TETRA TECH

WES WILLIAMS
PROJECT MANAGER

August 19, 2022

Mr. Jason Sewell
On-Scene Coordinator
U.S. Environmental Protection Agency Region 5
2525 North Shadowland Avenue
Indianapolis, Indiana 46219

Subject: **Letter Report – Revision 1**
Plainfield Warehouse Fire Site – RS
Plainfield, Hendricks County, Indiana
EPA Contract No.: 68HE0519D0005
Task Order-Task Order Line Item No.: F0032-0001DC104
Document Tracking No.: 1151a

Dear Mr. Sewell:

Tetra Tech, Inc. (Tetra Tech) is submitting this letter report summarizing emergency response activities conducted at the Plainfield Warehouse Fire Site at 9590 AllPoints Way in Plainfield, Indiana, on March 16 through 20, 2022. This Revision 1 clarifies the conclusions in Revision 0 that thallium and arsenic were detected above EPA Removal Management Levels and/or EPA Regional Screening Levels.

If you have any questions regarding this report, please contact me at (216) 470-8109 or via e-mail at wes.williams@tetratech.com.

Respectfully,

Wes Williams
Project Manager

cc: Chris Burns, Tetra Tech Program Manager
TO-TOLIN File

Tetra Tech, Inc.
6777 Engle Road, Suite L
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LETTER REPORT

PLAINFIELD WAREHOUSE FIRE SITE - RS
PLAINFIELD, HENDRICKS COUNTY, INDIANA

Revision 1

Prepared for

U.S. Environmental Protection Agency
Superfund and Emergency Management Division
Region 5
2525 North Shadowland Ave
Indianapolis, Indiana 46219

Prepared by

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August 19, 2022

Prepared by	Approved by
Wes Williams Tetra Tech Project Manager	Kevin Scott START QC Reviewer

CONTENTS

1.0 INTRODUCTION

U.S. Environmental Protection Agency (EPA) Region 5 tasked the Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) with providing environmental monitoring and sampling as part of emergency response activities at the Plainfield Warehouse Fire Site (the Site). The project was performed under EPA Contract Number 68HE0519D0005, Task Order (TO)-Task Order Line Item Number (TOLIN) F0032-0001DC104.

This report discusses site background information in Section 2.0; describes air monitoring and sampling activities in Section 3.0; describes fire ash debris sampling in Section 4.0; discusses analytical results in Section 5.0; and presents a brief summary of response activities in Section 6.0. References cited throughout the report are in Section 7.0. Site figures are presented in Appendix A; summary tables of analytical data are presented in Appendix B; scans of START field logbook notes are presented in Appendix C; and a photographic documentation log is included in Appendix D. Attachment 1 includes laboratory analytical reports for the samples collected throughout the response.

2.0 SITE LOCATION AND DESCRIPTION

The Site consists of a large Walmart e-fulfillment warehouse at 9590 AllPoints Way in Plainfield, Hendricks County, Indiana (Appendix A, Figure 1). Consumer packaged goods were stored at the Site to be packaged and shipped directly to consumers following online ordering.

The Site is 715 feet above mean sea level and consists of one parcel, ID number 32-09-18-250-001. The geographic coordinates measured from the approximate center of the Site are 39.74510287 degrees north latitude and 86.35117624 degrees west longitude. The 61.59-acre Site is in a mixed commercial and residential area. The property is bounded by commercial properties to the south, east, and west and to the north by East 100 Street with an empty field and railroad tracks beyond (Appendix A, Figure 2). Residential neighborhoods are scattered throughout the area surrounding the Site, with the closest residences 0.38 miles to the northeast and east; 0.75 miles to the north; and 1.14 miles to the west.

On Wednesday, March 16, 2022, at approximately 11:57, the Plainfield Fire Department responded to a fire incident reported at the warehouse and initiated fire suppression activities. The smoke plume persisted and generated fire ash and debris fallout for miles downwind. Wind direction over the course of the incident was initially to the north and varied over following days from north-northwest to the east. For Plainfield residents located in the vicinity of the smoke plume, Plainfield Fire Chief Brent Anderson advised residents to avoid smoke from the fire and instituted a voluntary shelter-in-place advisory. Multiple fire departments responded to assist Plainfield Fire Department, including Indianapolis area departments. Hendricks County

Health Department (HCDH), Marion County Public Health Department's (MCPHD) Hazardous Materials Section, Indiana Department of Homeland Security (IDHS), and Indiana Department of Environmental Management (IDEM) also responded to the incident. Chief Anderson requested assistance with monitoring air quality in the community from IDEM. IDEM requested air monitoring assistance from EPA.

On March 16, 2022, On-Scene Coordinators (OSC) Jason Sewell, Corey Peaslee, and Jacqueline Cole mobilized to the Site. At approximately 15:30, EPA Region 5 Phone Duty Officer activated START to respond to the incident. OSC Jim Mitchell mobilized to the Site on March 17, 2022.

START arrived at the Site March 16 at approximately 21:30 and received a briefing and direction from OSC Sewell. OSC Sewell consulted with the Agency for Toxic Substances and Disease Registry (ATSDR), who recommended initial air monitoring should include volatile organic compounds (VOCs) and particulate matter (PM) and provided recommended screening levels. EPA tasked START with performing community air monitoring for VOCs, hydrogen sulfide (H_2S), hydrogen cyanide (HCN), oxygen ($\%O_2$), carbon monoxide (CO), and fine respirable and respirable particulates ($PM_{2.5}$ and PM_{10}). In addition to air monitoring, OSC Sewell requested community air sampling for VOCs. Over the course of the response, OSC Sewell also requested collection of fire ash debris samples for laboratory analysis of asbestos, metals, and semi-volatile organic compounds (SVOCs).

3.0 AIR MONITORING AND SAMPLING

START conducted 24-hour air monitoring from March 16 to March 20, 2022 to document and report contaminant levels at nearby residential communities and several sensitive receptors, including schools and medical facilities. Site-specific air monitoring screening levels VOCs, H_2S, HCN, $PM_{2.5}$, and PM_{10} were provided by ATSDR; site-specific screening levels were based on a 1-hour time-weighted average. Table 1 below lists the screening levels.

Table 1 – Site-Specific Air Monitoring Screening Levels

Instrument(s)	Analyte	Site-Specific Screening Level
AreaRAE Pro MultiRAE Pro	VOC	1 ppm
	H_2S	0.1 ppm
	HCN	0.5 ppm
DustTrak DRX, Handheld DustTrak DRX	$PM_{2.5}$	0.025 mg/m^3
	PM_{10}	0.05 mg/m^3

Notes:
Site-specific screening levels are based on 1-hour time-weighted averages
H_2S = Hydrogen sulfide
HCN = Hydrogen cyanide
mg/m^3 = Milligrams per cubic meter
$PM_{2.5}$ = Particulate matter, diameter of 2.5 micrometers or less
PM_{10} = Particulate matter, diameter of 10 micrometers or less
ppm = Parts per million
VOC = Volatile organic compounds

3.1 AIR MONITORING

Dark black smoke was generated by the fire and persisted downwind. Smoke was readily visible by observation. EPA also requested air plume models from the Interagency Modeling and Atmospheric Assessment Center (IMAAC), which START used to determine sensitive receptors within the plume's pathway. START conducted community air monitoring in and around residential, sensitive receptors, and commercial areas surrounding the Site to document and report concentrations of airborne contaminants. Community air monitoring consisted of up to five stationary air monitor locations and mobile monitoring. Mobile monitoring was conducted along six downwind transects and several sensitive receptor locations, including a nearby elementary school and several medical facilities. All stationary and mobile monitoring locations were selected in consultation with the OSC and were based on wind direction and locations of sensitive receptors. Air monitoring was ceased during rain events to prevent damage to monitoring instruments.

Due to the 24-hour continuous air monitoring during this emergency response, START personnel operated on two 12-hour oversight shifts. Each shift had three START members, who were responsible for the physical maintenance of the air monitoring equipment, evaluating the equipment screening results, observing the overall status of the response activities, and communicating situational, real-time updates to OSCs. Day shifts took place from 0800 to 2000, while night shifts occurred from 2000 to 0800. START emergency response activities were headquartered out of the east-adjacent parking lot from the Site. General Site and monitoring observations were documented in field logbooks, provided in Appendix C.

Fixed stations consisted of stationary monitoring equipment including an AreaRAE Pro or an AreaRAE Pro and a DustTrak DRX (DustTrak) particulate monitors. AreaRAE Pros were used to monitor VOCs, percent lower explosive limit (LEL), CO, H_2S, HCN, and percent oxygen ($\%O_2$) in real-time. The AreaRAE Pros were used in conjunction with the EPA Emergency Response Team (ERT) telemetry system VIPER to record and monitor concentrations of VOCs, LEL, CO, H_2S, HCN, and $\%O_2$. DustTraks were used to assess suspended particulates in real-time. The DustTraks were used in conjunction with VIPER to record and monitor particulate levels in ambient air down to 0.1 microgram per cubic meter ($\mu g/m^3$). DustTraks monitored for particulate matter with an aerodynamic diameter equal to or less than 1 micrometer (PM_1), with an aerodynamic diameter equal to or less than 2.5 micrometers ($PM_{2.5}$), with an aerodynamic diameter equal to or less than 10 micrometers (PM_{10}), and total particulate matter.

Mobile stations consisted of discrete measurements with a MultiRAE Pro and a Handheld DustTrak DRX (HDRX), when possible. The MultiRAE Pro was used to monitor VOCs, LEL, CO, HCN, and $\%O_2$ and HDRXs were used to monitor $PM_{2.5}$ and PM_{10}. Roving air monitoring measurements at the established locations were recorded in a Survey123 digital form uploaded in the field for real-time viewing of results on an on-line dashboard.

Air monitoring with fixed stations occurred from 01:51 on March 17 to 17:30 on March 20, 2022; air monitoring with mobile stations occurred from 00:30 on March 17 to 15:54 on March 20, 2022. Locations of the fixed and mobile air monitoring stations are provided on Figures 3, 4, and 5 in Appendix A.

3.2 AIR SAMPLING

In addition to community air monitoring, START was directed to collect samples of ambient air for laboratory analysis of VOCs. These compounds were anticipated to be present within the plume given the types of materials that may have been incinerated during the warehouse fire.

Locations selected for the collection of samples are provided below:

- Downwind, co-located with the residential fixed air monitoring station 03
- Downwind, co-located with the sensitive receptor (school) fixed air monitoring station 02

Grab air sample PWDF-AA-Grab-01-031722 was collected from Station 03 by opening a 6-liter batch-certified SUMMA canister without a regulator attached. Air sample PWDF-AA-01-031723 was collected from Station 02 using a 6-liter individually-certified SUMMA canister with a laboratory calibrated 8-hour

flow controller. Both air samples were collected approximately 18 hours after the fire began. Visible black smoke from the fire was observed at the time of collection. The samples were shipped to ALS Environmental in Simi Valley, California, under chain-of-custody for analysis of VOCs via EPA Method TO-15. Air sample locations are provided on Figure 6 in Appendix A. Analytical results are discussed in Section 5.1.

4.0 FIRE ASH DEBRIS SAMPLING

Due to the size and duration of the fire, substantial ash and debris were carried offsite by the wind. The OSC directed START to collect debris samples for laboratory analysis. Three debris samples were analyzed for metals and semi-volatile organic compounds (SVOC) and eight samples were analyzed for asbestos.

4.1 OFF-SITE DEBRIS SAMPLES FOR SVOCS AND METALS ANALYSIS

On March 17, 2022, START collected three discrete bulk material samples from the ground surface in accordance with the Tetra Tech Air Monitoring and Sampling Plan (AMSP) (Tetra Tech 2022a). All three debris samples were collected from the surrounding residential neighborhoods and consisted of charred debris carried off-site by the smoke plume. The sample locations are shown in Figure 7 of Appendix A. The samples were collected using dedicated, disposable nitrile gloves to fill the laboratory-provided sample containers.

The debris samples were submitted to CT Laboratories in Baraboo, Wisconsin for analysis for target analyte list (TAL) metals and SVOCs. START handled and packaged all samples in accordance with the START Quality Assurance Project Plan (QAPP) (Tetra Tech 2022b). Sample analytical results were validated by a START chemist in accordance with EPA National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA 2017a) and EPA National Functional Guidelines for Organic Superfund Methods Data Review (EPA 2017b).

4.2 OFF-SITE DEBRIS SAMPLES FOR ASBESTOS ANALYSIS

On March 18, 2022, START collected eight discrete asbestos samples from the ground surface in accordance with the Tetra Tech AMSP (Tetra Tech 2022a). All eight samples were collected in the surrounding residential neighborhoods and comprised of charred debris carried off-site by the smoke plume. The asbestos sample locations are shown in Figure 8 of Appendix A. The samples were collected using dedicated, disposable nitrile gloves to fill individual, disposable, and resealable plastic bags.

The samples were submitted to ALS Environmental Group in Cincinnati, Ohio for analysis for asbestos using polarized light microscopy (PLM). START handled and packaged all samples in accordance with the START QAPP (Tetra Tech 2022b). Asbestos sample analytical results were validated by a START chemist.

5.0 ANALYTICAL RESULTS

This section discusses the analytical results from the two air samples, the three debris samples, and the eight asbestos samples that were collected during the response. Analytical results from all samples collected during the response underwent Stage Three data validation, as described in Tetra Tech's START QAPP (Tetra Tech 2022b). The findings of data validation were presented in separate Data Validation Reports (Tetra Tech 2022c, 2022d).

5.1 AIR SAMPLE RESULTS

The results from the air samples were compared to EPA Removal Management Levels (RML) for residential exposure scenarios with a hazard quotient of 1 and target cancer risk of 10^{-4} (EPA 2022a), as well as the EPA Regional Screening Levels (RSL) for residential exposure scenarios with a hazard quotient of 1 and target cancer risk of 10^{-6} (EPA 2022b). Benzene was detected above the residential RSL of 0.36 micrograms per cubic meter (ug/m^3) in both air samples. Additionally, the laboratory reporting limit for 1,2-dibromo-3-chloropropane was above both the residential RML and RSL. Therefore, it is possible that this compound may have been present at concentrations exceeding the RML and RSL but below the laboratory reporting limit. A summary table of air sample analytical results is presented in Appendix B, Table 1.

5.2 DEBRIS SAMPLE RESULTS FOR METALS AND SVOCS

The results from the waste samples were compared to EPA RML for residential exposure scenarios with a hazard quotient of 1 and target cancer risk of 10^{-4} (EPA 2022a), as well as the EPA RSL for residential exposure scenarios with a hazard quotient of 1 and target cancer risk of 10^{-6} (EPA 2022b). The laboratory reporting limit for the metal arsenic was above the residential RSL, allowing for the possibility that this metal may have been present at a concentration exceeding the RSL but below the laboratory reporting limit. Additionally, the laboratory reporting limit for the metal thallium was above both the residential RML and RSL, making it possible that this metal may have been present at concentration exceeding the RML and RSL but below the laboratory reporting limit. The laboratory reporting limit for the SVOC n-nitrosodi-n-propylamine was above the residential RSL, but below the RML. A summary table of debris sample analytical results is presented in Appendix B, Table 2.

5.3 DEBRIS SAMPLE RESULTS FOR ASBESTOS

Site-specific action levels for asbestos does not apply. The objective with the eight asbestos samples was to determine if any of the off-site debris was an asbestos-containing material. All eight of the asbestos samples were non-detect for asbestos. A summary table of analytical results is presented in Appendix B, Table 3.

6.0 RESPONSE SUMMARY

START mobilized to assist with emergency response activities in Plainfield, Indiana from March 16 to March 20, 2022. The emergency response was due to a fire at a warehouse, which was emitting dark black smoke into downwind communities. Upon mobilization and a briefing of the situation, START established an AreaRAE and DustTrak perimeter air monitoring network to screen for VOCs, H_2S, HCN, and particulate matter in the form of $PM_{2.5}$ and PM_{10} and compared monitoring results to established Site-specific air monitoring levels. Additional metrics requested for screening included $\%O_2$ and CO. Air monitoring screening results were provided to EPA twice a day. Upon direction from the EPA, START collected air samples for VOCs compounds, and fire ash debris samples for TAL Metals, SVOCs compounds, and asbestos. Upon request from EPA, START demobilized from the Site on March 20, 2022.

7.0 REFERENCES

Tetra Tech, Inc. (Tetra Tech). 2022a. Air Monitoring and Sampling Plan, Plainfield Walmart Distribution Center Fire Site, Plainfield, Hendricks County, Indiana, Revision 0. March 17.

Tetra Tech. 2022b. Quality Assurance Project Plan for Superfund Technical Assessment and Response Team (START), Revision 3. January.

Tetra Tech. 2022c. Data Validation Report, Plainfield Warehouse Fire Site – RS, DTN 1164. April.

Tetra Tech. 2022d. Data Validation Report, Plainfield Warehouse Fire Site – RS, DTN 1217. April.

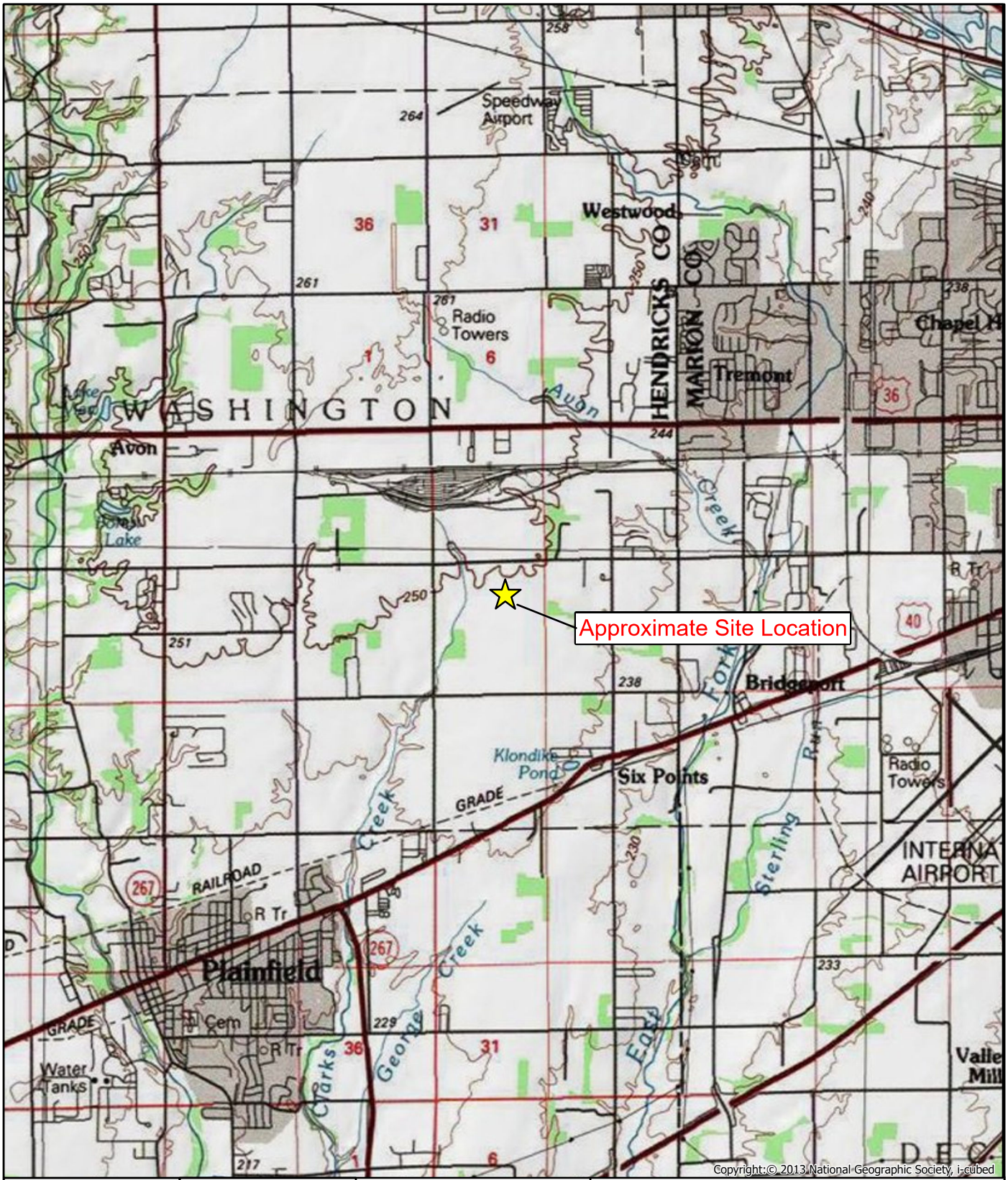
U.S. Environmental Protection Agency (EPA). 2017a. "EPA National Functional Guidelines for Inorganic Superfund Methods Data Review." Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-002. January.

EPA. 2017b. "EPA National Functional Guidelines for Organic Superfund Methods Data Review." Office of Superfund Remediation and Technology Innovation. EPA-540-R-2017-002. January.

EPA. 2022a. "Regional Removal Management Levels for Chemicals (RMLs)." May.

EPA. 2022b. "Regional Screening Levels for Chemicals (RSLs)." May.

APPENDIX A
SITE FIGURES



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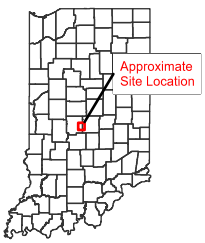

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0 2,000 4,000 8,000

Feet

Source: USGS 7.5-Minute Topographic Quadrangle Map Indianapolis, IN 1986

Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Figure 1
Site Location Map

TETRA TECH

Prepared for: EPA

Prepared for: Tetra Tech, Inc.

C:\Users\JORDAN.EDMUNDS\Documents\ArcGIS\Projects\Plainfield_Warehouse_Fire\Plainfield_Warehouse_Fire.aprx

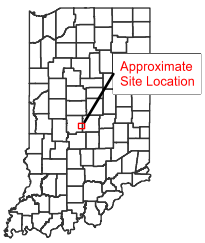
Date: 04/21/2022

EPA Contract No. 68HE0519D0005

TO/TOLIN: F0032-0001DC104

Coordinate System: WGS 1984 Web Mercator
Datum: WGS 1984
Units: Degree

Site Location



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Site Boundary

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0 250 500 1,000

Feet

Source: Esri

Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Figure 2
Site Layout Map

TETRA TECH

Prepared for: EPA

Prepared for: Tetra Tech, Inc.

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Date: 04/21/2022

EPA Contract No. 68HE0519D0005

TO/TOLIN: F0032-0001DC104

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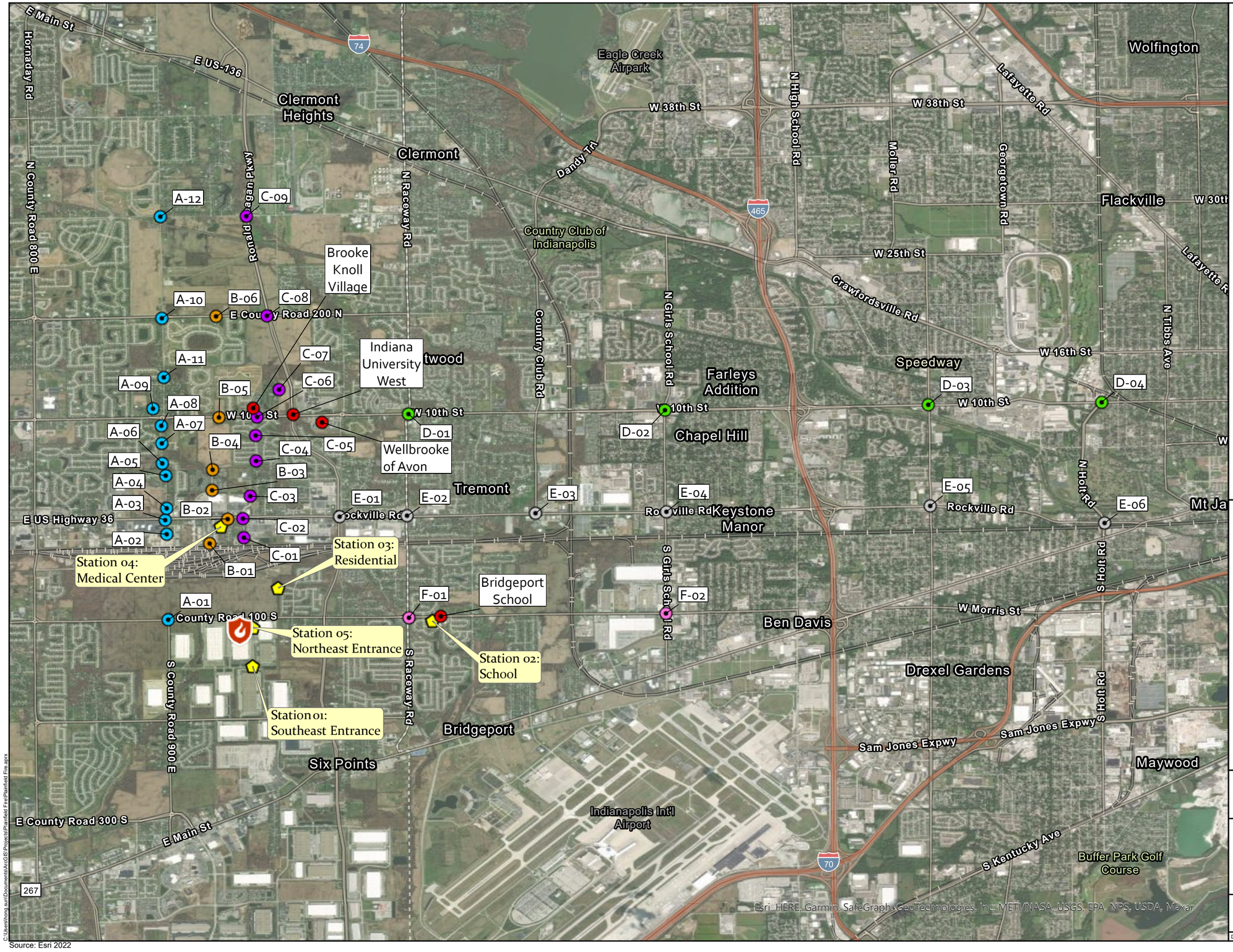
Datum: WGS 1984
Units: Degree



Legend

- Fire Location
- Continuous Air Monitoring Station
- Air Monitoring Roaming Locations
- Transect A
- Transect B
- Transect C
- Transect D
- Transect E
- Transect F
- Sensitive Receptor

N

0 0.5 1 1.5 2

Miles

Site Location

Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Figure 3

Air Monitoring Locations

(03/17/22 00:30 to 03/17/22 19:54)

TETRA TECH

Date: 3/19/2022 EPA Contract No: 68HE0519D0005 TO-TOLIN No: TBD

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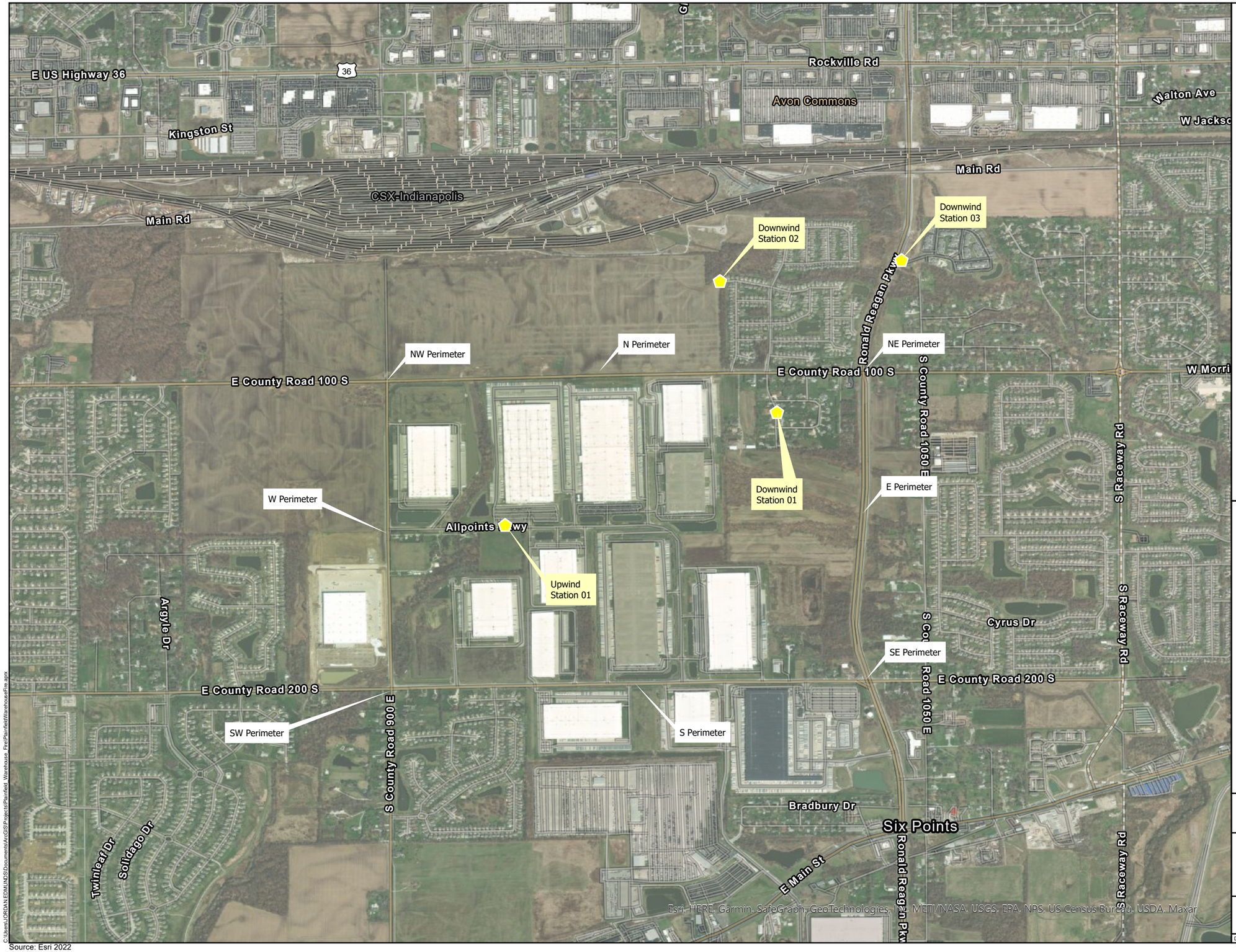

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Source: Esri 2022

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- Continuous Air Monitoring Station
- FireLocation

Air Monitoring Roaming Locations

- Site Perimeter

N

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Feet

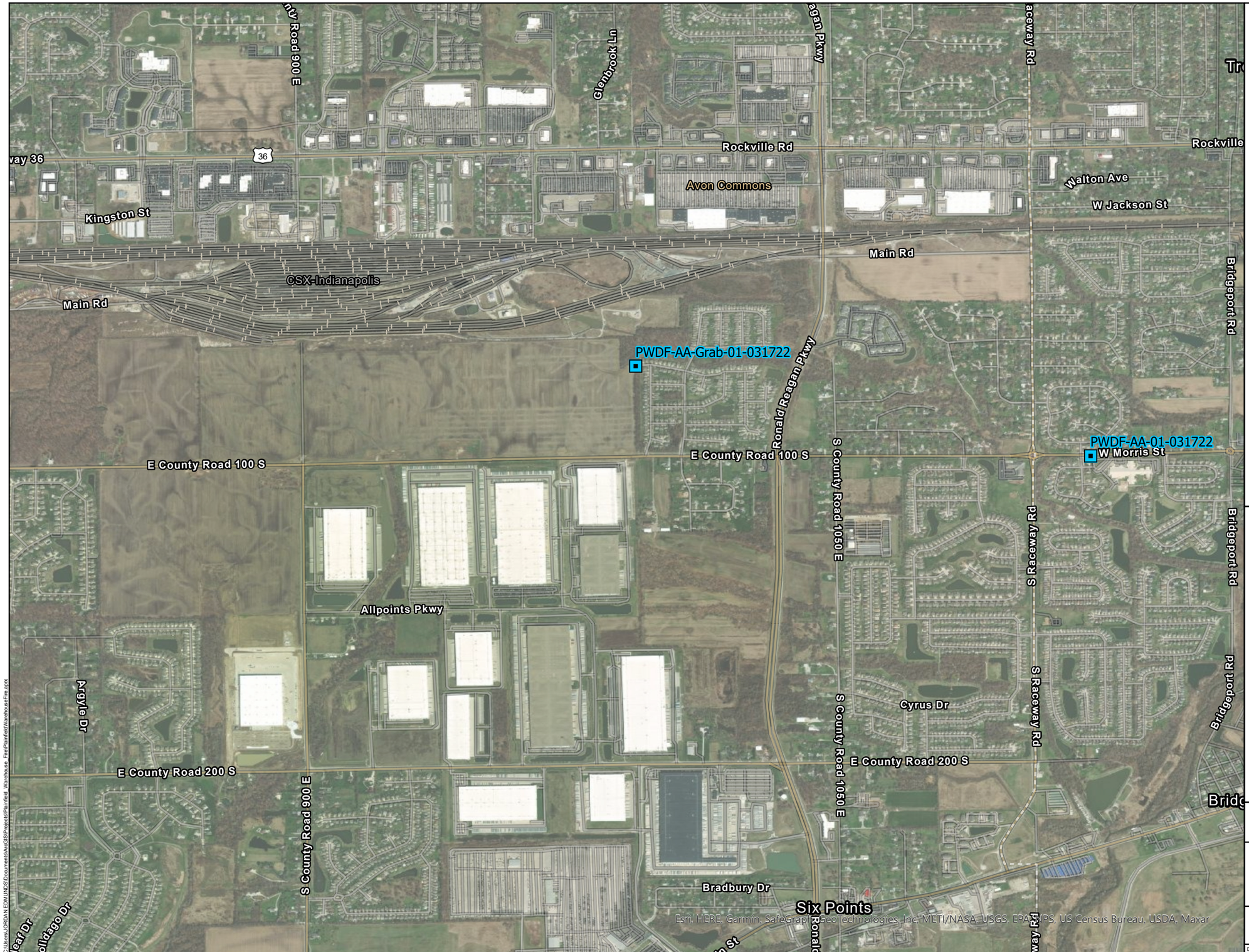
Site Location

Wal-Mart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Figure 4
Air Monitoring Locations
(03/20/22 07:38 to 03/20/22 17:30)

TETRA TECH

Date: 6/13/2022 EPA Contract No: 68HE0519D0005 TO-TOLIN No: TBD



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- Air Sample Locations
- Fire Location

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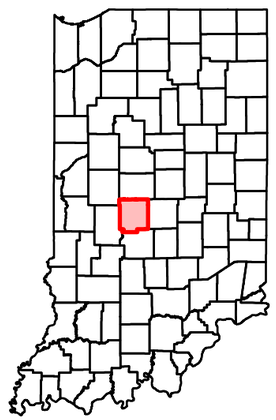
Feet

Site Location



Wal-Mart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Figure 5

Air Sampling Locations

TETRA TECH

Date: 6/13/2022 EPA Contract No: 68HE0519D0005 TO-TOLIN No: TBD

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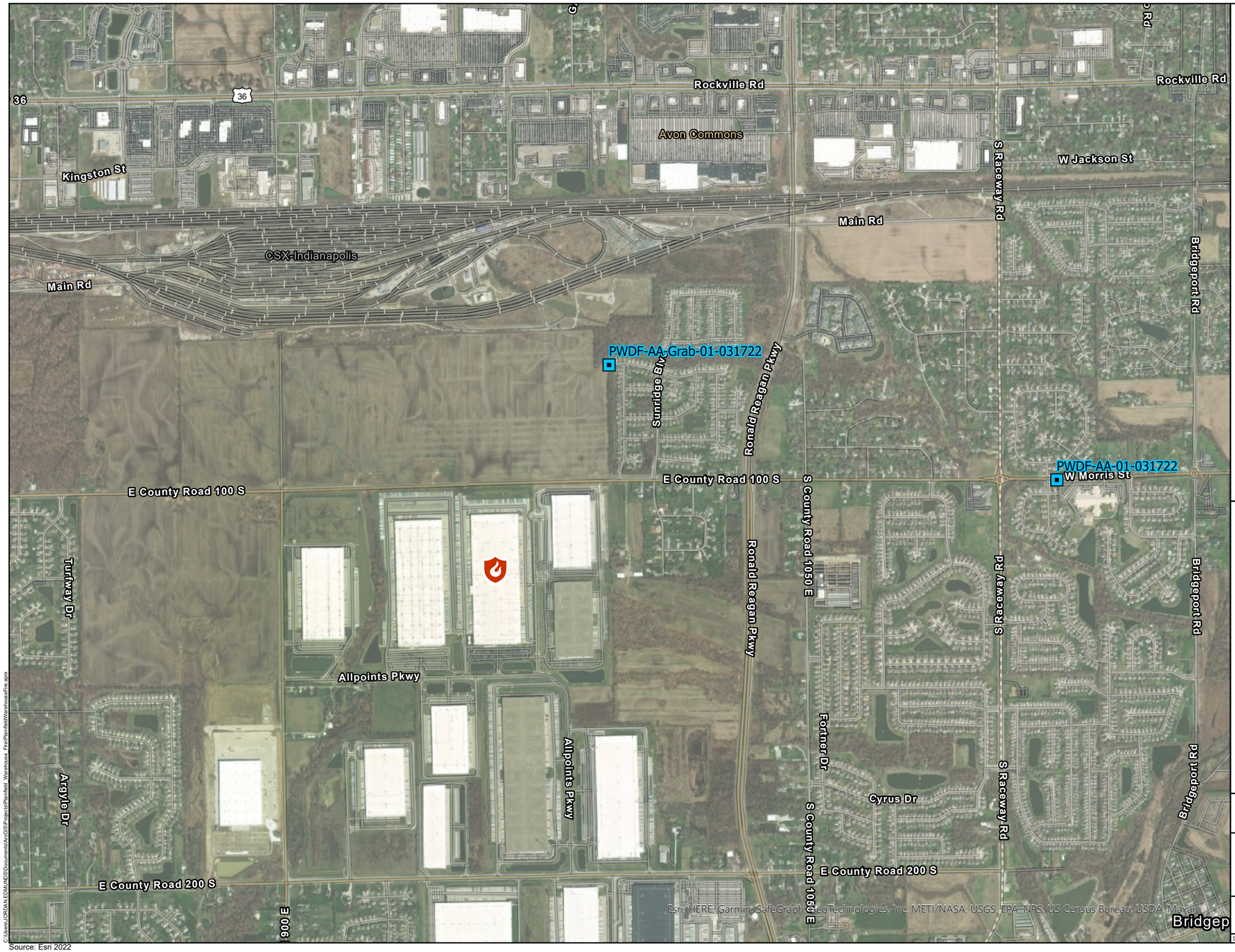

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- Air Sample Locations
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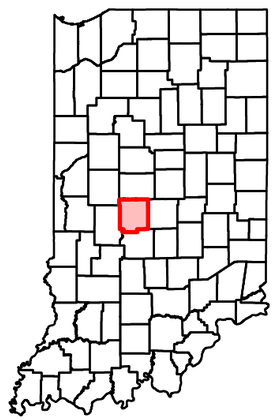
Feet

Site Location



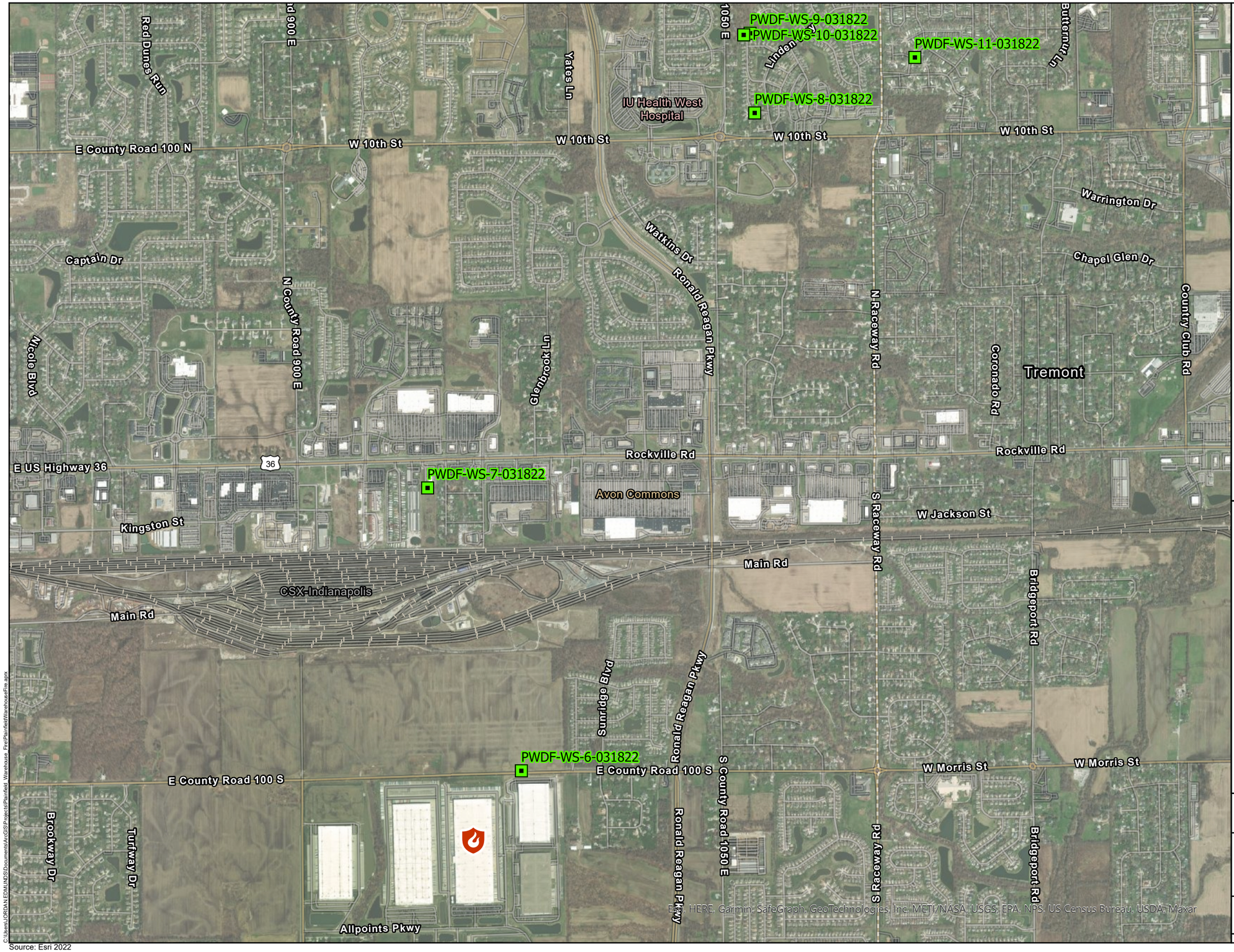
Wal-Mart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Figure 6

Air Sampling Locations

TETRA TECH

Date: 6/13/2022 | EPA Contract No: 68HE0519D0005 | TO-TOLIN No: TBD



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Source: Esri 2022

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- FireLocation
- Asbestos2

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Feet

Site Location

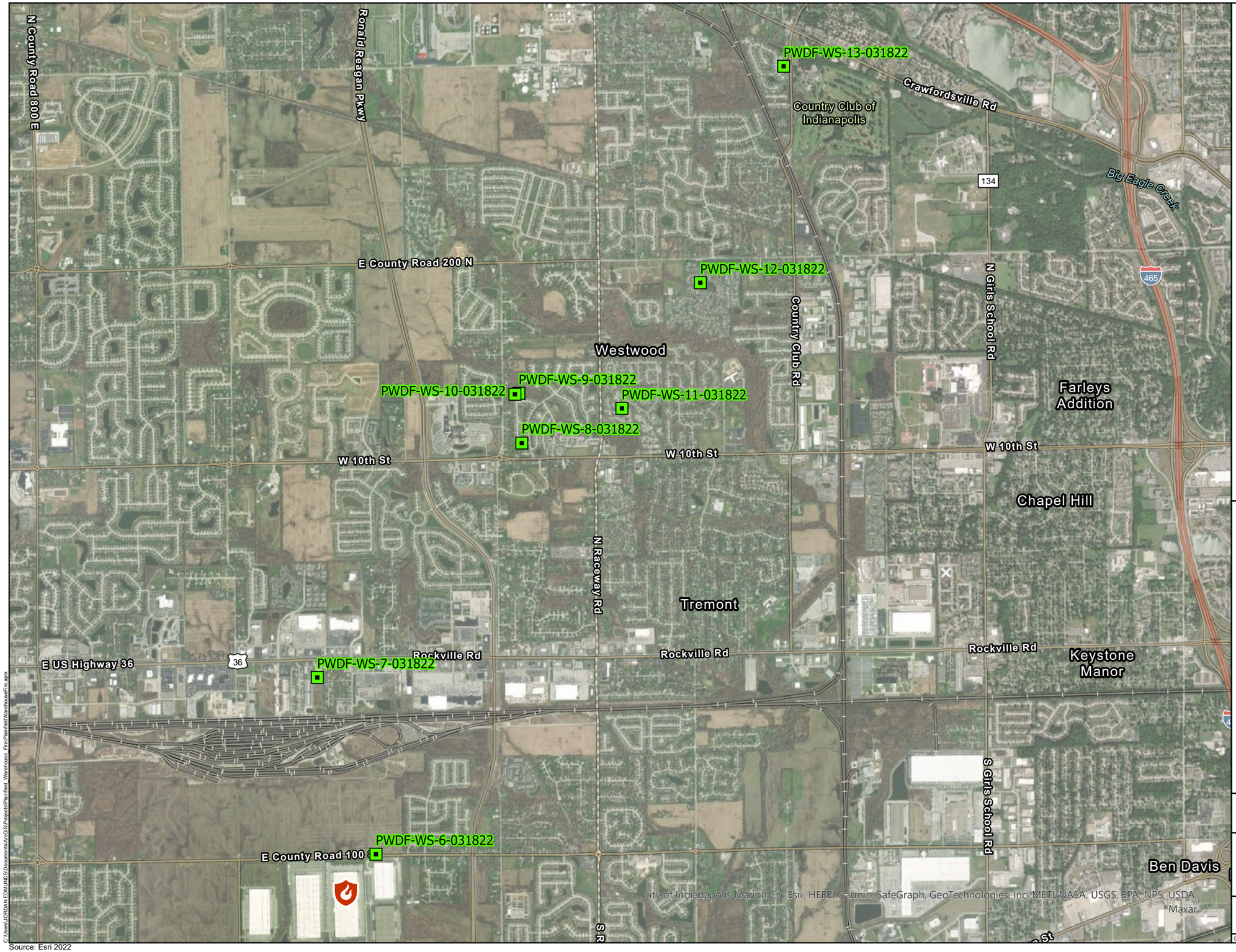
Wal-Mart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Figure 7

Debris Samples for SVOCs and Metals

TETRA TECH

Date: 6/13/2022 | EPA Contract No: 68HE0519D0005 | TO-TOLIN No: TBD



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Source: Esri 2022

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- Debris Samples for Asbestos
- FireLocation

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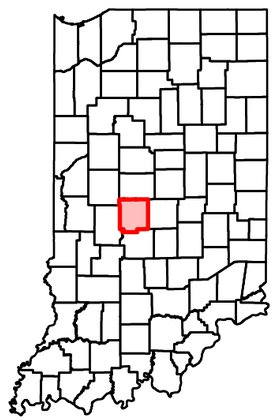
Feet

Site Location



Wal-Mart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Figure 8

Debris Samples for Asbestos

TETRA TECH

Date: 6/13/2022 | EPA Contract No: 68HE0519D0005 | TO-TOLIN No: TBD

APPENDIX B
SUMMARY TABLES

Table 1
Analytical Results for Air Samples
Plainfield Walmart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Volatile Organic Compounds (µg/m3) Method TO-15/T0-15 SIM	Cas No.	PWDF-AA-Grab-01-031722		PWDF-AA-01-031722		EPA Residential Air RML (TCR=1E-4, HQ=1)	EPA Residential Air RSL (TCR=1E-6, HQ=1)
1,1,1-Trichloroethane	71-55-6	0.17	U	0.16	U	5200	5200
1,1,2,2-Tetrachloroethane	79-34-5	0.17	U	0.16	U	4.8	0.048
1,1,2-Trichloroethane	79-00-5	0.17	U	0.16	U	0.21	0.18
1,1,2-Trichlorotrifluoroethane	76-13-1	0.84	U	0.77	U	5200	5200
1,1-Dichloroethane	75-34-3	0.17	U	0.16	U	180	1.8
1,1-Dichloroethene	75-35-4	0.17	U	0.16	U	210	210
1,2,4-Trichlorobenzene	120-82-1	1.6	U	1.4	U	2.1	2.1
1,2,4-Trimethylbenzene	95-63-6	0.81	U	0.74	U	63	63
1,2-Dibromo 3-Chloropropane	96-12-8	1.6	U	1.4	U	0.017	0.00017
1,2-Dibromoethane	106-93-4	0.17	U	0.16	U	0.47	0.0047
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	0.84	U	0.77	U	NL	NL
1,2-Dichlorobenzene	95-50-1	0.83	U	0.76	U	210	210
1,2-Dichloroethane	107-06-2	0.17	U	0.16	U	7.3	0.11
1,2-Dichloropropane	78-87-5	0.17	U	0.16	U	4.2	0.76
1,3,5-Trimethylbenzene	108-67-8	0.81	U	0.74	U	63	63
1,3-Butadiene	106-99-0	0.33	U	0.3	U	2.1	0.094
1,3-Dichlorobenzene	541-73-1	0.81	U	0.74	U	NL	NL
1,4-Dichlorobenzene	106-46-7	0.81	U	0.74	U	26	0.26
1,4-Dioxane	123-91-1	0.81	U	0.74	U	31	0.56
2-Butanone (MEK)	78-93-3	1.6	U	1.4	U	5,200	5,200
2-Hexanone	591-78-6	1.7	U	1.6	U	31	31
2-Propanol (Isopropyl Alcohol)	67-63-0	3.4		1.5		210	210
3-Chloro-1-propene (Allyl Chloride)	107-05-1	0.83	U	0.76	U	NL	0.47
4-Ethyltoluene	622-96-8	0.83	U	0.76	U	NL	NL
4-Methyl-2-pentanone	108-10-1	1.7	U	1.6	U	3,100	3,100
Acetone	67-64-1	18		11		NL	32,000
Acetonitrile	75-05-8	1.6	U	1.4	U	NL	63
Acrolein	107-02-8	1.6	U	1.4	U	NL	0.021
Acrylonitrile	107-13-1	1.6	U	1.4	U	4.1	0.041
alpha-Pinene	80-56-8	0.84	U	0.77	U	NL	NL
Benzene	71-43-2	2.1		1.9		31	0.36
Benzyl Chloride	100-44-7	1.7	U	1.6	U	5.7	0.057
Bromodichloromethane	75-27-4	0.17	U	0.16	U	7.60	0.076
Bromoform	75-25-2	0.81	U	0.74	U	260	2.6
Bromomethane	74-83-9	0.33	U	0.3	U	5.2	5.2
Carbon Disulfide	75-15-0	1.7	U	1.6	U	730	730
Carbon Tetrachloride	56-23-5	0.38		0.4		47	0.47
Chlorobenzene	108-90-7	0.81	U	0.74	U	52	52
Chloroethane	75-00-3	0.33	U	0.3	U	10000	10000
Chloroform	67-66-3	0.17	U	0.16	U	12	0.12
Chloromethane	74-87-3	0.45		0.46		94	94
cis-1,2-Dichloroethene	156-59-2	0.17	U	0.16	U	NL	NL
cis-1,3-Dichloropropene	10061-01-5	0.83	U	0.76	U	NL	NL
Cumene	98-82-8	0.81	U	0.74	U	4.2	420
Cyclohexane	110-82-7	1.7	U	1.6	U	6300	6300
Dibromochloromethane	124-48-1	0.17	U	0.16	U	NL	NL
Dichlorodifluoromethane (CFC 12)	75-71-8	2.4		2.5		100	100
Dichloromethane (Methylene Chloride)	75-09-2	0.81	U	0.74	U	630	100
d-Limonene	5989-27-5	0.81	U	0.74	U	NL	NL
Ethanol	64-17-5	84		16		NL	NL
Ethyl Acetate	141-78-6	3.3	U	3	U	7	73
Ethylbenzene	100-41-4	0.81	U	0.74	U	110	1.1
Hexachlorobutadiene	87-68-3	0.81	U	0.74	U	13	0.13

Table 1
Analytical Results for Air Samples
Plainfield Walmart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Volatile Organic Compounds (µg/m3) Method TO-15/T0-15 SIM	Cas No.	PWDF-AA-Grab-01-031722		PWDF-AA-01-031722		EPA Residential Air RML (TCR=1E-4, HQ=1)	EPA Residential Air RSL (TCR=1E-6, HQ=1)
Hexane	110-54-3	11		1.3		730	730
m,p-Xylenes	179601-23-1	2.1		1.6	U	100	100
Methyl Methacrylate	80-62-6	1.7	U	1.6	U	730	730
Methyl tert-Butyl Ether	1634-04-4	0.83	U	0.76	U	1,100	11
Naphthalene	91-20-3	0.81	U	0.74	U	3.1	0.083
n-Butyl Acetate	123-86-4	1.7	U	1.6	U	NL	NL
n-Heptane	142-82-5	0.83	U	0.76	U	4.2	420
n-Nonane	111-84-2	0.81	U	0.74	U	21	21
n-Octane	111-65-9	0.83	U	0.76	U	NL	NL
n-Propylbenzene	103-65-1	0.83	U	0.76	U	1000	1000
o-Xylene	95-47-6	0.81	U	0.74	U	100	100
Propene	115-07-1	5.1		2.8		3100	3100
Styrene	100-42-5	0.81	U	0.74	U	1000	1000
Tetrachloroethene	127-18-4	0.29		0.16	U	42	11
Tetrahydrofuran (THF)	109-99-9	1.6	U	1.4	U	2100	2100
Toluene	108-88-3	6.7		3		5200	5200
trans-1,2-Dichloroethene	156-60-5	0.17	U	0.16	U	42	42
trans-1,3-Dichloropropene	10061-02-6	0.8	U	0.73	U	NL	NL
Trichloroethene	79-01-6	0.17	U	0.16	U	2.1	0.48
Trichlorofluoromethane	75-69-4	1.1		1.2		NL	NL
Vinyl Acetate	108-05-4	7.8	U	7.2	U	210	210
Vinyl Chloride	75-01-4	0.17	U	0.16	U	17	0.17

Notes:

All results and screening levels are presented in units $\mu g/m^3$.

The analyte reporting limit is above the EPA RML and RSL.

The highlighted result exceeds the EPA RSL.

$\mu g/m^3$ = Micrograms per cubic meter

EPA = U.S. Environmental Protection Agency

HQ = Hazard quotient

NL = Not listed

RML = Removal Management Level

RSL = Regional Screening Level

SIM = Selected Ion Monitoring

TCR = Target cancer risk

U = The analyte was analyzed for, but not detected at or above the associated value (reporting limit).

Table 2
Debris Sample Results for Metals and SVOCs
Plainfield Walmart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Parameter	Cas No.	PWDF-WS-01-031722		PWDF-WS-02-031722		PWDF-WS-03-031722		EPA Residential Soil RSL mg/kg (TCR=1E-6, HQ=1)	EPA Residential Soil RSL µg/kg (TCR=1E-6, HQ=1)	EPA Residential Soil RML mg/kg (TCR=1E-4, HQ=1)	EPA Residential Soil RML µg/kg (TCR=1E-4, HQ=1)
SVOCs (µg/kg) Method 8270D											
1,1`-Biphenyl	92-52-4	245	J-	153	J-	340	UJ	47	47000	47	47000
1,2,4,5-Tetrachlorobenzene	95-94-3	420	UJ	750	UJ	670	UJ	23	23000	23	23000
2,4,5-Trichlorophenol	95-95-4	1000	UJ	1900	UJ	1700	UJ	6300	6300000	6300	6300000
2,4,6-Trichlorophenol	88-06-2	1000	UJ	1900	UJ	1700	UJ	49	49000	63	63000
2,4-Dichlorophenol	120-83-2	1000	UJ	1900	UJ	1700	UJ	190	190000	190	190000
2,4-Dimethylphenol	105-67-9	1000	UJ	1900	UJ	1700	UJ	1300	1300000	1300	1300000
2,4-Dinitrophenol	51-28-5	1000	UJ	1900	UJ	1700	UJ	130	130000	130	130000
2,4-Dinitrotoluene	121-14-2	210	UJ	380	UJ	340	UJ	1.7	1700	130	130000
2,6-Dinitrotoluene	606-20-2	210	UJ	380	UJ	340	UJ	0.36	360	19	19000
2-Chloronaphthalene	91-58-7	56.1	J-	77.8	J-	340	UJ	4800	4800000	4800	4800000
2-Chlorophenol	95-57-8	1000	UJ	1900	UJ	1700	UJ	390	390000	390	390000
2-Methylnaphthalene	91-57-6	110	J-	380	UJ	340	UJ	240	240000	240	240000
2-Methylphenol	95-48-7	241	J-	1900	UJ	1700	UJ	3200	3200000	3200	3200000
2-Nitroaniline	88-74-4	420	UJ	750	UJ	670	UJ	630	630000	630	630000
2-Nitrophenol	88-75-5	1000	UJ	1900	UJ	1700	UJ	NL	NL	NL	NL
3&4-Methylphenol	1319-77-3	517	J-	3800	UJ	3400	UJ	6300	6300000	6300	6300000
3,3´-Dichlorobenzidine	91-94-1	420	UJ	750	UJ	670	UJ	1.2	1200	120	120000
3-Nitroaniline	99-09-2	210	UJ	380	UJ	340	UJ	NL	NL	NL	NL
4,6-Dinitro-2-methylphenol	534-52-1	1000	UJ	1900	UJ	1700	UJ	5.1	5100	5.1	5100
4-Bromophenyl phenyl ether	101-55-3	210	UJ	380	UJ	340	UJ	NL	NL	NL	NL
4-Chloro-3-methylphenol	59-50-7	1000	UJ	1900	UJ	1700	UJ	6300	6300000	6300	6300000
4-Chloroaniline	106-47-8	420	UJ	750	UJ	670	UJ	2.7	2700	250	250000
4-Chlorophenyl phenyl ether	7005-72-3	210	UJ	380	UJ	340	UJ	NL	NL	NL	NL
4-Nitroaniline	100-01-6	210	UJ	380	UJ	340	UJ	27	27000	250	250000
4-Nitrophenol	100-02-7	1000	UJ	1900	UJ	1700	UJ	NL	NL	NL	NL
Acenaphthene	83-32-9	420	UJ	750	UJ	670	UJ	3600	3600000	3600	3600000
Acenaphthylene	208-96-8	85.8	J-	380	UJ	340	UJ	NL	NL	NL	NL
Acetophenone	98-86-2	924	J-	357	J-	338	J-	7800	7800000	7800	7800000
Anthracene	120-12-7	210	UJ	380	UJ	340	UJ	18000	18000000	18000	18000000
Atrazine	1912-24-9	210	UJ	380	UJ	340	UJ	2.4	2400	240	240000
Benzaldehyde	100-52-7	1560	J-	818	J-	340	UJ	170	170000	7800	7800000
Benzo(a)anthracene	56-55-3	210	UJ	380	UJ	340	UJ	1.1	1100	110	110000
Benzo(a)pyrene	50-32-8	210	UJ	380	UJ	340	UJ	0.11	110	11	11000
Benzo(b)fluoranthene	205-99-2	210	UJ	380	UJ	340	UJ	1.1	1100	110	110000
Benzo(g,h,i)perylene	191-24-2	210	UJ	380	UJ	340	UJ	NL	NL	NL	NL
Benzo(k)fluoranthene	207-08-9	210	UJ	380	UJ	340	UJ	11	11000	1100	1100000
Bis(2-chloroethoxy)methane	111-91-1	210	UJ	380	UJ	340	UJ	190	190000	190	190000
Bis(2-chloroethyl)ether	111-44-4	210	UJ	380	UJ	340	UJ	0.23	230	23	23000
Bis(2-chloroisopropyl)ether	108-60-1	210	UJ	380	UJ	340	UJ	3100	3100000	3100	3100000
Bis(2-ethylhexyl)phthalate	117-81-7	171	J-	151	J-	112	J-	39	39000	1300	1300000
Butyl benzyl phthalate	85-68-7	420	UJ	750	UJ	670	UJ	290	290000	13000	13000000
Caprolactam	105-60-2	838	J-	750	UJ	670	UJ	31000	31000000	31000	31000000
Carbazole	86-74-8	420	UJ	750	UJ	670	UJ	NL	NL	NL	NL
Chrysene	218-01-9	210	UJ	380	UJ	340	UJ	110	110000	11000	11000000
Dibenzo(a,h)anthracene	53-70-3	210	UJ	380	UJ	340	UJ	0.11	110	11	11000
Dibenzofuran	132-64-9	210	UJ	380	UJ	340	UJ	73	73000	73	73000
Diethyl phthalate	84-66-2	210	UJ	380	UJ	340	UJ	51000	51000000	51000	51000000
Dimethyl phthalate	131-11-3	210	UJ	380	UJ	340	UJ	NL	NL	NL	NL
Di-n-butyl phthalate	84-74-2	110	J-	275	J-	670	UJ	6300	6300000	6300	6300000
Di-n-octyl phthalate	117-84-0	210	UJ	380	UJ	340	UJ	630	630000	630	630000
Fluoranthene	206-44-0	210	UJ	380	UJ	340	UJ	2400	2400000	2400	2400000
Fluorene	86-73-7	210	UJ	380	UJ	340	UJ	2400	2400000	2400	2400000
Hexachlorobenzene	118-74-1	210	UJ	380	UJ	340	UJ	0.21	210	21	21000
Hexachlorobutadiene	87-68-3	210	UJ	380	UJ	340	UJ	1.2	1200	78	78000
Hexachlorocyclopentadiene	77-47-4		R		R		R	1.8	1800	1.8	1800
Hexachloroethane	67-72-1	210	UJ	380	UJ	340	UJ	1.8	1800	45	45000
Indeno(1,2,3-cd)pyrene	193-39-5	210	UJ	380	UJ	340	UJ	1.1	1100	110	110000
Isophorone	78-59-1	210	UJ	148	J-	340	UJ	570	570000	13000	13000000
Naphthalene	91-20-3	1060	J-	857	J-	183	J-	3.8	3800	130	130000
Nitrobenzene	98-95-3	210	UJ	380	UJ	340	UJ	5.1	5100	130	130000
N-Nitrosodi-n-propylamine	621-64-7	210	UJ	380	UJ	340	UJ	0.078	78	7.8	7800
N-Nitrosodiphenylamine	86-30-6	420	UJ	750	UJ	670	UJ	110	110000	NL	NL
Pentachlorophenol	87-86-5	1000	UJ	1900	UJ	1700	UJ	1	1000	100	100000
Phenanthrene	85-01-8	210	UJ	380	UJ	340	UJ	NL	NL	NL	NL
Phenol	108-95-2	2760	J-	1900	UJ	1700	UJ	19000	19000000	19000	19000000
Pyrene	129-00-0	210	UJ	380	UJ	340	UJ	1800	1800000	1800	1800000
TAL Metals (mg/kg) Method 6010D/7471B											
Aluminium	7429-90-5	1200	J	1300	J	160	J	77000	77000000	77000	77000000
Antimony	7440-36-0	4.0		1.4	J	5.0		31	31000	31	31000
Arsenic	7440-38-2	3.9	U	3.8	U	3.8	U	0.68	680	35	35000
Barium	7440-39-3	7.6		9.3		7.6		15000	15000000	15000	15000000
Beryllium	7440-41-7	0.78	U	0.77	U	0.77	U	160	160000	160	160000
Cadmium	7440-43-9	0.98	U	0.96	U	0.19	J	71	71000	71	71000
Calcium	7440-70-2	4500		3800		590		NL	NL	NL	NL
Chromium	7440-47-3	2.2		2.5		0.85	J	NL	NL	NL	NL
Cobalt	7440-48-4	0.49	J	1.0	J	0.61	J	23	23000	23	23000
Copper	7440-50-8	4.5		2.0		6.0		3100	3100000	3100	3100000
Iron	7439-89-6	170		100		38	J	55000	55000000	55000	55000000
Lead	7439-92-1	0.72	J	0.56	J	1.7	J	400	400000	400	400000
Magnesium	7439-95-4	6100	J	4900		3600		NL	NL	NL	NL
Manganese	7439-96-5	14		9.0		2.9		1800	1800000	1800	1800000
Nickel	7440-02-0	0.92	J	0.93	J	0.29	J	1500	1500000	1500	1500000
Potassium	9/7/7440	5040		7520		8800		NL	NL	NL	NL
Selenium	7782-49-2	3.9	U	3.8	U	3.8	U	390	390000	390	390000
Silver	7440-22-4	3.9	UJ	3.8	UJ	3.8	UJ	390	390000	390	390000
Sodium	7440-23-5	3630		563	J	358	J	NL	NL	NL	NL

Table 2
Debris Sample Results for Metals and SVOCs
Plainfield Walmart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Parameter	Cas No.	PWDF-WS-01-031722		PWDF-WS-02-031722		PWDF-WS-03-031722		EPA Residential Soil RSL mg/kg (TCR=1E-6, HQ=1)	EPA Residential Soil RSL µg/kg (TCR=1E-6, HQ=1)	EPA Residential Soil RML mg/kg (TCR=1E-4, HQ=1)	EPA Residential Soil RML µg/kg (TCR=1E-4, HQ=1)
Thallium	7440-28-0	3.9	U	3.8	U	3.8	U	0.78	780	0.78	780
Vanadium	7440-62-2	1.2	J	1.4	J	0.39	J	390	390000	390	390000
Zinc	7440-66-6	140		48		83		23000	23000000	23000	23000000
Mercury	7439-97-6	0.0089	J	0.0087	U	0.0089	U	11	11000	11	11000

Notes:
The analyte's reporting limit exceeds the EPA RSL.
The analyte's reporting limit exceeds the EPA RSL and RML.
EPA = U.S. Environmental Protection Agency
HQ = Hazard quotient
J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J- = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
mg/kg = Milligram per Kilogram
NL = Not listed
R = The sample is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
RML = Removal Management Level
RSL = Regional Screening Level
SVOCs = Semi-Volatile Organic Compounds
TAL = Target Analyte List
TCR = Target cancer risk
U = The analyte was analyzed for, but not detected at or above the reporting limit.
µg/kg = Microgram per Kilogram
UJ = The analyte was analyzed for, but not detected at or above the reporting limit, which is considered approximate due to deficiencies in one or more quality control criteria.

Table 3
Debris Sample Results for Asbestos
Plainfield Walmart Distribution Center Fire
Plainfield, Hendricks County, Indiana

Sample Identification	Asbestos Results by EPA E600/R93/116	Sample Descripton
PWDF-WS-6-031822	ND	Black; Homogeneous; >90% Non-fibrous; 1-3% Fiberglass
PWDF-WS-7-031822	ND	Black; Homogeneous; 90-100% Non-fibrous
PWDF-WS-8-031822	ND	Black; Homogeneous; 90-100% Non-fibrous
PWDF-WS-9-031822	ND	Black/Tan; Layered; 60-70% Non-fibrous; 20-30% Resin/Binder
PWDF-WS-10-031822	ND	Black; Homogeneous; 90-100% Non-fibrous
PWDF-WS-11-031822	ND	Black; Homogeneous; 90-100% Non-fibrous
PWDF-WS-12-031822	ND	Black/Tan; Layered; 60-70% Non-fibrous; 20-30% Resin/Binder
PWDF-WS-13-031822	ND	Black; Homogeneous; 90-100% Non-fibrous

Notes:
EPA = U.S. Environmental Protection Agency
ND = Not Detected

Preliminary Continuous Air Monitoring Results Summary Tables
Monitoring Period: 03/17/22 01:51 to 03/17/22 19:54
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Air Monitoring Station 01: Southeast Site Entrance					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Period Concentration Range**	**Average of All 8-Hour Periods**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	**Yes**	0.009 to 0.032	0.018
	PM_{10} (mg/m^3)	0.05 mg/m^3	No	0.010 to 0.035	0.019
AreaRAE Pro	VOC (ppm)	1 ppm	No	0.00 to 0.07	0.02
	CO (ppm)	--	No	0.0 to 0.0	0.0
	O_2 (%)	--	No	20.4 to 21.3	20.9
	H_2S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0

Air Monitoring Station 02: School					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Period Concentration Range**	**Average of All 8-Hour Periods**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	**Yes**	0.007 to 0.045	0.018
	PM_{10} (mg/m^3)	0.05 mg/m^3	No	0.007 to 0.047	0.019
AreaRAE Pro	VOC (ppm)	1 ppm	No	0.00 to 0.12	0.07
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H_2S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0

Air Monitoring Station 03: Residential					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Period Concentration Range**	**Average of All 8-Hour Periods**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	**Yes**	0.011 to 0.076	0.045
	PM_{10} (mg/m^3)	0.05 mg/m^3	**Yes**	0.012 to 0.080	0.046
AreaRAE Pro	VOC (ppm)	1 ppm	No	0.07 to 0.35	0.19
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H_2S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0

Air Monitoring Station 04: Medical Center					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Period Concentration Range**	**Average of All 8-Hour Periods**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	**Yes**	0.011 to 0.038	0.020
	PM_{10} (mg/m^3)	0.05 mg/m^3	No	0.012 to 0.044	0.022
AreaRAE Pro	VOC (ppm)	1 ppm	No	0.00 to 0.27	0.10
	CO (ppm)	--	No	0.0 to 0.3	0.0
	H_2S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0

Comments
Air monitoring measurements have been averaged over a rolling 8-hour time period and summarized above.
Start and stop times for each air monitoring instrument varies. The monitoring period is based on the earliest start time and latest stop time out of all instruments.
Air monitoring is not performed during inclement weather conditions/rain and thunderstorms.
1 - Action Levels are based on the Plainfield Walmart Distribution Center Fire Site Air Monitoring and Sampling Plan (Tetra Tech 2022).
Notes: % - Percent CO - Carbon Monoxide H_2S - Hydrogen Sulfide O_2 - Oxygen mg/m^3 - Milligrams per cubic meter PM - Particulate matter ppm - Parts per million VOC - Volatile organic compounds

Preliminary Discrete Air Monitoring Results Summary Table
Monitoring Period: 3/17/2022 00:30 through 3/17/2022 17:07
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	HCN (ppm)	VOCs (ppm)	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
		Action Levels[1]			
		0.5 ppm	1 ppm	0.05 mg/m^3	0.025 mg/m^3
A-01	3/17/2022 00:30	--	0.02	--	0.03
	3/17/2022 04:37	--	0.02	--	0.03
	3/17/2022 09:18	0.0	0	--	0.04
A-02	3/17/2022 00:44	--	0.03	--	0.03
	3/17/2022 06:47	--	0.03	--	0.04
	3/17/2022 09:30	0.0	0	0.03	0.03
A-03	3/17/2022 06:43	--	0.03	--	0.04
	3/17/2022 09:34	0.0	0	0.05	0.03
A-04	3/17/2022 06:38	--	0.02	--	0.04
	3/17/2022 09:42	0.0	0	0.04	0.03
A-05	3/17/2022 06:34	--	0.02	--	0.03
	3/17/2022 09:47	0.0	0	0.04	0.03
A-06	3/17/2022 06:31	--	0.03	--	0.03
	3/17/2022 09:52	0.0	0	0.04	0.03
A-07	3/17/2022 06:27	--	0.03	--	0.03
	3/17/2022 09:58	0.0	0	0.05	0.03
A-08	3/17/2022 06:23	--	0.03	--	0.04
	3/17/2022 10:07	0.0	0	0.04	0.03
A-09	3/17/2022 03:11	--	0.02	--	0.06
	3/17/2022 10:11	0.0	0	0.04	0.02
A-10	3/17/2022 02:02	--	0.03	--	0.09
	3/17/2022 10:24	0.0	0	0.02	0.02
A-11	3/17/2022 03:06	--	0.02	--	0.06
	3/17/2022 10:18	0.0	0	0.02	0.02
A-12	3/17/2022 01:34	--	0.03	--	0.14
	3/17/2022 10:30	--	--	--	0.02
	3/17/2022 10:31	0.0	0	0.03	0.02
B-01	3/17/2022 06:09	--	0.04	--	0.03
	3/17/2022 11:35	0.0	0	0.03	0.02
B-02	3/17/2022 06:14	--	0.03	--	0.04
	3/17/2022 11:30	0.0	0	0.02	0.03
B-03	3/17/2022 05:55	--	0.04	--	0.03
	3/17/2022 11:24	0.0	0	0.03	0.02
B-04	3/17/2022 05:59	--	0.02	--	0.04
	3/17/2022 11:11	0.0	0	0.03	0.02
B-05	3/17/2022 03:18	--	0.02	--	0.11
	3/17/2022 10:54	0.0	0	0.03	0.02
B-06	3/17/2022 02:40	--	0.03	--	0.09
	3/17/2022 10:40	0.0	0	0.03	0.02
Bridgeport School	3/17/2022 04:54	--	0.03	--	0.03
	3/17/2022 17:07	0.0	0	0.01	0.01
Brooke Knoll Village	3/17/2022 03:37	--	0.03	--	0.09
C-01	3/17/2022 05:44	--	0.04	--	0.06
C-02	3/17/2022 05:48	--	0.04	--	0.05

See notes on last page.

Preliminary Discrete Air Monitoring Results Summary Table
Monitoring Period: 3/17/2022 00:30 through 3/17/2022 17:07
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	HCN (ppm)	VOCs (ppm)	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
		Action Levels[1]			
		0.5 ppm	1 ppm	0.05 mg/m^3	0.025 mg/m^3
C-03	3/17/2022 05:39	--	0.04	--	0.05
C-04	3/17/2022 03:27	--	0.02	--	0.08
C-05	3/17/2022 03:33	--	0.02	--	0.07
C-06	3/17/2022 03:22	--	0.02	--	0.08
C-07	3/17/2022 04:06	--	0.02	--	0.03
C-08	3/17/2022 03:53	--	0.02	--	0.05
C-09	3/17/2022 03:58	--	0.02	--	0.06
D-01	3/17/2022 14:01	0.0	0	0.02	0.02
D-02	3/17/2022 14:12	0.0	0	0.02	0.01
D-03	3/17/2022 14:30	0.0	0	0.01	0.01
D-04	3/17/2022 14:47	0.0	0	0.03	0.02
E-01	3/17/2022 16:22	0.0	0	0.02	0.01
E-02	3/17/2022 16:14	0.0	0	0.01	0.01
E-03	3/17/2022 16:05	0.0	0	0.01	0.01
E-04	3/17/2022 15:58	0.0	0	0.02	0.01
E-05	3/17/2022 15:04	0.0	0	0.02	0.02
E-06	3/17/2022 14:55	0.0	0	0.03	0.02
F-01	3/17/2022 16:32	0.0	0	0.01	0.01
	3/17/2022 16:48	0.0	0	0.01	0.01
F-02	3/17/2022 16:42	0.0	0	0.01	0.01
Indiana University West	3/17/2022 03:47	--	0.03	--	0.03
Wellbrooke of Avon	3/17/2022 03:44	--	0.02	--	0.03

Notes:

= measurement greater than the Action Level.

1 - Action Levels are based on the Plainfield Walmart Distribution Center Fire Site Air Monitoring and Sampling Plan (Tetra Tech 2022).

% - Percent
CO - Carbon Monoxide
HCN - Hydrogen Cyanide
LEL - Lower Explosive Limit
mg/m^3 - milligrams per kilogram
O_2 - Oxygen
PM - Particulate matter
ppm - Parts per million
VOC - Volatile organic compounds

Preliminary Continuous Air Monitoring Results Summary Table
Monitoring Period: 03/17/22 19:00 to 03/18/22 08:00
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Air Monitoring Station 01: Southeast Site Entrance					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Rolling TWA Range**	**Average of All 8-Hour Rolling TWAs**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	**Yes**	0.042 to 0.080	0.062
	PM_{10} (mg/m^3)	0.05 mg/m^3	**Yes**	0.043 to 0.106	0.071
AreaRAE Pro	VOC (ppm)	1 ppm	No	0.00 to 0.00	0.00
	CO (ppm)	--	No	0.0 to 0.1	0.0
	O_2 (%)	--	No	21.4 to 21.6	21.5
	H_2S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0

Air Monitoring Station 02: School					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Rolling TWA Range**	**Average of All 8-Hour Rolling TWAs**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	**Yes**	0.048 to 0.100	0.067
	PM_{10} (mg/m^3)	0.05 mg/m^3	**Yes**	0.049 to 0.101	0.068
AreaRAE Pro	VOC (ppm)	1 ppm	No	0.00 to 0.14	0.07
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H_2S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0

Air Monitoring Station 03: Residential					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Rolling TWA Range**	**Average of All 8-Hour Rolling TWAs**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	**Yes**	0.041 to 0.055	0.048
	PM_{10} (mg/m^3)	0.05 mg/m^3	**Yes**	0.042 to 0.056	0.049
AreaRAE Pro	VOC (ppm)	1 ppm	No	0.28 to 0.37	0.33
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H_2S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0

Comments
Air monitoring measurements have been averaged over a rolling 8-hour time period and summarized above.
Start and stop times for each air monitoring instrument varies. The monitoring period is based on the earliest start time and latest stop time out of all instruments.
Air monitoring is not performed during inclement weather conditions/rain and thunderstorms.
1 - Action Levels are based on the Plainfield Walmart Distribution Center Fire Site Air Monitoring and Sampling Plan (Tetra Tech 2022).
Notes: % - Percent CO - Carbon Monoxide H_2S - Hydrogen Sulfide O_2 - Oxygen mg/m^3 - Milligrams per cubic meter PM - Particulate matter ppm - Parts per million TWA - Time-weighted average VOC - Volatile organic compounds

Preliminary Continuous Air Monitoring Results Summary Table
Monitoring Period: 03/17/22 19:00 to 03/18/22 08:00
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Air Monitoring Station 04: Medical Center					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Rolling TWA Range**	**Average of All 8-Hour Rolling TWAs**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	**Yes**	0.043 to 0.050	0.046
	PM_{10} (mg/m^3)	0.05 mg/m^3	**Yes**	0.044 to 0.052	0.048
AreaRAE Pro	VOC (ppm)	1 ppm	No	0.00 to 0.00	0.00
	CO (ppm)	--	No	0.0 to 0.0	0.0
	H_2S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0

Air Monitoring Station 05: Northeast Site Entrance					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Rolling TWA Range**	**Average of All 8-Hour Rolling TWAs**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	**Yes**	0.061 to 0.095	0.084
	PM_{10} (mg/m^3)	0.05 mg/m^3	**Yes**	0.062 to 0.097	0.086
AreaRAE Pro	VOC (ppm)	1 ppm	No	0.00 to 0.00	0.00
	CO (ppm)	--	No	0.0 to 0.9	0.3
	O_2 (%)	--	No	20.1 to 20.2	20.2
	H_2S (ppm)	0.1 ppm	No	0.0 to 0.0	0.0

Comments
Air monitoring measurements have been averaged over a rolling 8-hour time period and summarized above.
Start and stop times for each air monitoring instrument varies. The monitoring period is based on the earliest start time and latest stop time of all instruments.
Air monitoring is not performed during inclement weather conditions/rain and thunderstorms.
1 - Action Levels are based on the Plainfield Walmart Distribution Center Fire Site Air Monitoring and Sampling Plan (Tetra Tech 2022).
Notes: % - Percent CO - Carbon Monoxide H_2S - Hydrogen Sulfide O_2 - Oxygen mg/m^3 - Milligrams per cubic meter PM - Particulate matter ppm - Parts per million TWA - Time-weighted average VOC - Volatile organic compounds

Preliminary Discrete Air Monitoring Results Summary Table
Monitoring Period: 03/17/22 17:07 to 03/18/22 13:18
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	HCN (ppm)	VOCs (ppm)	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
		Action Levels[1]			
		0.5 ppm	1 ppm	0.05 mg/m^3	0.025 mg/m^3
A-01	3/18/2022 02:27	--	0	0.13	0.12
	3/18/2022 07:06	0	0	0.07	0.05
A-02	3/18/2022 02:12	--	0	0.07	0.05
	3/18/2022 04:53	0	0	0.09	0.08
A-03	3/18/2022 02:08	--	0	0.04	0.04
	3/18/2022 04:50	0	0	0.05	0.04
A-04	3/18/2022 02:02	--	0	0.1	0.06
	3/18/2022 04:47	0	0	0.04	0.04
A-05	3/18/2022 01:56	--	0	0.05	0.04
	3/18/2022 04:43	0	0	0.05	0.04
A-06	3/18/2022 01:52	--	0	0.05	0.04
	3/18/2022 04:39	0	0	0.04	0.04
A-07	3/18/2022 01:47	--	0	0.05	0.03
	3/18/2022 04:35	0	0	0.04	0.03
A-08	3/18/2022 01:37	--	0	0.05	0.04
	3/18/2022 04:32	0	0	0.04	0.04
A-09	3/18/2022 01:42	--	0	0.05	0.04
	3/18/2022 04:28	0	0	0.05	0.04
A-10	3/18/2022 01:23	--	0	0.04	0.03
	3/18/2022 04:20	0	0	0.04	0.04
A-11	3/18/2022 01:31	--	0	0.04	0.04
	3/18/2022 04:24	0	0	0.05	0.04
A-12	3/18/2022 04:11	0	0	0.04	0.04
B-01	3/18/2022 05:09	0	0	0.06	0.05
	3/18/2022 12:10	--	0	0.03	0.03
B-02	3/18/2022 05:15	0	0	0.04	0.03
	3/18/2022 12:22	--	0	0.03	0.02
B-03	3/18/2022 04:59	0	0	0.04	0.04
	3/18/2022 12:36	--	0	0.03	0.03
B-04	3/18/2022 05:03	0	0	0.04	0.04
	3/18/2022 12:41	--	0	0.03	0.02
B-05	3/18/2022 06:05	0	0	0.05	0.04
	3/18/2022 12:50	--	0	0.02	0.02
B-06	3/18/2022 06:51	0	0	0.03	0.03
	3/18/2022 13:18	--	0	0.02	0.02
C-01	3/18/2022 05:23	0	0	0.05	0.04
	3/18/2022 10:45	--	0	0.02	0.02
C-02	3/18/2022 05:18	0	0	0.04	0.04
	3/18/2022 10:52	--	0	0.02	0.02
C-03	3/18/2022 05:28	0	0	0.03	0.03

Notes: See last page.

Preliminary Discrete Air Monitoring Results Summary Table
Monitoring Period: 03/17/22 17:07 to 03/18/22 13:18
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	HCN (ppm)	VOCs (ppm)	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
		Action Levels[1]			
		0.5 ppm	1 ppm	0.05 mg/m^3	0.025 mg/m^3
C-03	3/18/2022 10:59	--	0	0.02	0.02
C-04	3/18/2022 06:18	0	0	0.04	0.04
	3/18/2022 11:14	--	0	0.03	0.02
C-05	3/18/2022 06:15	0	0	0.03	0.03
	3/18/2022 11:09	--	0	0.02	0.02
C-06	3/18/2022 06:11	0	0	0.05	0.05
	3/18/2022 11:19	--	0	0.03	0.03
C-07	3/18/2022 06:28	0	0	0.04	0.04
	3/18/2022 11:24	--	0	0.03	0.03
C-08	3/18/2022 06:48	0	0	0.06	0.04
	3/18/2022 11:37	--	0	0.03	0.03
C-09	3/18/2022 06:38	0	0	0.04	0.04
	3/18/2022 11:41	--	0	0.03	0.03
D-01	3/17/2022 22:45	0	0	0.04	0
D-02	3/17/2022 22:37	0	0	0.08	0.07
D-03	3/17/2022 22:27	0	0	0.04	0.03
D-04	3/17/2022 22:17	0	0	0.21	0.19
E-01	3/18/2022 00:35	0	0	0.04	0.03
E-02	3/18/2022 01:00	0	0	0.05	0.06
E-03	3/18/2022 01:11	0	0	0.08	0.07
E-04	3/18/2022 01:18	0	0	0.05	0.04
E-05	3/18/2022 01:27	0	0	0.07	0.05
E-06	3/18/2022 01:34	0	0	0.23	0.14
F-01	3/18/2022 02:06	0	0	0.05	0.05
F-02	3/18/2022 01:54	0	0	0.06	0.07
F-03	3/18/2022 01:48	0	0	0.04	0.04
NW-01	3/18/2022 02:35	--	0	0.08	0.06
NW-02	3/18/2022 02:40	--	0	0.13	0.08
NW-03	3/18/2022 02:45	--	0	0.08	0.07
NW-04	3/18/2022 02:49	--	0	0.05	0.04
NW-05	3/18/2022 02:54	--	0	0.04	0.04
	3/18/2022 03:00	--	0	0.04	0.04
NW-06	3/18/2022 03:31	--	0	0.08	0.05
NW-07	3/18/2022 03:47	--	0	0.08	0.06
W-01	3/18/2022 04:10	--	0	0.09	0.08
W-02	3/18/2022 04:15	--	0	0.08	0.06
W-03	3/18/2022 04:22	--	0	0.09	0.05
Avon Middle School South	3/18/2022 03:25	--	0	0.05	0.04

Notes: See last page.

Preliminary Discrete Air Monitoring Results Summary Table
Monitoring Period: 03/17/22 17:07 to 03/18/22 13:18
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	HCN (ppm)	VOCs (ppm)	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
		Action Levels[1]			
		0.5 ppm	1 ppm	0.05 mg/m^3	0.025 mg/m^3
Bridgeport School	3/17/2022 17:07	0	0	0.01	0.01
Brooke Knoll Village	3/18/2022 06:24	0	0	0.04	0.04
Countryside Meadows Senior Living	3/18/2022 03:07	--	0	0.09	0.06
Harmony Assisted Living Center	3/18/2022 03:41	--	0	0.06	0.05
Indiana University West	3/17/2022 23:05	0	0	0.02	0.01
Kingsway Christian School	3/18/2022 03:11	--	0	0.21	0.1
Sycamore Elementary School	3/18/2022 03:18	--	0	0.08	0.05
Wellbrooke of Avon	3/17/2022 22:59	0	0	0.03	0.02

Notes:

= measurement greater than the Action Level.

1 - Action Levels are based on the Plainfield Walmart Distribution Center Fire Site Air Monitoring and Sampling Plan (Tetra Tech 2022).

HCN - Hydrogen cyanide
mg/m^3 - milligrams per kilogram
PM - Particulate matter
ppm - Parts per million
VOC - Volatile organic compounds

Preliminary Discrete Air Monitoring Results Summary Table
Monitoring Period: 03/18/22 23:42 to 03/19/22 15:08
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	HCN (ppm)	VOCs (ppm)	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
		Action Levels[1]			
		0.5 ppm	1 ppm	0.05 mg/m^3	0.025 mg/m^3
A-01	3/18/2022 23:42	0	0.01	0.01	0
A-02	3/19/2022 00:37	0	0.01	0.01	0.01
A-03	3/19/2022 00:40	0	0	0.01	0.01
A-04	3/19/2022 00:45	0	0.01	0.01	0.01
A-05	3/19/2022 00:50	0	0.01	0.01	0.01
A-06	3/19/2022 00:54	0	0.01	0.01	0.01
A-07	3/19/2022 00:59	0	0	0.01	0.01
A-08	3/19/2022 01:04	0	0.01	0.01	0.01
A-09	3/19/2022 01:11	0	0	0.01	0.01
A-10	3/19/2022 01:22	0	0	0.01	0.01
A-11	3/19/2022 01:16	0	0	0.01	0.01
A-12	3/19/2022 01:27	0	0	0.01	0.01
B-01	3/19/2022 11:47	--	0	0	0
	3/19/2022 01:01	--	0	0.1	0.1
B-02	3/19/2022 01:11	--	0	0.04	0.03
	3/19/2022 11:52	--	0	0	0
B-03	3/19/2022 12:20	--	0	0	0
	3/19/2022 01:17	--	0	0.09	0.09
B-04	3/19/2022 15:08	--	0	0	0
	3/19/2022 01:21	--	0	0.03	0.03
B-05	3/19/2022 02:36	--	0	0.02	0.02
B-06	3/19/2022 02:58	--	0	0.02	0.02
C-01	3/19/2022 01:32	--	0	0.01	0.01
	3/19/2022 11:37	--	0	0	0
C-02	3/19/2022 01:36	--	0	0.02	0.02
	3/19/2022 11:46	--	0	0	0
C-03	3/19/2022 11:53	--	0	0	0
	3/19/2022 01:47	--	0	0.02	0.01
C-04	3/19/2022 02:04	--	0	0.02	0.02
	3/19/2022 12:04	--	0	0	0
C-05	3/19/2022 02:07	--	0	0.01	0.01
	3/19/2022 12:08	--	0	0	0
C-06	3/19/2022 02:15	--	0	0.02	0.02
	3/19/2022 12:12	--	0	0	0
C-07	3/19/2022 02:22	--	0	0.02	0.02
	3/19/2022 12:16	--	0	0	0
C-08	3/19/2022 02:49	--	0	0.02	0.02
	3/19/2022 12:23	--	0	0	0
C-09	3/19/2022 12:29	--	0	0	0
	3/19/2022 03:06	--	0	0.04	0.03
D-01	3/19/2022 02:28	0	0.02	0.03	0.03
	3/19/2022 06:35	--	0	0.02	0.02
	3/19/2022 11:01	0	0	0	0

Preliminary Discrete Air Monitoring Results Summary
Table Monitoring Period: 03/18/22 23:42 to 03/19/22 15:08
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	HCN (ppm)	VOCs (ppm)	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
		Action Levels[1]			
		0.5 ppm	1 ppm	0.05 mg/m^3	0.025 mg/m^3
D-02	3/19/2022 10:53	0	0	0	0
	3/19/2022 06:44	--	0	0.02	0.02
	3/19/2022 02:38	0	0.01	0.01	0.01
D-03	3/19/2022 10:43	0	0	0	0
	3/19/2022 07:45	--	0	0.01	0.01
	3/19/2022 02:47	0	0.01	0.01	0.01
D-04	3/19/2022 10:31	0	0	0	0
	3/19/2022 02:55	0	0	0.01	0.01
E-01	3/19/2022 04:30	0	0	0.01	0.01
	3/19/2022 09:19	--	0	0.04	0.04
	3/19/2022 06:08	--	0	0.01	0.01
E-02	3/19/2022 04:21	0	0	0.03	0.03
	3/19/2022 09:25	--	0	0.01	0.01
E-03	3/19/2022 03:53	0	0	0.01	0.01
	3/19/2022 09:41	--	0	0.02	0.02
E-04	3/19/2022 03:41	0	0	0.01	0.01
	3/19/2022 09:49	--	0	0.01	0.01
E-05	3/19/2022 09:59	--	0	0.01	0.01
	3/19/2022 03:09	0	0.01	0.01	0.01
E-06	3/19/2022 03:04	0	0	0.01	0.01
	3/19/2022 10:06	--	0	0.01	0.01
F-01	3/19/2022 11:32	--	0	0	0
	3/19/2022 04:09	0	0	0.01	0.01
	3/19/2022 05:18	0	0	0.02	0.02
F-02	3/19/2022 11:13	--	0	0	0
	3/19/2022 03:34	0	0.01	0.01	0.01
F-03	3/19/2022 03:28	0	0.01	0.01	0.01
	3/19/2022 07:10	--	0	0.09	0.08
	3/19/2022 09:56	--	0	0	0
Avon High School	3/18/2022 23:54	0	0.01	0.01	0.01
	3/19/2022 14:30	--	--	0	0
	3/18/2022 18:51	0	--	--	--
	3/18/2022 18:37	--	0	0.03	0.03
Avon Intermediate School	3/18/2022 19:02	0	0	0.03	0.03
	3/19/2022 00:16	0	0.01	0.01	0.01
Avon Middle School South	3/19/2022 00:23	0	0.01	0.01	0.01
	3/18/2022 19:09	0	0	0.04	0.04
Bridgeport School	3/19/2022 05:14	0	0	0.02	0.02
	3/18/2022 22:08	0	0	0.01	0.01
	3/19/2022 04:01	0	0	0.01	0.01
	3/19/2022 11:41	0	0	0	0
Brooke Knoll Village	3/19/2022 11:25	0	0	0	0
	3/18/2022 22:59	0	0.01	0.01	0.01

Preliminary Discrete Air Monitoring Results Summary
Table Monitoring Period: 03/18/22 23:42 to 03/19/22 15:08
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	HCN (ppm)	VOCs (ppm)	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
		Action Levels[1]			
		0.5 ppm	1 ppm	0.05 mg/m^3	0.025 mg/m^3
Cedar Elementary School	3/19/2022 00:05	0	0.01	0.01	0.01
	3/18/2022 18:53	0	0	0.17	0.19
Countryside Meadows Senior Center	3/18/2022 23:24	0	0.01	0.05	0.05
	3/18/2022 19:28	0	0	0.04	0.04
Hickory Elementary School	3/19/2022 00:01	0	0.01	0.01	0.01
	3/18/2022 18:43	0	0	0.1	0.07
Indiana University West	3/18/2022 22:53	0	0.01	0.01	0.01
	3/19/2022 11:12	0	0	0	0
E Perimeter	3/19/2022 15:30	--	--	0.01	0.01
Maple Elementary School	3/19/2022 00:28	0.5	0.01	0.01	0.01
	3/18/2022 19:16	0	0	0.06	0.06
Station 03: Residential	3/18/2022 23:45	--	0.02	0.01	0.01
Sycamore Elementary School	3/18/2022 23:10	0	0	0.01	0.01
	3/18/2022 19:33	0	0	0.04	0.03
Wellbrooke of Avon	3/19/2022 06:29	--	0	0.02	0.02
	3/19/2022 11:18	0	0	0	0
	3/18/2022 22:40	0	0.01	0.01	0.01

Notes:

= measurement greater than the Action Level.

1 - Action Levels are based on the Plainfield Walmart Distribution Center Fire Site Air Monitoring and Sampling Plan (Tetra Tech 2022).

% - Percent
mg/m^3 - milligrams per kilogram
PM - Particulate matter
ppm - Parts per million
VOC - Volatile organic compounds

Preliminary Continuous Air Monitoring Results Summary Table
Monitoring Period: 03/20/22 07:38 to 03/20/22 17:30
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Upwind Station 01					
Monitoring Period: 03/20/22 07:53 to 03/20/22 15:53					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Rolling TWA Range**	**Average of All 8-Hour Rolling TWAs**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	No	0.000 to 0.003	0.000
	PM_{10} (mg/m^3)	0.05 mg/m^3	No	0.000 to 0.003	0.000

Downwind Station 01					
Monitoring Period: 03/20/22 07:38 to 03/20/22 15:37					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Rolling TWA Range**	**Average of All 8-Hour Rolling TWAs**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	No	0.000 to 0.020	0.004
	PM_{10} (mg/m^3)	0.05 mg/m^3	No	0.000 to 0.021	0.005

Downwind Station 02					
Monitoring Period: 03/20/22 08:52 to 03/20/22 16:51					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Rolling TWA Range**	**Average of All 8-Hour Rolling TWAs**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	No	0.004 to 0.016	0.005
	PM_{10} (mg/m^3)	0.05 mg/m^3	No	0.004 to 0.017	0.005

Downwind Station 03					
Monitoring Period: 03/20/22 09:32 to 03/20/22 17:30					
Instrument	**Analyte**	**Action Level[1]**	**Action Level Exceeded?**	**8-Hour Rolling TWA Range**	**Average of All 8-Hour Rolling TWAs**
DustTrak	$PM_{2.5}$ (mg/m^3)	0.025 mg/m^3	No	0.002 to 0.004	0.003
	PM_{10} (mg/m^3)	0.05 mg/m^3	No	0.003 to 0.005	0.004

Comments
Air monitoring measurements have been averaged over a rolling 8-hour time period and summarized above.
Air monitoring is not performed during inclement weather conditions/rain and thunderstorms.
1 - Action Levels are based on the Plainfield Walmart Distribution Center Fire Site Air Monitoring and Sampling Plan (Tetra Tech 2022).
Notes: mg/m^3 - Milligrams per cubic meter PM - Particulate matter TWA - Time-weighted average

Preliminary Discrete Air Monitoring Results Summary Table
Monitoring Period: 03/20/22 10:02 to 03/20/22 15:57
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	Wind Position	Smoke Observed?	Odor Observed?	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
					Action Levels[1]	
					0.05 mg/m^3	0.025 mg/m^3
East Perimeter	3/20/2022 13:10	--	--	--	0.002	0.003
	3/20/2022 15:15	--	--	--	0.002	0.002
	3/20/2022 10:02	--	No	Yes	--	0.022
	3/20/2022 10:02	--	No	Yes	0.024	--
	3/20/2022 13:39	Downwind	No	No	0.003	0.003
	3/20/2022 15:46	Downwind	No	No	0.005	0.003
North Perimeter	3/20/2022 13:21	--	--	--	0.001	0.003
	3/20/2022 15:06	--	--	--	0.003	0.001
	3/20/2022 10:35	Crosswind	No	No	0.006	0.006
	3/20/2022 13:31	Crosswind	No	No	0.002	0.002
	3/20/2022 15:54	Crosswind	Yes	Yes	0.087	0.086
Northeast Perimeter	3/20/2022 13:17	--	--	--	0.008	0.004
	3/20/2022 15:09	--	--	--	0.005	0.004
	3/20/2022 10:40	Downwind	No	No	--	0.007
	3/20/2022 10:40	Downwind	No	No	0.007	--
	3/20/2022 13:35	Downwind	No	No	0.004	0.003
	3/20/2022 15:51	Downwind	No	No	0.004	0.004
Northwest Perimeter	3/20/2022 13:24	--	--	--	0.002	0.001
	3/20/2022 15:02	--	--	--	0.002	0.001
	3/20/2022 10:32	Upwind	No	No	0.005	--
	3/20/2022 13:28	Upwind	No	No	0.002	0.002
	3/20/2022 15:57	Upwind	No	No	0.003	0.003
	3/20/2022 10:32	Upwind	No	No	--	0.004
South Perimeter	3/20/2022 13:40	--	--	--	0.002	0.001
	3/20/2022 15:22	--	--	--	0.002	0.002
	3/20/2022 10:15	Crosswind	No	No	--	0.006
	3/20/2022 13:16	Crosswind	No	No	--	0.002
	3/20/2022 10:15	Crosswind	No	No	0.007	--
	3/20/2022 13:16	Crosswind	No	No	0.005	--
	3/20/2022 15:36	Crosswind	No	No	0.004	0.004
Southeast Perimeter	3/20/2022 13:03	--	--	--	0.002	0.002
	3/20/2022 15:18	--	--	--	0.002	0.002
	3/20/2022 10:10	Crosswind	No	No	0.009	0.008
	3/20/2022 13:43	Crosswind	No	No	0.002	0.002
	3/20/2022 15:40	Crosswind	No	No	0.003	0.003
Southwest Perimeter	3/20/2022 13:31	--	--	--	0.001	0.001
	3/20/2022 15:24	--	--	--	0.002	0.002
	3/20/2022 10:19	Crosswind	No	No	0.004	--
	3/20/2022 10:19	Crosswind	No	No	--	0.004
	3/20/2022 13:20	Upwind	No	No	--	0.001
	3/20/2022 13:21	Upwind	No	No	0.004	--
	3/20/2022 15:33	Upwind	No	No	0.003	0.003

Preliminary Discrete Air Monitoring Results Summary Table
Monitoring Period: 03/20/22 10:02 to 03/20/22 15:57
Plainfield Warehouse Fire Site
Plainfield, Hendricks County, Indiana

Location	Date/Time	Wind Position	Smoke Observed?	Odor Observed?	PM_{10} (mg/m^3)	$PM_{2.5}$ (mg/m^3)
					Action Levels[1]	
					0.05 mg/m^3	0.025 mg/m^3
West Perimeter	3/20/2022 13:27	--	--	--	0.001	0.001
	3/20/2022 14:58	--	--	--	0.002	0.001
	3/20/2022 10:26	Upwind	No	No	0.004	0.002
	3/20/2022 13:24	Upwind	No	No	0.002	0.002
	3/20/2022 15:29	Upwind	No	No	0.004	0.002

Notes:
= measurement greater than the Action Level.

1 - Action Levels are based on the Plainfield Walmart Distribution Center Fire Site Air Monitoring and Sampling Plan (Tetra Tech 2022).

mg/m^3 - milligrams per kilogram
PM - Particulate matter

APPENDIX C
START FIELD LOGBOOK NOTES

INCH

MADE IN TACOMA — SINCE 1916 —
Rite in the Rain®
— DEFYING MOTHER NATURE —

Name _____

START FIELD LOGBOOK

Logbook Tracking Number CLV028

Site Name PLAINFIELD WAREHOUSE FIRE SITE

Issue to WES WILLIAMS

Date Issued 3/16/22

TO-TOLIN # 0032-0001DC104

MADE USA · RITE GREEN · Archival paper

RiteintheRain.com

CONTENTS

03/17/22 Plainfield Fire ER

0100: START. B. Hartwell and H. Kish are onsite with ER van and equipment. ——— HK

0130: AreaRAE's 1, 2, & 3 are fully calibrated. ARP 003-1 H2S: 10.1, ARP 003-4 O2: 18.4% H2S: 0.3 LEL: 0.3, ARP 003-3 H2S: 10.1, VOC: 100 ppm.

0200: OSC, Jackie Love, asks start to put out dust traks and AreaRAE's at distribution center, elementary, residential neighborhood and urgent care. ——— HK

0230: Dust Trak, AreaRAE 003-1, and viper linc setup at distribution center. ——— HK

0300: Dust Trak, AreaRAE 003-3, and viper linc setup at residential neighborhood. ——— HK

0330: Dust Trak, AreaRAE 003-4, and viper linc setup at urgent care. Plume has moved east towards Bridgeport Elmentary school. A new sensitive receptor is placed at the school to monitor air.

0400: Dust trak, AreaRAE 003-2, and viper linc setup at Bridgeport Elementary School. ——— HK

0530: Begins to prepare Summa for grab sample at urgent care. We noticed the plume had shifted and moved to a more impacted area to sample. ——— HK

0555: Summa can grab sample. TIS00006 started at -29.0 ——— HK

0649: Summa can with 8-hour flow controller, TIS00018 and TIF00011, started at -29.5 ——— HK

0715: START, Joe Roberts onsite for day shift. B. Hartwell tries to connect Viper on laptop. ——— HK

Location	AreaRAE ID	Linc ID	Direction from Fire
Distribution Center	~~[illegible]~~ 2169	201	S
Residential Neighborhood	~~003-3~~ 2172	202	E
urgent care	3170 ~~003-4~~	203	N
Elementary School	2168 ~~[illegible]~~	205	Far East

0900: B. Hartwell set up Viper.

0930: START. H. Kish and B. Hartwell OFFsite.

Heather Kish 3/17/22

3/17/22 Plainfield Warehouse Fire ER

0700 Joe Robert (START) on site.

0730 H+S meeting with Wes Williams and Alexis Enright.

0800 START separated to begin stationary monitoring location checks, mobile air monitoring of the identified transects, and data downloads of equipment that ran overnight.

1000 START continued to setup/troubleshoot VIPER.

1145 EPA tasked START with collecting solid ash/debris samples to be analyzed for Asbestos, TAL METALS & SVOCs.

1230 ~~START CONTINUED MOBILE MONITORING OF TRANSECT A, B, C. PER EPAs REQUEST START ADDED TRANSECTS D, E, & F; START ADDED THOSE TRANSECTS TO THE MOBILE MONITORING ROTATION~~ ——— WW

03/17/22 cont.

2000: START, H. Kish, D. Grams, and B. Hartwell onsite. OSC, Jackie Cole asked to deploy one more DustTrak and AreaRAE station near demo of building on East side near station 003-1.

2030 START deploys new air monitoring station at east of building (AreaRAE SN: 2178) No Lincs/Gateways on-site to hookup new location to VIPER. —BJH

2100 START maintaining power systems @ all stationary locations, START (Grams) calibrates MultiRAE Pro & Zero cals HDRX, + begins mobile monitoring transects north of the site. —BJH

2330 START (Hartwell, Kish) troubleshoot AreaRAE connectivity, deploy additional RAELINK 3 set to "Repeater Mode" @ South portion of Hospital Property.

0030 AREARAEs (5) seen in PRG, and PRGZCAP app restarted & all AR units pushing to VIPER after new run configured w/ 4 DTs & 5ARs.

0200 START begins troubleshooting all DT Link's + Gateways due to being off VIPER. LNCs 203 + 205 (Hospital + School) on-line.

03/18/22

0400 START (Grams) continues N transects of mobile monitoring locations.

Backnote: 00:00 EPA (Cole) requests set of A/M instruments for her use in performing additional mobile A/M. START provides HDRX, + she uses her EPA MultiRAE Pro, recording PID, HCN, PM2.5 + PM10 readings at locations to the West of the fire due to the wind shift. —BJH

0500 START (Hartwell, Kish) begins downloading stationary instrument data. —BJH

0800 START (Williams, Roberts, Enright) on-site for debreifing of site progress/changes.

0830 START (Grams, Kish, Hartwell) off-site. —BJH

3/18/21 (Cont.)

2000 – START (Myre, Kish, Hartwell) on-site for night-shift, get debreifed by day-shift. START (Williams, Roberts, Delong) off-site. ——— BJH

2130 START calibrates roving A/M equipment HDRXs (×2) + MultiRAE Pro's (×2). The HCN sensor won't cal. after 2 attempts, so sensor turned off. ——— BJH

2200 START begins mobile rounds after T-storms & heavy rainfall have passed. START (Myre + Kish) will rove @ West locations in circuit fashion until wind shifts, then will switch to North transect circuits. START Hartwell organizing van. EPA notifies START of desire to collect water quality parameters w/ EPA's YSI instrument @ surface water off AllPoints Pkwy small bridge. EPA will be in touch, when State personnel are on-site for that during night-shift. Driver for that activity is a recently observed fish-kill in that drain/SW-body ——— BJH

2300 START (Hartwell) begins roving A/M

APPENDIX D
PHOTOGRAPHIC DOCUMENTATION LOG

Photographic Documentation

Client: U.S. Environmental Protection Agency (EPA) Region 5
Site Name: Plainfield Warehouse Fire Site
Location: Plainfield, Hendricks County, Indiana

Prepared by: Tetra Tech, Inc.
TO-TOLIN: F0032-0001DC104
Date: March 16 through March 20, 2022

Photograph No. 1 **Date:** March 16, 2022 **Description:** A view of the fire burning in the warehouse. **Direction:** West	
Photograph No. 2 **Date:** March 17, 2022 **Description:** A view of firefighters spraying water onto the fire. **Direction:** Northwest	

Photographic Documentation

Client: U.S. Environmental Protection Agency (EPA) Region 5
Site Name: Plainfield Warehouse Fire Site
Location: Plainfield, Hendricks County, Indiana

Prepared by: Tetra Tech, Inc.
TO-TOLIN: F0032-0001DC104
Date: March 16 through March 20, 2022

Photograph No. 3 **Date:** March 17, 2022 **Description:** A view of the warehouse burning from 0.75 miles to the northeast. **Direction:** Southwest	
Photograph No. 4 **Date:** March 17, 2022 **Description:** A view of air monitoring station 01 consisting of a DustTrak DRX and AreaRAE Pro. **Direction:** North	

Photographic Documentation

Client: U.S. Environmental Protection Agency (EPA) Region 5
Site Name: Plainfield Warehouse Fire Site
Location: Plainfield, Hendricks County, Indiana

Prepared by: Tetra Tech, Inc.
TO-TOLIN: F0032-0001DC104
Date: March 16 through March 20, 2022

Photograph No. 5 **Date:** March 17, 2022 **Description:** A view of air monitoring station 02 consisting of a DustTrak DRX, AreaRAE Pro, and an 8-hour SUMMA cannister collecting an air sample (PWDF-AA-01-031722) for VOC analysis. **Direction:** Southeast	
Photograph No. 6 **Date:** March 17, 2022 **Description:** A view of air monitoring station 03 consisting of a DustTrak DRX and AreaRAE Pro. Air sample PWDF-AA-Grab-01-031722 was collected from this location for VOC analysis. **Direction:** West	

Photographic Documentation

Client: U.S. Environmental Protection Agency (EPA) Region 5
Site Name: Plainfield Warehouse Fire Site
Location: Plainfield, Hendricks County, Indiana

Prepared by: Tetra Tech, Inc.
TO-TOLIN: F0032-0001DC104
Date: March 16 through March 20, 2022

Photograph No. 7 **Date:** March 17, 2022 **Description:** A view of air monitoring station 04 consisting of a DustTrak DRX and AreaRAE Pro. **Direction:** Northeast	
Photograph No. 8 **Date:** March 17, 2022 **Description:** An example of debris carried into the surrounding neighborhoods by the smoke plume. **Direction:** Overview	

Photographic Documentation

Client: U.S. Environmental Protection Agency (EPA) Region 5
Site Name: Plainfield Warehouse Fire Site
Location: Plainfield, Hendricks County, Indiana

Prepared by: Tetra Tech, Inc.
TO-TOLIN: F0032-0001DC104
Date: March 16 through March 20, 2022

Photograph No. 9 **Date:** March 18, 2022 **Description:** An example of debris carried into the surrounding neighborhoods by the smoke plume, approximately 9 miles to the northeast. **Direction:** Overview	
Photograph No. 10 **Date:** March 18, 2022 **Description:** An example of debris sampled for asbestos analysis (sample PWDF-WS-12-031822). **Direction:** Overview	

Photographic Documentation

Client: U.S. Environmental Protection Agency (EPA) Region 5
Site Name: Plainfield Warehouse Fire Site
Location: Plainfield, Hendricks County, Indiana

Prepared by: Tetra Tech, Inc.
TO-TOLIN: F0032-0001DC104
Date: March 16 through March 20, 2022

Photograph No. 11 **Date:** March 18, 2022 **Description:** A view of firefighters attempting to extinguish the fire. **Direction:** Northwest	
Photograph No. 12 **Date:** March 18, 2022 **Description:** An example of the damage created by the fire. **Direction:** West	

ATTACHMENT 1

LABORATORY ANALYTICAL REPORTS

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

LABORATORY REPORT

March 23, 2022

Wes Williams
Tetra Tech, Inc.
677 Engle Rd., Ste. L
Middleburg, OH 44130

RE: Plainfield Warehouse Fire ER

Dear Wes:

Enclosed are the results of the samples submitted to our laboratory on March 18, 2022. For your reference, these analyses have been assigned our service request number P2201204.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Sue Anderson at 3:35 pm, Mar 23, 2022

Sue Anderson
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: Tetra Tech, Inc.
Project: Plainfield Warehouse Fire ER

Service Request No: P2201204

CASE NARRATIVE

The samples were received intact under chain of custody on March 18, 2022 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.3 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-008
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Tetra Tech, Inc. Service Request: P2201204

Project ID: Plainfield Warehouse Fire ER

Date Received: 3/18/2022

Time Received: 10:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pfl (psig)	TO-15 - VOC Cans
PWDF-AA-Grab-01-031722	P2201204-001	Air	3/17/2022	05:55	TTS00006	-2.96	3.66	X
PWDF-AA-01-031722	P2201204-002	Air	3/17/2022	15:08	TTS00018	-1.75	3.86	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. P 2201204

Company Name & Address (Reporting Information)
Tetra Tech 677 Engle Rd. Ste: L
Middleburg, OH 44130

Project Name
Plainfield Warehous Fire ER

Project Number

ALS Contact:

Analysis Method

Project Manager
Wes Williams

P.O. # / Billing Information

Phone
216-470-8109

Fax

Email Address for Result Reporting
Wes.Williams@Tetratech.com

Sampler (Print & Sign) WES WILLIAMS

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO-15		Comments e.g. Actual Preservative or specific instructions
PWDF-AA-Grab-01-031722	1	3/17/22	0555	TT500006	—	-29	-8		X		TAT ASAP Per Emergency Response.
PWDF-AA-01-031722	2	3/17/22	1508	TT500018	TTF00011	-29.5	-3.5		X		

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Report Tier Levels - please select

Tier I - Results (Default if not specified) ____ Tier III (Results + QC & Calibration Summaries) ____
Tier II (Results + QC Summaries) ____ Tier IV (Data Validation Package) 10% Surcharge X

EDD required (Yes) / No Scribe
Type: _____ Units: _____

Chain of Custody Seal: (Circle)
INTACT BROKEN (ABSENT)

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	3/17/22	1900			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
			[signature]	3-18-22	1000

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: Tetra Tech, Incorporated Work order: P2201204

Project: Plainfield Warehouse Fire ER

Sample(s) received on: 3/18/22 Date opened: 3/18/22 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2201204-001.01	6.0L Canister					
P2201204-002.01	6.0L Canister					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Tetra Tech, Inc.**
Client Sample ID: **PWDF-AA-Grab-01-031722** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P2201204-001

Test Code: EPA TO-15 Date Collected: 3/17/22
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 3/18/22
Analyst: Topacio Zavala Date Analyzed: 3/19/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: TTS00006

Initial Pressure (psig): -2.96 Final Pressure (psig): 3.66

Container Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**5.1**	0.81	**3.0**	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	0.83	**0.48**	0.17	
74-87-3	Chloromethane	**0.45**	0.33	**0.22**	0.16	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.84	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.17	ND	0.067	
106-99-0	1,3-Butadiene	ND	0.33	ND	0.15	
74-83-9	Bromomethane	ND	0.33	ND	0.084	
75-00-3	Chloroethane	ND	0.33	ND	0.12	
64-17-5	Ethanol	**84**	7.8	**45**	4.1	
75-05-8	Acetonitrile	ND	1.6	ND	0.93	
107-02-8	Acrolein	ND	1.6	ND	0.68	
67-64-1	Acetone	**18**	8.1	**7.7**	3.4	
75-69-4	Trichlorofluoromethane	**1.1**	0.81	**0.20**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	**3.4**	1.6	**1.4**	0.63	
107-13-1	Acrylonitrile	ND	1.6	ND	0.72	
75-35-4	1,1-Dichloroethene	ND	0.17	ND	0.043	
75-09-2	Methylene Chloride	ND	0.81	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.83	ND	0.26	
76-13-1	Trichlorotrifluoroethane	ND	0.84	ND	0.11	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.55	
156-60-5	trans-1,2-Dichloroethene	ND	0.17	ND	0.043	
75-34-3	1,1-Dichloroethane	ND	0.17	ND	0.042	
1634-04-4	Methyl tert-Butyl Ether	ND	0.83	ND	0.23	
108-05-4	Vinyl Acetate	ND	7.8	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	1.6	ND	0.53	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Tetra Tech, Inc.**
Client Sample ID: **PWDF-AA-Grab-01-031722** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P2201204-001

Test Code: EPA TO-15 Date Collected: 3/17/22
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 3/18/22
Analyst: Topacio Zavala Date Analyzed: 3/19/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: TTS00006

Initial Pressure (psig): -2.96 Final Pressure (psig): 3.66

Container Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.17	ND	0.043	
141-78-6	Ethyl Acetate	ND	3.3	ND	0.91	
110-54-3	n-Hexane	**11**	0.83	**3.0**	0.23	
67-66-3	Chloroform	ND	0.17	ND	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	1.6	ND	0.53	
107-06-2	1,2-Dichloroethane	ND	0.17	ND	0.042	
71-55-6	1,1,1-Trichloroethane	ND	0.17	ND	0.031	
71-43-2	Benzene	**2.1**	0.17	**0.67**	0.054	
56-23-5	Carbon Tetrachloride	**0.38**	0.17	**0.061**	0.027	
110-82-7	Cyclohexane	ND	1.7	ND	0.50	
78-87-5	1,2-Dichloropropane	ND	0.17	ND	0.037	
75-27-4	Bromodichloromethane	ND	0.17	ND	0.026	
79-01-6	Trichloroethene	ND	0.17	ND	0.032	
123-91-1	1,4-Dioxane	ND	0.81	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.42	
142-82-5	n-Heptane	ND	0.83	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.83	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	1.7	ND	0.42	
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.17	ND	0.031	
108-88-3	Toluene	**6.7**	0.81	**1.8**	0.22	
591-78-6	2-Hexanone	ND	1.7	ND	0.42	
124-48-1	Dibromochloromethane	ND	0.17	ND	0.020	
106-93-4	1,2-Dibromoethane	ND	0.17	ND	0.022	
123-86-4	n-Butyl Acetate	ND	1.7	ND	0.36	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Tetra Tech, Inc.**
Client Sample ID: **PWDF-AA-Grab-01-031722** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P2201204-001

Test Code: EPA TO-15 Date Collected: 3/17/22
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 3/18/22
Analyst: Topacio Zavala Date Analyzed: 3/19/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: TTS00006

Initial Pressure (psig): -2.96 Final Pressure (psig): 3.66

Container Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.83	ND	0.18	
127-18-4	Tetrachloroethene	**0.29**	0.17	**0.043**	0.025	
108-90-7	Chlorobenzene	ND	0.81	ND	0.18	
100-41-4	Ethylbenzene	ND	0.81	ND	0.19	
179601-23-1	m,p-Xylenes	**2.1**	1.7	**0.49**	0.40	
75-25-2	Bromoform	ND	0.81	ND	0.078	
100-42-5	Styrene	ND	0.81	ND	0.19	
95-47-6	o-Xylene	ND	0.81	ND	0.19	
111-84-2	n-Nonane	ND	0.81	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.17	ND	0.025	
98-82-8	Cumene	ND	0.81	ND	0.17	
80-56-8	alpha-Pinene	ND	0.84	ND	0.15	
103-65-1	n-Propylbenzene	ND	0.83	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.83	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.81	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.81	ND	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.33	
541-73-1	1,3-Dichlorobenzene	ND	0.81	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.81	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.83	ND	0.14	
5989-27-5	d-Limonene	ND	0.81	ND	0.15	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.6	ND	0.16	
120-82-1	1,2,4-Trichlorobenzene	ND	1.6	ND	0.21	
91-20-3	Naphthalene	ND	0.81	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.81	ND	0.076	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Tetra Tech, Inc.**
Client Sample ID: **PWDF-AA-01-031722** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P2201204-002

Test Code: EPA TO-15 Date Collected: 3/17/22
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 3/18/22
Analyst: Topacio Zavala Date Analyzed: 3/19/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: TTS00018

Initial Pressure (psig): -1.75 Final Pressure (psig): 3.86

Container Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**2.8**	0.74	**1.6**	0.43	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.5**	0.76	**0.50**	0.15	
74-87-3	Chloromethane	**0.46**	0.30	**0.22**	0.15	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.77	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.16	ND	0.062	
106-99-0	1,3-Butadiene	ND	0.30	ND	0.14	
74-83-9	Bromomethane	ND	0.30	ND	0.077	
75-00-3	Chloroethane	ND	0.30	ND	0.11	
64-17-5	Ethanol	**16**	7.2	**8.2**	3.8	
75-05-8	Acetonitrile	ND	1.4	ND	0.85	
107-02-8	Acrolein	ND	1.4	ND	0.62	
67-64-1	Acetone	**11**	7.4	**4.5**	3.1	
75-69-4	Trichlorofluoromethane	**1.2**	0.74	**0.21**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	**1.5**	1.4	**0.62**	0.58	
107-13-1	Acrylonitrile	ND	1.4	ND	0.66	
75-35-4	1,1-Dichloroethene	ND	0.16	ND	0.040	
75-09-2	Methylene Chloride	ND	0.74	ND	0.21	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.76	ND	0.24	
76-13-1	Trichlorotrifluoroethane	ND	0.77	ND	0.10	
75-15-0	Carbon Disulfide	ND	1.6	ND	0.51	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	ND	0.040	
75-34-3	1,1-Dichloroethane	ND	0.16	ND	0.039	
1634-04-4	Methyl tert-Butyl Ether	ND	0.76	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.2	ND	2.0	
78-93-3	2-Butanone (MEK)	ND	1.4	ND	0.49	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Tetra Tech, Inc.**
Client Sample ID: **PWDF-AA-01-031722** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P2201204-002

Test Code: EPA TO-15 Date Collected: 3/17/22
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 3/18/22
Analyst: Topacio Zavala Date Analyzed: 3/19/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: TTS00018

Initial Pressure (psig): -1.75 Final Pressure (psig): 3.86

Container Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.16	ND	0.040	
141-78-6	Ethyl Acetate	ND	3.0	ND	0.83	
110-54-3	n-Hexane	**1.3**	0.76	**0.37**	0.22	
67-66-3	Chloroform	ND	0.16	ND	0.032	
109-99-9	Tetrahydrofuran (THF)	ND	1.4	ND	0.49	
107-06-2	1,2-Dichloroethane	ND	0.16	ND	0.039	
71-55-6	1,1,1-Trichloroethane	ND	0.16	ND	0.029	
71-43-2	Benzene	**1.9**	0.16	**0.60**	0.049	
56-23-5	Carbon Tetrachloride	**0.40**	0.16	**0.064**	0.025	
110-82-7	Cyclohexane	ND	1.6	ND	0.46	
78-87-5	1,2-Dichloropropane	ND	0.16	ND	0.034	
75-27-4	Bromodichloromethane	ND	0.16	ND	0.023	
79-01-6	Trichloroethene	ND	0.16	ND	0.029	
123-91-1	1,4-Dioxane	ND	0.74	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.38	
142-82-5	n-Heptane	ND	0.76	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.76	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	1.6	ND	0.38	
10061-02-6	trans-1,3-Dichloropropene	ND	0.73	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.029	
108-88-3	Toluene	**3.0**	0.74	**0.80**	0.20	
591-78-6	2-Hexanone	ND	1.6	ND	0.38	
124-48-1	Dibromochloromethane	ND	0.16	ND	0.018	
106-93-4	1,2-Dibromoethane	ND	0.16	ND	0.020	
123-86-4	n-Butyl Acetate	ND	1.6	ND	0.33	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Tetra Tech, Inc.**
Client Sample ID: **PWDF-AA-01-031722** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P2201204-002

Test Code: EPA TO-15 Date Collected: 3/17/22
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 3/18/22
Analyst: Topacio Zavala Date Analyzed: 3/19/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: TTS00018

Initial Pressure (psig): -1.75 Final Pressure (psig): 3.86

Container Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.76	ND	0.16	
127-18-4	Tetrachloroethene	ND	0.16	ND	0.023	
108-90-7	Chlorobenzene	ND	0.74	ND	0.16	
100-41-4	Ethylbenzene	ND	0.74	ND	0.17	
179601-23-1	m,p-Xylenes	ND	1.6	ND	0.36	
75-25-2	Bromoform	ND	0.74	ND	0.072	
100-42-5	Styrene	ND	0.74	ND	0.17	
95-47-6	o-Xylene	ND	0.74	ND	0.17	
111-84-2	n-Nonane	ND	0.74	ND	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	ND	0.023	
98-82-8	Cumene	ND	0.74	ND	0.15	
80-56-8	alpha-Pinene	ND	0.77	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.76	ND	0.15	
622-96-8	4-Ethyltoluene	ND	0.76	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.74	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	ND	0.74	ND	0.15	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.30	
541-73-1	1,3-Dichlorobenzene	ND	0.74	ND	0.12	
106-46-7	1,4-Dichlorobenzene	ND	0.74	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.76	ND	0.13	
5989-27-5	d-Limonene	ND	0.74	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.4	ND	0.15	
120-82-1	1,2,4-Trichlorobenzene	ND	1.4	ND	0.19	
91-20-3	Naphthalene	ND	0.74	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.74	ND	0.070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Tetra Tech, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P220318-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Topacio Zavala Date Analyzed: 3/18/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.53	ND	0.11	
74-87-3	Chloromethane	ND	0.21	ND	0.10	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.54	ND	0.077	
75-01-4	Vinyl Chloride	ND	0.11	ND	0.043	
106-99-0	1,3-Butadiene	ND	0.21	ND	0.095	
74-83-9	Bromomethane	ND	0.21	ND	0.054	
75-00-3	Chloroethane	ND	0.21	ND	0.080	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	1.0	ND	0.60	
107-02-8	Acrolein	ND	1.0	ND	0.44	
67-64-1	Acetone	ND	5.2	ND	2.2	
75-69-4	Trichlorofluoromethane	ND	0.52	ND	0.093	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	1.0	ND	0.41	
107-13-1	Acrylonitrile	ND	1.0	ND	0.46	
75-35-4	1,1-Dichloroethene	ND	0.11	ND	0.028	
75-09-2	Methylene Chloride	ND	0.52	ND	0.15	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane	ND	0.54	ND	0.070	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.11	ND	0.028	
75-34-3	1,1-Dichloroethane	ND	0.11	ND	0.027	
1634-04-4	Methyl tert-Butyl Ether	ND	0.53	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Tetra Tech, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P220318-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Topacio Zavala Date Analyzed: 3/18/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.11	ND	0.028	
141-78-6	Ethyl Acetate	ND	2.1	ND	0.58	
110-54-3	n-Hexane	ND	0.53	ND	0.15	
67-66-3	Chloroform	ND	0.11	ND	0.023	
109-99-9	Tetrahydrofuran (THF)	ND	1.0	ND	0.34	
107-06-2	1,2-Dichloroethane	ND	0.11	ND	0.027	
71-55-6	1,1,1-Trichloroethane	ND	0.11	ND	0.020	
71-43-2	Benzene	ND	0.11	ND	0.034	
56-23-5	Carbon Tetrachloride	ND	0.11	ND	0.017	
110-82-7	Cyclohexane	ND	1.1	ND	0.32	
78-87-5	1,2-Dichloropropane	ND	0.11	ND	0.024	
75-27-4	Bromodichloromethane	ND	0.11	ND	0.016	
79-01-6	Trichloroethene	ND	0.11	ND	0.020	
123-91-1	1,4-Dioxane	ND	0.52	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.53	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.53	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	1.1	ND	0.27	
10061-02-6	trans-1,3-Dichloropropene	ND	0.51	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.11	ND	0.020	
108-88-3	Toluene	ND	0.52	ND	0.14	
591-78-6	2-Hexanone	ND	1.1	ND	0.27	
124-48-1	Dibromochloromethane	ND	0.11	ND	0.013	
106-93-4	1,2-Dibromoethane	ND	0.11	ND	0.014	
123-86-4	n-Butyl Acetate	ND	1.1	ND	0.23	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Tetra Tech, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P220318-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Topacio Zavala Date Analyzed: 3/18/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.53	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.11	ND	0.016	
108-90-7	Chlorobenzene	ND	0.52	ND	0.11	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.52	ND	0.050	
100-42-5	Styrene	ND	0.52	ND	0.12	
95-47-6	o-Xylene	ND	0.52	ND	0.12	
111-84-2	n-Nonane	ND	0.52	ND	0.099	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.11	ND	0.016	
98-82-8	Cumene	ND	0.52	ND	0.11	
80-56-8	alpha-Pinene	ND	0.54	ND	0.097	
103-65-1	n-Propylbenzene	ND	0.53	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.52	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.52	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.52	ND	0.087	
106-46-7	1,4-Dichlorobenzene	ND	0.52	ND	0.087	
95-50-1	1,2-Dichlorobenzene	ND	0.53	ND	0.088	
5989-27-5	d-Limonene	ND	0.52	ND	0.093	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ND	0.10	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ND	0.13	
91-20-3	Naphthalene	ND	0.52	ND	0.099	
87-68-3	Hexachlorobutadiene	ND	0.52	ND	0.049	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **Tetra Tech, Inc.**
Client Project ID: **Plainfield Warehouse Fire ER** ALS Project ID: P2201204

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Collected: 3/17/22
Analyst: Topacio Zavala Date(s) Received: 3/18/22
Sample Type: 6.0 L Silonite Canister(s) Date(s) Analyzed: 3/18 - 3/19/22
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P220318-MB	**99**	**91**	**103**	70-130	
Lab Control Sample	P220318-LCS	**99**	**89**	**108**	70-130	
Duplicate Lab Control Sample	P220318-DLCS	**98**	**91**	**109**	70-130	
PWDF-AA-Grab-01-031722	P2201204-001	**102**	**88**	**101**	70-130	
PWDF-AA-01-031722	P2201204-002	**102**	**88**	**102**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **Tetra Tech, Inc.**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P220318-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Topacio Zavala Date Analyzed: 3/18/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
115-07-1	Propene	206	215	219	**104**	**106**	56-128	2	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	208	187	189	**90**	**91**	71-112	1	25	
74-87-3	Chloromethane	206	191	192	**93**	**93**	53-126	0	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	208	194	194	**93**	**93**	62-121	0	25	
75-01-4	Vinyl Chloride	208	185	183	**89**	**88**	63-123	1	25	
106-99-0	1,3-Butadiene	206	199	203	**97**	**99**	63-135	2	25	
74-83-9	Bromomethane	206	188	193	**91**	**94**	71-112	3	25	
75-00-3	Chloroethane	206	199	202	**97**	**98**	66-117	1	25	
64-17-5	Ethanol	832	870	870	**105**	**105**	57-117	0	25	
75-05-8	Acetonitrile	202	178	178	**88**	**88**	59-131	0	25	
107-02-8	Acrolein	416	457	460	**110**	**111**	71-123	0.9	25	
67-64-1	Acetone	1,020	992	969	**97**	**95**	60-117	2	25	
75-69-4	Trichlorofluoromethane	202	184	185	**91**	**92**	71-114	1	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	400	375	370	**94**	**93**	61-124	1	25	
107-13-1	Acrylonitrile	402	395	391	**98**	**97**	65-130	1	25	
75-35-4	1,1-Dichloroethene	210	200	200	**95**	**95**	74-114	0	25	
75-09-2	Methylene Chloride	208	195	193	**94**	**93**	75-112	1	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	204	190	188	**93**	**92**	57-127	1	25	
76-13-1	Trichlorotrifluoroethane	216	212	212	**98**	**98**	73-114	0	25	
75-15-0	Carbon Disulfide	414	412	406	**100**	**98**	70-113	2	25	
156-60-5	trans-1,2-Dichloroethene	208	201	199	**97**	**96**	76-119	1	25	
75-34-3	1,1-Dichloroethane	214	203	200	**95**	**93**	70-114	2	25	
1634-04-4	Methyl tert-Butyl Ether	206	203	202	**99**	**98**	72-118	1	25	
108-05-4	Vinyl Acetate	942	1110	1080	**118**	**115**	56-137	3	25	
78-93-3	2-Butanone (MEK)	408	393	389	**96**	**95**	74-121	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Tetra Tech, Inc.**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P220318-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Topacio Zavala Date Analyzed: 3/18/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	206	200	197	**97**	**96**	73-117	1	25	
141-78-6	Ethyl Acetate	580	604	582	**104**	**100**	59-161	4	25	
110-54-3	n-Hexane	208	233	223	**112**	**107**	55-130	5	25	
67-66-3	Chloroform	210	204	201	**97**	**96**	71-114	1	25	
109-99-9	Tetrahydrofuran (THF)	404	403	395	**100**	**98**	73-114	2	25	
107-06-2	1,2-Dichloroethane	210	194	191	**92**	**91**	71-119	1	25	
71-55-6	1,1,1-Trichloroethane	208	189	188	**91**	**90**	73-119	1	25	
71-43-2	Benzene	208	201	199	**97**	**96**	72-113	1	25	
56-23-5	Carbon Tetrachloride	202	191	189	**95**	**94**	67-123	1	25	
110-82-7	Cyclohexane	412	447	435	**108**	**106**	70-119	2	25	
78-87-5	1,2-Dichloropropane	206	210	208	**102**	**101**	70-118	1	25	
75-27-4	Bromodichloromethane	208	212	208	**102**	**100**	74-119	2	25	
79-01-6	Trichloroethene	204	206	205	**101**	**100**	74-115	1	25	
123-91-1	1,4-Dioxane	206	198	195	**96**	**95**	77-124	1	25	
80-62-6	Methyl Methacrylate	410	438	432	**107**	**105**	78-126	2	25	
142-82-5	n-Heptane	206	217	213	**105**	**103**	70-119	2	25	
10061-01-5	cis-1,3-Dichloropropene	208	217	214	**104**	**103**	81-126	1	25	
108-10-1	4-Methyl-2-pentanone	412	455	439	**110**	**107**	73-129	3	25	
10061-02-6	trans-1,3-Dichloropropene	200	206	203	**103**	**102**	80-127	1	25	
79-00-5	1,1,2-Trichloroethane	208	207	202	**100**	**97**	78-117	3	25	
108-88-3	Toluene	206	180	184	**87**	**89**	70-118	2	25	
591-78-6	2-Hexanone	406	362	364	**89**	**90**	74-132	1	25	
124-48-1	Dibromochloromethane	210	190	194	**90**	**92**	69-137	2	25	
106-93-4	1,2-Dibromoethane	208	178	181	**86**	**87**	76-128	1	25	
123-86-4	n-Butyl Acetate	406	374	376	**92**	**93**	75-134	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Tetra Tech, Inc.**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER** ALS Sample ID: P220318-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Topacio Zavala Date Analyzed: 3/18/22
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
111-65-9	n-Octane	208	205	206	**99**	**99**	68-120	0	25	
127-18-4	Tetrachloroethene	212	197	200	**93**	**94**	63-130	1	25	
108-90-7	Chlorobenzene	206	193	194	**94**	**94**	70-118	0	25	
100-41-4	Ethylbenzene	206	192	192	**93**	**93**	71-123	0	25	
179601-23-1	m,p-Xylenes	416	396	398	**95**	**96**	67-127	1	25	
75-25-2	Bromoform	210	199	203	**95**	**97**	65-149	2	25	
100-42-5	Styrene	202	190	191	**94**	**95**	76-132	1	25	
95-47-6	o-Xylene	208	201	201	**97**	**97**	69-124	0	25	
111-84-2	n-Nonane	208	211	211	**101**	**101**	64-127	0	25	
79-34-5	1,1,2,2-Tetrachloroethane	208	212	211	**102**	**101**	69-128	1	25	
98-82-8	Cumene	206	197	198	**96**	**96**	69-125	0	25	
80-56-8	alpha-Pinene	210	214	216	**102**	**103**	68-129	1	25	
103-65-1	n-Propylbenzene	208	202	203	**97**	**98**	70-127	1	25	
622-96-8	4-Ethyltoluene	208	204	205	**98**	**99**	69-127	1	25	
108-67-8	1,3,5-Trimethylbenzene	208	207	207	**100**	**100**	66-129	0	25	
95-63-6	1,2,4-Trimethylbenzene	206	225	223	**109**	**108**	63-142	0.9	25	
100-44-7	Benzyl Chloride	416	454	453	**109**	**109**	73-145	0	25	
541-73-1	1,3-Dichlorobenzene	208	225	227	**108**	**109**	67-136	0.9	25	
106-46-7	1,4-Dichlorobenzene	210	206	204	**98**	**97**	63-134	1	25	
95-50-1	1,2-Dichlorobenzene	210	232	232	**110**	**110**	64-139	0	25	
5989-27-5	d-Limonene	206	236	236	**115**	**115**	63-137	0	25	
96-12-8	1,2-Dibromo-3-chloropropane	404	471	472	**117**	**117**	72-145	0	25	
120-82-1	1,2,4-Trichlorobenzene	420	446	445	**106**	**106**	62-154	0	25	
91-20-3	Naphthalene	210	181	183	**86**	**87**	62-156	1	25	
87-68-3	Hexachlorobutadiene	212	217	216	**102**	**102**	55-142	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Tetra Tech, Inc.** ALS Project ID: P2201204

Client Project ID: **Plainfield Warehouse Fire ER**

Method Blank Summary

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Lab File ID: 03182203.D

Analyst: Topacio Zavala Date Analyzed: 3/18/22

Sample Type: 6.0 L Silonite Canister(s) Time Analyzed: 22:12

Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P220318-LCS	03182204.D	22:45
Duplicate Lab Control Sample	P220318-DLCS	03182205.D	23:19
PWDF-AA-Grab-01-031722	P2201204-001	03182224.D	18:49
PWDF-AA-01-031722	P2201204-002	03182225.D	19:23

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Tetra Tech, Inc.** ALS Project ID: P2201204
Client Project ID: **Plainfield Warehouse Fire ER**

Internal Standard Area and RT Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Lab File ID: 03182201.D
Analyst: Topacio Zavala Date Analyzed: 3/18/22
Sample Type: 6.0 L Silonite Canister(s) Time Analyzed: 21:05
Test Notes:

		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	24 Hour Standard	193489		11.32		886356		13.43		169652		17.73	
	Upper Limit	270885		11.65		1240898		13.76		237513		18.06	
	Lower Limit	116093		10.99		531814		13.10		101791		17.40	
	Client Sample ID												
01	Method Blank	154812		11.30		720555		13.42		139932		17.73	
02	Lab Control Sample	165763		11.31		769393		13.43		157389		17.73	
03	Duplicate Lab Control Sample	181064		11.31		835460		13.43		164178		17.73	
04	PWDF-AA-Grab-01-031722	123796		11.30		582885		13.42		120617		17.73	
05	PWDF-AA-01-031722	122613		11.30		576030		13.42		118667		17.73	
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.
I = Internal standard not within the speicified limits.

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182224.D Vial: 14
Acq On : 19 Mar 2022 18:49 Operator: TZ/MT
Sample : P2201204-001 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:00:42 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

3/20/22

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (IS1)	11.30	130	123796	12.500 ng		-0.02
37) 1,4-Difluorobenzene (IS2)	13.42	114	582885	12.500 ng		-0.01
56) Chlorobenzene-d5 (IS3)	17.73	54	120617	12.500 ng		0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	12.15	65	216330	12.721 ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.76%			
57) Toluene-d8 (SS2)	15.88	98	638296	10.951 ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 87.60%			
73) Bromofluorobenzene (SS3)	19.11	174	233842	12.588 ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%			
Target Compounds						Qvalue
2) Propene	4.16	42	61361	3.254 ng		99
3) Dichlorodifluoromethan...	4.33	85	47765	1.533 ng		100
4) Chloromethane	4.61	50	6469	0.286 ng		97
5) 1,2-Dichloro-1,1,2,2-t...	4.90	135	1242	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.32	54	1652	0.103 ng	#	81
8) Bromomethane	5.77	94	103	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	6.47	45	629004	53.948 ng		100
11) Acetonitrile	6.72	41	7053	0.226 ng		88
12) Acrolein	6.92	56	2438	0.283 ng		98
13) Acetone	7.13	58	136674	11.717 ng	#	54
14) Trichlorofluoromethane	7.39	101	18956	0.716 ng		99
15) 2-Propanol (Isopropanol)	7.64	45	86318	2.171 ng		80
16) Acrylonitrile	7.89	53	2225	0.109 ng		94
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D. d		
19) Methylene Chloride	8.56	84	3267	0.215 ng		83
20) 3-Chloro-1-propene (Al...	8.66	41	1143	N.D.		
21) Trichlorotrifluoroethane	9.00	151	3418	0.284 ng		99
22) Carbon Disulfide	8.84	76	8846	0.171 ng		95
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D. d		
27) 2-Butanone (MEK)	10.62	72	7592	0.707 ng	#	59
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D. d		
30) Ethyl Acetate	11.43	61	5837	1.060 ng		98
31) n-Hexane	11.42	57	141158	6.751 ng	#	97
32) Chloroform	11.47	83	1944	N.D.		
34) Tetrahydrofuran (THF)	11.91	72	476	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	12.27	62	837	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	13.03	61	298	No Calib	#	
40) 1-Butanol	13.00	56	6876	No Calib	#	
41) Benzene	13.03	78	82892	1.369 ng		99
42) Carbon Tetrachloride	13.20	117	4718	0.245 ng		94
43) Cyclohexane	13.33	84	3528	0.158 ng	#	82
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	14.19	83	167	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	14.20	57	20726	0.353 ng		76
50) Methyl Methacrylate	0.00	100	0	N.D. d		

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182224.D Vial: 14
Acq On : 19 Mar 2022 18:49 Operator: TZ/MT
Sample : P2201204-001 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:00:42 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

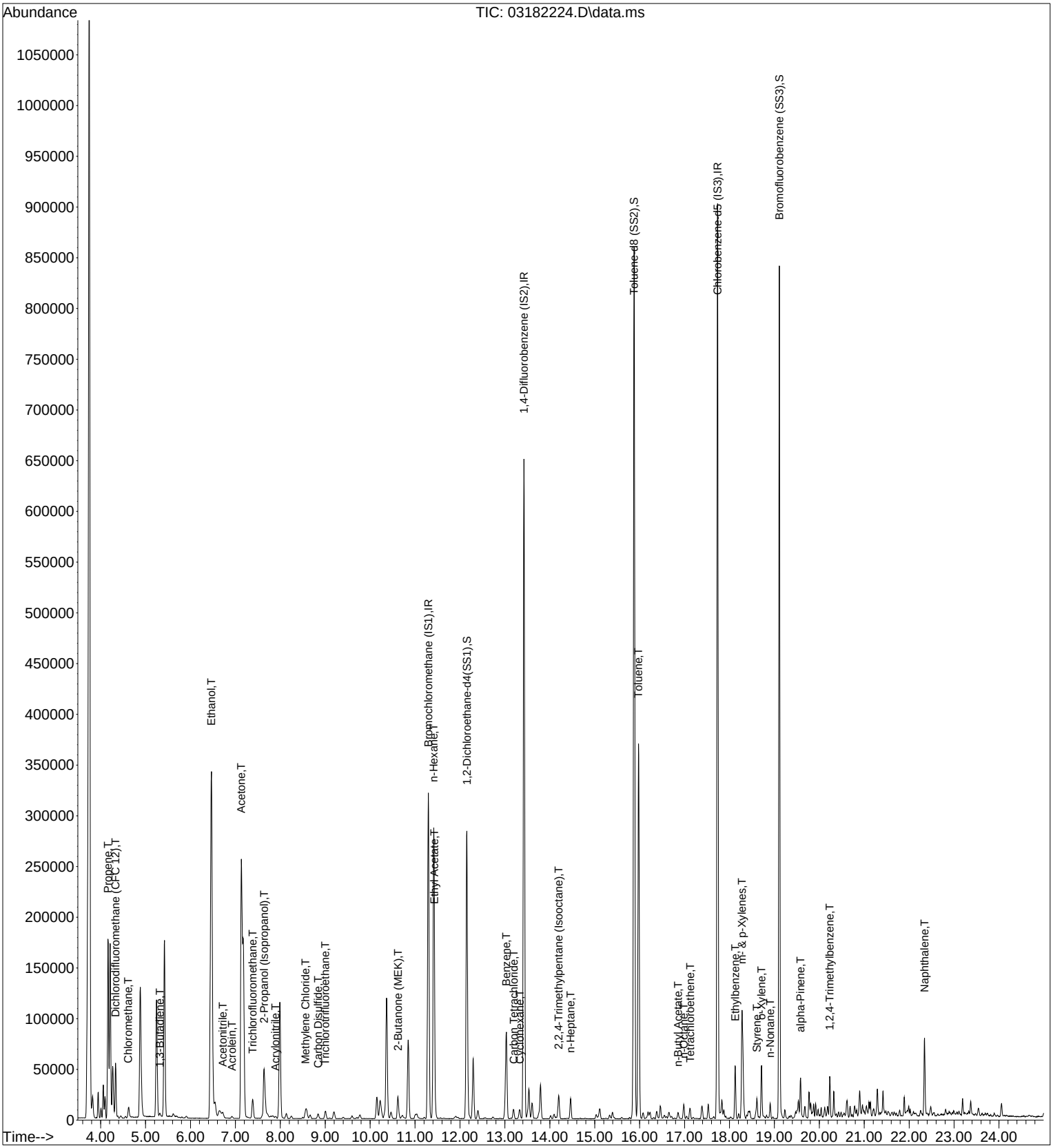
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	14.46	71	4281	0.285 ng		86
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	15.04	58	1133	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	15.98	91	300981	4.270 ng		98
59) 2-Hexanone	0.00	43	0	N.D. d		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	16.85	43	4994	0.115 ng		92
63) n-Octane	16.98	57	2291	0.163 ng		84
64) Tetrachloroethene	17.12	166	3574	0.189 ng		99
65) Chlorobenzene	17.77	112	1195	N.D.		
66) Ethylbenzene	18.13	91	39290	0.501 ng		97
67) m- & p-Xylenes	18.28	91	81407	1.364 ng		96
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	18.61	104	8817	0.181 ng		98
70) o-Xylene	18.71	91	29534	0.492 ng		94
71) n-Nonane	18.91	43	5711	0.182 ng		80
72) 1,1,2,2-Tetrachloroethane	18.76	83	409	N.D.		
74) Cumene	19.24	105	4072	N.D.		
75) alpha-Pinene	19.58	93	13934	0.378 ng		93
76) n-Propylbenzene	19.68	91	6522	N.D.		
77) 3-Ethyltoluene	19.81	105	6370	No Calib		
78) 4-Ethyltoluene	19.81	105	6370	N.D.		
79) 1,3,5-Trimethylbenzene	19.87	105	4602	N.D.		
80) alpha-Methylstyrene	20.01	118	876	No Calib	#	
81) 2-Ethyltoluene	19.87	105	4602	No Calib		
82) 1,2,4-Trimethylbenzene	20.23	105	17597	0.296 ng		87
83) n-Decane	20.24	58	262	No Calib	#	
84) Benzyl Chloride	20.35	91	171	N.D.		
85) 1,3-Dichlorobenzene	20.42	146	1423	N.D.		
86) 1,4-Dichlorobenzene	20.42	146	1423	N.D.		
87) sec-Butylbenzene	20.47	105	992	N.D.		
88) 4-Isopropyltoluene (p-...	20.61	119	2267	N.D.		
89) 1,2,3-Trimethylbenzene	20.61	105	4947	No Calib	#	
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	20.73	68	663	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	22.26	57	666	No Calib	#	
94) 1,2,4-Trichlorobenzene	22.24	180	132	N.D.		
95) Naphthalene	22.34	128	40270	0.455 ng		98
96) n-Dodecane	22.34	57	6371	No Calib	#	
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	18.32	55	1490	No Calib	#	
99) tert-Butylbenzene	20.23	119	2193	N.D.		
100) n-Butylbenzene	20.97	91	3269	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182224.D Vial: 14
Acq On : 19 Mar 2022 18:49 Operator: TZ/MT
Sample : P2201204-001 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:00:42 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182224.D Vial: 14
Acq On : 19 Mar 2022 18:49 Operator: TZ/MT
Sample : P2201204-001 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:00:42 2022 3/20/22
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

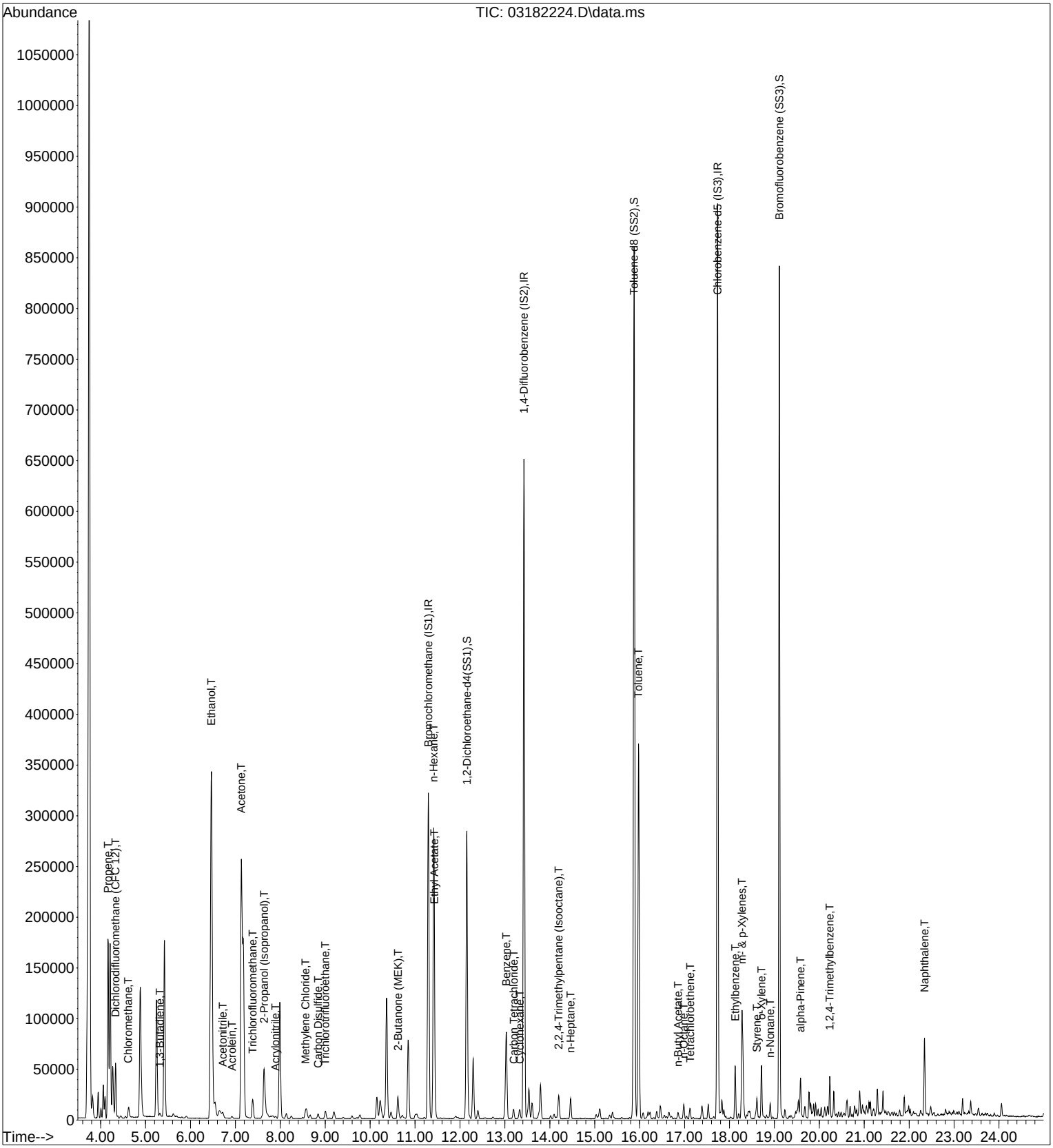
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.30	130	123796	12.500	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	13.42	114	582885	12.500	ng		-0.01
56) Chlorobenzene-d5 (IS3)	17.73	54	120617	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.15	65	216330	12.721	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.76%				
57) Toluene-d8 (SS2)	15.88	98	638296	10.951	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 87.60%				
73) Bromofluorobenzene (SS3)	19.11	174	233842	12.588	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%				
Target Compounds							Qvalue
2) Propene	4.16	42	61361	3.254	ng		99
3) Dichlorodifluoromethan...	4.33	85	47765	1.533	ng		100
4) Chloromethane	4.61	50	6469	0.286	ng		97
7) 1,3-Butadiene	5.32	54	1652	0.103	ng	#	81
10) Ethanol	6.47	45	629004	53.948	ng		100
11) Acetonitrile	6.72	41	7053	0.226	ng		88
12) Acrolein	6.92	56	2438	0.283	ng		98
13) Acetone	7.13	58	136674	11.717	ng	#	54
14) Trichlorofluoromethane	7.39	101	18956	0.716	ng		99
15) 2-Propanol (Isopropanol)	7.64	45	86318	2.171	ng		80
16) Acrylonitrile	7.89	53	2225	0.109	ng		94
19) Methylene Chloride	8.56	84	3267	0.215	ng		83
21) Trichlorotrifluoroethane	9.00	151	3418	0.284	ng		99
22) Carbon Disulfide	8.84	76	8846	0.171	ng		95
27) 2-Butanone (MEK)	10.62	72	7592	0.707	ng	#	59
30) Ethyl Acetate	11.43	61	5837	1.060	ng		98
31) n-Hexane	11.42	57	141158	6.751	ng	#	97
41) Benzene	13.03	78	82892	1.369	ng		99
42) Carbon Tetrachloride	13.20	117	4718	0.245	ng		94
43) Cyclohexane	13.33	84	3528	0.158	ng	#	82
49) 2,2,4-Trimethylpentane...	14.20	57	20726	0.353	ng		76
51) n-Heptane	14.46	71	4281	0.285	ng		86
58) Toluene	15.98	91	300981	4.270	ng		98
62) n-Butyl Acetate	16.85	43	4994	0.115	ng		92
63) n-Octane	16.98	57	2291	0.163	ng		84
64) Tetrachloroethene	17.12	166	3574	0.189	ng		99
66) Ethylbenzene	18.13	91	39290	0.501	ng		97
67) m- & p-Xylenes	18.28	91	81407	1.364	ng		96
69) Styrene	18.61	104	8817	0.181	ng		98
70) o-Xylene	18.71	91	29534	0.492	ng		94
71) n-Nonane	18.91	43	5711	0.182	ng		80
75) alpha-Pinene	19.58	93	13934	0.378	ng		93
82) 1,2,4-Trimethylbenzene	20.23	105	17597	0.296	ng		87
95) Naphthalene	22.34	128	40270	0.455	ng		98

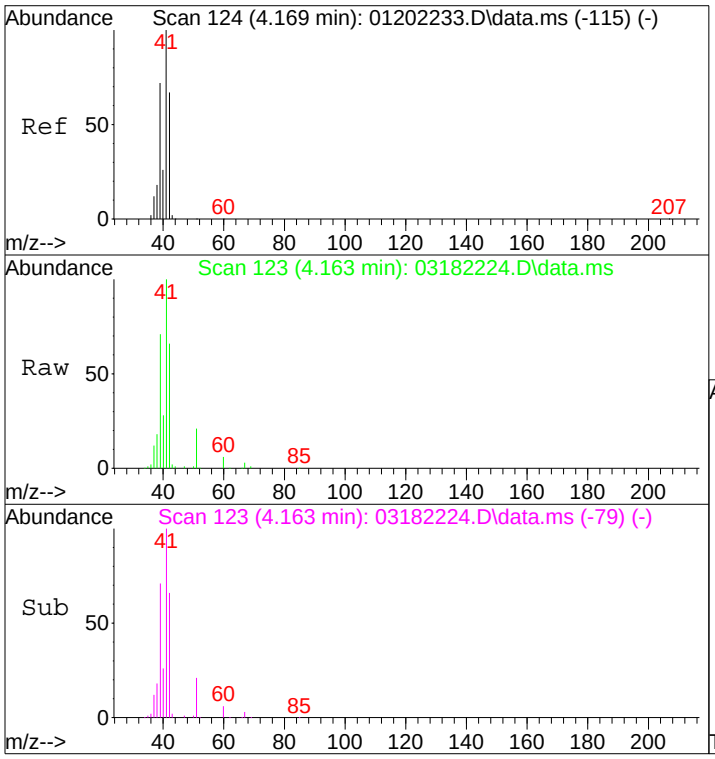
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182224.D Vial: 14
Acq On : 19 Mar 2022 18:49 Operator: TZ/MT
Sample : P2201204-001 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:00:42 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

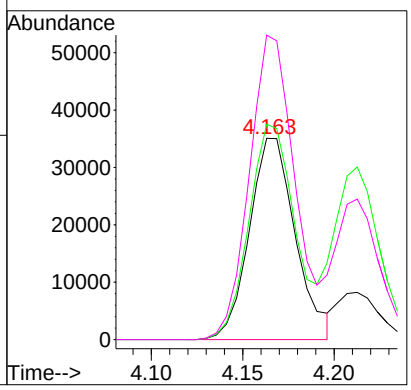


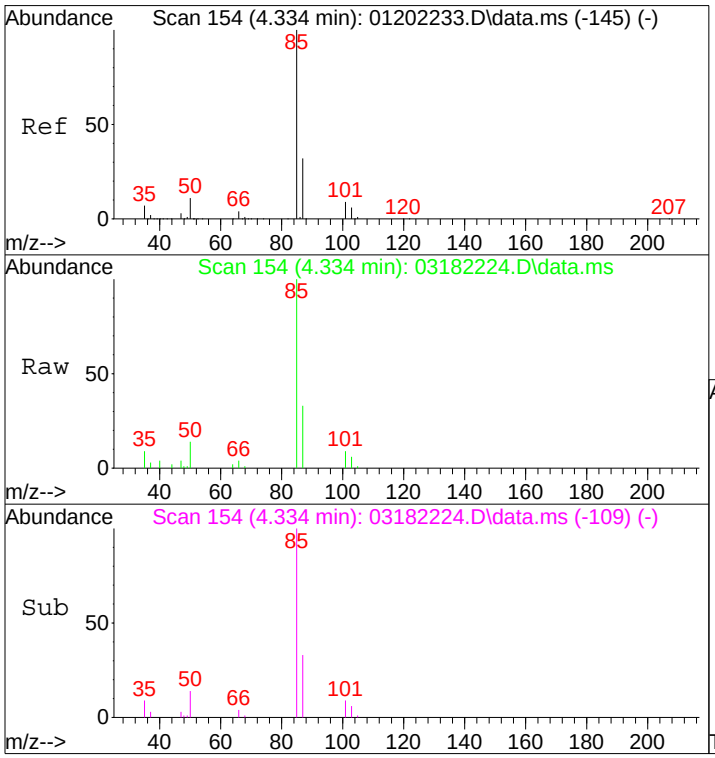


#2
Propene
Concen: 3.25 ng
RT: 4.16 min Scan# 123
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 42 Resp: 61361

Ion	Ratio	Lower	Upper
42	100		
39	108.2	89.5	129.5
41	148.0	129.4	169.4

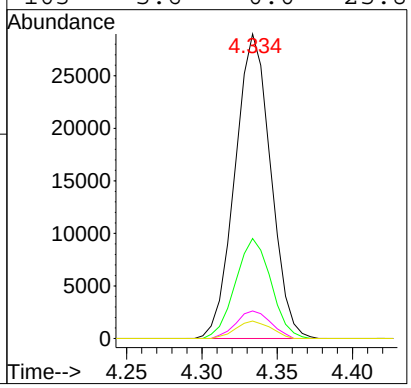


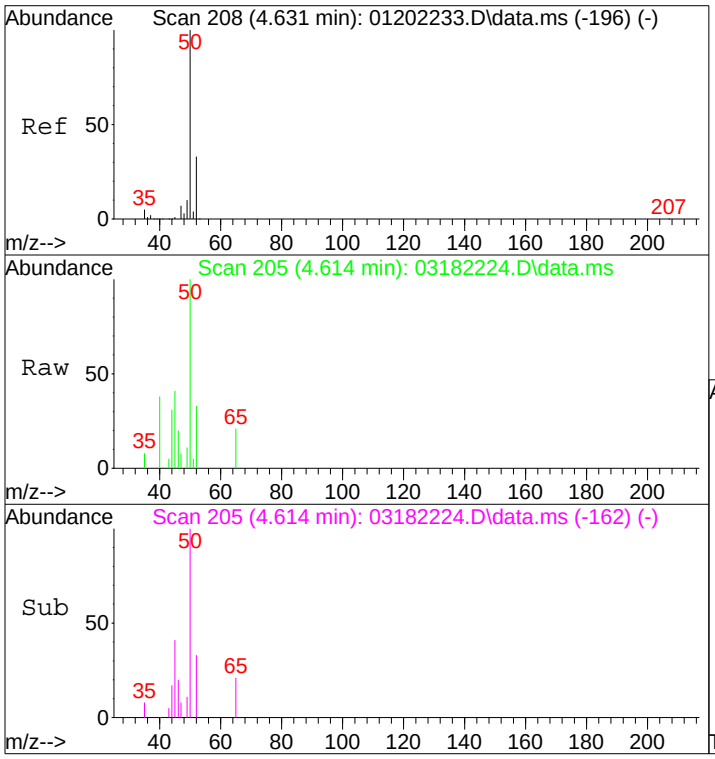


#3
Dichlorodifluoromethane (CFC 12)
Concen: 1.53 ng
RT: 4.33 min Scan# 154
Delta R.T. 0.000 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 85 Resp: 47765

Ion	Ratio	Lower	Upper
85	100		
87	32.6	12.6	52.6
101	8.8	0.0	29.1
103	5.6	0.0	25.8

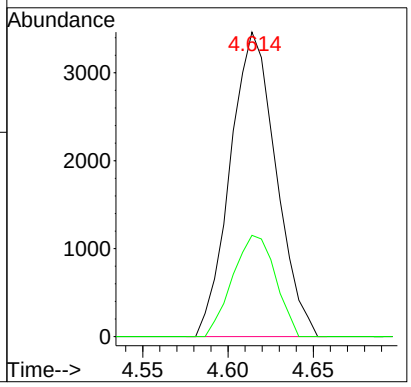


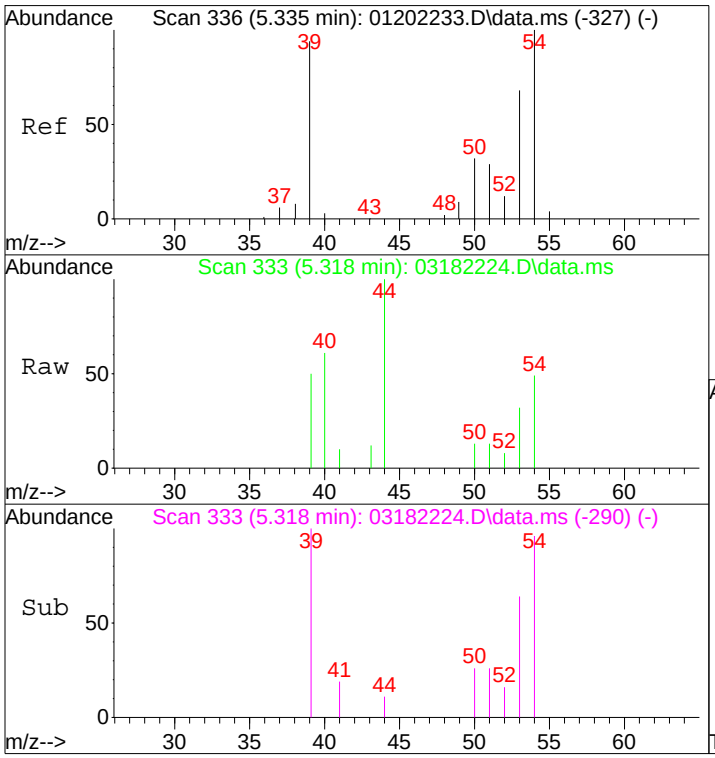


#4
Chloromethane
Concen: 0.29 ng
RT: 4.61 min Scan# 205
Delta R.T. -0.011 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 50 Resp: 6469

Ion	Ratio	Lower	Upper
50	100		
52	31.1	12.8	52.8

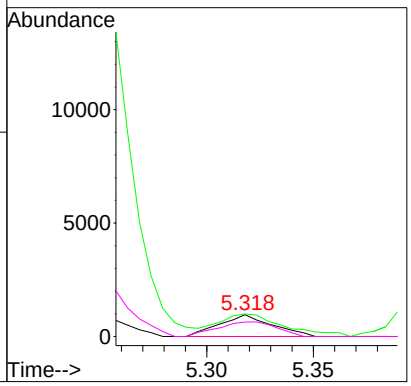


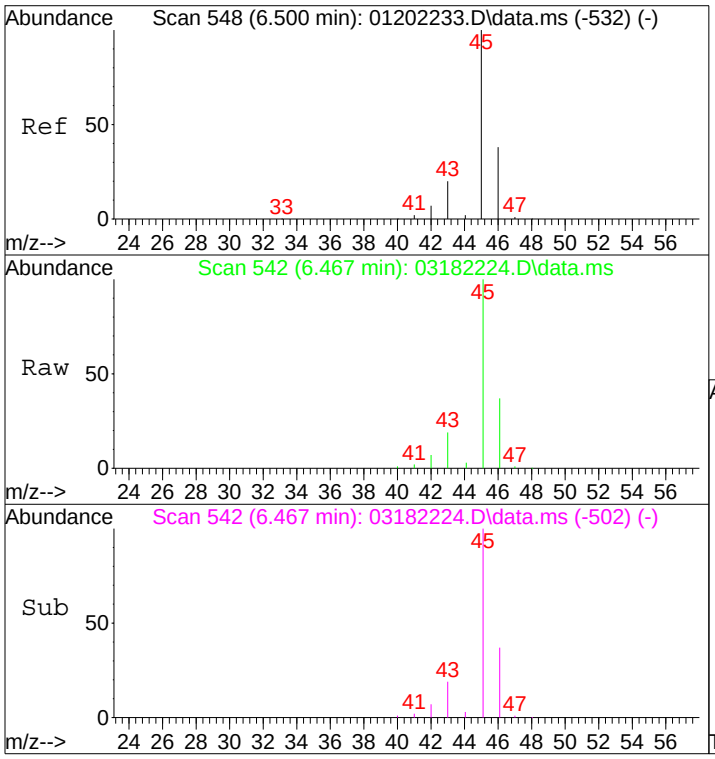


#7
1,3-Butadiene
Concen: 0.10 ng
RT: 5.32 min Scan# 333
Delta R.T. -0.011 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 54 Resp: 1652

Ion	Ratio	Lower	Upper
54	100		
39	126.9	79.2	119.2#
53	74.6	48.9	88.9

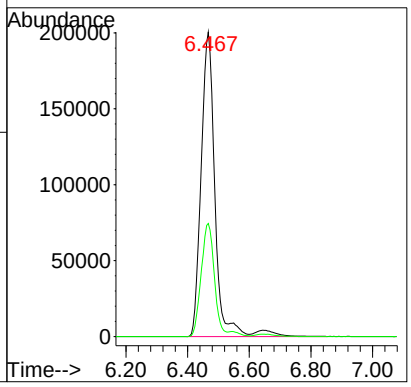


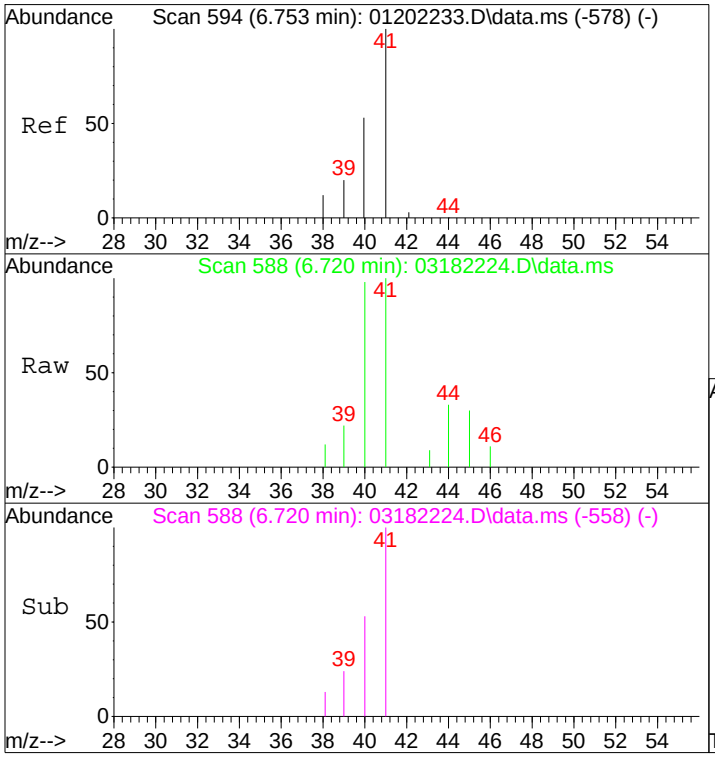


#10
Ethanol
Concen: 53.95 ng
RT: 6.47 min Scan# 542
Delta R.T. -0.028 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 45 Resp: 629004

Ion	Ratio	Lower	Upper
45	100		
46	37.5	17.6	57.6

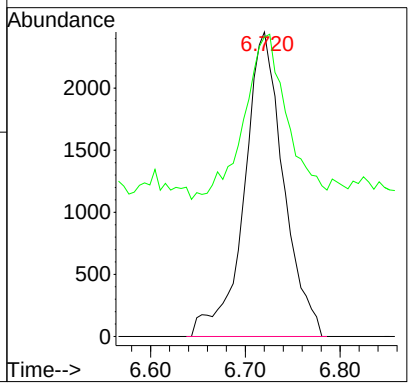


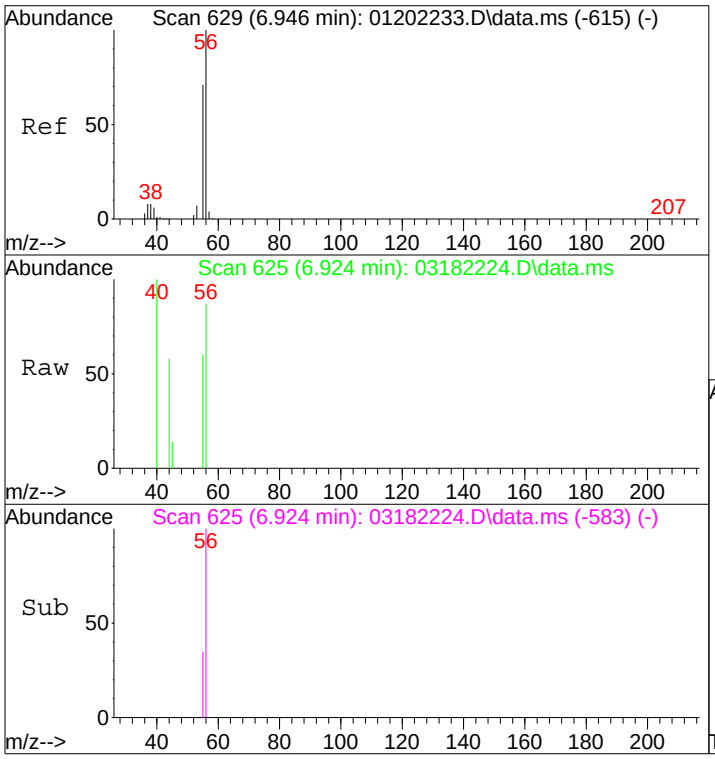


#11
Acetonitrile
Concen: 0.23 ng
RT: 6.72 min Scan# 588
Delta R.T. -0.033 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 41 Resp: 7053

Ion	Ratio	Lower	Upper
41	100		
40	61.5	32.9	72.9

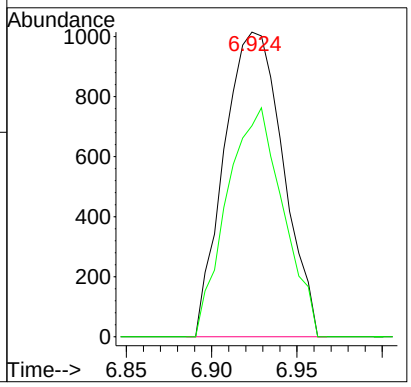


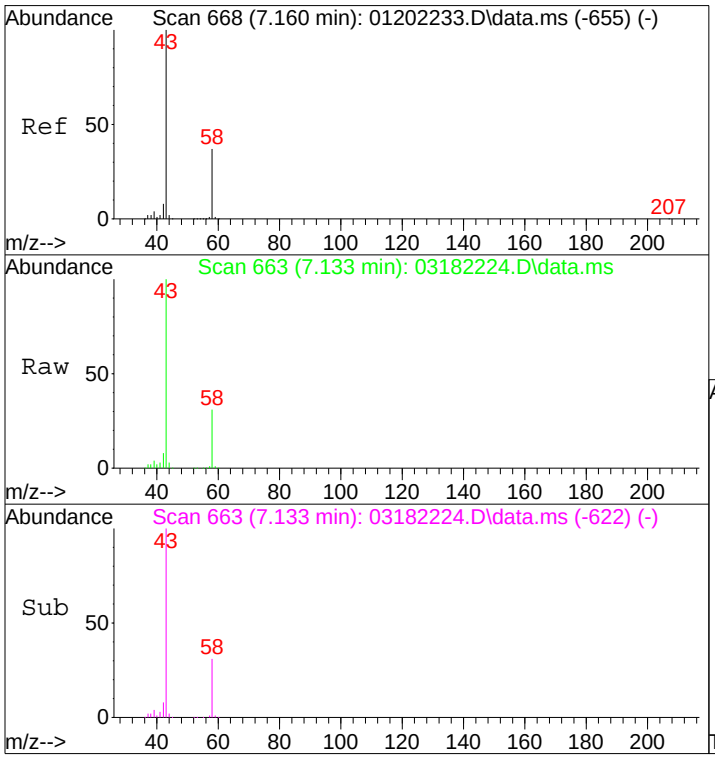


#12
Acrolein
Concen: 0.28 ng
RT: 6.92 min Scan# 625
Delta R.T. -0.016 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 56 Resp: 2438

Ion	Ratio	Lower	Upper
56	100		
55	71.5	50.2	90.2

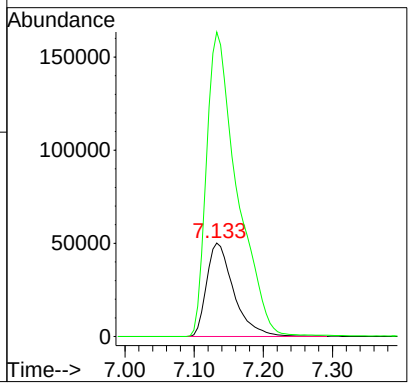


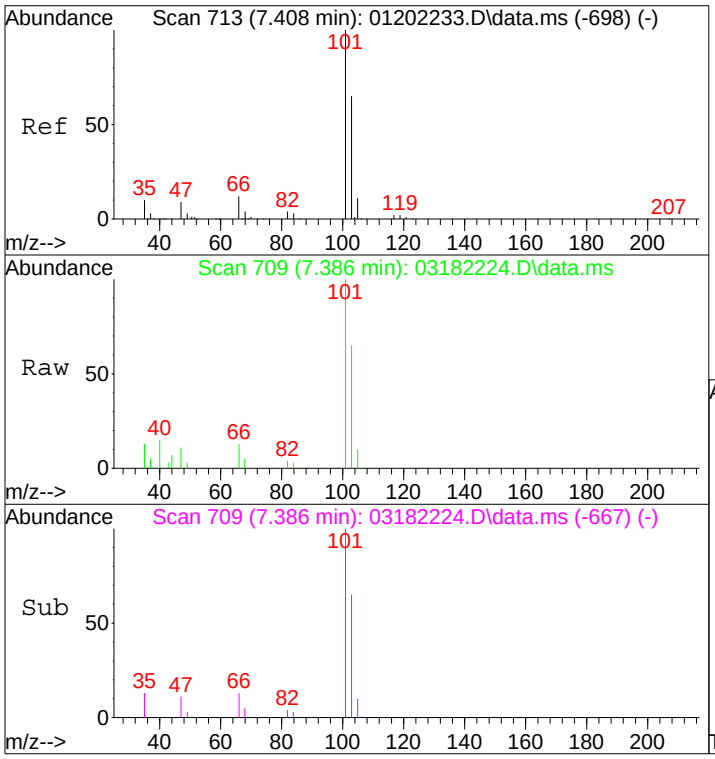


#13
Acetone
Concen: 11.72 ng
RT: 7.13 min Scan# 663
Delta R.T. -0.022 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 58 Resp: 136674

Ion	Ratio	Lower	Upper
58	100		
43	370.6	253.5	313.5#

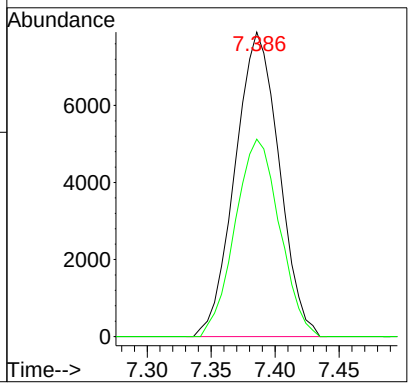


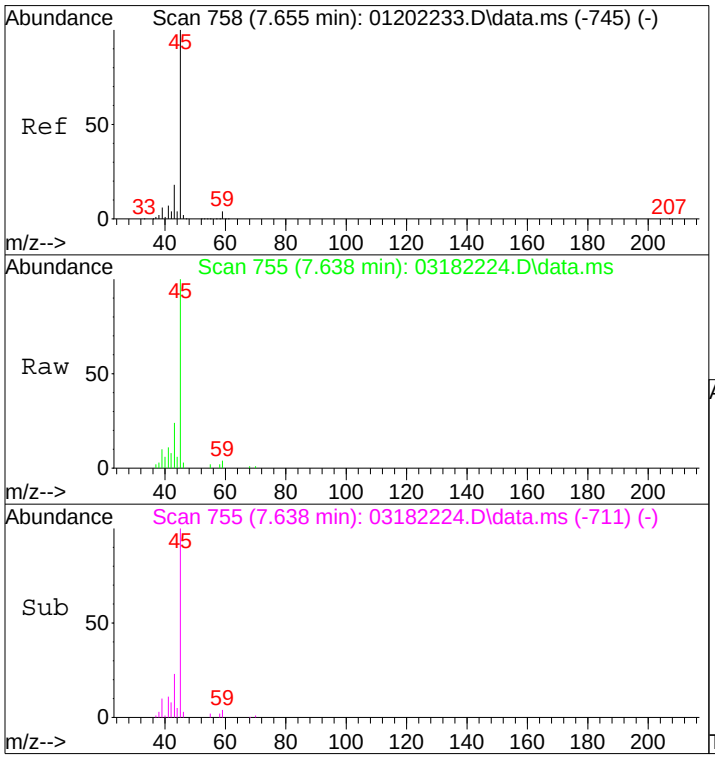


#14
Trichlorofluoromethane
Concen: 0.72 ng
RT: 7.39 min Scan# 709
Delta R.T. -0.016 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion:101 Resp: 18956

Ion	Ratio	Lower	Upper
101	100		
103	65.6	45.0	85.0

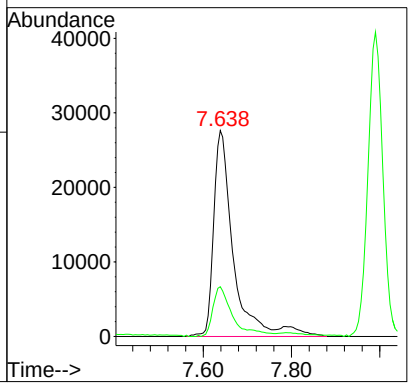


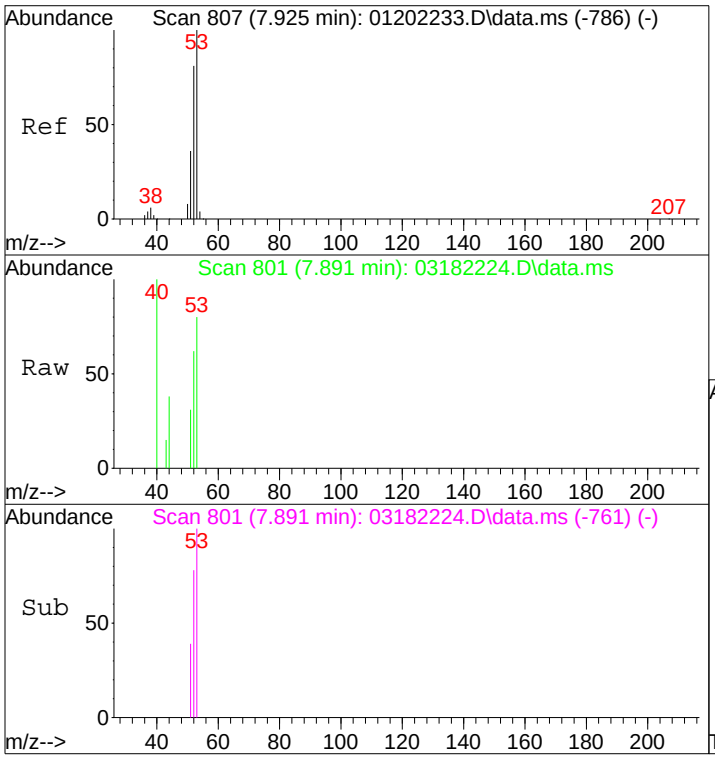


#15
2-Propanol (Isopropanol)
Concen: 2.17 ng
RT: 7.64 min Scan# 755
Delta R.T. -0.011 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 45 Resp: 86318

Ion	Ratio	Lower	Upper
45	100		
43	27.4	0.0	38.6

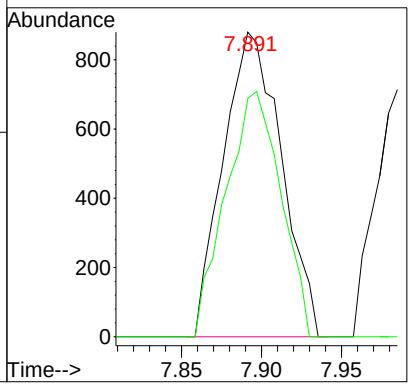


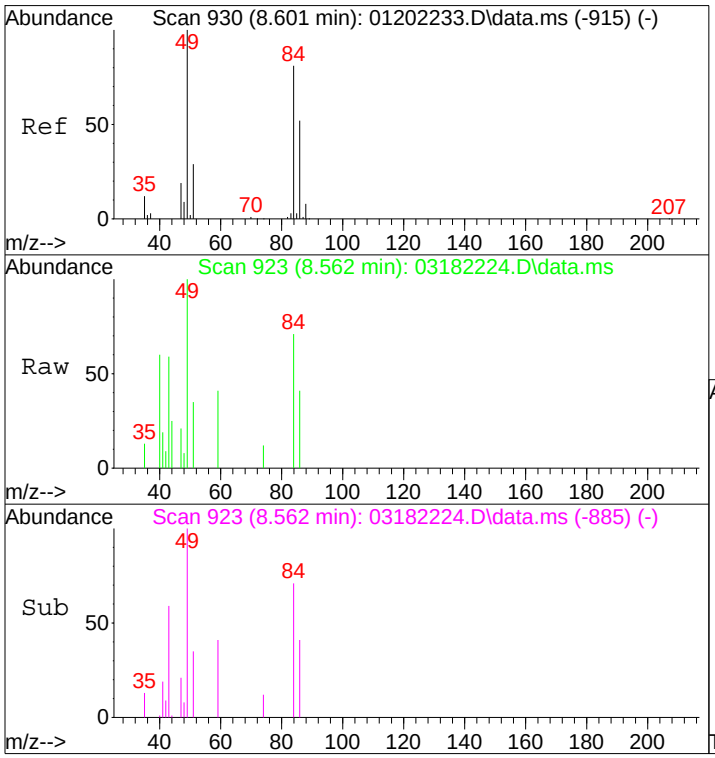


#16
Acrylonitrile
Concen: 0.11 ng
RT: 7.89 min Scan# 801
Delta R.T. -0.027 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 53 Resp: 2225

Ion	Ratio	Lower	Upper
53	100		
52	76.2	61.8	101.8

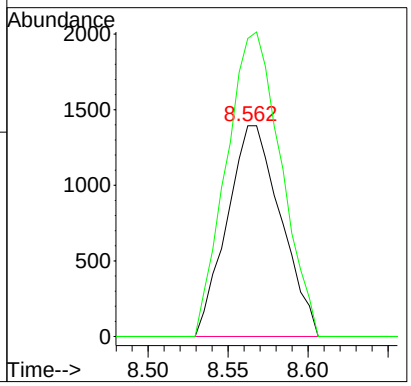


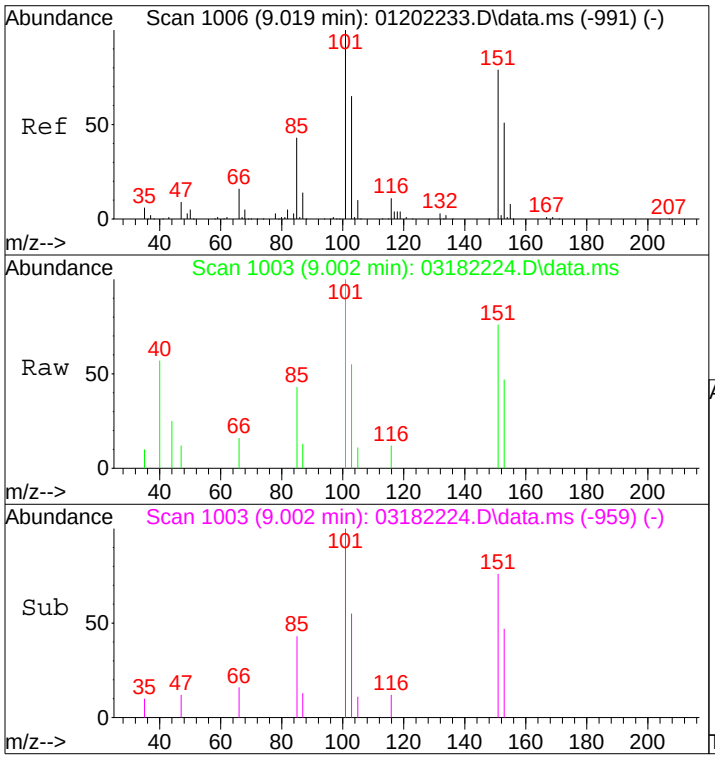


#19
Methylene Chloride
Concen: 0.21 ng
RT: 8.56 min Scan# 923
Delta R.T. -0.038 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 84 Resp: 3267

Ion	Ratio	Lower	Upper
84	100		
49	146.8	102.1	152.1

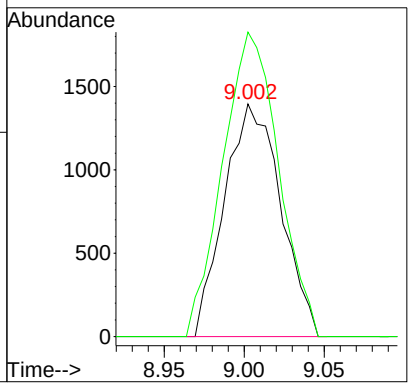


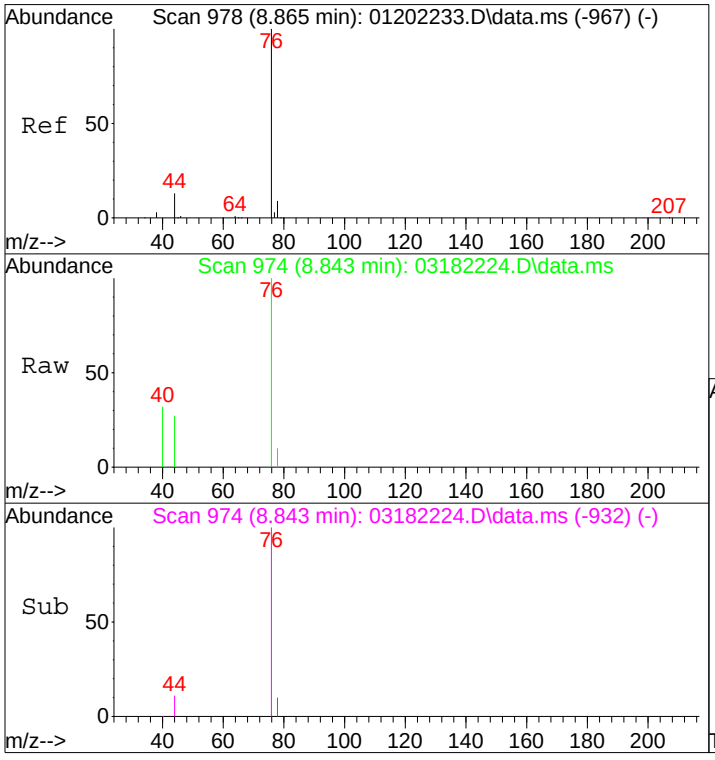


#21
Trichlorotrifluoroethane
Concen: 0.28 ng
RT: 9.00 min Scan# 1003
Delta R.T. -0.011 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion:151 Resp: 3418

Ion	Ratio	Lower	Upper
151	100		
101	129.9	108.9	148.9

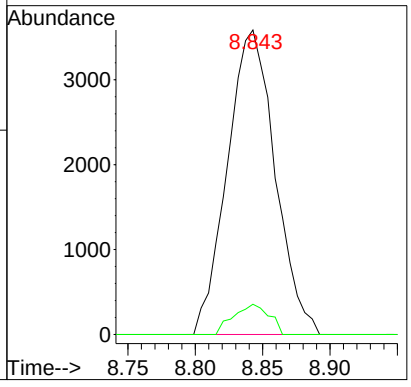


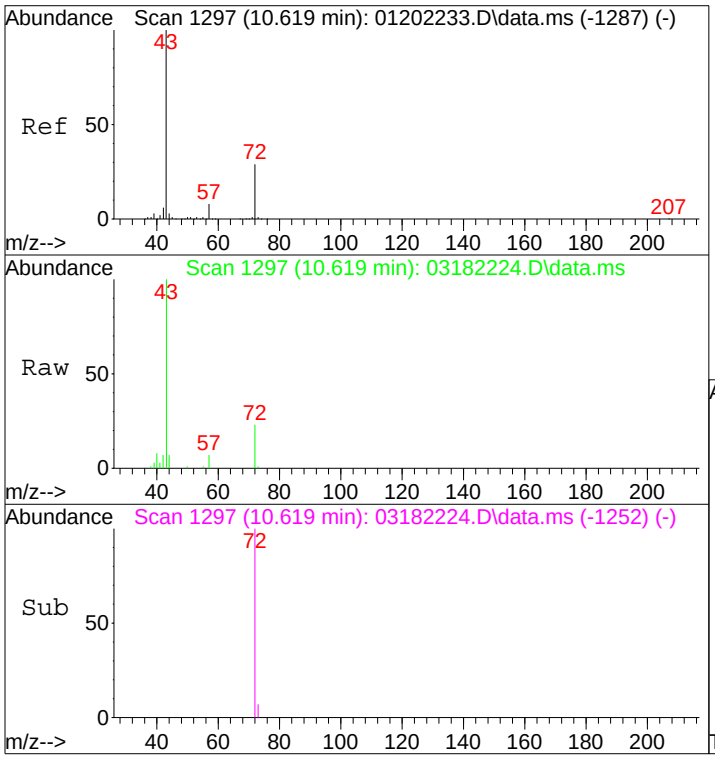


#22
Carbon Disulfide
Concen: 0.17 ng
RT: 8.84 min Scan# 974
Delta R.T. -0.016 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 76 Resp: 8846

Ion	Ratio	Lower	Upper
76	100		
78	7.4	0.0	29.4

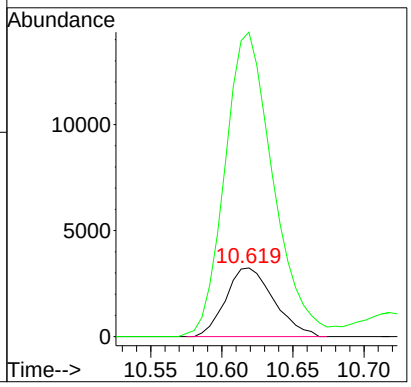


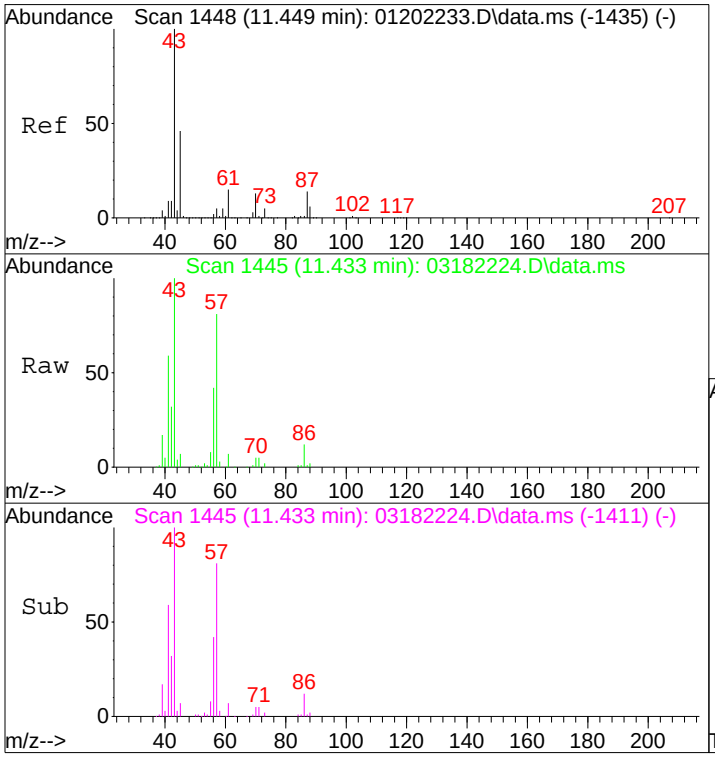


#27
2-Butanone (MEK)
Concen: 0.71 ng
RT: 10.62 min Scan# 1297
Delta R.T. 0.000 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 72 Resp: 7592

Ion	Ratio	Lower	Upper
72	100		
43	449.0	339.3	379.3#

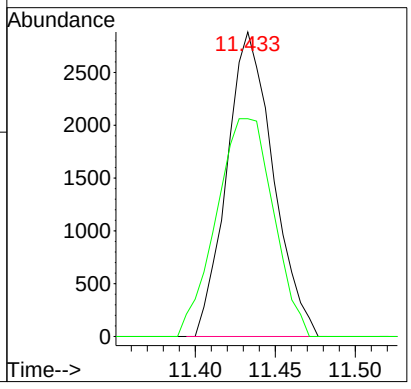


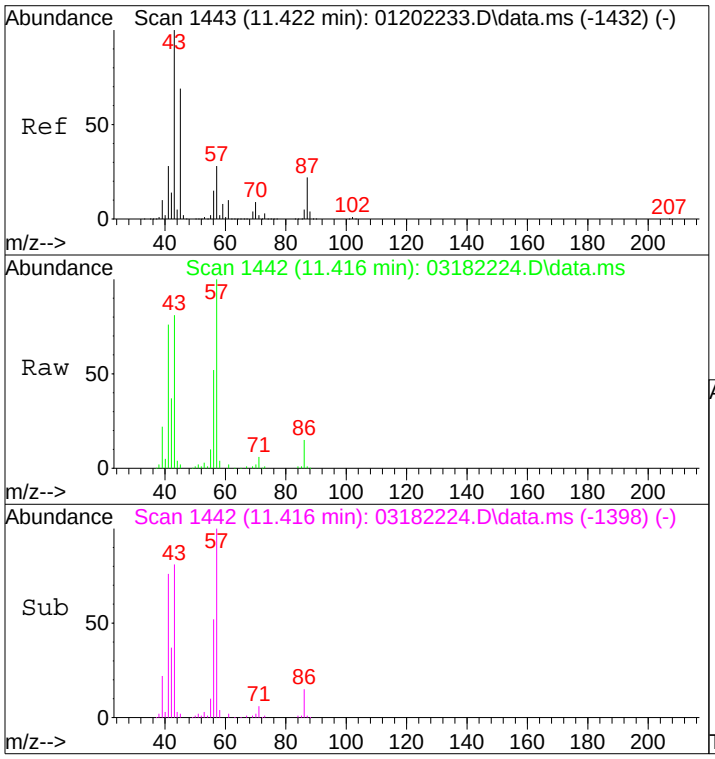


#30
Ethyl Acetate
Concen: 1.06 ng
RT: 11.43 min Scan# 1445
Delta R.T. -0.011 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 61 Resp: 5837

Ion	Ratio	Lower	Upper
61	100		
70	88.0	66.4	106.4

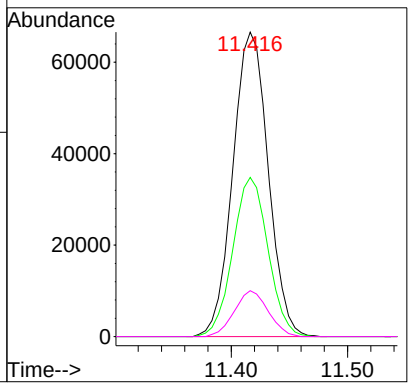


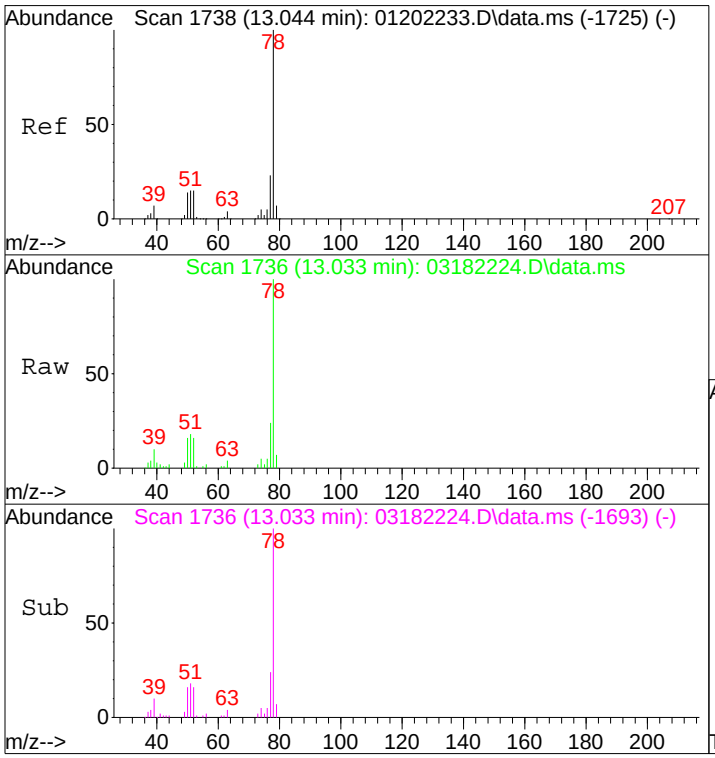


#31
n-Hexane
Concen: 6.75 ng
RT: 11.42 min Scan# 1442
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 57 Resp: 141158

Ion	Ratio	Lower	Upper
57	100		
56	52.0	41.0	61.6
86	14.5	15.3	22.9#

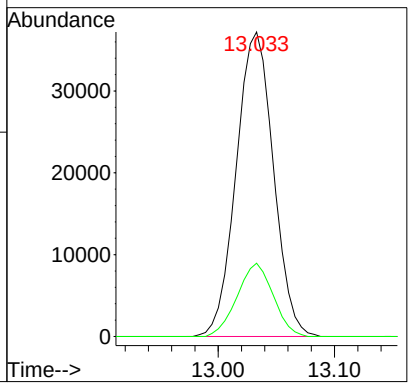


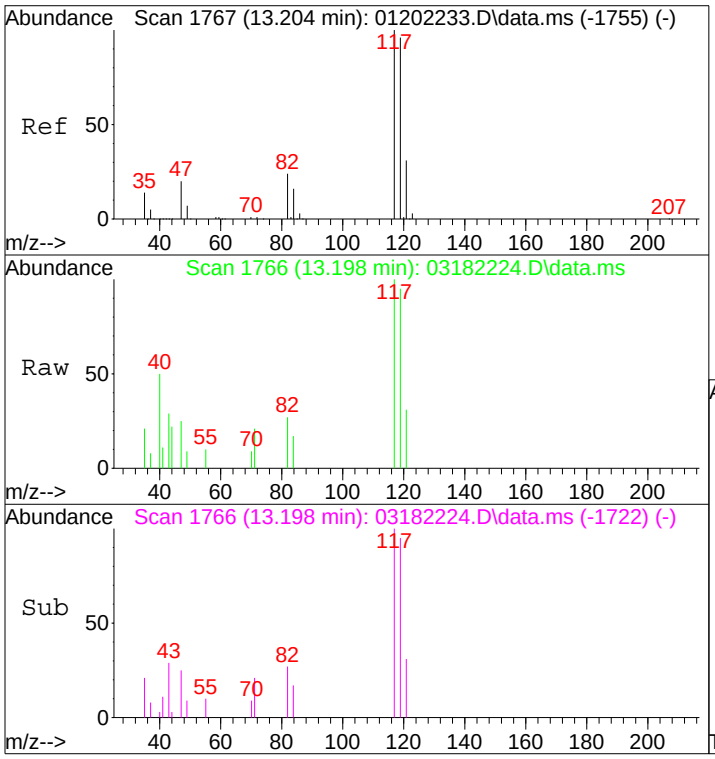


#41
Benzene
Concen: 1.37 ng
RT: 13.03 min Scan# 1736
Delta R.T. -0.011 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 78 Resp: 82892

Ion	Ratio	Lower	Upper
78	100		
77	23.3	3.0	43.0

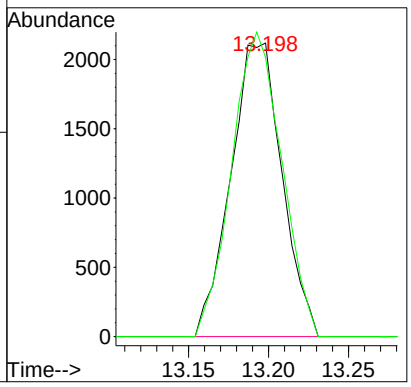


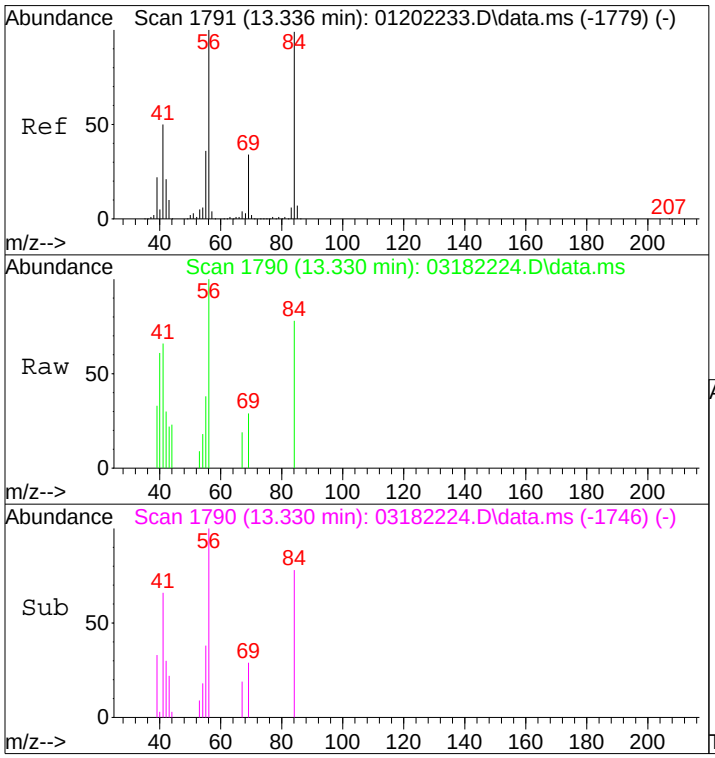


#42
Carbon Tetrachloride
Concen: 0.24 ng
RT: 13.20 min Scan# 1766
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion:117 Resp: 4718

Ion	Ratio	Lower	Upper
117	100		
119	101.6	76.2	116.2

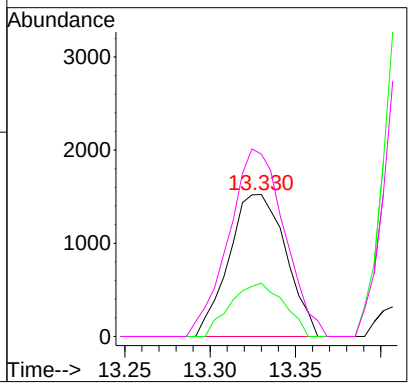


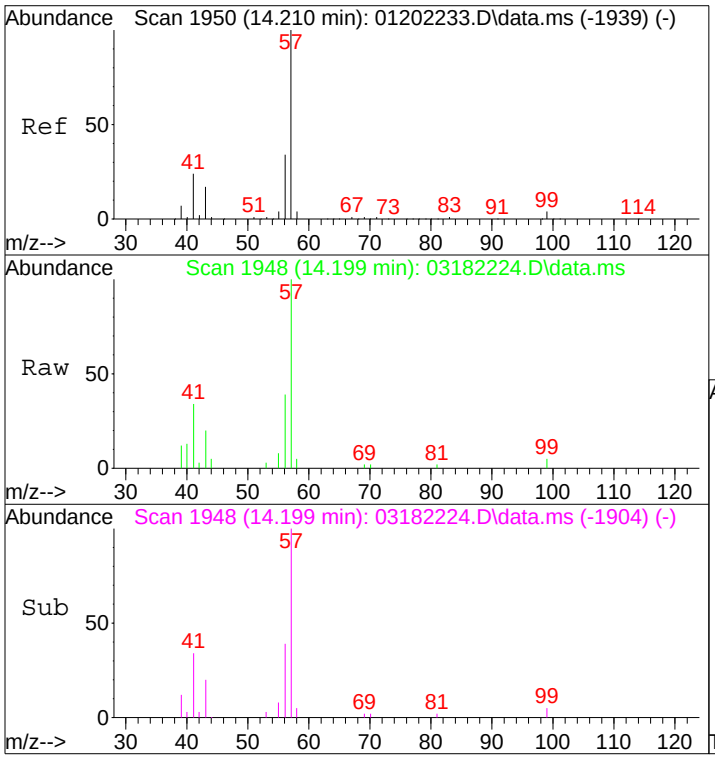


#43
Cyclohexane
Concen: 0.16 ng
RT: 13.33 min Scan# 1790
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 84 Resp: 3528

Ion	Ratio	Lower	Upper
84	100		
69	35.3	14.7	54.7
56	129.6	84.7	124.7#

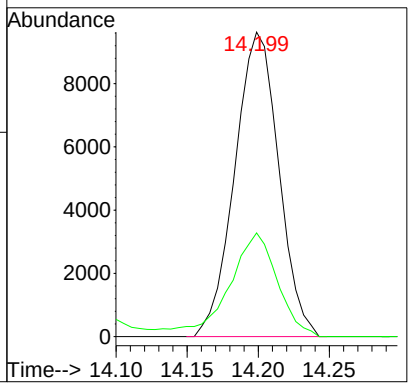


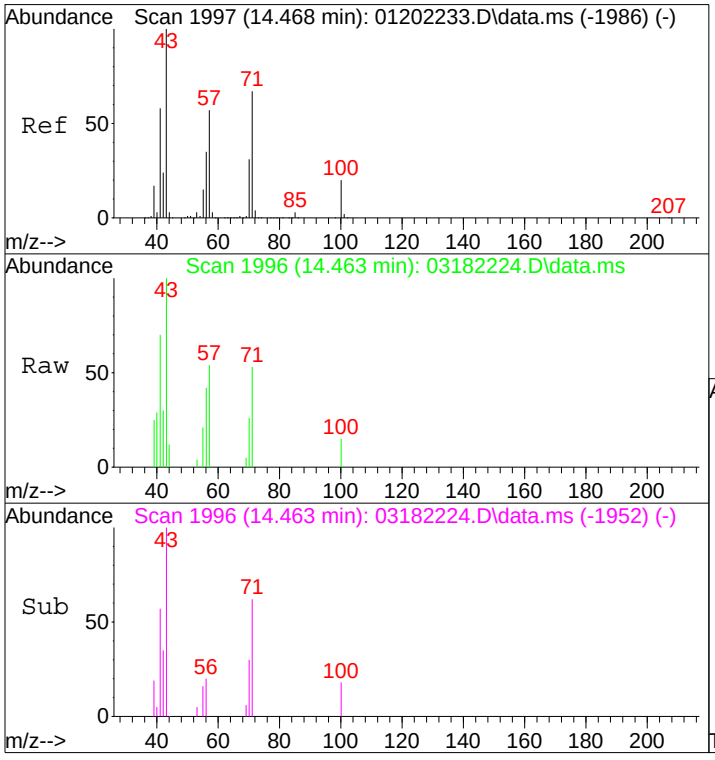


#49
2,2,4-Trimethylpentane (Isooctane)
Concen: 0.35 ng
RT: 14.20 min Scan# 1948
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 57 Resp: 20726

Ion	Ratio	Lower	Upper
57	100		
41	37.1	5.2	45.2

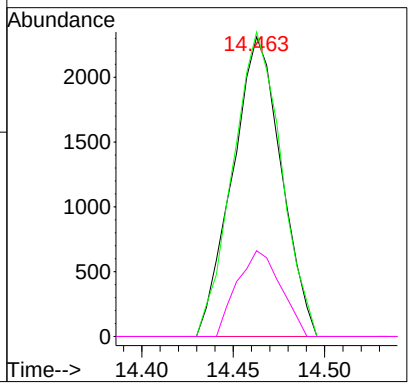


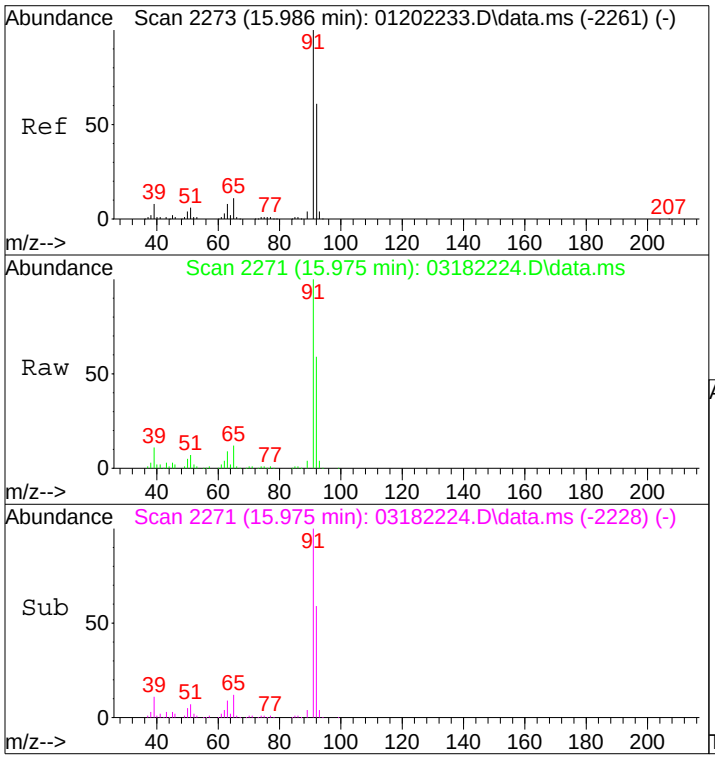


#51
n-Heptane
Concen: 0.28 ng
RT: 14.46 min Scan# 1996
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 71 Resp: 4281

Ion	Ratio	Lower	Upper
71	100		
57	101.1	65.8	105.8
100	25.7	9.6	49.6

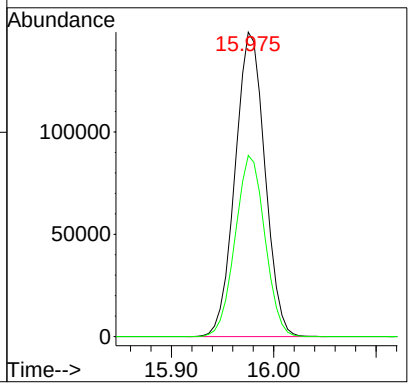


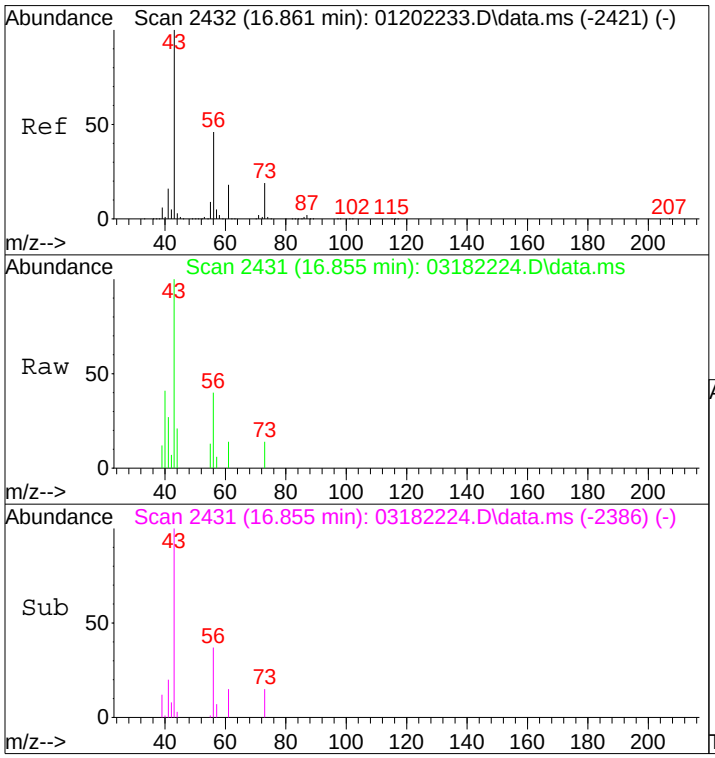


#58
Toluene
Concen: 4.27 ng
RT: 15.98 min Scan# 2271
Delta R.T. -0.011 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 91 Resp: 300981

Ion	Ratio	Lower	Upper
91	100		
92	59.3	40.6	80.6

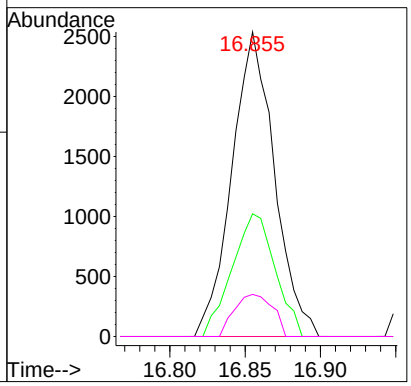


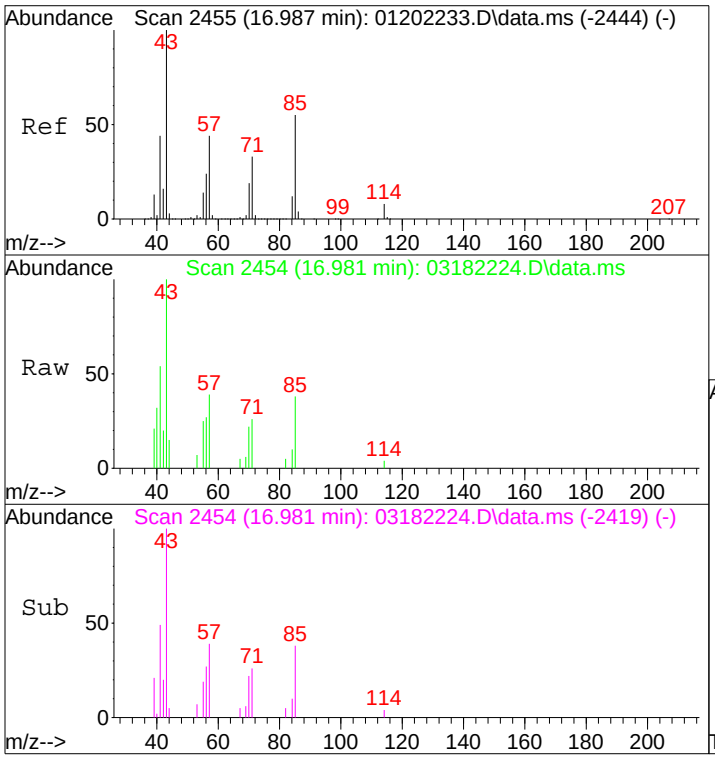


#62
n-Butyl Acetate
Concen: 0.11 ng
RT: 16.85 min Scan# 2431
Delta R.T. 0.000 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 43 Resp: 4994

Ion	Ratio	Lower	Upper
43	100		
56	40.6	24.6	64.6
73	12.4	0.0	37.5

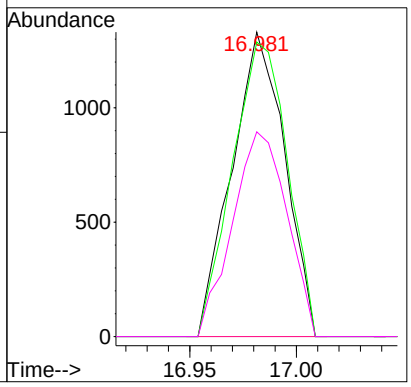


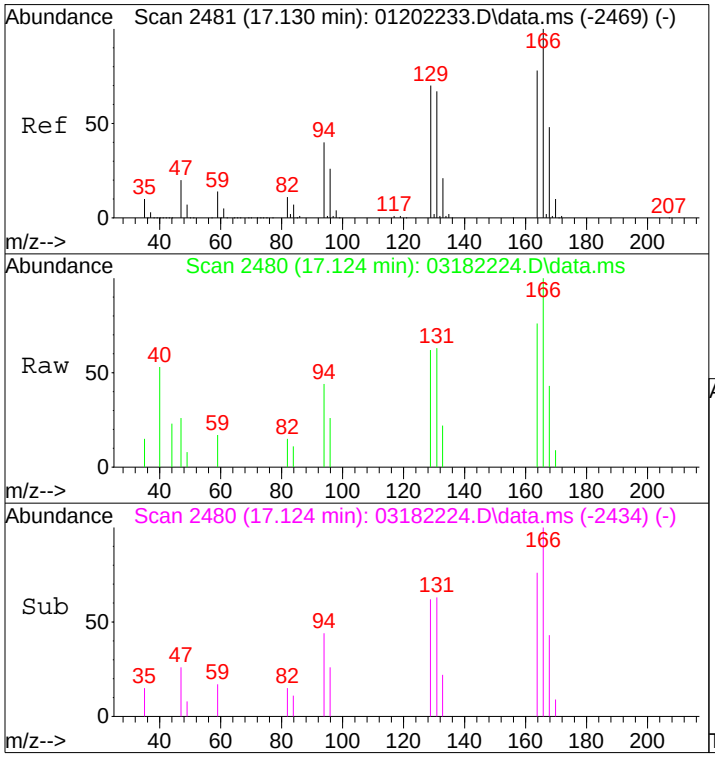


#63
n-Octane
Concen: 0.16 ng
RT: 16.98 min Scan# 2454
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 57 Resp: 2291

Ion	Ratio	Lower	Upper
57	100		
85	101.1	99.8	149.8
71	69.4	60.6	90.8

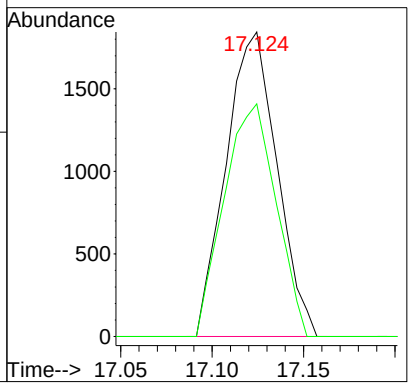


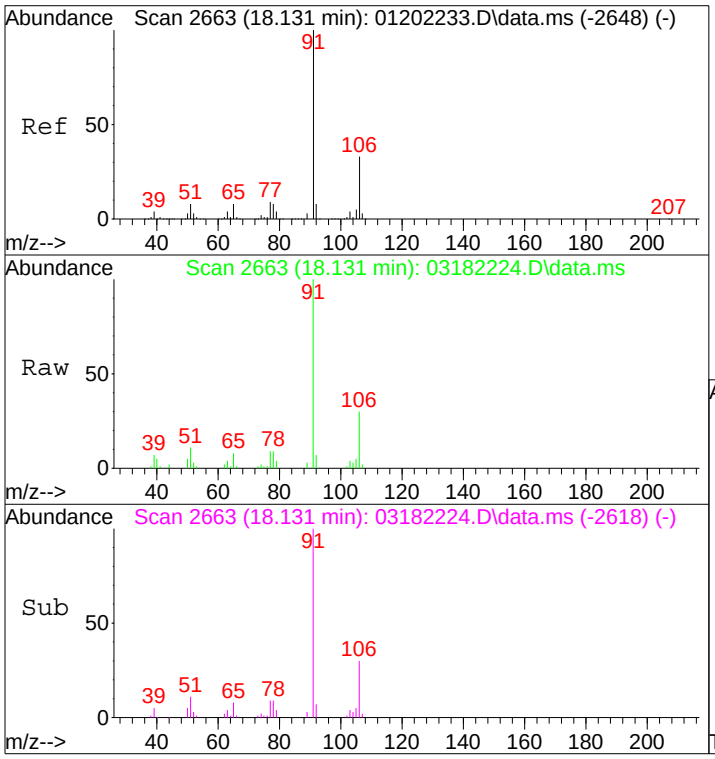


#64
Tetrachloroethene
Concen: 0.19 ng
RT: 17.12 min Scan# 2480
Delta R.T. 0.000 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion:166 Resp: 3574

Ion	Ratio	Lower	Upper
166	100		
164	77.9	58.6	98.6

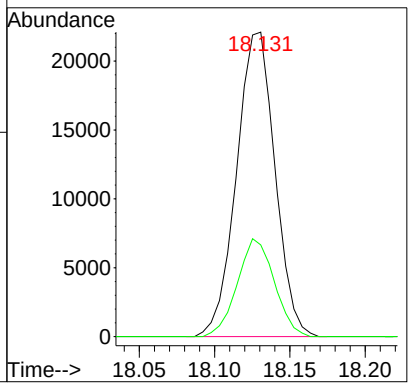


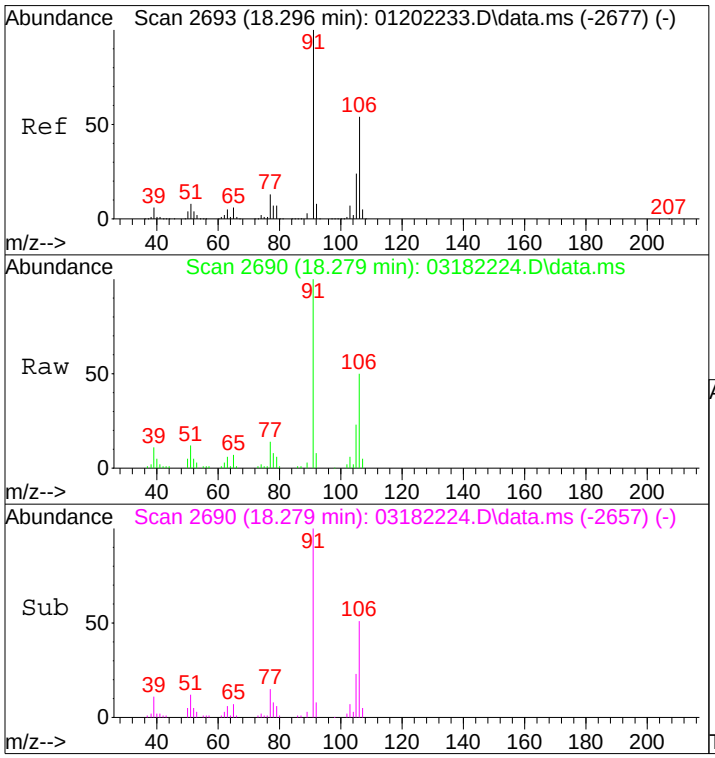


#66
Ethylbenzene
Concen: 0.50 ng
RT: 18.13 min Scan# 2663
Delta R.T. 0.000 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 91 Resp: 39290

Ion	Ratio	Lower	Upper
91	100		
106	30.9	12.8	52.8

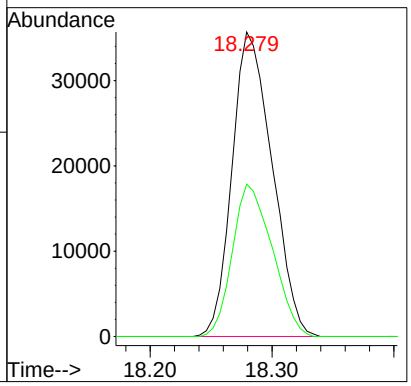


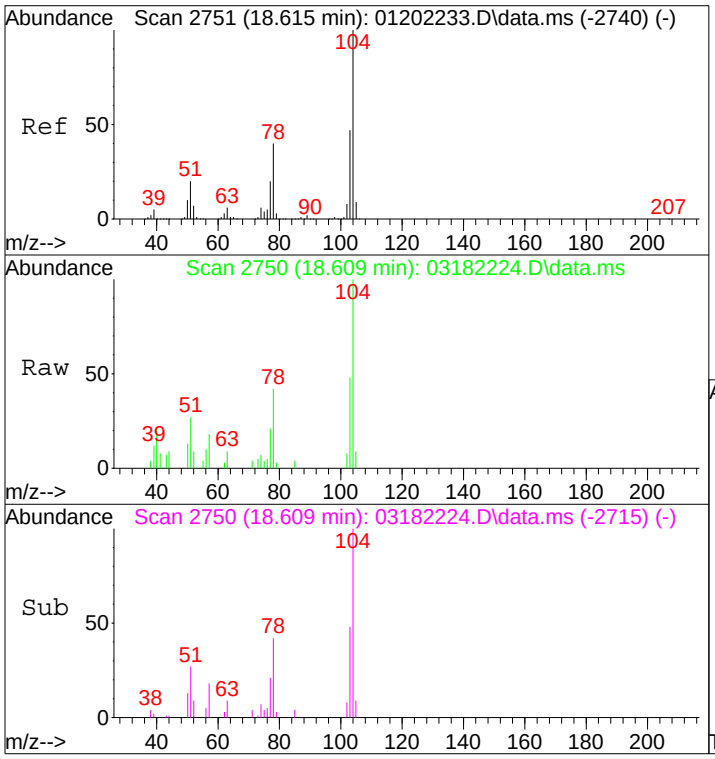


#67
m- & p-Xylenes
Concen: 1.36 ng
RT: 18.28 min Scan# 2690
Delta R.T. -0.016 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 91 Resp: 81407

Ion	Ratio	Lower	Upper
91	100		
106	49.8	32.9	72.9

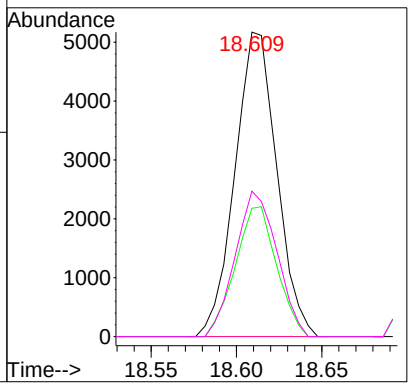


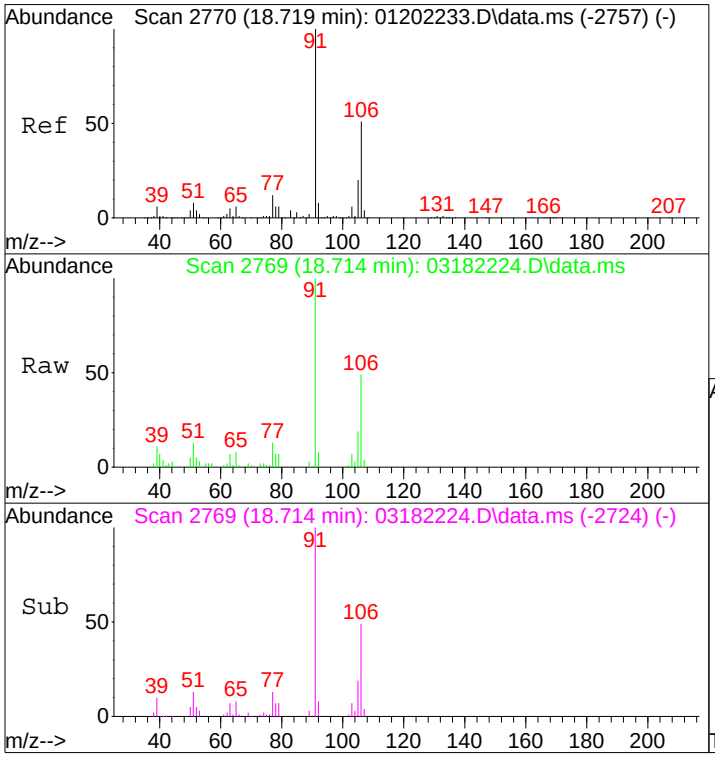


#69
Styrene
Concen: 0.18 ng
RT: 18.61 min Scan# 2750
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion:104 Resp: 8817

Ion	Ratio	Lower	Upper
104	100		
78	42.1	20.1	60.1
103	47.4	26.8	66.8

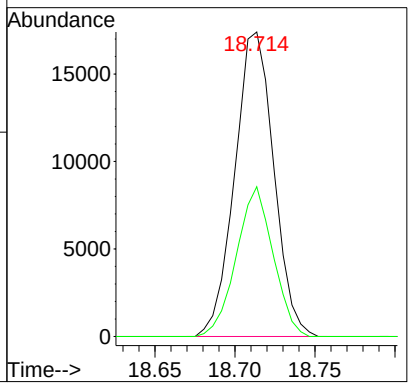


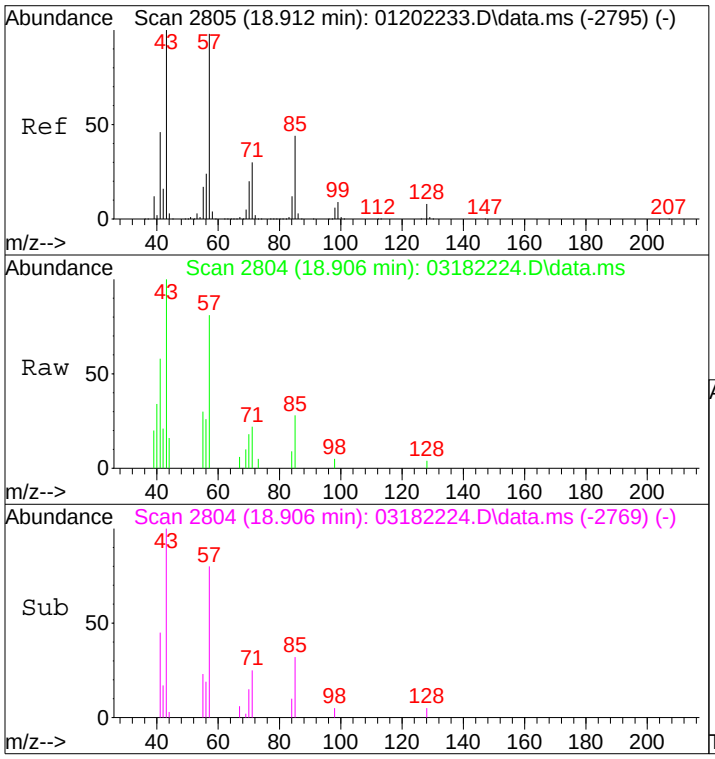


#70
o-Xylene
Concen: 0.49 ng
RT: 18.71 min Scan# 2769
Delta R.T. 0.000 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 91 Resp: 29534

Ion	Ratio	Lower	Upper
91	100		
106	46.2	30.1	70.1

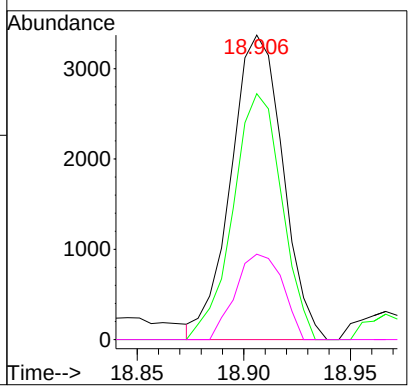


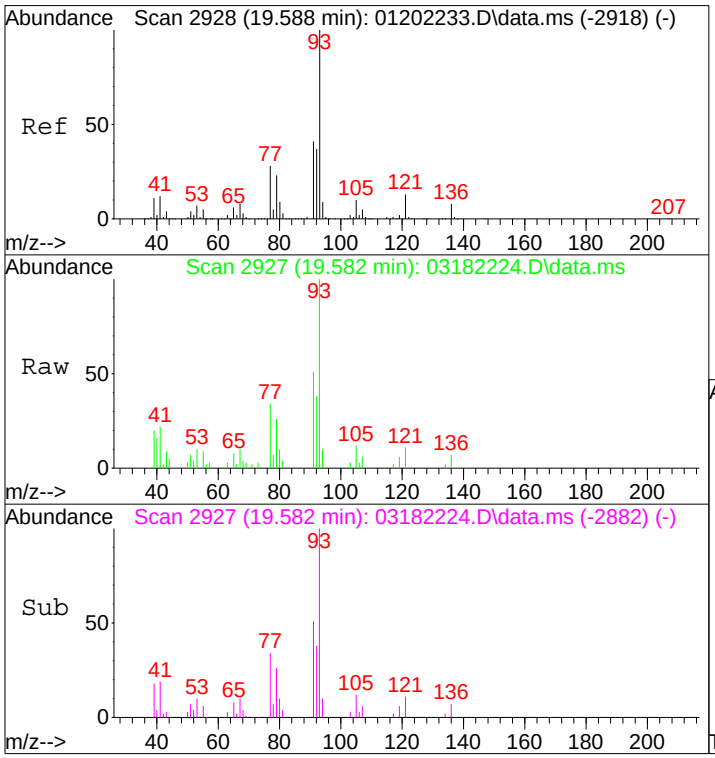


#71
n-Nonane
Concen: 0.18 ng
RT: 18.91 min Scan# 2804
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 43 Resp: 5711

Ion	Ratio	Lower	Upper
43	100		
57	76.0	74.0	114.0
85	25.4	20.5	60.5

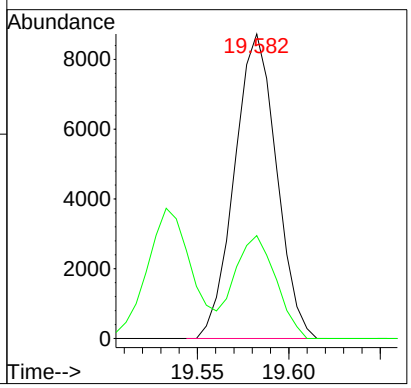


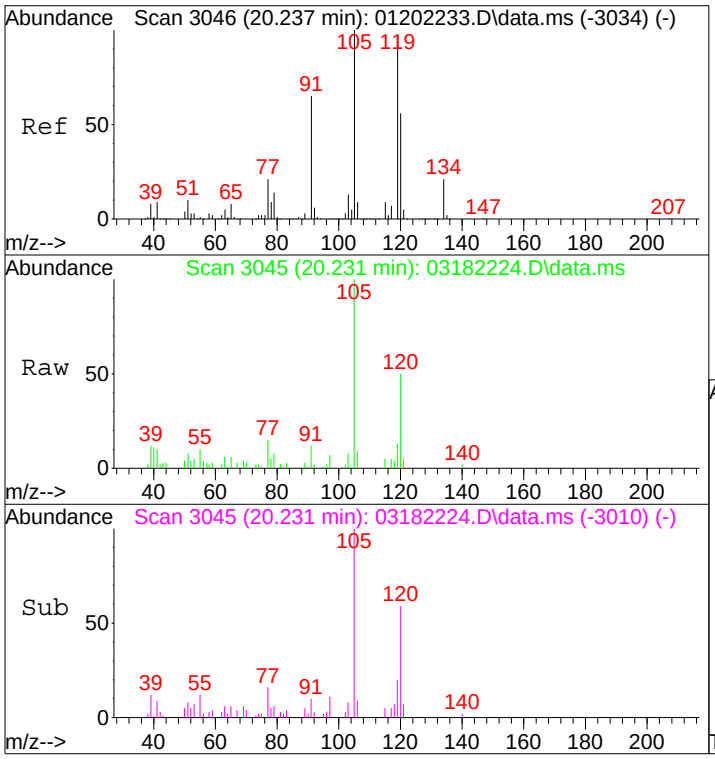


#75
alpha-Pinene
Concen: 0.38 ng
RT: 19.58 min Scan# 2927
Delta R.T. 0.000 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion: 93 Resp: 13934

Ion	Ratio	Lower	Upper
93	100		
77	33.2	9.3	49.3

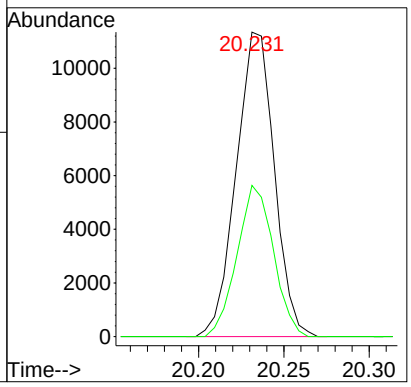


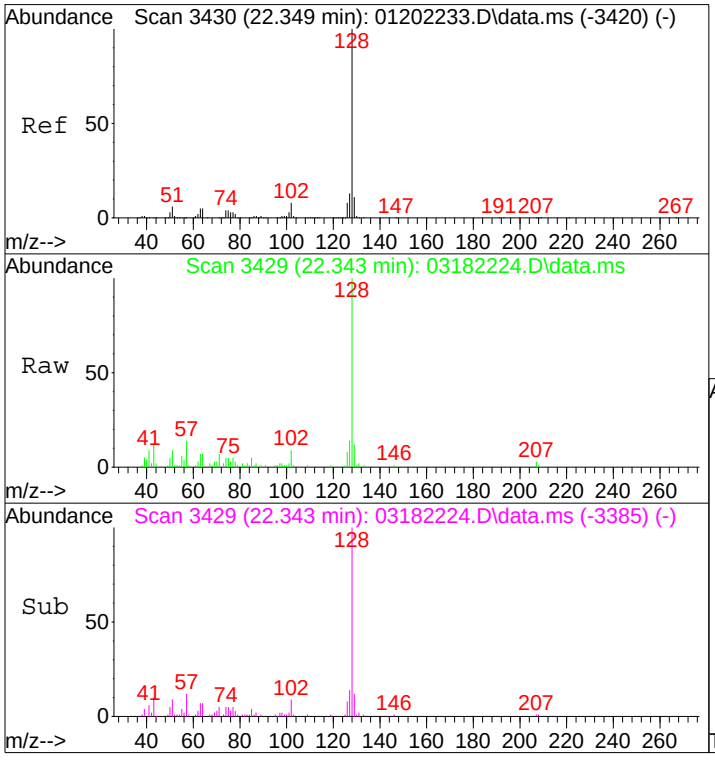


#82
1,2,4-Trimethylbenzene
Concen: 0.30 ng
RT: 20.23 min Scan# 3045
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion:105 Resp: 17597

Ion	Ratio	Lower	Upper
105	100		
120	47.4	36.6	76.6

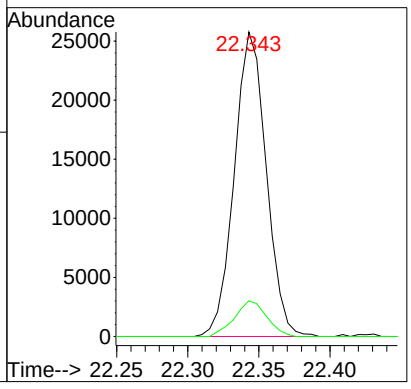




#95
Naphthalene
Concen: 0.46 ng
RT: 22.34 min Scan# 3429
Delta R.T. -0.005 min
Lab File: 03182224.D
Acq: 19 Mar 2022 18:49

Tgt Ion:128 Resp: 40270

Ion	Ratio	Lower	Upper
128	100		
129	11.8	0.0	31.2



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182225.D Vial: 15
Acq On : 19 Mar 2022 19:23 Operator: TZ/MT
Sample : P2201204-002 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:03:35 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

3/20/22

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.30	130	122613	12.500	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	13.42	114	576030	12.500	ng		-0.01
56) Chlorobenzene-d5 (IS3)	17.73	54	118667	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.15	65	214754	12.751	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.00%				
57) Toluene-d8 (SS2)	15.88	98	634355	11.062	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 88.48%				
73) Bromofluorobenzene (SS3)	19.11	174	232998	12.748	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.00%				
Target Compounds							Qvalue
2) Propene	4.17	42	36924	1.977	ng		98
3) Dichlorodifluoromethan...	4.34	85	53267	1.726	ng		99
4) Chloromethane	4.62	50	7281	0.324	ng		96
5) 1,2-Dichloro-1,1,2,2-t...	4.90	135	1472	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	5.32	54	1076	N.D.			
8) Bromomethane	5.77	94	240	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	6.45	45	125292	10.850	ng		100
11) Acetonitrile	6.72	41	6057	0.196	ng		85
12) Acrolein	6.93	56	3056	0.359	ng		95
13) Acetone	7.14	58	85647	7.413	ng	#	44
14) Trichlorofluoromethane	7.39	101	21229	0.809	ng		99
15) 2-Propanol (Isopropanol)	7.63	45	42228	1.072	ng		74
16) Acrylonitrile	7.89	53	605	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	8.55	59	1821	N.D.			
19) Methylene Chloride	8.56	84	3608	0.240	ng		86
20) 3-Chloro-1-propene (Al...	8.67	41	849	N.D.			
21) Trichlorotrifluoroethane	9.01	151	3768	0.316	ng		94
22) Carbon Disulfide	8.84	76	2501	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	10.62	72	7063	0.664	ng	#	62
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	11.44	61	762	0.140	ng		96
31) n-Hexane	11.42	57	18966	0.916	ng	#	93
32) Chloroform	11.47	83	1912	N.D.			
34) Tetrahydrofuran (THF)	11.91	72	443	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	12.27	62	990	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	13.03	61	295	No Calib		#	
40) 1-Butanol	13.00	56	15693	No Calib		#	
41) Benzene	13.03	78	80568	1.346	ng		99
42) Carbon Tetrachloride	13.19	117	5353	0.281	ng		99
43) Cyclohexane	13.32	84	1859	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	14.09	83	165	N.D.			
47) Trichloroethene	14.13	130	192	N.D.			
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	14.20	57	20338	0.350	ng		78
50) Methyl Methacrylate	0.00	100	0	N.D. d			

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182225.D Vial: 15
Acq On : 19 Mar 2022 19:23 Operator: TZ/MT
Sample : P2201204-002 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:03:35 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

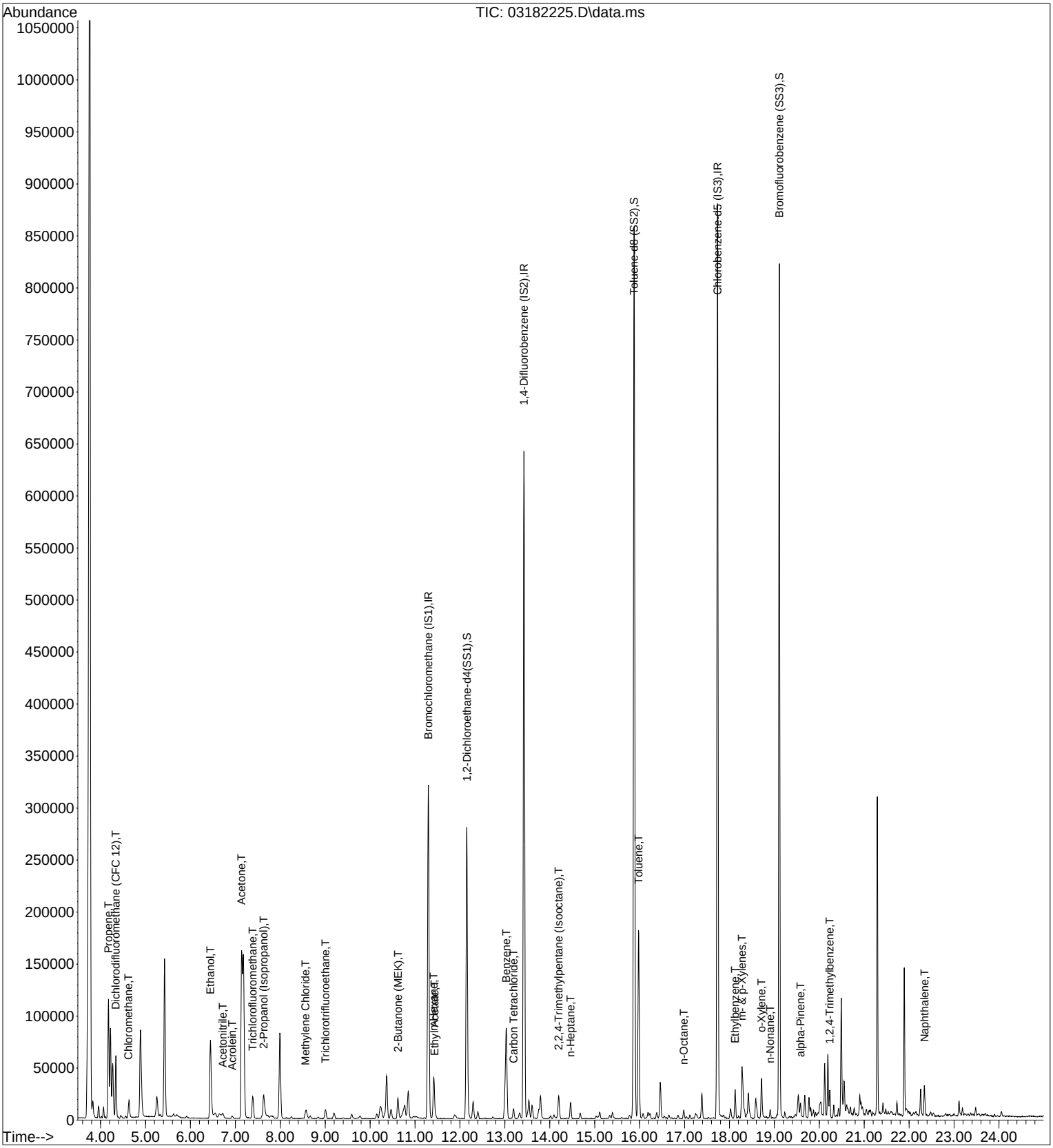
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	14.46	71	3402	0.229 ng		85
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	15.03	58	648	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	15.98	91	145493	2.098 ng		98
59) 2-Hexanone	16.23	43	3189	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	16.86	43	2615	N.D.		
63) n-Octane	16.98	57	1314	0.095 ng	#	77
64) Tetrachloroethene	17.12	166	1258	N.D.		
65) Chlorobenzene	17.77	112	662	N.D.		
66) Ethylbenzene	18.13	91	20984	0.272 ng		96
67) m- & p-Xylenes	18.28	91	37512	0.639 ng		97
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	18.61	104	3454	N.D.		
70) o-Xylene	18.71	91	15659	0.265 ng		96
71) n-Nonane	18.91	43	2922	0.094 ng		90
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	19.23	105	2154	N.D.		
75) alpha-Pinene	19.58	93	5189	0.143 ng		88
76) n-Propylbenzene	19.68	91	5097	N.D.		
77) 3-Ethyltoluene	19.80	105	4447	No Calib		
78) 4-Ethyltoluene	19.80	105	4447	N.D.		
79) 1,3,5-Trimethylbenzene	19.87	105	2497	N.D.		
80) alpha-Methylstyrene	20.01	118	2859	No Calib	#	
81) 2-Ethyltoluene	19.87	105	2497	No Calib		
82) 1,2,4-Trimethylbenzene	20.23	105	13152	0.225 ng		84
83) n-Decane	20.23	58	249	No Calib	#	
84) Benzyl Chloride	20.35	91	468	N.D.		
85) 1,3-Dichlorobenzene	20.42	146	2459	N.D.		
86) 1,4-Dichlorobenzene	20.42	146	2459	N.D.		
87) sec-Butylbenzene	20.47	105	616	N.D.		
88) 4-Isopropyltoluene (p-...	20.61	119	1742	N.D.		
89) 1,2,3-Trimethylbenzene	20.61	105	3131	No Calib	#	
90) 1,2-Dichlorobenzene	20.73	146	105	N.D.		
91) d-Limonene	20.73	68	612	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	22.26	57	3125	No Calib		
94) 1,2,4-Trichlorobenzene	22.24	180	357	N.D.		
95) Naphthalene	22.34	128	10601	0.122 ng		100
96) n-Dodecane	22.33	57	4794	No Calib	#	
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	18.26	55	895	No Calib	#	
99) tert-Butylbenzene	20.24	119	1644	N.D.		
100) n-Butylbenzene	20.97	91	2932	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182225.D Vial: 15
Acq On : 19 Mar 2022 19:23 Operator: TZ/MT
Sample : P2201204-002 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:03:35 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182225.D Vial: 15
Acq On : 19 Mar 2022 19:23 Operator: TZ/MT
Sample : P2201204-002 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:03:35 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

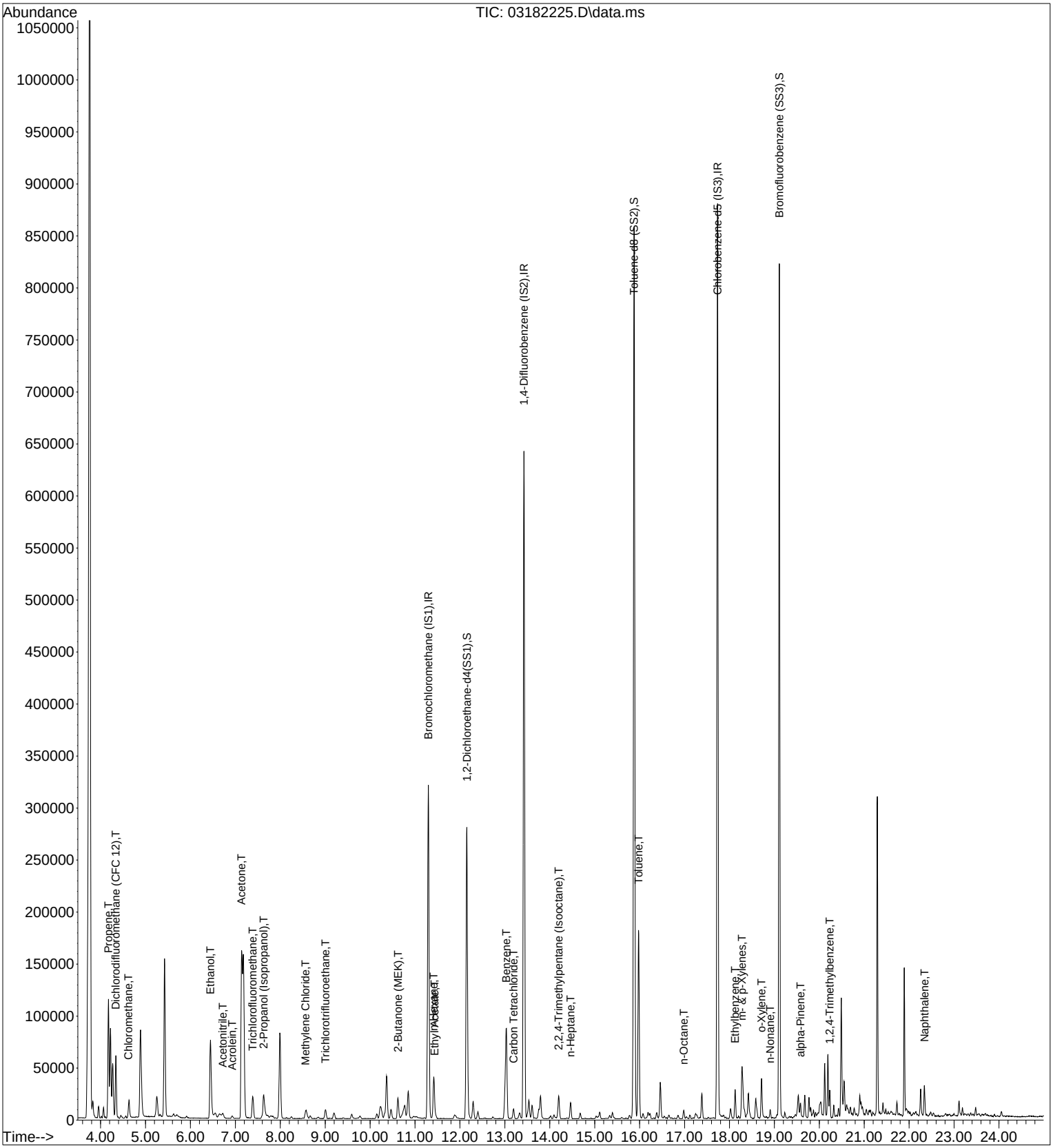
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.30	130	122613	12.500	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	13.42	114	576030	12.500	ng		-0.01
56) Chlorobenzene-d5 (IS3)	17.73	54	118667	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.15	65	214754	12.751	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.00%				
57) Toluene-d8 (SS2)	15.88	98	634355	11.062	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 88.48%				
73) Bromofluorobenzene (SS3)	19.11	174	232998	12.748	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.00%				
Target Compounds							Qvalue
2) Propene	4.17	42	36924	1.977	ng		98
3) Dichlorodifluoromethan...	4.34	85	53267	1.726	ng		99
4) Chloromethane	4.62	50	7281	0.324	ng		96
10) Ethanol	6.45	45	125292	10.850	ng		100
11) Acetonitrile	6.72	41	6057	0.196	ng		85
12) Acrolein	6.93	56	3056	0.359	ng		95
13) Acetone	7.14	58	85647	7.413	ng	#	44
14) Trichlorofluoromethane	7.39	101	21229	0.809	ng		99
15) 2-Propanol (Isopropanol)	7.63	45	42228	1.072	ng		74
19) Methylene Chloride	8.56	84	3608	0.240	ng		86
21) Trichlorotrifluoroethane	9.01	151	3768	0.316	ng		94
27) 2-Butanone (MEK)	10.62	72	7063	0.664	ng	#	62
30) Ethyl Acetate	11.44	61	762	0.140	ng		96
31) n-Hexane	11.42	57	18966	0.916	ng	#	93
41) Benzene	13.03	78	80568	1.346	ng		99
42) Carbon Tetrachloride	13.19	117	5353	0.281	ng		99
49) 2,2,4-Trimethylpentane...	14.20	57	20338	0.350	ng		78
51) n-Heptane	14.46	71	3402	0.229	ng		85
58) Toluene	15.98	91	145493	2.098	ng		98
63) n-Octane	16.98	57	1314	0.095	ng	#	77
66) Ethylbenzene	18.13	91	20984	0.272	ng		96
67) m- & p-Xylenes	18.28	91	37512	0.639	ng		97
70) o-Xylene	18.71	91	15659	0.265	ng		96
71) n-Nonane	18.91	43	2922	0.094	ng		90
75) alpha-Pinene	19.58	93	5189	0.143	ng		88
82) 1,2,4-Trimethylbenzene	20.23	105	13152	0.225	ng		84
95) Naphthalene	22.34	128	10601	0.122	ng		100

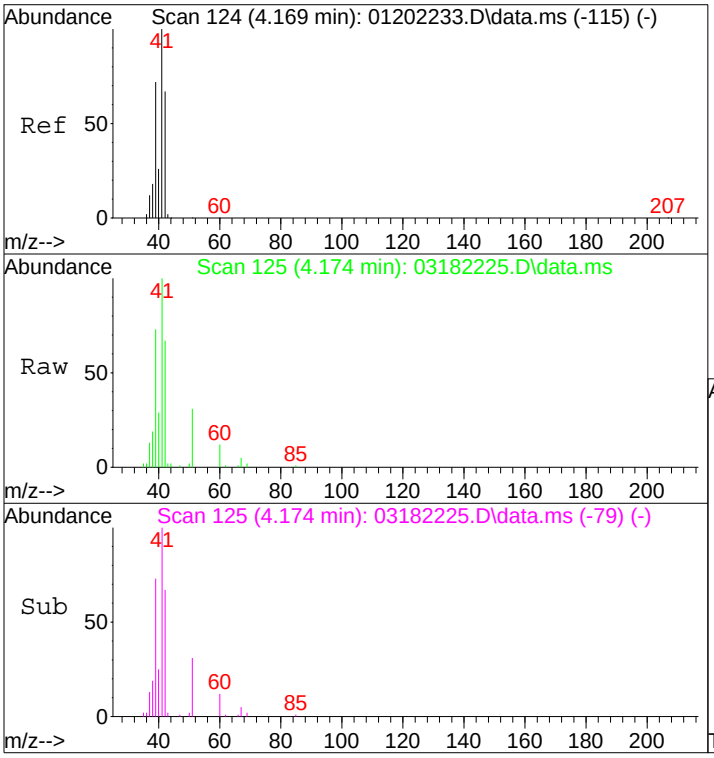
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182225.D Vial: 15
Acq On : 19 Mar 2022 19:23 Operator: TZ/MT
Sample : P2201204-002 (1000mL) Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 20 06:03:35 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

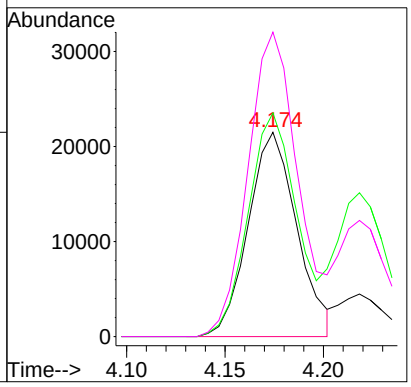


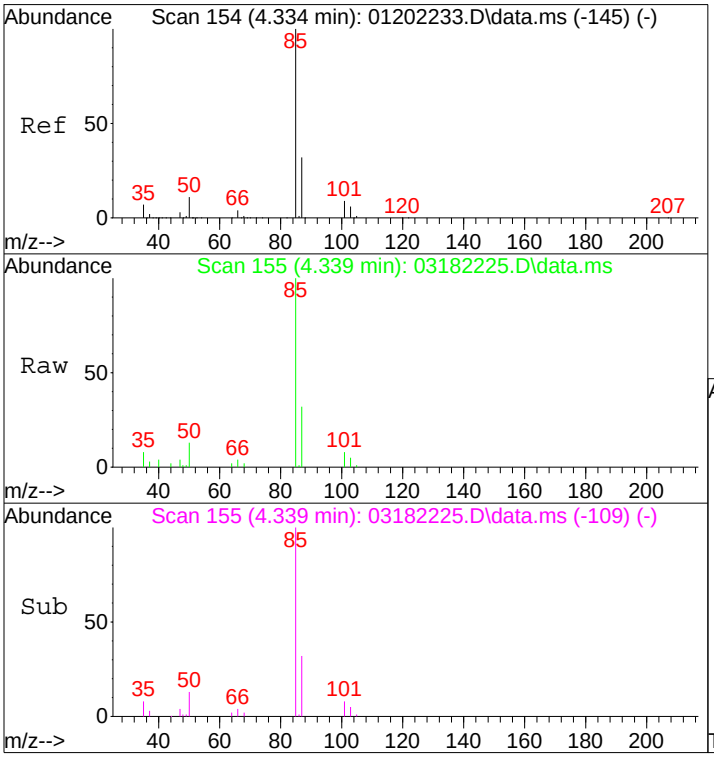


#2
Propene
Concen: 1.98 ng
RT: 4.17 min Scan# 125
Delta R.T. 0.006 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 42 Resp: 36924

Ion	Ratio	Lower	Upper
42	100		
39	109.1	89.5	129.5
41	154.4	129.4	169.4

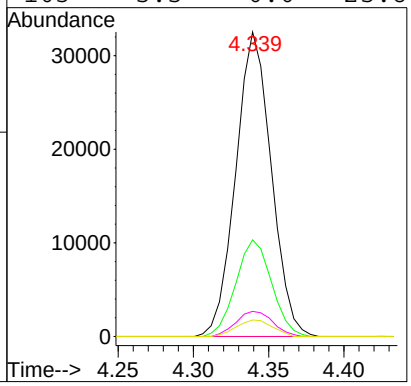


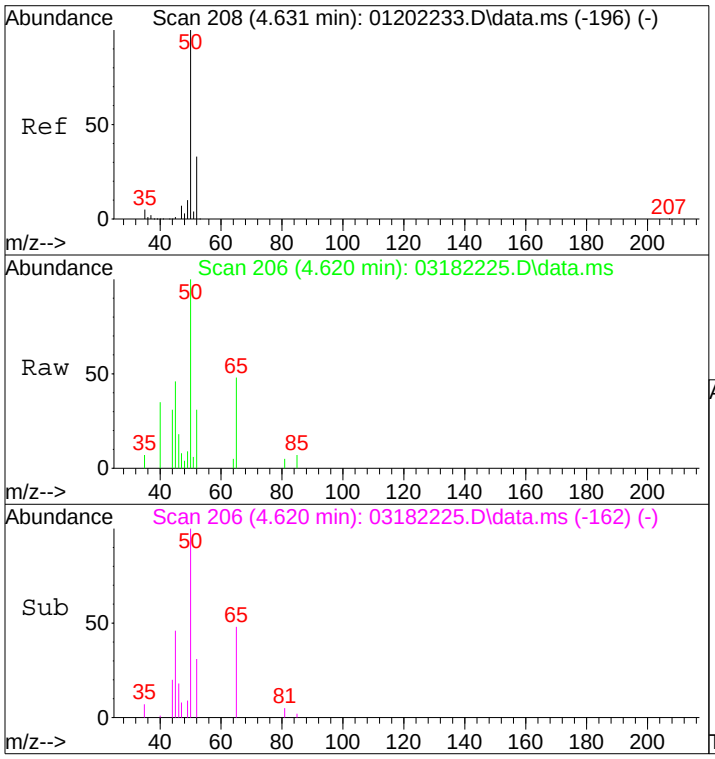


#3
Dichlorodifluoromethane (CFC 12)
Concen: 1.73 ng
RT: 4.34 min Scan# 155
Delta R.T. 0.006 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 85 Resp: 53267

Ion	Ratio	Lower	Upper
85	100		
87	31.9	12.6	52.6
101	8.6	0.0	29.1
103	5.5	0.0	25.8

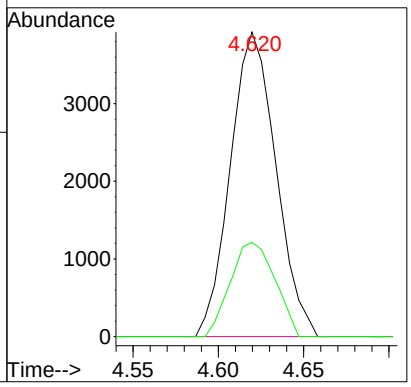


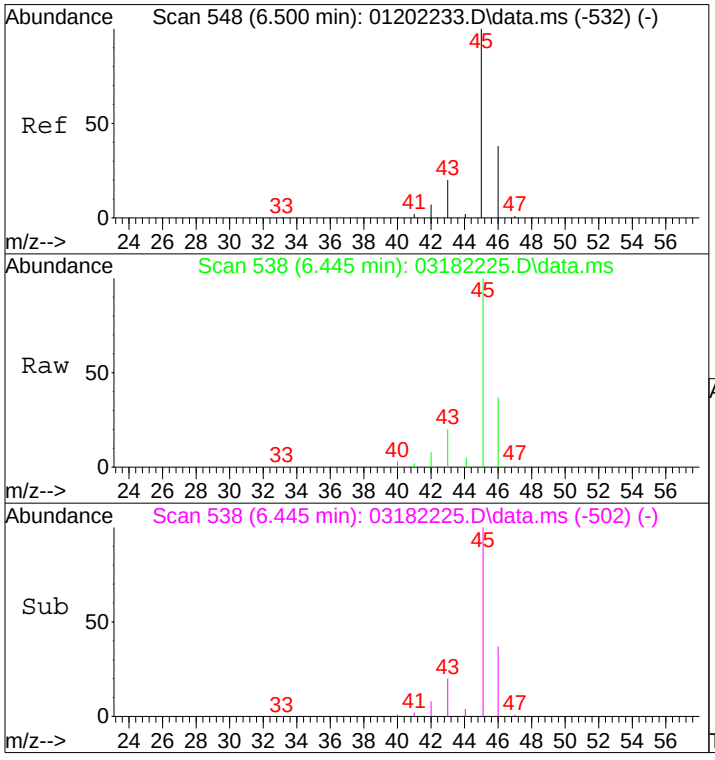


#4
Chloromethane
Concen: 0.32 ng
RT: 4.62 min Scan# 206
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 50 Resp: 7281

Ion	Ratio	Lower	Upper
50	100		
52	30.3	12.8	52.8

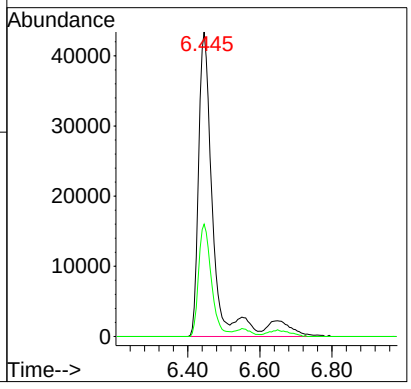


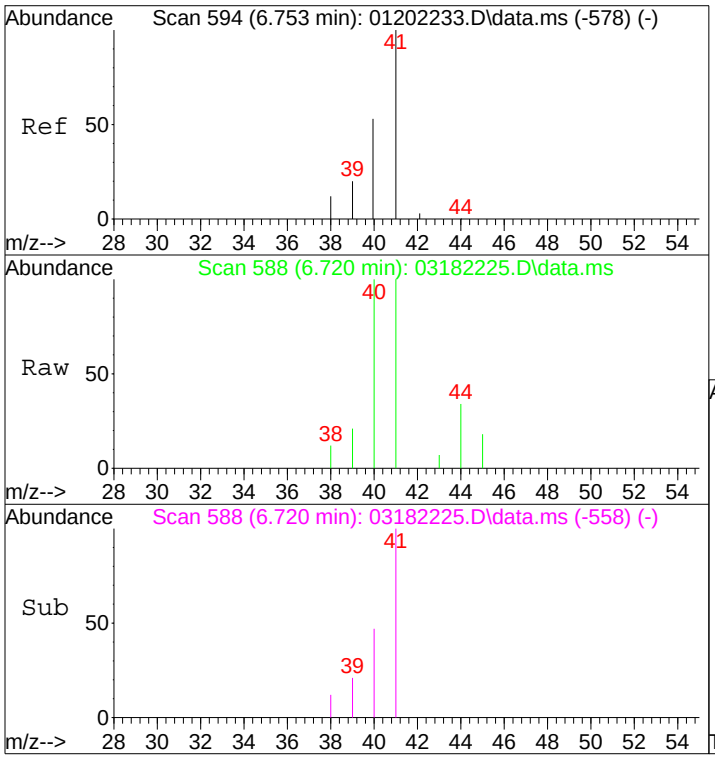


#10
Ethanol
Concen: 10.85 ng
RT: 6.45 min Scan# 538
Delta R.T. -0.050 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 45 Resp: 125292

Ion	Ratio	Lower	Upper
45	100		
46	37.3	17.6	57.6

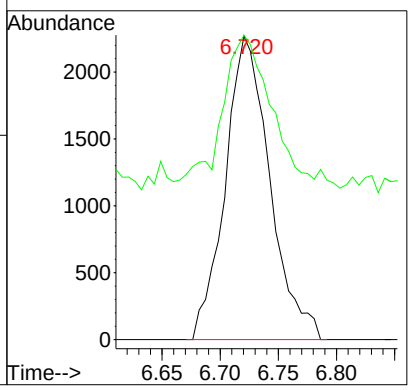


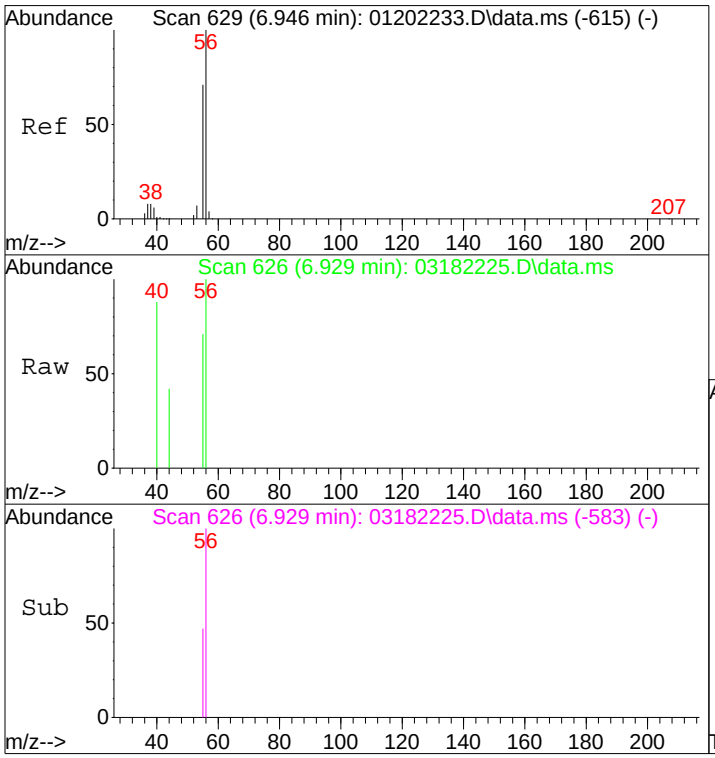


#11
Acetonitrile
Concen: 0.20 ng
RT: 6.72 min Scan# 588
Delta R.T. -0.033 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 41 Resp: 6057

Ion	Ratio	Lower	Upper
41	100		
40	63.7	32.9	72.9

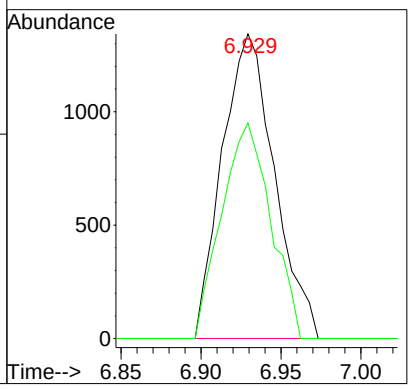


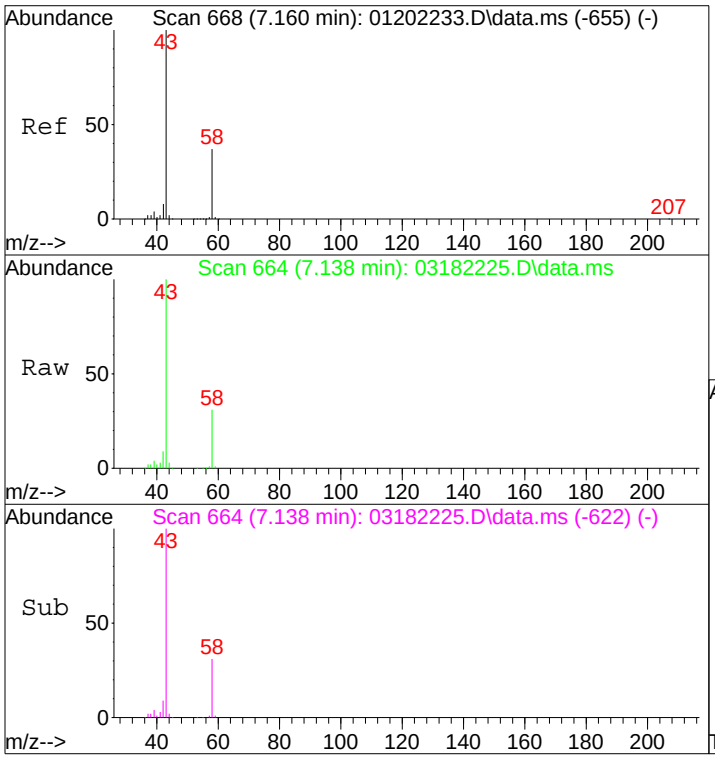


#12
Acrolein
Concen: 0.36 ng
RT: 6.93 min Scan# 626
Delta R.T. -0.011 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 56 Resp: 3056

Ion	Ratio	Lower	Upper
56	100		
55	66.5	50.2	90.2

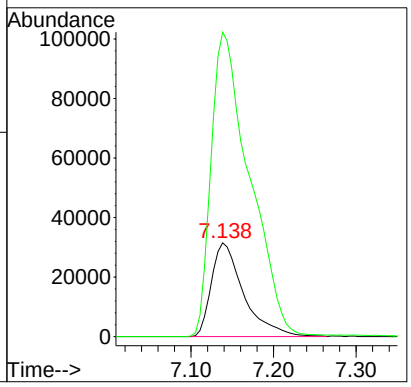


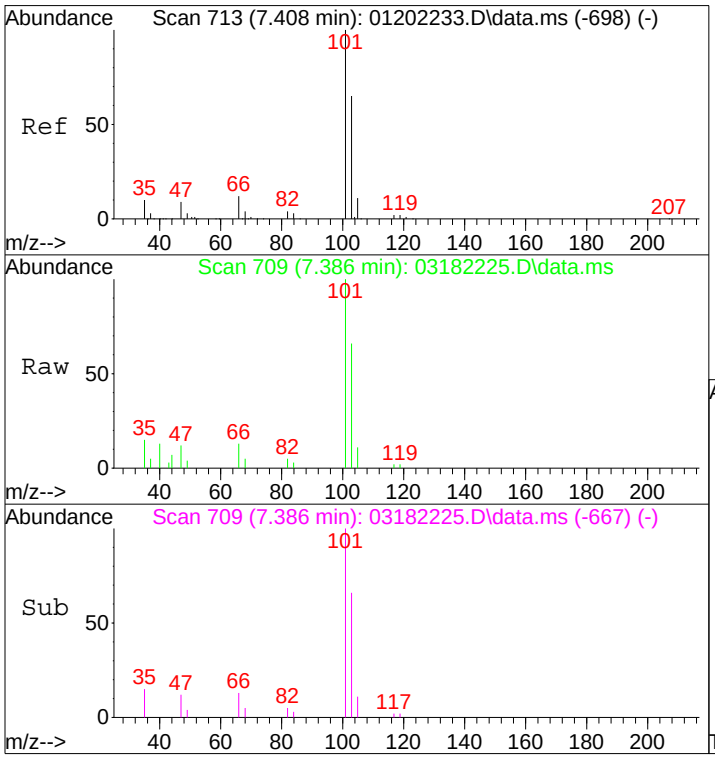


#13
Acetone
Concen: 7.41 ng
RT: 7.14 min Scan# 664
Delta R.T. -0.016 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 58 Resp: 85647

Ion	Ratio	Lower	Upper
58	100		
43	389.7	253.5	313.5#

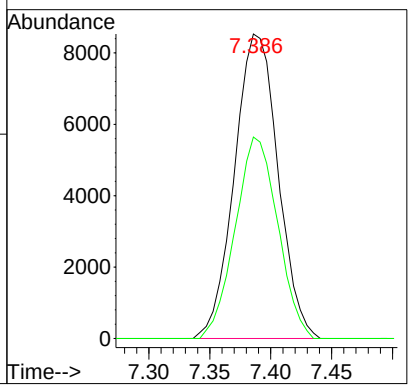


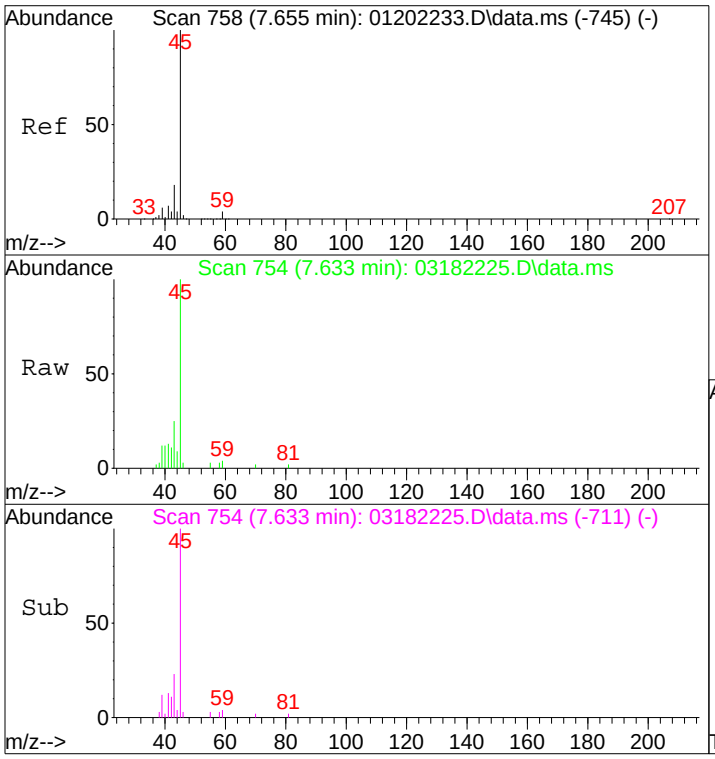


#14
Trichlorofluoromethane
Concen: 0.81 ng
RT: 7.39 min Scan# 709
Delta R.T. -0.016 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion:101 Resp: 21229

Ion	Ratio	Lower	Upper
101	100		
103	64.4	45.0	85.0

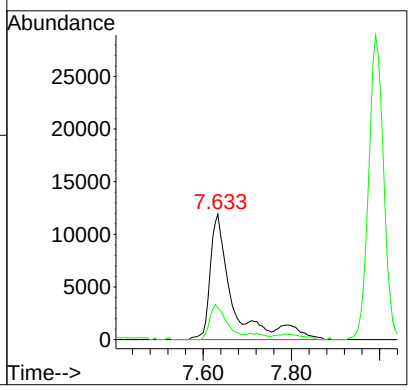


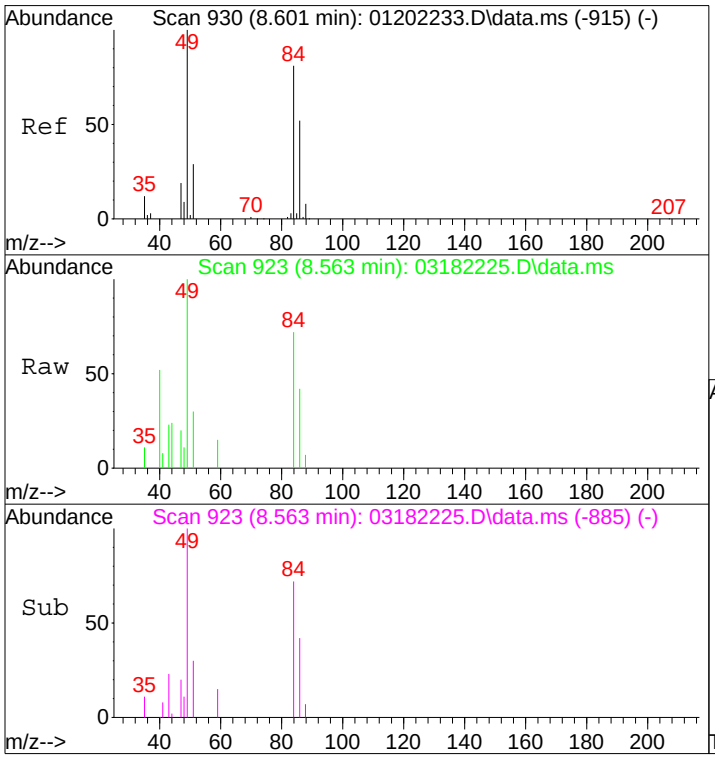


#15
2-Propanol (Isopropanol)
Concen: 1.07 ng
RT: 7.63 min Scan# 754
Delta R.T. -0.016 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 45 Resp: 42228

Ion	Ratio	Lower	Upper
45	100		
43	30.4	0.0	38.6

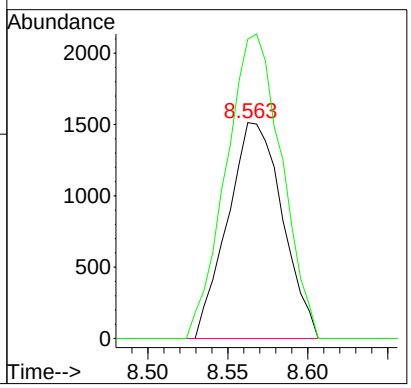


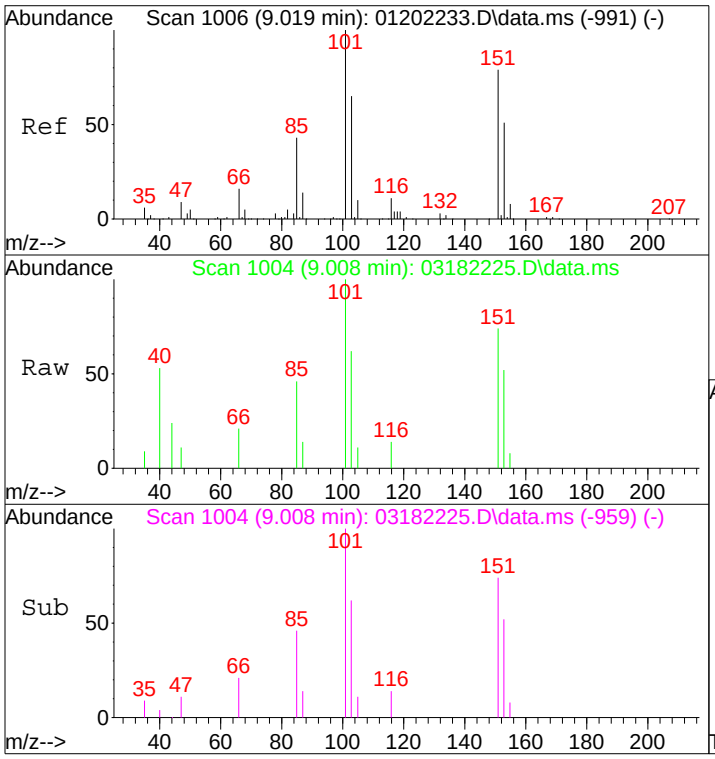


#19
Methylene Chloride
Concen: 0.24 ng
RT: 8.56 min Scan# 923
Delta R.T. -0.038 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 84 Resp: 3608

Ion	Ratio	Lower	Upper
84	100		
49	143.5	102.1	152.1

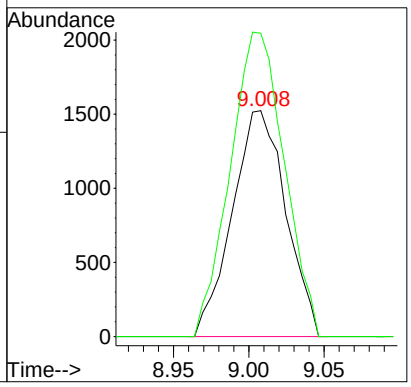


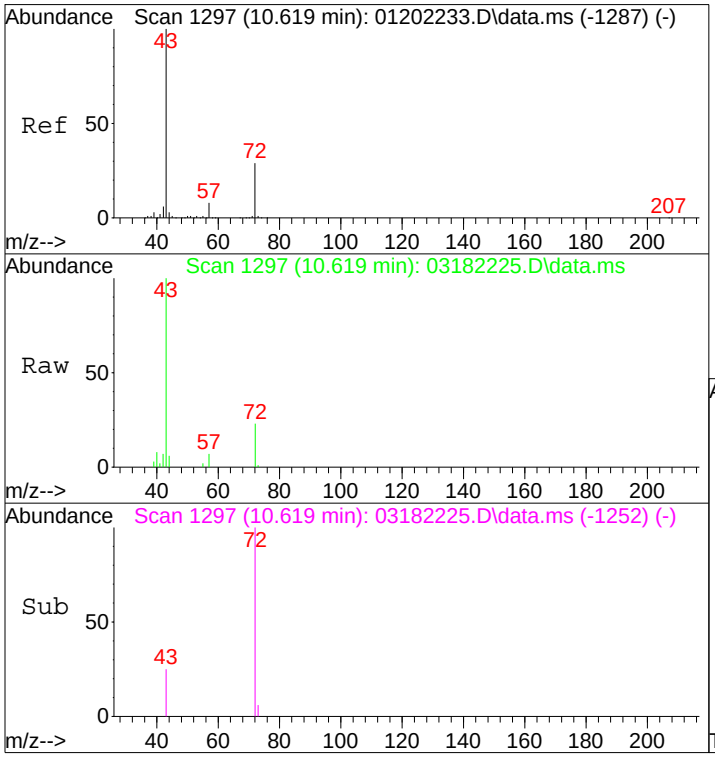


#21
Trichlorotrifluoroethane
Concen: 0.32 ng
RT: 9.01 min Scan# 1004
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion:151 Resp: 3768

Ion	Ratio	Lower	Upper
151	100		
101	136.3	108.9	148.9

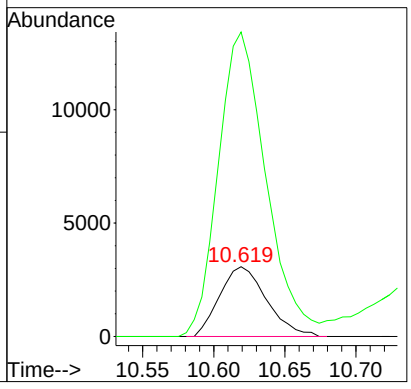


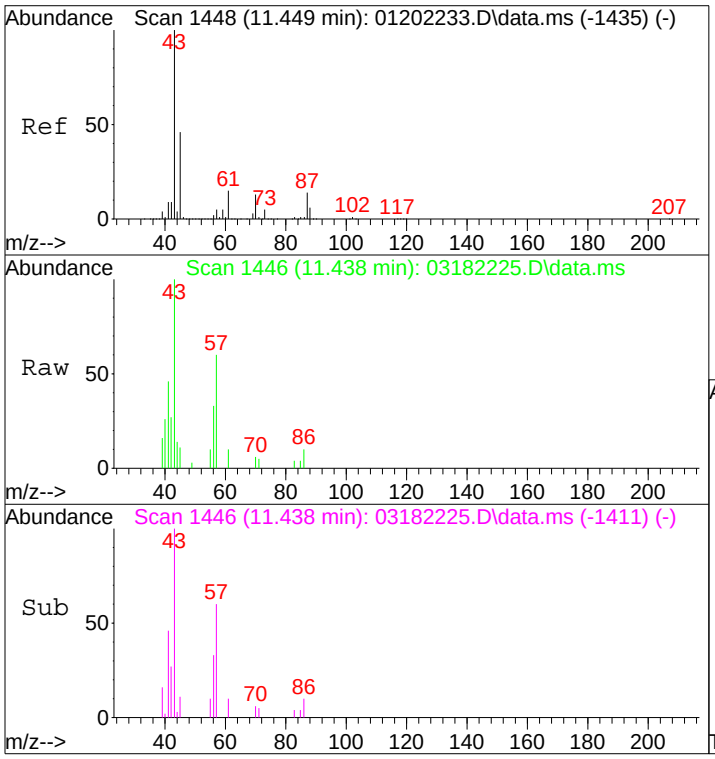


#27
2-Butanone (MEK)
Concen: 0.66 ng
RT: 10.62 min Scan# 1297
Delta R.T. 0.000 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 72 Resp: 7063

Ion	Ratio	Lower	Upper
72	100		
43	442.4	339.3	379.3#

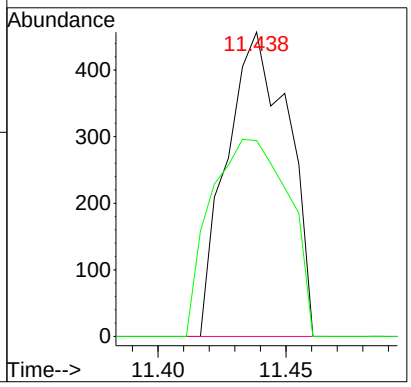


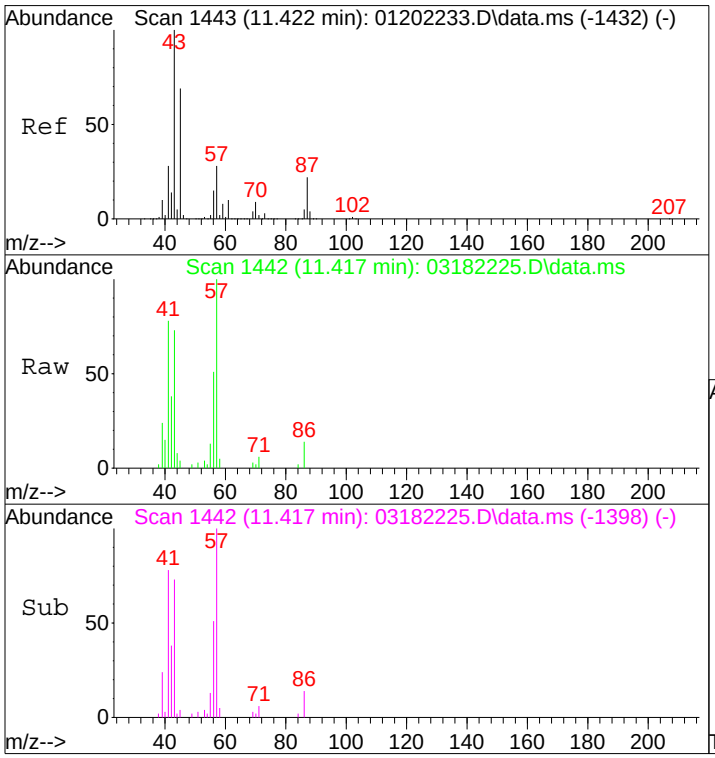


#30
Ethyl Acetate
Concen: 0.14 ng
RT: 11.44 min Scan# 1446
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 61 Resp: 762

Ion	Ratio	Lower	Upper
61	100		
70	82.3	66.4	106.4

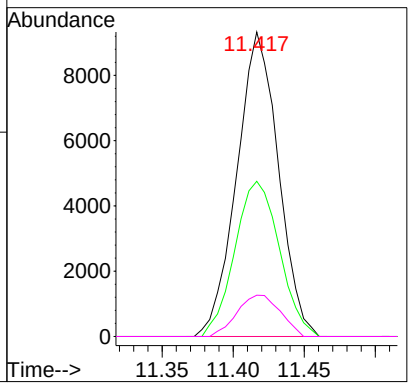


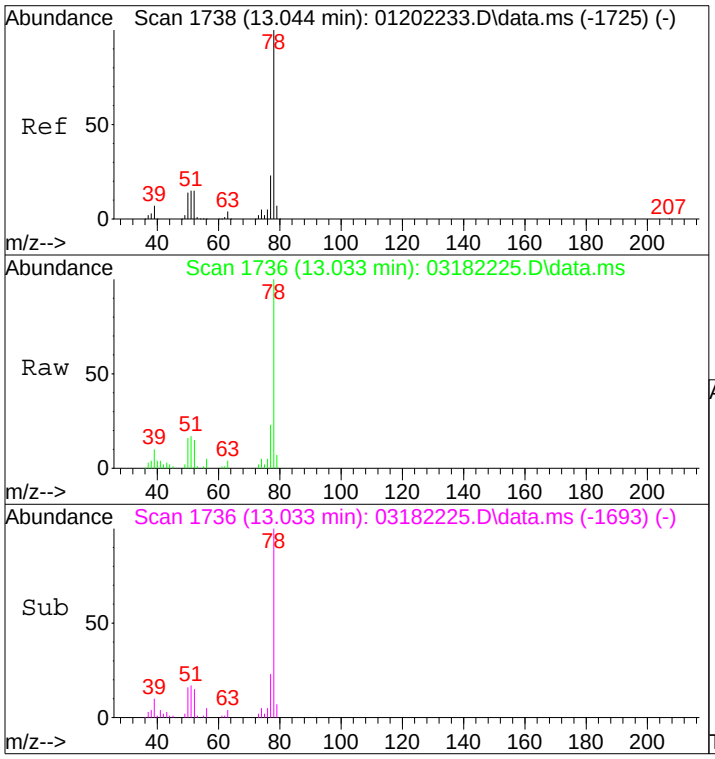


#31
n-Hexane
Concen: 0.92 ng
RT: 11.42 min Scan# 1442
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 57 Resp: 18966

Ion	Ratio	Lower	Upper
57	100		
56	54.7	41.0	61.6
86	14.1	15.3	22.9#

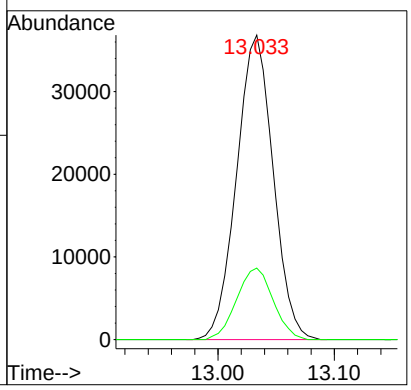


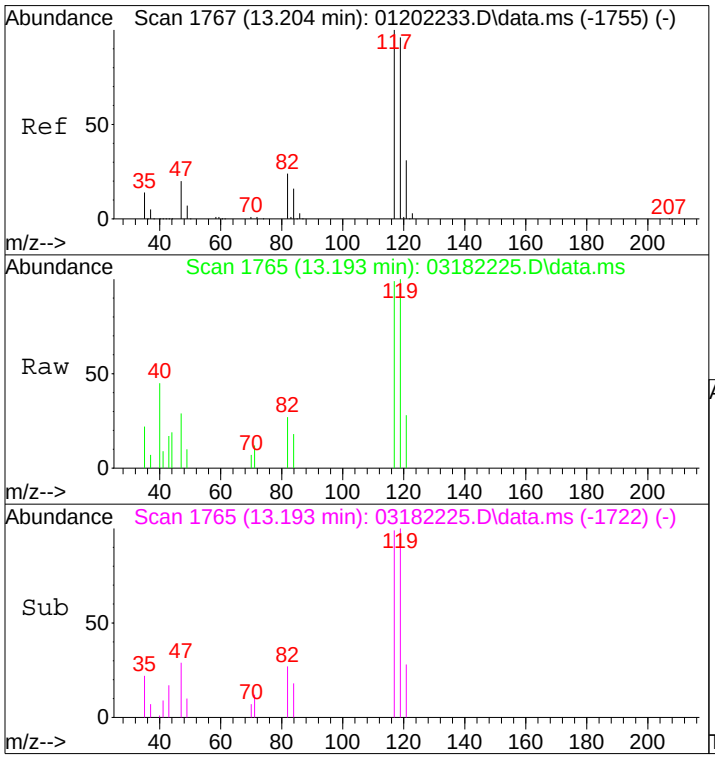


#41
Benzene
Concen: 1.35 ng
RT: 13.03 min Scan# 1736
Delta R.T. -0.011 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 78 Resp: 80568

Ion	Ratio	Lower	Upper
78	100		
77	23.5	3.0	43.0

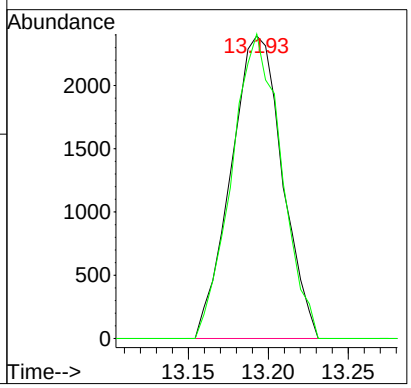


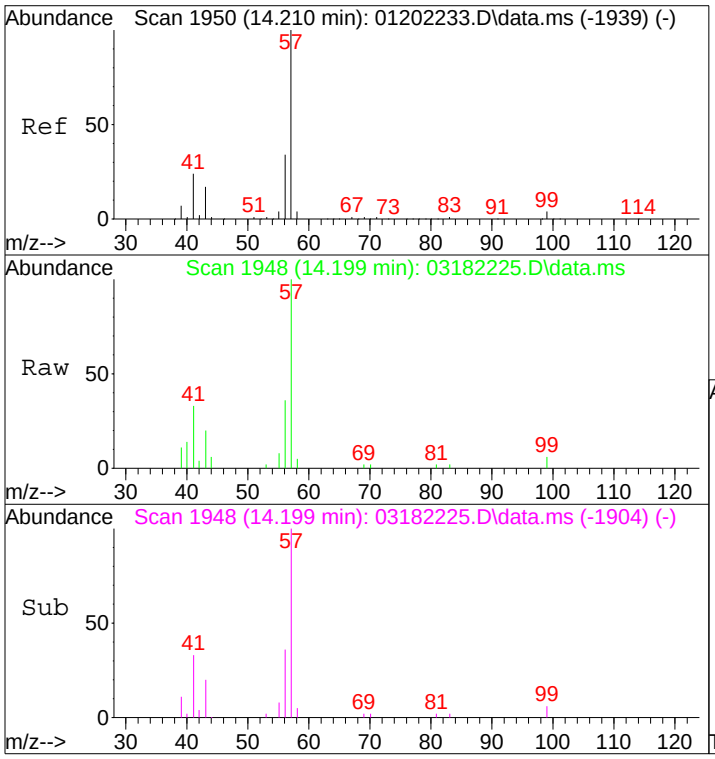


#42
Carbon Tetrachloride
Concen: 0.28 ng
RT: 13.19 min Scan# 1765
Delta R.T. -0.011 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion:117 Resp: 5353

Ion	Ratio	Lower	Upper
117	100		
119	97.0	76.2	116.2

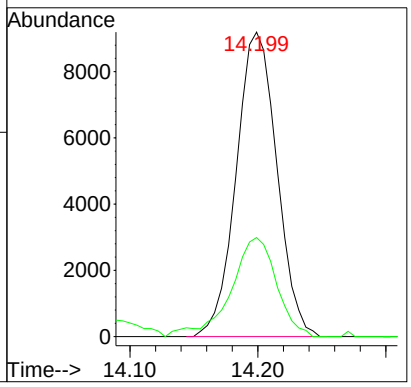


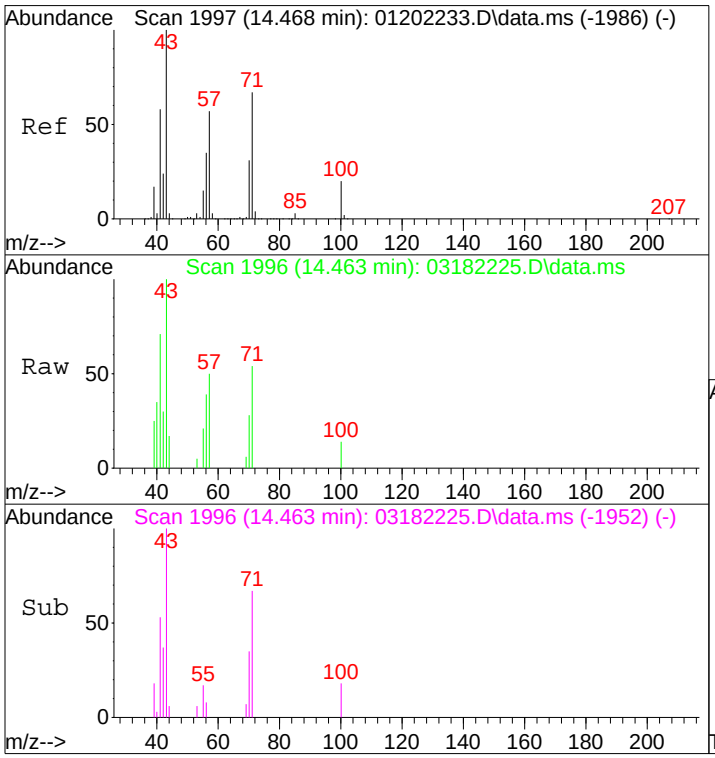


#49
2,2,4-Trimethylpentane (Isooctane)
Concen: 0.35 ng
RT: 14.20 min Scan# 1948
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 57 Resp: 20338

Ion	Ratio	Lower	Upper
57	100		
41	36.4	5.2	45.2

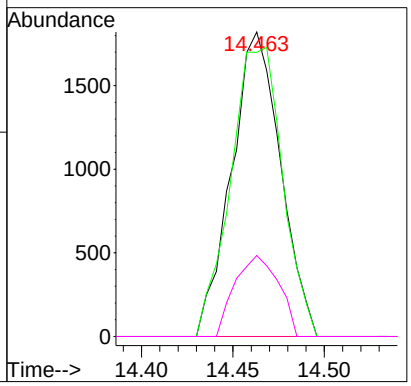


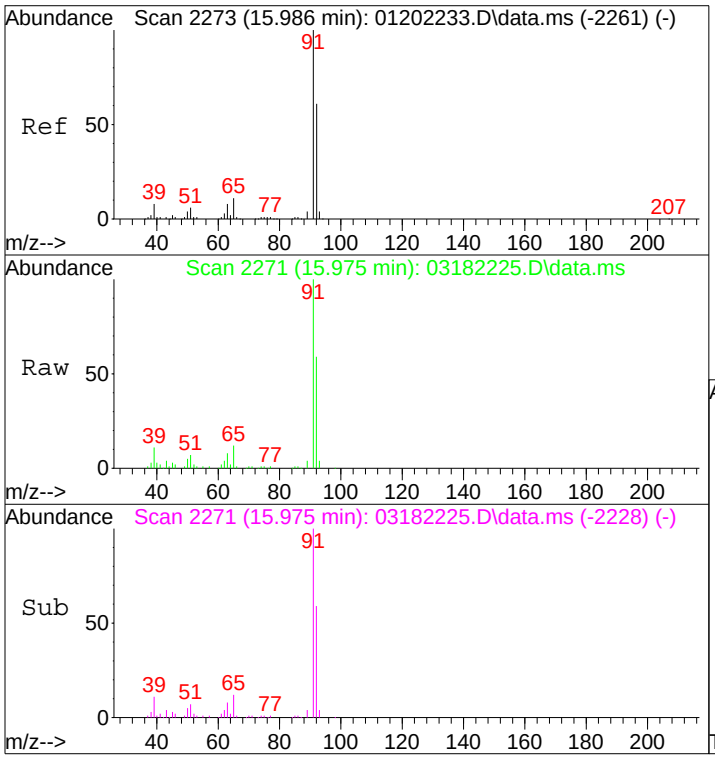


#51
n-Heptane
Concen: 0.23 ng
RT: 14.46 min Scan# 1996
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 71 Resp: 3402

Ion	Ratio	Lower	Upper
71	100		
57	100.6	65.8	105.8
100	23.7	9.6	49.6

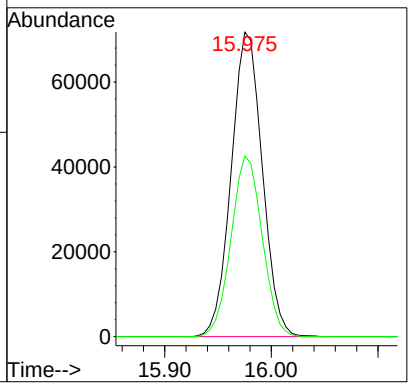


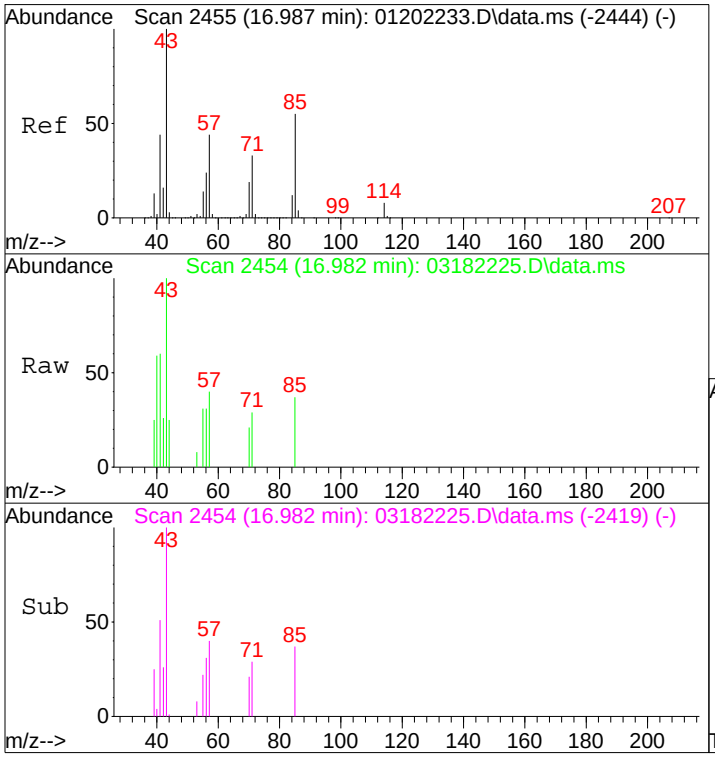


#58
Toluene
Concen: 2.10 ng
RT: 15.98 min Scan# 2271
Delta R.T. -0.011 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 91 Resp: 145493

Ion	Ratio	Lower	Upper
91	100		
92	59.2	40.6	80.6

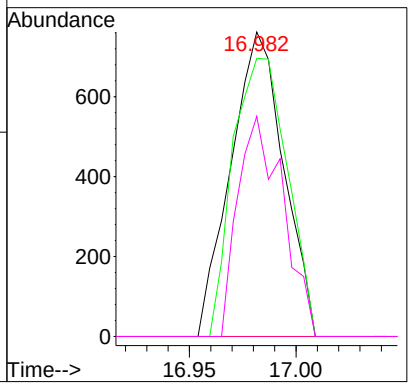


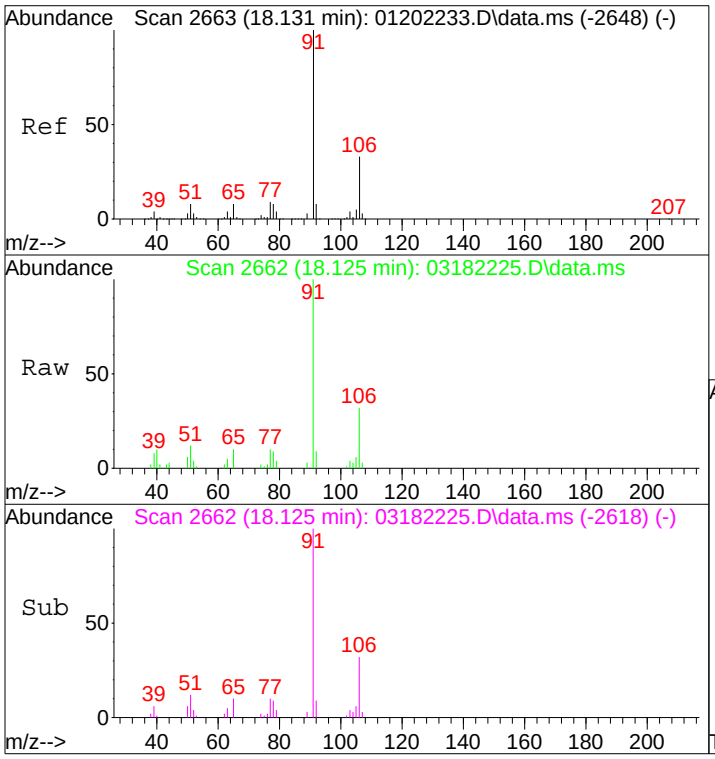


#63
n-Octane
Concen: 0.09 ng
RT: 16.98 min Scan# 2454
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 57 Resp: 1314

Ion	Ratio	Lower	Upper
57	100		
85	94.1	99.8	149.8#
71	61.6	60.6	90.8

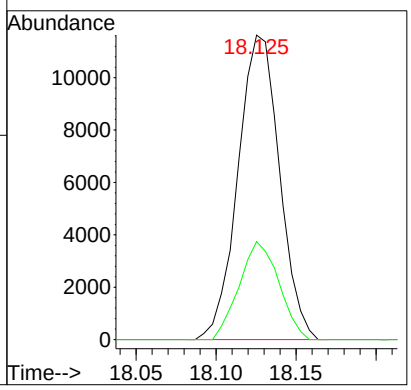


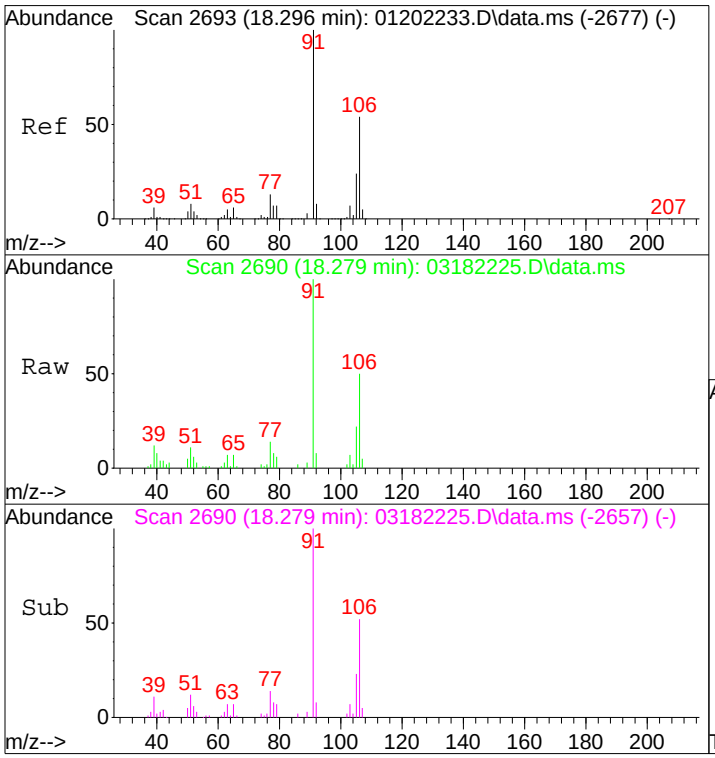


#66
Ethylbenzene
Concen: 0.27 ng
RT: 18.13 min Scan# 2662
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 91 Resp: 20984

Ion	Ratio	Lower	Upper
91	100		
106	30.7	12.8	52.8

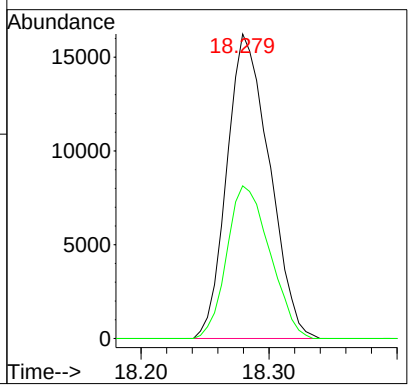


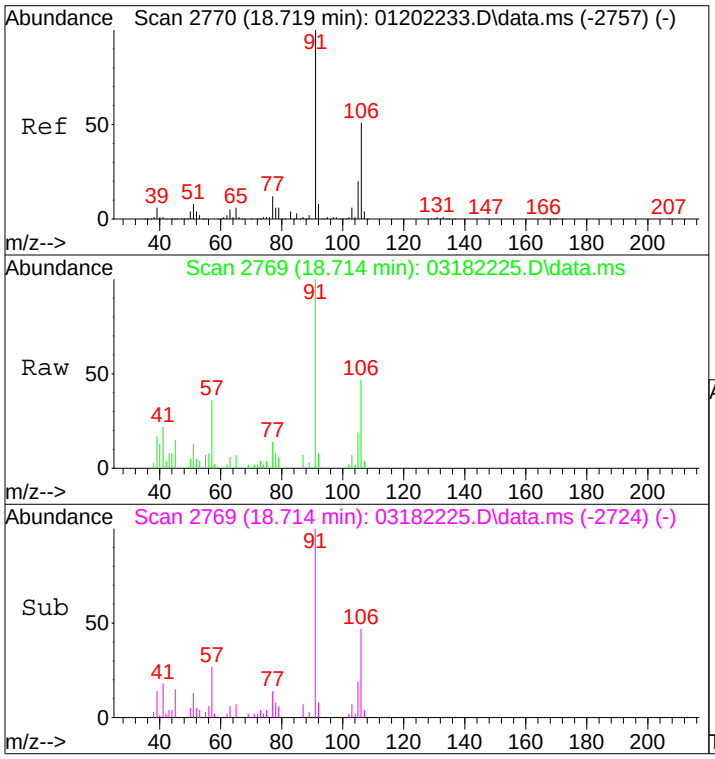


#67
m- & p-Xylenes
Concen: 0.64 ng
RT: 18.28 min Scan# 2690
Delta R.T. -0.016 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 91 Resp: 37512

Ion	Ratio	Lower	Upper
91	100		
106	50.8	32.9	72.9

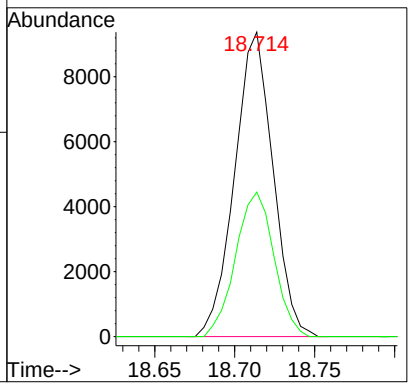


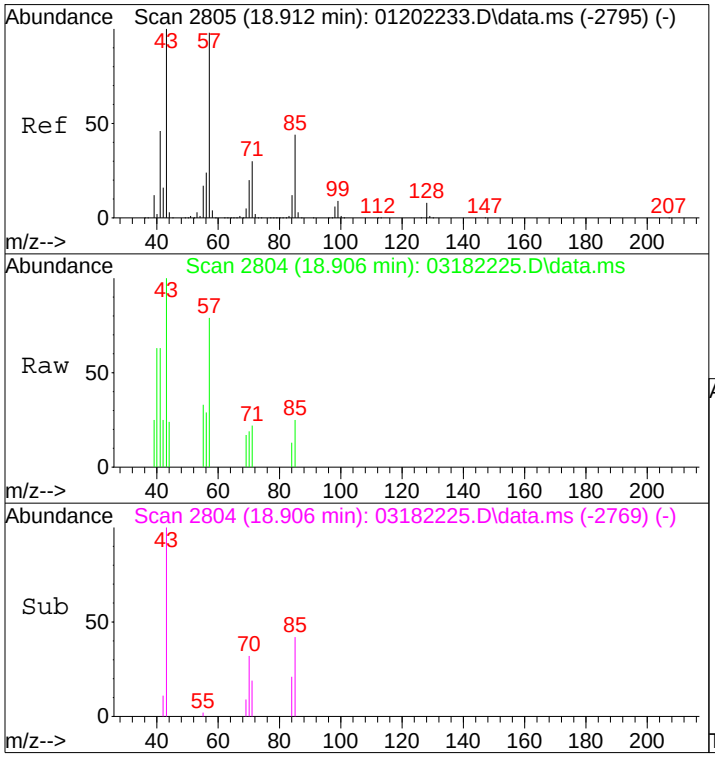


#70
o-Xylene
Concen: 0.27 ng
RT: 18.71 min Scan# 2769
Delta R.T. 0.000 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 91 Resp: 15659

Ion	Ratio	Lower	Upper
91	100		
106	47.4	30.1	70.1

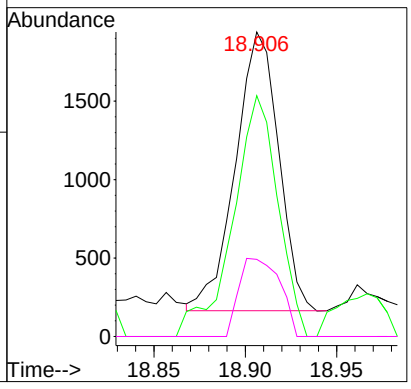


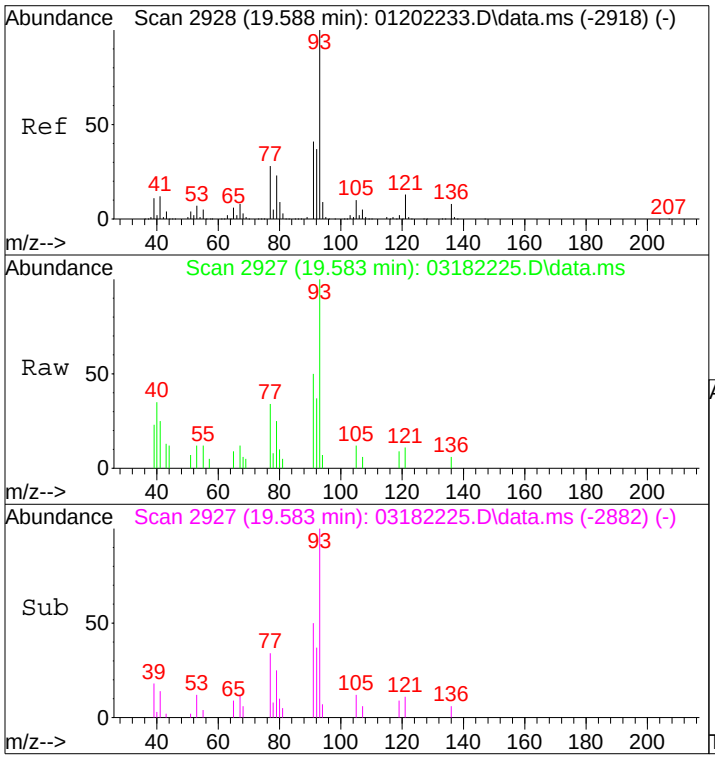


#71
n-Nonane
Concen: 0.09 ng
RT: 18.91 min Scan# 2804
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 43 Resp: 2922

Ion	Ratio	Lower	Upper
43	100		
57	89.8	74.0	114.0
85	26.5	20.5	60.5

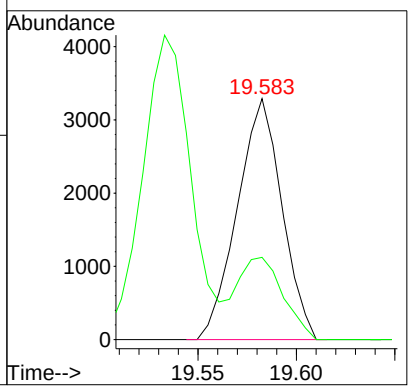


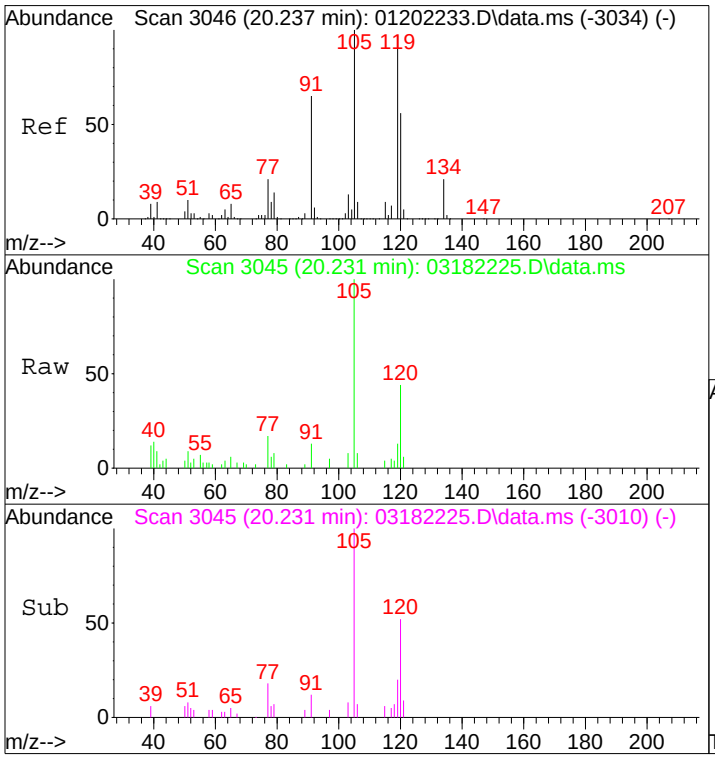


#75
alpha-Pinene
Concen: 0.14 ng
RT: 19.58 min Scan# 2927
Delta R.T. 0.000 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion: 93 Resp: 5189

Ion	Ratio	Lower	Upper
93	100		
77	35.9	9.3	49.3

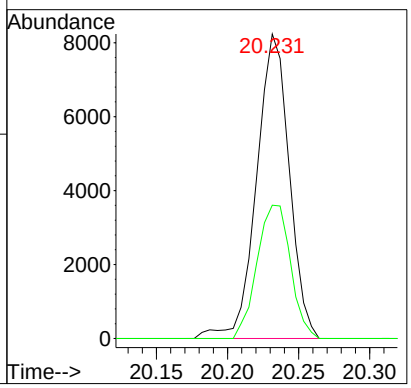


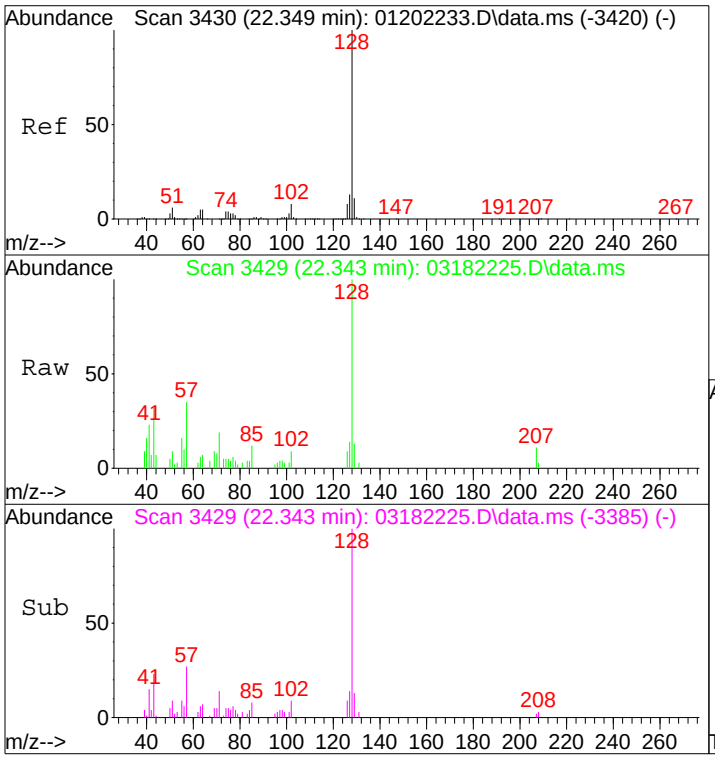


#82
1,2,4-Trimethylbenzene
Concen: 0.22 ng
RT: 20.23 min Scan# 3045
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion:105 Resp: 13152

Ion	Ratio	Lower	Upper
105	100		
120	44.9	36.6	76.6

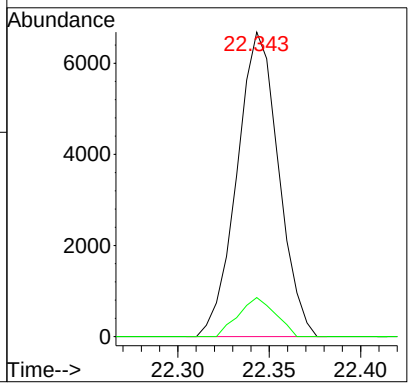




#95
Naphthalene
Concen: 0.12 ng
RT: 22.34 min Scan# 3429
Delta R.T. -0.005 min
Lab File: 03182225.D
Acq: 19 Mar 2022 19:23

Tgt Ion:128 Resp: 10601

Ion	Ratio	Lower	Upper
128	100		
129	11.3	0.0	31.2



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182203.D Vial: 2
Acq On : 18 Mar 2022 22:12 Operator: TZ/MT
Sample : MB R16031822_1000mL Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 19 05:47:21 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

3/19/22

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.30	130	154812	12.500	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	13.42	114	720555	12.500	ng		-0.01
56) Chlorobenzene-d5 (IS3)	17.73	54	139932	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.15	65	264195	12.423	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%				
57) Toluene-d8 (SS2)	15.88	98	773192	11.434	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 91.44%				
73) Bromofluorobenzene (SS3)	19.11	174	278809	12.937	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.52%				
Target Compounds							Qvalue
2) Propene	4.22	42	353	N.D.			
3) Dichlorodifluoromethan...	0.00	85	0	N.D.			
4) Chloromethane	0.00	50	0	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	6.47	45	3011	0.207	ng		93
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	6.95	56	235	N.D.			
13) Acetone	7.19	58	1556	0.107	ng	#	58
14) Trichlorofluoromethane	0.00	101	0	N.D.			
15) 2-Propanol (Isopropanol)	7.70	45	185	N.D.			
16) Acrylonitrile	7.90	53	1139	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	0.00	84	0	N.D.			
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.			
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	8.85	76	2665	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	0.00	72	0	N.D.			
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	0.00	83	0	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	0.00	56	0	N.D.			
41) Benzene	13.04	78	681	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	13.42	84	793	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	0.00	83	0	N.D.			
47) Trichloroethene	0.00	130	0	N.D.			
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182203.D Vial: 2
Acq On : 18 Mar 2022 22:12 Operator: TZ/MT
Sample : MB R16031822_1000mL Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 19 05:47:21 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

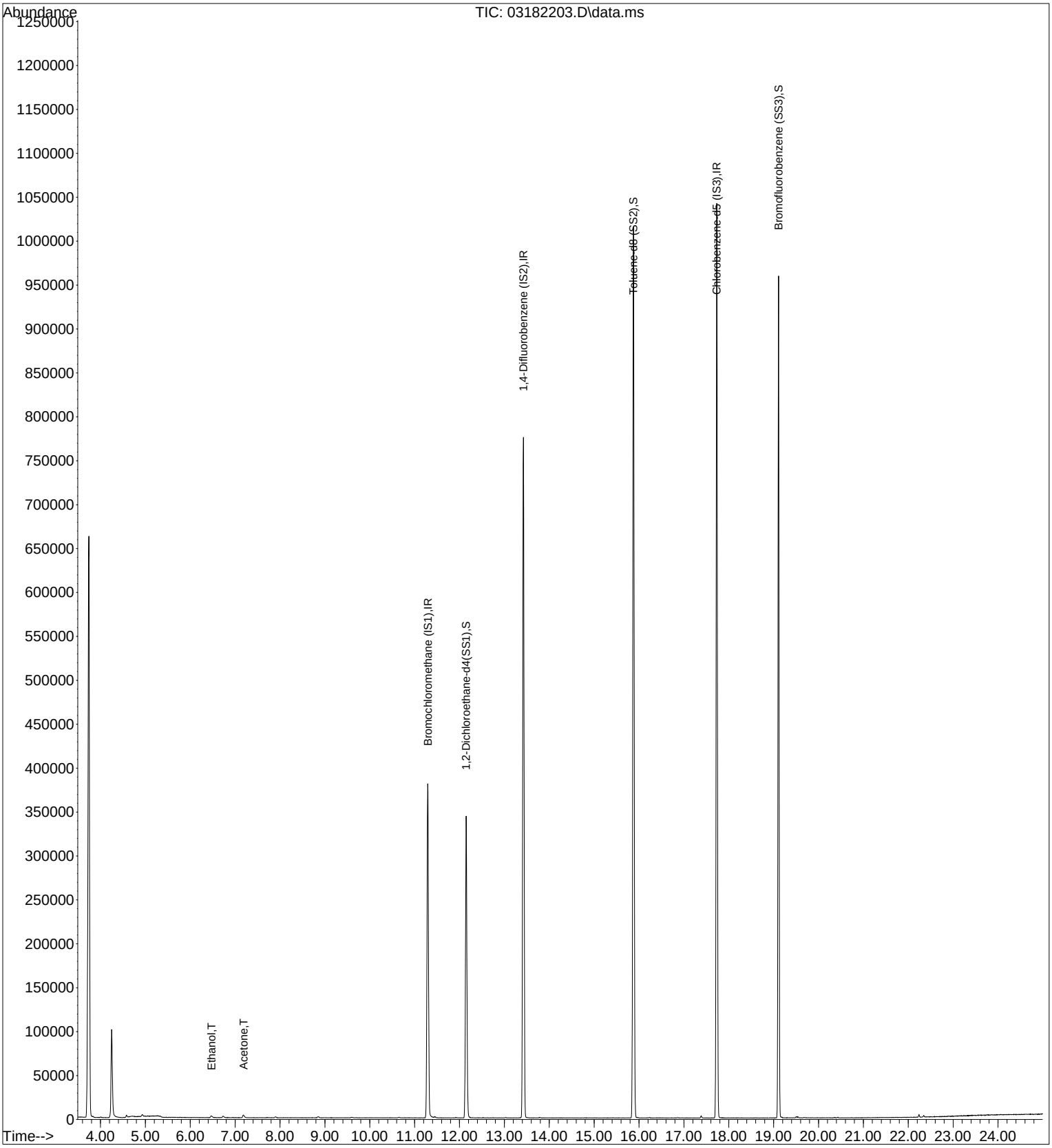
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0		N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0		N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0		N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0		N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0		N.D.	
58) Toluene	15.98	91	435		N.D.	
59) 2-Hexanone	16.23	43	753		N.D.	
60) Dibromochloromethane	0.00	129	0		N.D.	
61) 1,2-Dibromoethane	0.00	107	0		N.D.	
62) n-Butyl Acetate	16.86	43	515		N.D.	
63) n-Octane	0.00	57	0		N.D.	
64) Tetrachloroethene	0.00	166	0		N.D.	
65) Chlorobenzene	0.00	112	0		N.D.	
66) Ethylbenzene	0.00	91	0		N.D.	
67) m- & p-Xylenes	0.00	91	0		N.D.	
68) Bromoform	0.00	173	0		N.D.	
69) Styrene	0.00	104	0		N.D.	
70) o-Xylene	0.00	91	0		N.D.	
71) n-Nonane	0.00	43	0		N.D.	
72) 1,1,2,2-Tetrachloroethane	0.00	83	0		N.D.	
74) Cumene	19.11	105	449		N.D.	
75) alpha-Pinene	0.00	93	0		N.D.	
76) n-Propylbenzene	0.00	91	0		N.D.	
77) 3-Ethyltoluene	0.00	105	0		N.D.	
78) 4-Ethyltoluene	0.00	105	0		N.D.	
79) 1,3,5-Trimethylbenzene	0.00	105	0		N.D.	
80) alpha-Methylstyrene	0.00	118	0		N.D.	
81) 2-Ethyltoluene	0.00	105	0		N.D.	
82) 1,2,4-Trimethylbenzene	0.00	105	0		N.D.	
83) n-Decane	0.00	58	0		N.D.	
84) Benzyl Chloride	20.35	91	355		N.D.	
85) 1,3-Dichlorobenzene	20.37	146	292		N.D.	
86) 1,4-Dichlorobenzene	20.43	146	436		N.D.	
87) sec-Butylbenzene	0.00	105	0		N.D.	
88) 4-Isopropyltoluene (p-...	0.00	119	0		N.D.	
89) 1,2,3-Trimethylbenzene	0.00	105	0		N.D.	
90) 1,2-Dichlorobenzene	20.73	146	119		N.D.	
91) d-Limonene	0.00	68	0		N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0		N.D.	
93) n-Undecane	0.00	57	0		N.D.	
94) 1,2,4-Trichlorobenzene	22.24	180	1083		N.D.	
95) Naphthalene	22.34	128	2282		N.D.	
96) n-Dodecane	0.00	57	0		N.D.	
97) Hexachlorobutadiene	0.00	225	0		N.D.	
98) Cyclohexanone	0.00	55	0		N.D.	
99) tert-Butylbenzene	0.00	119	0		N.D.	
100) n-Butylbenzene	0.00	91	0		N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0		N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182203.D Vial: 2
Acq On : 18 Mar 2022 22:12 Operator: TZ/MT
Sample : MB R16031822_1000mL Inst : GCMS-16
Misc : S35-01102201

Quant Time: Mar 19 05:47:21 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182204.D Vial: 2
Acq On : 18 Mar 2022 22:45 Operator: TZ/MT
Sample : LCS R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-03072204 (4/6)

Quant Time: Mar 19 05:45:01 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

VOA 3/19/22

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.31	130	165763	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	13.43	114	769393	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	17.73	54	157389	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.16	65	282607	12.411	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
57) Toluene-d8 (SS2)	15.88	98	845004	11.110	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 88.88%				
73) Bromofluorobenzene (SS3)	19.11	174	327351	13.504	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 108.00%				
Target Compounds							Qvalue
2) Propene	4.17	42	680194	26.937	ng		98
3) Dichlorodifluoromethan...	4.33	85	976402	23.404	ng		100
4) Chloromethane	4.63	50	722581	23.820	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	4.89	135	542286	24.302	ng		100
6) Vinyl Chloride	5.06	62	719570	23.113	ng		100
7) 1,3-Butadiene	5.33	54	534916	24.912	ng		97
8) Bromomethane	5.77	94	399397	23.551	ng		100
9) Chloroethane	6.12	64	340609	24.891	ng		100
10) Ethanol	6.49	45	1697491	108.729	ng		100
11) Acetonitrile	6.75	41	927177	22.231	ng		99
12) Acrolein	6.93	56	658446	57.148	ng		100
13) Acetone	7.15	58	1937228	124.029	ng		95
14) Trichlorofluoromethane	7.40	101	816789	23.025	ng		100
15) 2-Propanol (Isopropanol)	7.64	45	2495023	46.866	ng		100
16) Acrylonitrile	7.91	53	1354915	49.358	ng		99
17) 1,1-Dichloroethene	8.37	96	465560	24.972	ng		97
18) 2-Methyl-2-Propanol (t...	8.52	59	2564682	52.239	ng		97
19) Methylene Chloride	8.60	84	497423	24.429	ng		93
20) 3-Chloro-1-propene (Al...	8.75	41	675592	23.756	ng		97
21) Trichlorotrifluoroethane	9.01	151	426873	26.506	ng		95
22) Carbon Disulfide	8.85	76	3565615	51.471	ng		100
23) trans-1,2-Dichloroethene	9.87	61	691896	25.102	ng		97
24) 1,1-Dichloroethane	10.12	63	857818	25.363	ng		100
25) Methyl tert-Butyl Ether	10.21	73	1426391	25.335	ng		97
26) Vinyl Acetate	10.37	86	545889	138.282	ng	#	82
27) 2-Butanone (MEK)	10.61	72	706331	49.142	ng	#	86
28) cis-1,2-Dichloroethene	11.14	61	667171	24.972	ng		97
29) Diisopropyl Ether	11.43	87	938873	56.061	ng	#	89
30) Ethyl Acetate	11.44	61	556659	75.488	ng		93
31) n-Hexane	11.42	57	814293	29.085	ng		99
32) Chloroform	11.48	83	854837	25.510	ng		100
34) Tetrahydrofuran (THF)	11.88	72	660823	50.383	ng		91
35) Ethyl tert-Butyl Ether	12.02	87	1254247	58.596	ng		90
36) 1,2-Dichloroethane	12.28	62	631042	24.218	ng		100
38) 1,1,1-Trichloroethane	12.56	97	738523	23.636	ng		98
39) Isopropyl Acetate	12.99	61	12855	No Calib		#	
40) 1-Butanol	13.01	56	11029	No Calib		#	
41) Benzene	13.04	78	2008696	25.124	ng		100
42) Carbon Tetrachloride	13.20	117	608015	23.919	ng		100
43) Cyclohexane	13.33	84	1641400	55.830	ng		93
44) tert-Amyl Methyl Ether	13.67	73	2917382	55.895	ng		97
45) 1,2-Dichloropropane	13.89	63	511843	26.227	ng		100
46) Bromodichloromethane	14.08	83	693762	26.488	ng		100
47) Trichloroethene	14.13	130	551179	25.788	ng		94
48) 1,4-Dioxane	14.10	88	439800	24.782	ng		95
49) 2,2,4-Trimethylpentane...	14.20	57	2163239	27.904	ng		100
50) Methyl Methacrylate	14.34	100	454925	54.740	ng		93

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182204.D Vial: 2
Acq On : 18 Mar 2022 22:45 Operator: TZ/MT
Sample : LCS R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-03072204 (4/6)

Quant Time: Mar 19 05:45:01 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

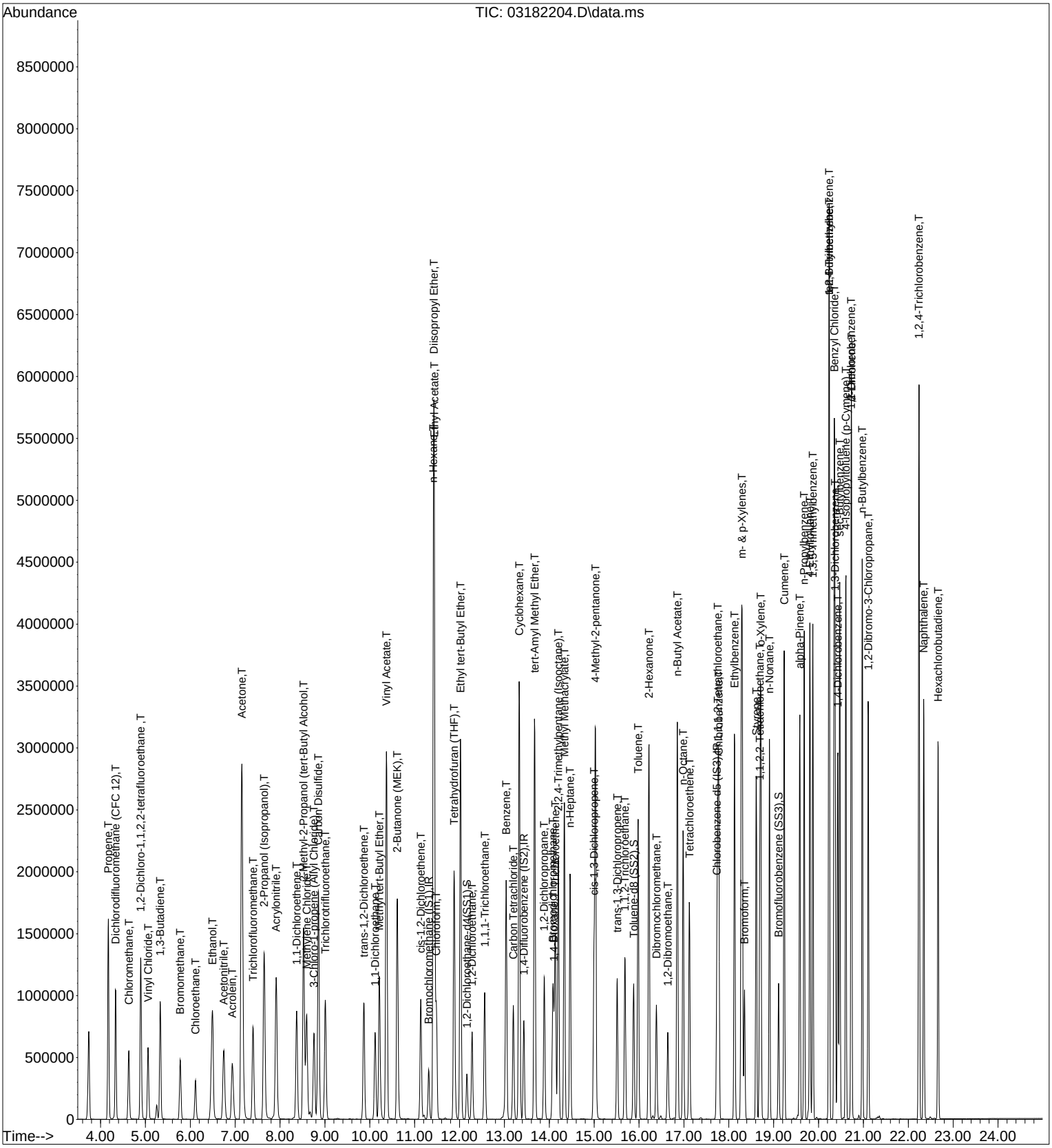
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	14.46	71	539624	27.182	ng		95
52) cis-1,3-Dichloropropene	15.00	75	833162	27.134	ng		100
53) 4-Methyl-2-pentanone	15.03	58	1014314	56.879	ng		94
54) trans-1,3-Dichloropropene	15.51	75	726139	25.740	ng		100
55) 1,1,2-Trichloroethane	15.68	97	492651	25.817	ng		99
58) Toluene	15.98	91	2072943	22.538	ng		100
59) 2-Hexanone	16.22	43	2347628	45.196	ng		97
60) Dibromochloromethane	16.39	129	578368	23.722	ng		100
61) 1,2-Dibromoethane	16.64	107	555612	22.229	ng		100
62) n-Butyl Acetate	16.85	43	2657478	46.728	ng		97
63) n-Octane	16.98	57	469682	25.565	ng		93
64) Tetrachloroethene	17.12	166	608124	24.623	ng		100
65) Chlorobenzene	17.78	112	1470825	24.169	ng		100
66) Ethylbenzene	18.13	91	2453902	23.964	ng		99
67) m- & p-Xylenes	18.29	91	3855217	49.498	ng		100
68) Bromoform	18.35	173	519747	24.899	ng		100
69) Styrene	18.61	104	1511403	23.750	ng		100
70) o-Xylene	18.71	91	1964421	25.071	ng		100
71) n-Nonane	18.91	43	1081615	26.364	ng		95
72) 1,1,2,2-Tetrachloroethane	18.69	83	960781	26.471	ng		100
74) Cumene	19.24	105	2507303	24.602	ng		99
75) alpha-Pinene	19.58	93	1286838	26.780	ng		99
76) n-Propylbenzene	19.68	91	3059782	25.297	ng		99
77) 3-Ethyltoluene	19.81	105	2518620	No Calib			
78) 4-Ethyltoluene	19.81	105	2518620	25.505	ng		100
79) 1,3,5-Trimethylbenzene	19.87	105	2102195	25.856	ng		100
80) alpha-Methylstyrene	19.87	118	16769	No Calib		#	
81) 2-Ethyltoluene	19.87	105	2102195	No Calib			
82) 1,2,4-Trimethylbenzene	20.24	105	2177823	28.070	ng		100
83) n-Decane	20.23	58	82065	No Calib		#	
84) Benzyl Chloride	20.35	91	3529945	56.779	ng		98
85) 1,3-Dichlorobenzene	20.37	146	1314308	28.063	ng		100
86) 1,4-Dichlorobenzene	20.43	146	1251502	25.706	ng		99
87) sec-Butylbenzene	20.47	105	2867685	26.454	ng		99
88) 4-Isopropyltoluene (p-...	20.61	119	2506256	26.495	ng		98
89) 1,2,3-Trimethylbenzene	20.61	105	90748	No Calib		#	
90) 1,2-Dichlorobenzene	20.73	146	1281707	29.025	ng		100
91) d-Limonene	20.74	68	819168	29.495	ng		95
92) 1,2-Dibromo-3-Chloropr...	21.11	157	984299	58.863	ng		98
93) n-Undecane	22.34	57	792	No Calib		#	
94) 1,2,4-Trichlorobenzene	22.24	180	1951154	55.748	ng		100
95) Naphthalene	22.34	128	2607425	22.601	ng		100
96) n-Dodecane	22.34	57	792	No Calib		#	
97) Hexachlorobutadiene	22.67	225	578033	27.065	ng		100
98) Cyclohexanone	18.30	55	2880	No Calib			
99) tert-Butylbenzene	20.24	119	2140500	28.015	ng		98
100) n-Butylbenzene	20.97	91	2331239	26.744	ng		100
101) 1,1,1,2-Tetrachloroethane	17.76	131	544369	25.519	ng		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182204.D Vial: 2
Acq On : 18 Mar 2022 22:45 Operator: TZ/MT
Sample : LCS R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-03072204 (4/6)

Quant Time: Mar 19 05:45:01 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182205.D Vial: 2
Acq On : 18 Mar 2022 23:19 Operator: TZ/MT
Sample : LCSD R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-03072204 (4/6)

Quant Time: Mar 19 05:45:04 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

VOA 3/19/22

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.31	130	181064	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	13.43	114	835460	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	17.73	54	164178	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.16	65	303918	12.219	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.76%				
57) Toluene-d8 (SS2)	15.88	98	905684	11.415	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 91.36%				
73) Bromofluorobenzene (SS3)	19.11	174	345611	13.668	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 109.36%				
Target Compounds							Qvalue
2) Propene	4.17	42	754161	27.342	ng		98
3) Dichlorodifluoromethan...	4.33	85	1079141	23.681	ng		100
4) Chloromethane	4.63	50	796065	24.025	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	4.89	135	591855	24.282	ng		100
6) Vinyl Chloride	5.05	62	776159	22.824	ng		100
7) 1,3-Butadiene	5.32	54	595116	25.373	ng		97
8) Bromomethane	5.77	94	446668	24.112	ng		100
9) Chloroethane	6.11	64	377770	25.274	ng		100
10) Ethanol	6.49	45	1854444	108.744	ng		100
11) Acetonitrile	6.74	41	1013275	22.242	ng		99
12) Acrolein	6.93	56	723097	57.456	ng		99
13) Acetone	7.14	58	2067116	121.161	ng		96
14) Trichlorofluoromethane	7.40	101	893741	23.065	ng		100
15) 2-Propanol (Isopropanol)	7.64	45	2686026	46.190	ng		100
16) Acrylonitrile	7.91	53	1464700	48.848	ng		100
17) 1,1-Dichloroethene	8.37	96	508115	24.952	ng		98
18) 2-Methyl-2-Propanol (t...	8.52	59	2776504	51.774	ng		98
19) Methylene Chloride	8.59	84	536322	24.113	ng		94
20) 3-Chloro-1-propene (Al...	8.75	41	729128	23.472	ng		96
21) Trichlorotrifluoroethane	9.01	151	465655	26.471	ng		95
22) Carbon Disulfide	8.85	76	3837803	50.718	ng		100
23) trans-1,2-Dichloroethene	9.87	61	748151	24.850	ng		98
24) 1,1-Dichloroethane	10.12	63	925637	25.055	ng		100
25) Methyl tert-Butyl Ether	10.21	73	1553388	25.259	ng		97
26) Vinyl Acetate	10.37	86	580576	134.641	ng	#	83
27) 2-Butanone (MEK)	10.61	72	762833	48.588	ng	#	87
28) cis-1,2-Dichloroethene	11.14	61	719682	24.661	ng		98
29) Diisopropyl Ether	11.43	87	986215	53.912	ng	#	89
30) Ethyl Acetate	11.43	61	586327	72.792	ng		93
31) n-Hexane	11.42	57	851549	27.846	ng		99
32) Chloroform	11.48	83	920953	25.160	ng		100
34) Tetrahydrofuran (THF)	11.88	72	706872	49.339	ng		92
35) Ethyl tert-Butyl Ether	12.02	87	1338742	57.258	ng		90
36) 1,2-Dichloroethane	12.28	62	680885	23.923	ng		100
38) 1,1,1-Trichloroethane	12.56	97	796579	23.478	ng		99
39) Isopropyl Acetate	12.99	61	14436	No Calib		#	
40) 1-Butanol	13.00	56	12132	No Calib		#	
41) Benzene	13.04	78	2155142	24.824	ng		100
42) Carbon Tetrachloride	13.20	117	653456	23.674	ng		100
43) Cyclohexane	13.33	84	1735316	54.357	ng		94
44) tert-Amyl Methyl Ether	13.67	73	3113799	54.941	ng		97
45) 1,2-Dichloropropane	13.89	63	550778	25.990	ng		100
46) Bromodichloromethane	14.08	83	741145	26.059	ng		100
47) Trichloroethene	14.13	130	594753	25.626	ng		94
48) 1,4-Dioxane	14.10	88	470585	24.420	ng		95
49) 2,2,4-Trimethylpentane...	14.20	57	2300508	27.328	ng		99
50) Methyl Methacrylate	14.34	100	487127	53.980	ng		94

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182205.D Vial: 2
Acq On : 18 Mar 2022 23:19 Operator: TZ/MT
Sample : LCSD R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-03072204 (4/6)

Quant Time: Mar 19 05:45:04 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

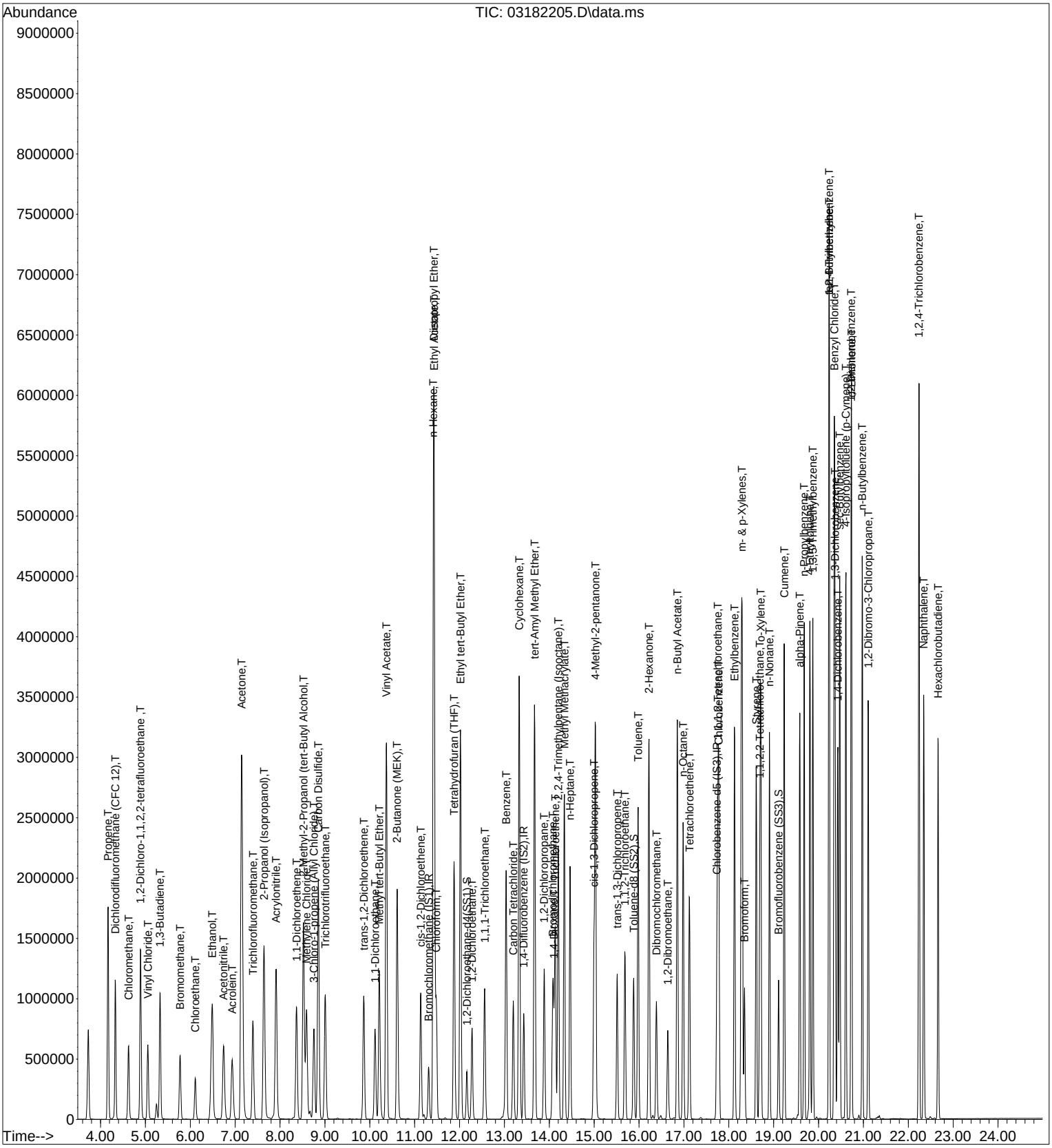
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	14.46	71	573444	26.601 ng		96
52) cis-1,3-Dichloropropene	15.00	75	892433	26.765 ng		100
53) 4-Methyl-2-pentanone	15.03	58	1063352	54.913 ng		94
54) trans-1,3-Dichloropropene	15.51	75	777737	25.389 ng		100
55) 1,1,2-Trichloroethane	15.68	97	521934	25.189 ng		99
58) Toluene	15.98	91	2212687	23.062 ng		100
59) 2-Hexanone	16.22	43	2462327	45.444 ng		97
60) Dibromochloromethane	16.39	129	615414	24.197 ng		100
61) 1,2-Dibromoethane	16.64	107	589507	22.610 ng		100
62) n-Butyl Acetate	16.85	43	2787383	46.986 ng		97
63) n-Octane	16.98	57	494097	25.782 ng		93
64) Tetrachloroethene	17.12	166	643422	24.975 ng		100
65) Chlorobenzene	17.78	112	1540874	24.273 ng		100
66) Ethylbenzene	18.13	91	2561282	23.978 ng		100
67) m- & p-Xylenes	18.29	91	4046427	49.805 ng		99
68) Bromoform	18.35	173	551550	25.330 ng		100
69) Styrene	18.61	104	1587912	23.921 ng		100
70) o-Xylene	18.71	91	2055845	25.153 ng		100
71) n-Nonane	18.91	43	1128284	26.365 ng		95
72) 1,1,2,2-Tetrachloroethane	18.69	83	998511	26.373 ng		100
74) Cumene	19.24	105	2633930	24.776 ng		99
75) alpha-Pinene	19.58	93	1352705	26.987 ng		99
76) n-Propylbenzene	19.68	91	3197250	25.341 ng		99
77) 3-Ethyltoluene	19.81	105	2635315	No Calib		
78) 4-Ethyltoluene	19.81	105	2635315	25.583 ng		100
79) 1,3,5-Trimethylbenzene	19.87	105	2197351	25.909 ng		100
80) alpha-Methylstyrene	19.87	118	17499	No Calib	#	
81) 2-Ethyltoluene	19.87	105	2197351	No Calib		
82) 1,2,4-Trimethylbenzene	20.24	105	2259903	27.924 ng		100
83) n-Decane	20.24	58	85982	No Calib	#	
84) Benzyl Chloride	20.35	91	3668517	56.568 ng		98
85) 1,3-Dichlorobenzene	20.37	146	1385973	28.369 ng		99
86) 1,4-Dichlorobenzene	20.43	146	1297958	25.558 ng		100
87) sec-Butylbenzene	20.47	105	2987338	26.418 ng		99
88) 4-Isopropyltoluene (p-...	20.61	119	2610163	26.452 ng		98
89) 1,2,3-Trimethylbenzene	20.61	105	94047	No Calib	#	
90) 1,2-Dichlorobenzene	20.73	146	1334482	28.970 ng		100
91) d-Limonene	20.74	68	853942	29.475 ng		95
92) 1,2-Dibromo-3-Chloropr...	21.11	157	1029156	59.001 ng		98
93) n-Undecane	22.34	57	925	No Calib	#	
94) 1,2,4-Trichlorobenzene	22.24	180	2028607	55.564 ng		100
95) Naphthalene	22.34	128	2755358	22.896 ng		100
96) n-Dodecane	22.34	57	925	No Calib		
97) Hexachlorobutadiene	22.67	225	601511	27.000 ng		100
98) Cyclohexanone	18.29	55	3099	No Calib		
99) tert-Butylbenzene	20.24	119	2217982	27.828 ng		98
100) n-Butylbenzene	20.97	91	2428025	26.702 ng		99
101) 1,1,1,2-Tetrachloroethane	17.76	131	570022	25.616 ng		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182205.D Vial: 2
Acq On : 18 Mar 2022 23:19 Operator: TZ/MT
Sample : LCSD R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-03072204 (4/6)

Quant Time: Mar 19 05:45:04 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Response Factor Report GCMS-16

Method Path : I:\MS16\METHODS\
Method File : R16012022B.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Fri Jan 21 09:34:58 2022
Response Via : Initial Calibration

Calibration Files
0.1 =01202228.D 0.2 =01202229.D 0.5 =01202230.D 1.0 =01202231.D 5.0 =01202232.D 25 =01202233.D 50 =01202234.D
100 =01202235.D

WDH 1/21/22

		Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
1)	IR	Bromochloromethane...	----------	----------	ISTD	----------	----------	----------	----------	----------		
2)	T	Propene	1.942	1.872	2.173	1.657	2.346	1.885	1.726	1.632	1.904	13.13
3)	T	Dichlorodifluo...	3.254	3.121	3.220	3.015	3.012	3.462	3.191	2.892	3.146	5.62
4)	T	Chloromethane	2.609	2.434	2.341	2.416	1.795	2.555	2.243	1.907	2.288	12.85
5)	T	1,2-Dichloro-1...	1.717	1.751	1.809	1.738	1.687	1.834	1.594	1.332	1.683	9.50
6)	T	Vinyl Chloride	2.396	2.310	2.453	2.395	2.321	2.458	2.286	2.164	2.348	4.19
7)	T	1,3-Butadiene	1.527	1.439	1.560	1.537	1.566	1.894	1.788	1.643	1.619	9.28
8)	T	Bromomethane	1.292	1.209	1.276	1.161	1.140	1.410	1.375	1.369	1.279	7.98
9)	T	Chloroethane	0.989	1.010	1.031	0.975	0.963	1.127	1.096	1.065	1.032	5.75
10)	T	Ethanol		1.435	1.352	1.119	1.121	1.209	1.089	0.915	1.177	14.75
11)	T	Acetonitrile		3.725	3.412	2.940	2.939	3.126	2.967	2.906	3.145	9.89
12)	T	Acrolein	0.795	0.663	0.589	0.890	0.896	1.087	1.040	0.993	0.869	20.37
13)	T	Acetone	1.550	1.396	1.315	1.074	1.084	1.247	1.012	0.745	1.178	21.40
14)	T	Trichlorofluor...	2.666	2.647	2.677	2.473	2.478	2.949	2.834	2.676	2.675	6.00
15)	T	2-Propanol (Is...	4.791	4.271	4.843	3.886	2.863	4.457	3.977	3.029	4.015	18.51
16)	T	Acrylonitrile	2.483	2.085	1.962	1.881	1.917	2.258	2.099	1.876	2.070	10.26
17)	T	1,1-Dichloroet...	1.450	1.333	1.321	1.234	1.254	1.583	1.551	1.522	1.406	9.80
18)	T	2-Methyl-2-Pro...	3.692	3.693	3.769	3.294	3.468	4.195	3.805		3.702	7.64
19)	T	Methylene Chlo...	1.643	1.526	1.474	1.376	1.406	1.683	1.633	1.542	1.535	7.34
20)	T	3-Chloro-1-pro...	2.173	2.162	2.047	1.964	2.000	2.478	2.260	2.073	2.145	7.77
21)	T	Trichlorotrifl...	1.138	1.127	1.146	1.061	1.093	1.380	1.384	1.385	1.214	11.72
22)	T	Carbon Disulfide	5.554	5.319	5.322	4.816	4.939	6.115	5.473	4.253	5.224	10.67
23)	T	trans-1,2-Dich...	2.099	2.039	2.017	1.929	1.971	2.343	2.203	2.027	2.078	6.50
24)	T	1,1-Dichloroet...	2.529	2.523	2.491	2.399	2.409	2.850	2.679	2.523	2.550	5.83
25)	T	Methyl tert-Bu...	4.062	3.999	4.022	3.815	3.954	5.002	4.756	4.355	4.246	10.00
26)	T	Vinyl Acetate			0.231	0.218	0.255	0.407	0.375	0.299	0.298	26.21
27)	T	2-Butanone (MEK)	1.176	1.067	1.092	0.967	1.011	1.257	1.156	0.945	1.084	10.01
28)	T	cis-1,2-Dichlo...	2.042	1.965	1.951	1.900	1.907	2.275	2.127	1.950	2.015	6.41
29)	T	Diisopropyl Ether	1.280	1.279	1.288	1.256	1.412	1.374	0.951		1.263	11.80
30)	T	Ethyl Acetate	0.618	0.599	0.611	0.583	0.649	0.510	0.323		0.556	20.05
31)	T	n-Hexane	2.479	2.388	2.405	2.353	2.542	2.175	1.498	1.050	2.111	25.62
32)	T	Chloroform	2.514	2.481	2.491	2.385	2.436	2.873	2.639	2.396	2.527	6.37
33)	S	1,2-Dichloroet...	1.700	1.734	1.768	1.748	1.759	1.710	1.686	1.631	1.717	2.63
34)	T	Tetrahydrofura...	1.078	0.971	0.970	0.905	0.933	1.148	1.059	0.849	0.989	10.00
35)	T	Ethyl tert-But...	1.458	1.540	1.564	1.490	1.594	2.105	1.830	1.332	1.614	15.10
36)	T	1,2-Dichloroet...	1.995	1.980	1.986	1.895	1.894	2.185	2.000	1.784	1.965	5.90
37)	IR	1,4-Difluorobenzen...	----------	----------	ISTD	----------	----------	----------	----------	----------		
38)	T	1,1,1-Trichlor...	0.507	0.487	0.482	0.471	0.472	0.581	0.547	0.514	0.508	7.71
39)	T	Isopropyl Acetate									0.000	-1.00
40)	T	1-Butanol									0.000	-1.00
41)	T	Benzene	1.433	1.315	1.237	1.172	1.175	1.485	1.376	1.198	1.299	9.42
42)	T	Carbon Tetrach...	0.374	0.379	0.378	0.368	0.384	0.489	0.475	0.456	0.413	12.40

Method Path : I:\MS16\METHODS\
Method File : R16012022B.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

43)	T	Cyclohexane	0.481	0.467	0.461	0.450	0.479	0.620	0.511	0.353	0.478	15.44
44)	T	tert-Amyl Meth...	0.874	0.852	0.840	0.817	0.849	1.068	0.872	0.613	0.848	14.54
45)	T	1,2-Dichloropr...	0.313	0.306	0.309	0.291	0.297	0.365	0.345	0.310	0.317	7.92
46)	T	Bromodichlorom...	0.406	0.385	0.394	0.384	0.407	0.517	0.486	0.424	0.426	11.61
47)	T	Trichloroethene	0.328	0.317	0.313	0.303	0.314	0.426	0.417	0.361	0.347	14.08
48)	T	1,4-Dioxane	0.310	0.285	0.281	0.260	0.273	0.333	0.316	0.248	0.288	10.19
49)	T	2,2,4-Trimethy...	1.270	1.256	1.247	1.214	1.245	1.519	1.323	1.002	1.260	11.24
50)	T	Methyl Methacr...	0.125	0.120	0.123	0.118	0.131	0.178	0.162	0.123	0.135	16.64
51)	T	n-Heptane	0.320	0.298	0.305	0.298	0.311	0.401	0.363	0.285	0.323	12.20
52)	T	cis-1,3-Dichlo...	0.446	0.450	0.453	0.446	0.477	0.624	0.587	0.507	0.499	13.97
53)	T	4-Methyl-2-pen...	0.322	0.306	0.310	0.275	0.295	0.348	0.276	0.187	0.290	16.56
54)	T	trans-1,3-Dich...	0.380	0.380	0.400	0.404	0.448	0.579	0.560	0.516	0.458	17.86
55)	T	1,1,2-Trichlor...	0.294	0.292	0.287	0.276	0.284	0.368	0.356	0.324	0.310	11.37
56)	IR	Chlorobenzene-d5 (...	----------	ISTD	----------							
57)	S	Toluene-d8 (SS2)	5.988	5.886	5.873	5.849	5.922	5.958	6.243	6.605	6.041	4.30
58)	T	Toluene	7.854	6.961	6.629	6.404	6.629	8.576	8.318	7.069	7.305	11.39
59)	T	2-Hexanone	5.267	4.660	4.551	4.002	4.241	4.346	3.447	2.489	4.125	20.45
60)	T	Dibromochlorom...	1.619	1.548	1.582	1.544	1.746	2.406	2.508	2.538	1.936	23.71
61)	T	1,2-Dibromoethane	1.848	1.693	1.690	1.703	1.785	2.326	2.408	2.429	1.985	17.06
62)	T	n-Butyl Acetate	5.745	5.051	5.000	4.358	4.612	4.831	3.835	2.702	4.517	20.36
63)	T	n-Octane	1.486	1.361	1.388	1.337	1.423	1.789	1.619	1.270	1.459	11.64
64)	T	Tetrachloroethene	1.759	1.727	1.713	1.656	1.708	2.392	2.464	2.273	1.961	17.75
65)	T	Chlorobenzene	5.084	4.480	4.247	4.253	4.490	6.154	5.681	4.276	4.833	15.16
66)	T	Ethylbenzene	0.844	0.760	0.728	0.726	0.768	1.010	0.929	0.741	0.813	E1 12.97
67)	T	m- & p-Xylenes	6.785	5.958	5.623	5.651	6.083	7.895	6.642	4.850	6.186	14.89
68)	T	Bromoform			1.123	1.114	1.348	2.043	2.188	2.131	1.658	31.13
69)	T	Styrene	5.046	4.342	4.269	4.210	4.772	6.575	6.211	5.008	5.054	17.65
70)	T	o-Xylene	6.496	5.855	5.662	5.703	6.088	7.976	6.967	5.036	6.223	14.69
71)	T	n-Nonane	3.582	3.352	3.307	3.262	3.450	3.927	3.083	2.103	3.258	16.26
72)	T	1,1,2,2-Tetrac...	2.668	2.659	2.627	2.636	2.857	3.754	3.382	2.478	2.883	15.49
73)	S	Bromofluoroben...	1.933	1.877	1.840	1.844	1.868	1.908	1.996	2.135	1.925	5.15
74)	T	Cumene	0.865	0.757	0.729	0.717	0.766	1.031	0.919	0.691	0.809	E1 14.59
75)	T	alpha-Pinene	3.547	3.504	3.575	3.516	3.867	4.689	4.399	3.432	3.816	12.41
76)	T	n-Propylbenzene	1.025	0.904	0.869	0.870	0.939	1.227	1.068	0.783	0.961	E1 14.63
77)	T	3-Ethyltoluene									0.000	-1.00
78)	T	4-Ethyltoluene	0.849	0.717	0.686	0.691	0.750	1.029	0.894	0.658	0.784	E1 16.44
79)	T	1,3,5-Trimethy...	6.520	5.849	5.690	5.699	6.248	8.450	7.527	5.673	6.457	15.83
80)	T	alpha-Methylst...									0.000	-1.00
81)	T	2-Ethyltoluene									0.000	-1.00
82)	T	1,2,4-Trimethy...	6.617	5.912	5.711	5.883	6.840	8.254	5.940	4.137	6.162	18.94
83)	T	n-Decane									0.000	-1.00
84)	T	Benzyl Chloride			3.148	3.984	5.405	6.979	5.173		4.938	29.61
85)	T	1,3-Dichlorobe...	4.195	3.221	2.965	3.301	3.663	5.161	4.233	3.019	3.720	20.45
86)	T	1,4-Dichlorobe...	4.258	3.267	2.900	3.220	3.483	5.067	4.850	3.886	3.867	20.55
87)	T	sec-Butylbenzene	0.854	0.790	0.777	0.776	0.852	1.154	0.984	0.702	0.861	E1 16.74
88)	T	4-Isopropyltol...	0.764	0.688	0.658	0.658	0.729	1.024	0.865	0.623	0.751	E1 17.87
89)	T	1,2,3-Trimethy...									0.000	-1.00
90)	T	1,2-Dichlorobe...	3.842	3.085	2.894	3.128	3.507	4.914	3.897	2.791	3.507	20.03
91)	T	d-Limonene	2.162	2.132	2.286	2.081	2.534	3.000	2.099	1.353	2.206	21.03
92)	T	1,2-Dibromo-3-...	1.106	1.016	1.030	1.071	1.321	1.962	1.771	1.348	1.328	27.00
93)	T	n-Undecane									0.000	-1.00
94)	T	1,2,4-Trichlor...	3.191	2.067	1.760	2.355	2.756	4.085	3.244		2.780	28.69

Method Path : I:\MS16\METHODS\
Method File : R16012022B.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

95)	T	Naphthalene	1.166	0.660	0.511	0.778	0.878	1.257	1.179	0.901	0.916	E1 29.11
96)	T	n-Dodecane									0.000	-1.00
97)	T	Hexachlorobuta...	1.510	1.425	1.357	1.329	1.475	2.279	2.249	1.945	1.696	23.50
98)	T	Cyclohexanone									0.000	-1.00
99)	T	tert-Butylbenzene	6.548	5.897	5.758	5.724	6.607	8.037	5.823	4.152	6.068	18.02
100)	T	n-Butylbenzene	6.972	6.257	6.114	6.393	6.987	9.248	7.847	5.567	6.923	16.81
101)	T	1,1,1,2-Tetrac...	1.554	1.487	1.490	1.475	1.622	2.225	2.065	1.638	1.694	16.99

(#) = Out of Range

Primary Source Standards Concentrations (Working & Initial Calibration)

1ng/L Std. ID:
4ng/L Std. ID: S35-01172211
20ng/L Std. ID: S35-01172210
40ng/L Std. ID:
200ng/L Std. ID:
1000ng/L Std. ID: S35-12292101

1/27/22

Dilution Factors:		1	5	25	50	250	1000	Working STD Conc.(ng/L):	4	4	4	20	20	1000	1000	1000
	Source Std.		Primary Working Standards					Injection (L):	0.025	0.050	0.1250	0.050	0.25	0.025	0.05	0.10
Compounds	mg/m^3	1000ng/L	200ng/L	40ng/L	20ng/L	4ng/L	1ng/L	ICAL Points:	0.1ng	0.2ng	0.5ng	1ng	5ng	25ng	50ng	100ng
Propene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Dichlorodifluoromethane	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Chloromethane	1.02	1020	204	40.8	20.4	4.08	1.02		0.102	0.204	0.510	1.02	5.10	25.50	51.0	102
Freon-114	1.08	1080	216	43.2	21.6	4.32	1.08		0.108	0.216	0.540	1.08	5.40	27.00	54.0	108
Vinyl Chloride	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
1,3-Butadiene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Bromomethane	1.02	1020	204	40.8	20.4	4.08	1.02		0.102	0.204	0.510	1.02	5.10	25.50	51.0	102
Chloroethane	1.02	1020	204	40.8	20.4	4.08	1.02		0.102	0.204	0.510	1.02	5.10	25.50	51.0	102
Ethanol	3.62	3620	724	144.8	72.4	14.48	3.62		0.362	0.724	1.810	3.62	18.10	90.50	181.0	362
Acetonitrile	0.93	930	186	37.2	18.6	3.72	0.93		0.093	0.186	0.465	0.93	4.65	23.25	46.5	93
Acrolein	2.00	2000	400	80.0	40.0	8.00	2.00		0.200	0.400	1.000	2.00	10.00	50.00	100.0	200
Acetone	5.19	5190	1038	207.6	103.8	20.76	5.19		0.519	1.038	2.595	5.19	25.95	129.75	259.5	519
Trichlorofluoromethane	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
Isopropanol	2.02	2020	404	80.8	40.4	8.08	2.02		0.202	0.404	1.010	2.02	10.10	50.50	101.0	202
Acrylonitrile	2.03	2030	406	81.2	40.6	8.12	2.03		0.203	0.406	1.015	2.03	10.15	50.75	101.5	203
1,1-Dichloroethene	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107
tert-Butanol	2.10	2100	420	84.0	42.0	8.40	2.10		0.210	0.420	1.050	2.10	10.50	52.50	105.0	210
Methylene Chloride	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Allyl Chloride	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Trichlorotrifluoroethane	1.08	1080	216	43.2	21.6	4.32	1.08		0.108	0.216	0.540	1.08	5.40	27.00	54.0	108
Carbon Disulfide	2.10	2100	420	84.0	42.0	8.40	2.10		0.210	0.420	1.050	2.10	10.50	52.50	105.0	210
trans-1,2-Dichloroethene	1.06	1060	212	42.4	21.2	4.24	1.06		0.106	0.212	0.530	1.06	5.30	26.50	53.0	106
1,1-Dichloroethane	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Methyl tert-Butyl Ether	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Vinyl Acetate	3.40	3400	680	136.0	68.0	13.60	3.40		0.340	0.680	1.700	3.40	17.00	85.00	170.0	340
2-Butanone	2.06	2060	412	82.4	41.2	8.24	2.06		0.206	0.412	1.030	2.06	10.30	51.50	103.0	206
cis-1,2-Dichloroethene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Diisopropyl Ether	2.12	2120	424	84.8	42.4	8.48	2.12		0.212	0.424	1.060	2.12	10.60	53.00	106.0	212
Ethyl Acetate	4.08	4080	816	163.2	81.6	16.32	4.08		0.408	0.816	2.040	4.08	20.40	102.00	204.0	408
n-Hexane	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Chloroform	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107
Tetrahydrofuran	1.97	1970	394	78.8	39.4	7.88	1.97		0.197	0.394	0.985	1.97	9.85	49.25	98.5	197
Ethyl tert-Butyl Ether	2.10	2100	420	84.0	42.0	8.40	2.10		0.210	0.420	1.050	2.10	10.50	52.50	105.0	210
1,2-Dichloroethane	1.06	1060	212	42.4	21.2	4.24	1.06		0.106	0.212	0.530	1.06	5.30	26.50	53.0	106
1,1,1-Trichloroethane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Benzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Carbon Tetrachloride	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Cyclohexane	2.07	2070	414	82.8	41.4	8.28	2.07		0.207	0.414	1.035	2.07	10.35	51.75	103.5	207
tert-Amyl Methyl Ether	2.09	2090	418	83.6	41.8	8.36	2.09		0.209	0.418	1.045	2.09	10.45	52.25	104.5	209
1,2-Dichloropropane	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
Bromodichloromethane	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Trichloroethene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
1,4-Dioxane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Isooctane	1.06	1060	212	42.4	21.2	4.24	1.06		0.106	0.212	0.530	1.06	5.30	26.50	53.0	106
Methyl Methacrylate	2.08	2080	416	83.2	41.6	8.32	2.08		0.208	0.416	1.040	2.08	10.40	52.00	104.0	208
n-Heptane	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105

Q:\TO15 Std. Concentrations\MS16 Std. Conc\2022\R16012022B.M\ICAL Conc. (Primary Source)

Primary Source Standards Concentrations (Working & Initial Calibration)

1ng/L Std. ID:		**40ng/L Std. ID:**	
4ng/L Std. ID:	**S35-01172211**	**200ng/L Std. ID:**	
20ng/L Std. ID:	**S35-01172210**	**1000ng/L Std. ID:**	**S35-12292101**

Dilution Factors:		**1**	**5**	**25**	**50**	**250**	**1000**	**Working STD Conc.(ng/L):**	**4**	**4**	**4**	**20**	**20**	**1000**	**1000**	**1000**
	Source Std.			**Primary Working Standards**				**Injection (L):**	**0.025**	**0.050**	**0.1250**	**0.050**	**0.25**	**0.025**	**0.05**	**0.10**
Compounds	**mg/m³**	**1000ng/L**	**200ng/L**	**40ng/L**	**20ng/L**	**4ng/L**	**1ng/L**	**ICAL Points:**	**0.1ng**	**0.2ng**	**0.5ng**	**1ng**	**5ng**	**25ng**	**50ng**	**100ng**
cis-1,3-Dichloropropene	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
4-Methyl-2-pentanone	2.08	2080	416	83.2	41.6	8.32	2.08		0.208	0.416	1.040	2.08	10.40	52.00	104.0	208
trans-1,3-Dichloropropene	1.01	1010	202	40.4	20.2	4.04	1.01		0.101	0.202	0.505	1.01	5.05	25.25	50.5	101
1,1,2-Trichloroethane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Toluene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
2-Hexanone	2.05	2050	410	82.0	41.0	8.20	2.05		0.205	0.410	1.025	2.05	10.25	51.25	102.5	205
Dibromochloromethane	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
1,2-Dibromoethane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
n-Butyl Acetate	2.04	2040	408	81.6	40.8	8.16	2.04		0.204	0.408	1.020	2.04	10.20	51.00	102.0	204
n-Octane	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Tetrachloroethene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Chlorobenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Ethylbenzene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
m-&p-Xylene	2.06	2060	412	82.4	41.2	8.24	2.06		0.206	0.412	1.030	2.06	10.30	51.50	103.0	206
Bromoform	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Styrene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
o-Xylene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
n-Nonane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
1,1,2,2-Tetrachloroethane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Cumene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
alpha-Pinene	1.08	1080	216	43.2	21.6	4.32	1.08		0.108	0.216	0.540	1.08	5.40	27.00	54.0	108
n-Propylbenzene	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
4-Ethyltoluene	1.06	1060	212	42.4	21.2	4.24	1.06		0.106	0.212	0.530	1.06	5.30	26.50	53.0	106
1,3,5-Trimethylbenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
1,2,4-Trimethylbenzene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
Benzyl Chloride	2.06	2060	412	82.4	41.2	8.24	2.06		0.206	0.412	1.030	2.06	10.30	51.50	103.0	206
1,3-Dichlorobenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
1,4-Dichlorobenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
sec-Butylbenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
p-Isopropyltoluene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
1,2-Dichlorobenzene	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
d-Limonene	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
1,2-Dibromo-3-chloropropane	2.00	2000	400	80.0	40.0	8.00	2.00		0.200	0.400	1.000	2.00	10.00	50.00	100.0	200
1,2,4-Trichlorobenzene	2.04	2040	408	81.6	40.8	8.16	2.04		0.204	0.408	1.020	2.04	10.20	51.00	102.0	204
Naphthalene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Hexachloro-1,3-butadiene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
tert-Butylbenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
n-Butylbenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
1,1,1,2-Tetrachloroethane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104

Calibration Status Report GCMS-16

Method : I:\MS16\METHODS\R16012022B.M (RTE Integrator)
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Fri Jan 21 09:34:58 2022
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	0	13	I:\MS16\DATA\2022_01\20\01202228.D
2	0.2	0	13	I:\MS16\DATA\2022_01\20\01202229.D
3	0.5	1	13	I:\MS16\DATA\2022_01\20\01202230.D
4	1.0	1	13	I:\MS16\DATA\2022_01\20\01202231.D
5	5.0	5	13	I:\MS16\DATA\2022_01\20\01202232.D
6	25	26	13	I:\MS16\DATA\2022_01\20\01202233.D
7	50	52	13	I:\MS16\DATA\2022_01\20\01202234.D
8	100	104	13	I:\MS16\DATA\2022_01\20\01202235.D

VOA 1/21/22

#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	Jan 21 06:15 2022	Jan 21 06:07 2022	20 Jan 2022 22:56
2	0.2	Jan 21 06:21 2022	Jan 21 06:09 2022	20 Jan 2022 23:30
3	0.5	Jan 21 06:22 2022	Jan 21 06:10 2022	21 Jan 2022 00:04
4	1.0	Jan 21 06:22 2022	Jan 21 06:10 2022	21 Jan 2022 00:38
5	5.0	Jan 21 06:22 2022	Jan 21 06:11 2022	21 Jan 2022 1:11
6	25	Jan 21 06:22 2022	Jan 21 06:12 2022	21 Jan 2022 1:45
7	50	Jan 21 06:22 2022	Jan 21 06:13 2022	21 Jan 2022 2:19
8	100	Jan 21 06:22 2022	Jan 21 06:14 2022	21 Jan 2022 2:53

R16012022B.M Fri Jan 21 14:14:23 2022

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202228.D Vial: 12
Acq On : 20 Jan 2022 22:56 Operator: WA
Sample : 0.1ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172211 (2/16)

Quant Time: Jan 21 06:07:08 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

VOA 1/21/22

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.30	130	177131	12.500	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	13.43	114	807052	12.500	ng		-0.01
56) Chlorobenzene-d5 (IS3)	17.73	54	145679	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.15	65	301095	12.766	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.16%				
57) Toluene-d8 (SS2)	15.88	98	872384	12.505	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.08%				
73) Bromofluorobenzene (SS3)	19.12	174	281525	11.869	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 94.96%				
Target Compounds							Qvalue
2) Propene	4.21	42	2862	0.087	ng		97
3) Dichlorodifluoromethan...	4.36	85	4841	0.112	ng		96
4) Chloromethane	4.64	50	3771	0.136	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	4.91	135	2627	0.111	ng		92
6) Vinyl Chloride	5.07	62	3531	0.100	ng		94
7) 1,3-Butadiene	5.35	54	2251	0.104	ng		89
8) Bromomethane	5.77	94	1868	0.094	ng		95
9) Chloroethane	6.12	64	1429	0.092	ng		87
10) Ethanol	6.45	45	11165	0.651	ng		93
11) Acetonitrile	6.73	41	6845	0.140	ng		92
12) Acrolein	6.94	56	2253	0.161	ng		99
13) Acetone	7.17	58	11402	0.692	ng	#	77
14) Trichlorofluoromethane	7.41	101	3891	0.098	ng		100
15) 2-Propanol (Isopropanol)	7.67	45	13713	0.283	ng		95
16) Acrylonitrile	7.89	53	7143	0.236	ng		100
17) 1,1-Dichloroethene	8.36	96	2198	0.092	ng		98
18) 2-Methyl-2-Propanol (t...	8.59	59	10987	0.216	ng		84
19) Methylene Chloride	8.57	84	2422	0.105	ng		93
20) 3-Chloro-1-propene (Al...	8.74	41	3233	0.104	ng		85
21) Trichlorotrifluoroethane	9.01	151	1741	0.097	ng		96
22) Carbon Disulfide	8.85	76	16528	0.212	ng		99
23) trans-1,2-Dichloroethene	9.85	61	3153	0.095	ng		99
24) 1,1-Dichloroethane	10.11	63	3763	0.092	ng		100
25) Methyl tert-Butyl Ether	10.25	73	6044	0.104	ng		98
26) Vinyl Acetate	10.37	86	984	0.255	ng	#	8
27) 2-Butanone (MEK)	10.64	72	3434	0.232	ng	#	69
28) cis-1,2-Dichloroethene	11.12	61	3010	0.093	ng		96
29) Diisopropyl Ether	11.44	87	3846	0.200	ng	#	1
30) Ethyl Acetate	11.44	61	3574	0.423	ng		89
31) n-Hexane	11.42	57	3689	0.113	ng	#	95
32) Chloroform	11.46	83	3812	0.095	ng		98
34) Tetrahydrofuran (THF)	11.91	72	3008	0.209	ng	#	87
35) Ethyl tert-Butyl Ether	12.04	87	4339	0.195	ng	#	83
36) 1,2-Dichloroethane	12.27	62	2997	0.098	ng		96
38) 1,1,1-Trichloroethane	12.55	97	3405	0.098	ng		97
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	0.00	56	0	N.D.	d		
41) Benzene	13.03	78	9625	0.103	ng		99
42) Carbon Tetrachloride	13.20	117	2538	0.090	ng		97
43) Cyclohexane	13.33	84	6434	0.199	ng		90
44) tert-Amyl Methyl Ether	13.69	73	11795	0.208	ng		89
45) 1,2-Dichloropropane	13.89	63	2081	0.097	ng		91
46) Bromodichloromethane	14.07	83	2752	0.095	ng		97
47) Trichloroethene	14.13	130	2179	0.087	ng		99
48) 1,4-Dioxane	14.12	88	2084	0.100	ng		92
49) 2,2,4-Trimethylpentane...	14.20	57	8691	0.098	ng		87
50) Methyl Methacrylate	14.34	100	1680	0.176	ng	#	75

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202228.D Vial: 12
Acq On : 20 Jan 2022 22:56 Operator: WA
Sample : 0.1ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172211 (2/16)

Quant Time: Jan 21 06:07:08 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

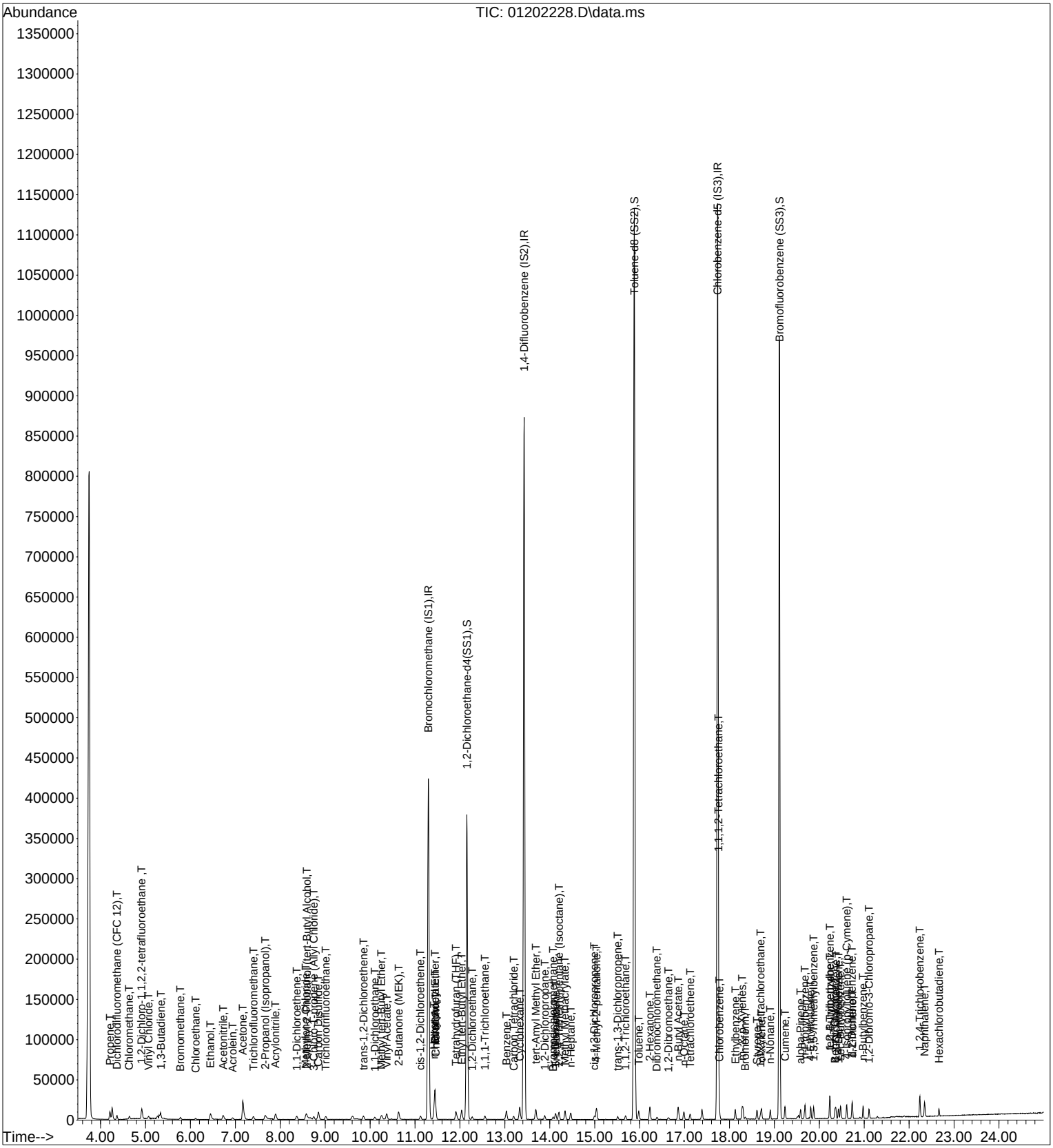
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	14.47	71	2171	0.095	ng		94
52) cis-1,3-Dichloropropene	14.99	75	3024	0.092	ng		99
53) 4-Methyl-2-pentanone	15.04	58	4319	0.216	ng		76
54) trans-1,3-Dichloropropene	15.51	75	2480	0.083	ng		97
55) 1,1,2-Trichloroethane	15.68	97	1974	0.094	ng		98
58) Toluene	15.98	91	9428	0.105	ng		97
59) 2-Hexanone	16.23	43	12583	0.257	ng		88
60) Dibromochloromethane	16.38	129	1981	0.086	ng		99
61) 1,2-Dibromoethane	16.64	107	2240	0.090	ng		98
62) n-Butyl Acetate	16.86	43	13658	0.253	ng		91
63) n-Octane	16.99	57	1818	0.099	ng		89
64) Tetrachloroethene	17.12	166	2132	0.083	ng		98
65) Chlorobenzene	17.78	112	6162	0.104	ng		99
66) Ethylbenzene	18.13	91	10136	0.095	ng		96
67) m- & p-Xylenes	18.28	91	16290	0.199	ng		91
68) Bromoform	18.35	173	1418	0.078	ng		92
69) Styrene	18.61	104	6057	0.097	ng		97
70) o-Xylene	18.71	91	7873	0.102	ng		92
71) n-Nonane	18.91	43	4341	0.105	ng		85
72) 1,1,2,2-Tetrachloroethane	18.69	83	3234	0.089	ng		97
74) Cumene	19.24	105	10490	0.106	ng		96
75) alpha-Pinene	19.58	93	4465	0.095	ng		91
76) n-Propylbenzene	19.68	91	12545	0.105	ng		93
77) 3-Ethyltoluene	0.00	105	0	N.D.	d		
78) 4-Ethyltoluene	19.81	105	10489	0.103	ng		94
79) 1,3,5-Trimethylbenzene	19.87	105	7903	0.094	ng		93
80) alpha-Methylstyrene	0.00	118	0	N.D.			
81) 2-Ethyltoluene	0.00	105	0	N.D.	d		
82) 1,2,4-Trimethylbenzene	20.24	105	7943	0.104	ng		93
83) n-Decane	0.00	58	0	N.D.	d		
84) Benzyl Chloride	20.35	91	8312	0.151	ng		88
85) 1,3-Dichlorobenzene	20.37	146	5084	0.113	ng		100
86) 1,4-Dichlorobenzene	20.43	146	5161	0.110	ng		97
87) sec-Butylbenzene	20.47	105	10346	0.096	ng		94
88) 4-Isopropyltoluene (p-...	20.61	119	9264	0.096	ng		92
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D.	d		
90) 1,2-Dichlorobenzene	20.73	146	4702	0.110	ng		100
91) d-Limonene	20.74	68	2646	0.089	ng		90
92) 1,2-Dibromo-3-Chloropr...	21.11	157	2578	0.152	ng	#	40
93) n-Undecane	0.00	57	0	N.D.	d		
94) 1,2,4-Trichlorobenzene	22.24	180	7586	0.211	ng		100
95) Naphthalene	22.34	128	14134	0.125	ng		99
96) n-Dodecane	0.00	57	0	N.D.	d		
97) Hexachlorobutadiene	22.67	225	1813	0.082	ng		98
98) Cyclohexanone	0.00	55	0	N.D.	d		
99) tert-Butylbenzene	20.24	119	7936	0.105	ng		97
100) n-Butylbenzene	20.97	91	8451	0.098	ng		94
101) 1,1,1,2-Tetrachloroethane	17.76	131	1883	0.090	ng		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202228.D Vial: 12
Acq On : 20 Jan 2022 22:56 Operator: WA
Sample : 0.1ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172211 (2/16)

Quant Time: Jan 21 06:07:08 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202229.D Vial: 12
Acq On : 20 Jan 2022 23:30 Operator: WA
Sample : 0.2ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172211 (2/16)

Quant Time: Jan 21 06:09:10 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022 1/21/22
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.30	130	164864	12.500	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	13.43	114	756154	12.500	ng		-0.01
56) Chlorobenzene-d5 (IS3)	17.73	54	139104	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.15	65	285834	13.021	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.16%				
57) Toluene-d8 (SS2)	15.88	98	818757	12.292	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.32%				
73) Bromofluorobenzene (SS3)	19.11	174	261159	11.531	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 92.24%				
Target Compounds							Qvalue
2) Propene	4.20	42	5136	0.167	ng		99
3) Dichlorodifluoromethan...	4.36	85	8644	0.215	ng		98
4) Chloromethane	4.64	50	6550	0.254	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	4.91	135	4988	0.226	ng		98
6) Vinyl Chloride	5.07	62	6336	0.192	ng		98
7) 1,3-Butadiene	5.34	54	3949	0.196	ng		92
8) Bromomethane	5.77	94	3252	0.176	ng		97
9) Chloroethane	6.11	64	2718	0.187	ng		97
10) Ethanol	6.45	45	13702	0.859	ng		92
11) Acetonitrile	6.73	41	9137	0.201	ng		96
12) Acrolein	6.93	56	3497	0.268	ng		98
13) Acetone	7.16	58	19111	1.247	ng	#	77
14) Trichlorofluoromethane	7.40	101	7193	0.194	ng		100
15) 2-Propanol (Isopropanol)	7.65	45	22759	0.504	ng		89
16) Acrylonitrile	7.89	53	11165	0.396	ng		99
17) 1,1-Dichloroethene	8.36	96	3761	0.168	ng		94
18) 2-Methyl-2-Propanol (t...	8.58	59	20458	0.432	ng		89
19) Methylene Chloride	8.57	84	4186	0.196	ng		95
20) 3-Chloro-1-propene (Al...	8.74	41	5987	0.208	ng		91
21) Trichlorotrifluoroethane	9.01	151	3212	0.192	ng		97
22) Carbon Disulfide	8.85	76	29467	0.405	ng		100
23) trans-1,2-Dichloroethene	9.85	61	5700	0.184	ng		100
24) 1,1-Dichloroethane	10.10	63	6988	0.184	ng		99
25) Methyl tert-Butyl Ether	10.25	73	11075	0.204	ng		98
26) Vinyl Acetate	10.37	86	1819	0.507	ng	#	29
27) 2-Butanone (MEK)	10.63	72	5798	0.420	ng	#	68
28) cis-1,2-Dichloroethene	11.13	61	5391	0.179	ng		98
29) Diisopropyl Ether	11.44	87	7154	0.400	ng	#	7
30) Ethyl Acetate	11.44	61	6451	0.820	ng		89
31) n-Hexane	11.42	57	6613	0.219	ng	#	97
32) Chloroform	11.47	83	7002	0.187	ng		98
34) Tetrahydrofuran (THF)	11.91	72	5047	0.377	ng	#	87
35) Ethyl tert-Butyl Ether	12.03	87	8530	0.412	ng	#	87
36) 1,2-Dichloroethane	12.27	62	5535	0.194	ng		99
38) 1,1,1-Trichloroethane	12.55	97	6127	0.188	ng		97
39) Isopropyl Acetate	0.00	61	0	N.D.	d		
40) 1-Butanol	0.00	56	0	N.D.	d		
41) Benzene	13.03	78	16544	0.189	ng		100
42) Carbon Tetrachloride	13.19	117	4812	0.183	ng		98
43) Cyclohexane	13.33	84	11692	0.386	ng		91
44) tert-Amyl Methyl Ether	13.69	73	21535	0.405	ng		93
45) 1,2-Dichloropropane	13.89	63	3817	0.190	ng		99
46) Bromodichloromethane	14.07	83	4892	0.180	ng		99
47) Trichloroethene	14.13	130	3948	0.168	ng		98
48) 1,4-Dioxane	14.12	88	3591	0.183	ng		90
49) 2,2,4-Trimethylpentane...	14.20	57	16112	0.193	ng		90
50) Methyl Methacrylate	14.34	100	3013	0.337	ng	#	81

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202229.D Vial: 12
Acq On : 20 Jan 2022 23:30 Operator: WA
Sample : 0.2ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172211 (2/16)

Quant Time: Jan 21 06:09:10 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

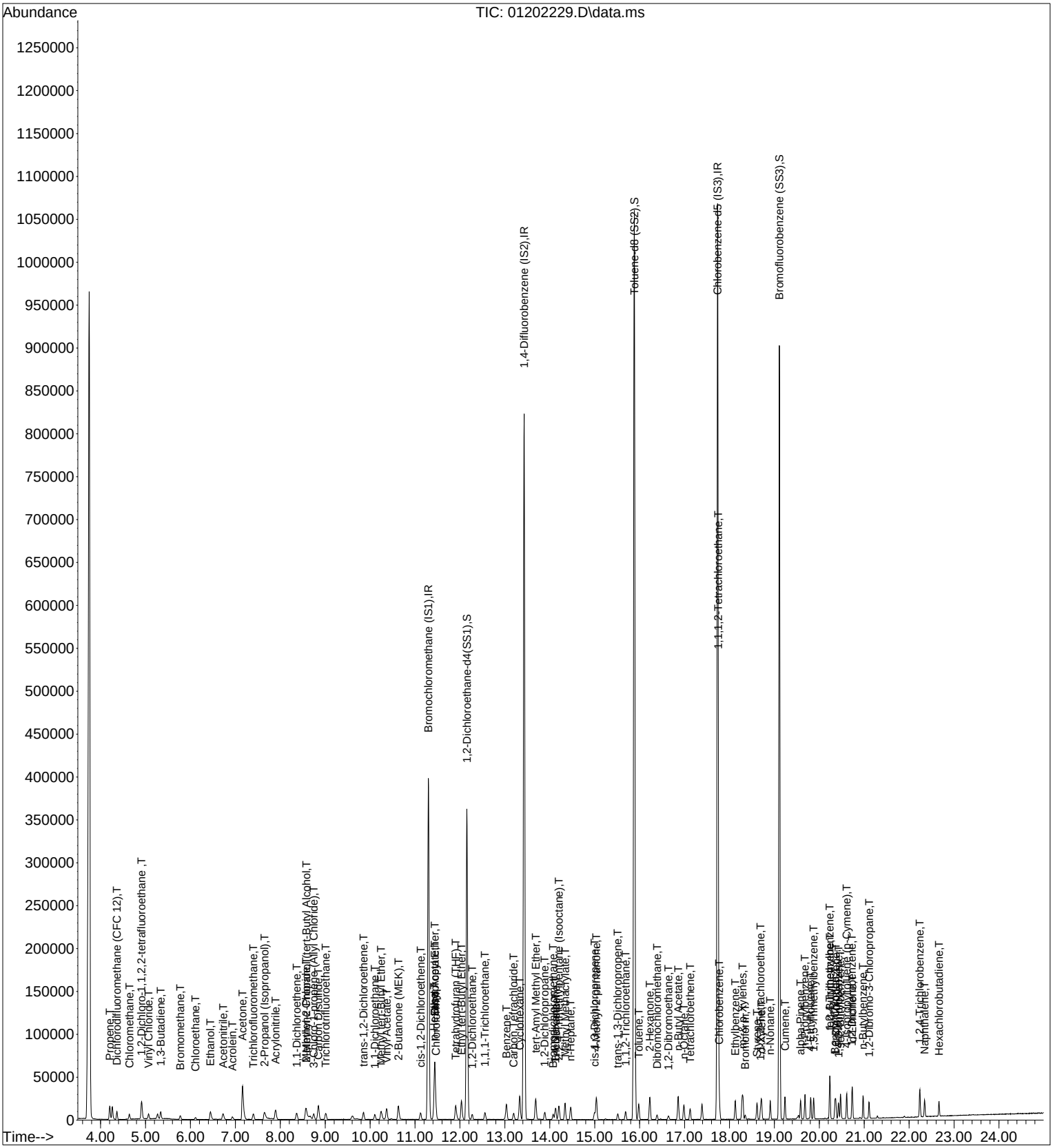
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	14.46	71	3782	0.177 ng		92
52) cis-1,3-Dichloropropene	15.00	75	5717	0.187 ng		99
53) 4-Methyl-2-pentanone	15.03	58	7700	0.410 ng		79
54) trans-1,3-Dichloropropene	15.51	75	4647	0.165 ng		99
55) 1,1,2-Trichloroethane	15.69	97	3673	0.187 ng		99
58) Toluene	15.98	91	15958	0.187 ng		98
59) 2-Hexanone	16.23	43	21262	0.454 ng		88
60) Dibromochloromethane	16.39	129	3618	0.165 ng		98
61) 1,2-Dibromoethane	16.64	107	3918	0.165 ng		100
62) n-Butyl Acetate	16.86	43	22935	0.445 ng		92
63) n-Octane	16.99	57	3181	0.182 ng		95
64) Tetrachloroethene	17.12	166	3998	0.162 ng		100
65) Chlorobenzene	17.77	112	10369	0.183 ng		99
66) Ethylbenzene	18.13	91	17430	0.170 ng		96
67) m- & p-Xylenes	18.29	91	27317	0.349 ng		93
68) Bromoform	18.35	173	2477	0.143 ng		94
69) Styrene	18.61	104	9953	0.168 ng		97
70) o-Xylene	18.71	91	13553	0.183 ng		96
71) n-Nonane	18.91	43	7759	0.196 ng		87
72) 1,1,2,2-Tetrachloroethane	18.69	83	6154	0.178 ng		98
74) Cumene	19.24	105	17520	0.185 ng		96
75) alpha-Pinene	19.58	93	8423	0.187 ng		95
76) n-Propylbenzene	19.68	91	21125	0.185 ng		94
77) 3-Ethyltoluene	0.00	105	0	N.D. d		
78) 4-Ethyltoluene	19.81	105	16927	0.174 ng		97
79) 1,3,5-Trimethylbenzene	19.87	105	13538	0.168 ng		94
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	0.00	105	0	N.D. d		
82) 1,2,4-Trimethylbenzene	20.23	105	13554	0.185 ng		96
83) n-Decane	0.00	58	0	N.D. d		
84) Benzyl Chloride	20.35	91	13684	0.261 ng		90
85) 1,3-Dichlorobenzene	20.37	146	7456	0.174 ng		98
86) 1,4-Dichlorobenzene	20.43	146	7563	0.170 ng		99
87) sec-Butylbenzene	20.47	105	18295	0.178 ng		96
88) 4-Isopropyltoluene (p-...	20.61	119	15935	0.172 ng		94
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D. d		
90) 1,2-Dichlorobenzene	20.73	146	7209	0.176 ng		97
91) d-Limonene	20.74	68	4982	0.175 ng		95
92) 1,2-Dibromo-3-Chloropr...	21.11	157	4522	0.279 ng	#	48
93) n-Undecane	0.00	57	0	N.D.		
94) 1,2,4-Trichlorobenzene	22.24	180	9384	0.274 ng		98
95) Naphthalene	22.34	128	15288	0.141 ng		98
96) n-Dodecane	0.00	57	0	N.D. d		
97) Hexachlorobutadiene	22.67	225	3267	0.155 ng		95
98) Cyclohexanone	0.00	55	0	N.D. d		
99) tert-Butylbenzene	20.24	119	13650	0.189 ng		99
100) n-Butylbenzene	20.97	91	14483	0.176 ng		95
101) 1,1,1,2-Tetrachloroethane	17.75	131	3441	0.172 ng		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202229.D Vial: 12
Acq On : 20 Jan 2022 23:30 Operator: WA
Sample : 0.2ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172211 (2/16)

Quant Time: Jan 21 06:09:10 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202230.D Vial: 12
Acq On : 21 Jan 2022 00:04 Operator: WA
Sample : 0.5ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172211 (2/16)

Quant Time: Jan 21 06:10:10 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) 1/21/22
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.30	130	157739	12.500	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	13.43	114	736604	12.500	ng		-0.01
56) Chlorobenzene-d5 (IS3)	17.73	54	136638	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.15	65	278939	13.281	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 106.24%				
57) Toluene-d8 (SS2)	15.88	98	802410	12.264	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.08%				
73) Bromofluorobenzene (SS3)	19.11	174	251400	11.301	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 90.40%				
Target Compounds							Qvalue
2) Propene	4.19	42	14258	0.486	ng		98
3) Dichlorodifluoromethan...	4.35	85	21331	0.555	ng		99
4) Chloromethane	4.63	50	15065	0.611	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	4.91	135	12329	0.583	ng		98
6) Vinyl Chloride	5.06	62	16095	0.511	ng		100
7) 1,3-Butadiene	5.33	54	10234	0.530	ng		99
8) Bromomethane	5.76	94	8210	0.464	ng		99
9) Chloroethane	6.10	64	6637	0.478	ng		100
10) Ethanol	6.44	45	30890	2.023	ng		88
11) Acetonitrile	6.72	41	20024	0.461	ng		99
12) Acrolein	6.93	56	7432	0.596	ng		98
13) Acetone	7.15	58	43049	2.935	ng	#	75
14) Trichlorofluoromethane	7.39	101	17399	0.490	ng		99
15) 2-Propanol (Isopropanol)	7.62	45	61720	1.429	ng		92
16) Acrylonitrile	7.89	53	25136	0.932	ng		98
17) 1,1-Dichloroethene	8.36	96	8915	0.417	ng		95
18) 2-Methyl-2-Propanol (t...	8.58	59	49938	1.103	ng		92
19) Methylene Chloride	8.57	84	9674	0.473	ng		94
20) 3-Chloro-1-propene (Al...	8.74	41	13559	0.491	ng		93
21) Trichlorotrifluoroethane	9.01	151	7812	0.487	ng		98
22) Carbon Disulfide	8.84	76	70521	1.014	ng		99
23) trans-1,2-Dichloroethene	9.85	61	13489	0.456	ng		97
24) 1,1-Dichloroethane	10.11	63	16506	0.455	ng		100
25) Methyl tert-Butyl Ether	10.23	73	26648	0.514	ng		98
26) Vinyl Acetate	10.37	86	4964	1.445	ng	#	55
27) 2-Butanone (MEK)	10.62	72	14198	1.075	ng	#	75
28) cis-1,2-Dichloroethene	11.12	61	12805	0.445	ng		96
29) Diisopropyl Ether	11.43	87	17233	1.007	ng	#	6
30) Ethyl Acetate	11.44	61	15720	2.090	ng		91
31) n-Hexane	11.42	57	15935	0.550	ng	#	97
32) Chloroform	11.47	83	16820	0.469	ng		99
34) Tetrahydrofuran (THF)	11.89	72	12063	0.943	ng	#	89
35) Ethyl tert-Butyl Ether	12.03	87	20721	1.045	ng	#	85
36) 1,2-Dichloroethane	12.27	62	13282	0.486	ng		99
38) 1,1,1-Trichloroethane	12.56	97	14757	0.466	ng		98
39) Isopropyl Acetate	0.00	61	0	N.D.	d		
40) 1-Butanol	0.00	56	0	N.D.	d		
41) Benzene	13.03	78	37898	0.444	ng		100
42) Carbon Tetrachloride	13.20	117	11680	0.456	ng		100
43) Cyclohexane	13.33	84	28102	0.952	ng		90
44) tert-Amyl Methyl Ether	13.68	73	51705	0.998	ng		93
45) 1,2-Dichloropropane	13.89	63	9374	0.478	ng		99
46) Bromodichloromethane	14.07	83	12200	0.462	ng		100
47) Trichloroethene	14.13	130	9499	0.416	ng		99
48) 1,4-Dioxane	14.12	88	8605	0.450	ng		93
49) 2,2,4-Trimethylpentane...	14.20	57	38951	0.479	ng		91
50) Methyl Methacrylate	14.34	100	7556	0.868	ng	#	85

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202230.D Vial: 12
Acq On : 21 Jan 2022 00:04 Operator: WA
Sample : 0.5ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172211 (2/16)

Quant Time: Jan 21 06:10:10 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

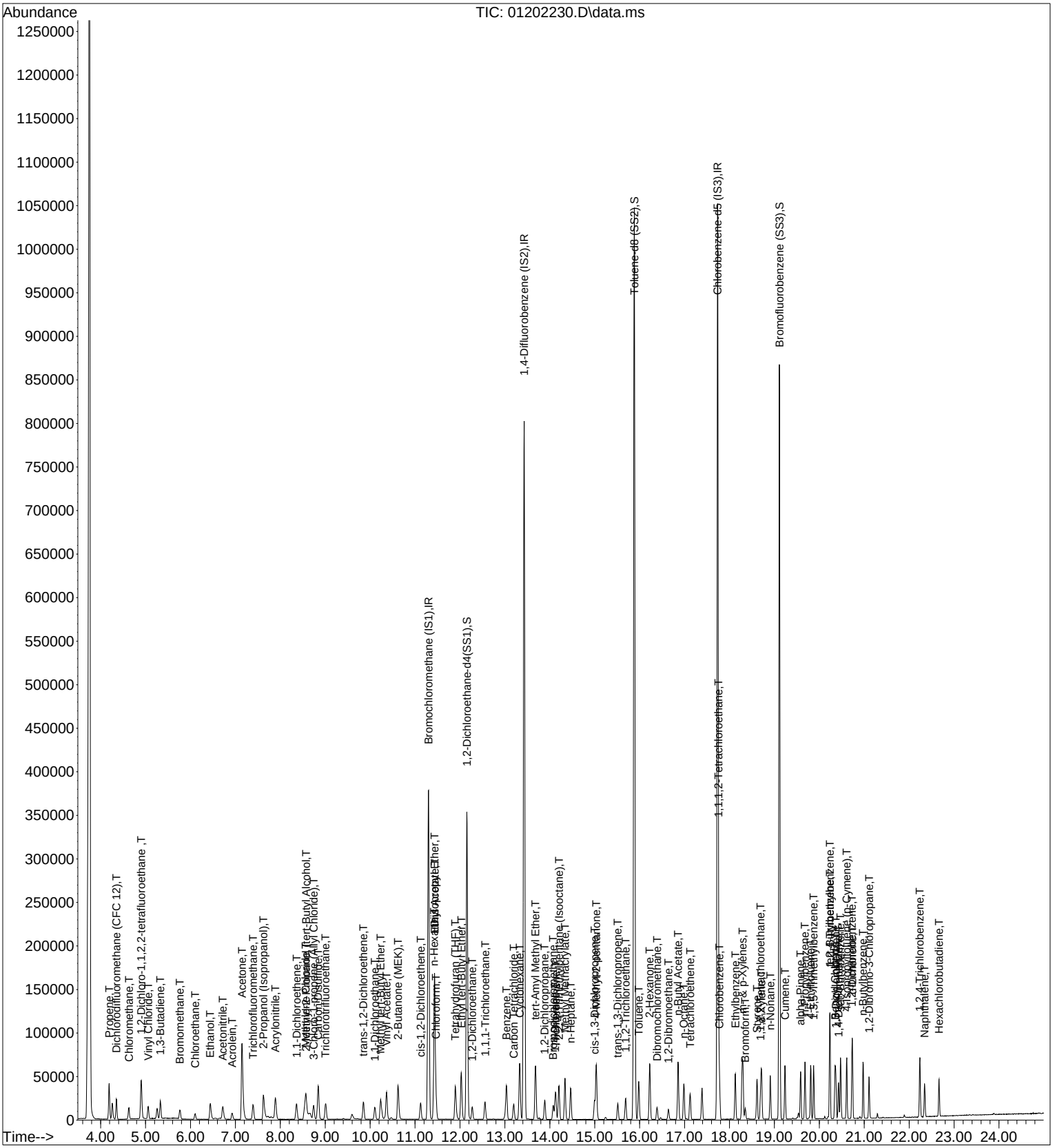
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	14.47	71	9422	0.452 ng		96
52) cis-1,3-Dichloropropene	15.00	75	14024	0.470 ng		99
53) 4-Methyl-2-pentanone	15.03	58	19003	1.040 ng		81
54) trans-1,3-Dichloropropene	15.51	75	11893	0.434 ng		99
55) 1,1,2-Trichloroethane	15.69	97	8784	0.460 ng		99
58) Toluene	15.98	91	37317	0.445 ng		99
59) 2-Hexanone	16.22	43	50995	1.109 ng		89
60) Dibromochloromethane	16.39	129	9081	0.421 ng		99
61) 1,2-Dibromoethane	16.64	107	9609	0.411 ng		99
62) n-Butyl Acetate	16.85	43	55752	1.102 ng		92
63) n-Octane	16.98	57	7967	0.463 ng		91
64) Tetrachloroethene	17.12	166	9736	0.402 ng		100
65) Chlorobenzene	17.78	112	24140	0.434 ng		99
66) Ethylbenzene	18.13	91	40965	0.407 ng		98
67) m- & p-Xylenes	18.29	91	63306	0.823 ng		95
68) Bromoform	18.35	173	6382	0.374 ng		100
69) Styrene	18.61	104	24030	0.412 ng		97
70) o-Xylene	18.71	91	32185	0.443 ng		95
71) n-Nonane	18.91	43	18800	0.484 ng		88
72) 1,1,2,2-Tetrachloroethane	18.69	83	14931	0.440 ng		98
74) Cumene	19.24	105	41455	0.445 ng		96
75) alpha-Pinene	19.58	93	21105	0.477 ng		95
76) n-Propylbenzene	19.68	91	49856	0.444 ng		94
77) 3-Ethyltoluene	0.00	105	0	N.D. d		
78) 4-Ethyltoluene	19.81	105	39763	0.417 ng		96
79) 1,3,5-Trimethylbenzene	19.87	105	32341	0.410 ng		96
80) alpha-Methylstyrene	0.00	118	0	N.D. d		
81) 2-Ethyltoluene	0.00	105	0	N.D. d		
82) 1,2,4-Trimethylbenzene	20.24	105	32152	0.447 ng		98
83) n-Decane	0.00	58	0	N.D. d		
84) Benzyl Chloride	20.35	91	35448	0.688 ng		91
85) 1,3-Dichlorobenzene	20.37	146	16856	0.401 ng		99
86) 1,4-Dichlorobenzene	20.43	146	16483	0.376 ng		99
87) sec-Butylbenzene	20.47	105	44143	0.438 ng		96
88) 4-Isopropyltoluene (p-...	20.61	119	37403	0.411 ng		95
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D. d		
90) 1,2-Dichlorobenzene	20.73	146	16608	0.414 ng		99
91) d-Limonene	20.74	68	13117	0.469 ng		92
92) 1,2-Dibromo-3-Chloropr...	21.11	157	11261	0.707 ng	#	55
93) n-Undecane	0.00	57	0	N.D. d		
94) 1,2,4-Trichlorobenzene	22.24	180	19624	0.582 ng		100
95) Naphthalene	22.34	128	29060	0.273 ng		98
96) n-Dodecane	0.00	57	0	N.D. d		
97) Hexachlorobutadiene	22.67	225	7641	0.370 ng		99
98) Cyclohexanone	0.00	55	0	N.D. d		
99) tert-Butylbenzene	20.24	119	32728	0.462 ng		99
100) n-Butylbenzene	20.97	91	34750	0.429 ng		96
101) 1,1,1,2-Tetrachloroethane	17.76	131	8470	0.430 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202230.D Vial: 12
Acq On : 21 Jan 2022 00:04 Operator: WA
Sample : 0.5ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172211 (2/16)

Quant Time: Jan 21 06:10:10 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202231.D Vial: 15
Acq On : 21 Jan 2022 00:38 Operator: WA
Sample : 1.0ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172210 (2/16)

Quant Time: Jan 21 06:10:58 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

1/21/22

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.30	130	157109	12.500	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	13.43	114	722531	12.500	ng		-0.01
56) Chlorobenzene-d5 (IS3)	17.73	54	133393	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.16	65	274625	13.128	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.04%				
57) Toluene-d8 (SS2)	15.88	98	780241	12.215	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.68%				
73) Bromofluorobenzene (SS3)	19.12	174	246012	11.328	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 90.64%				
Target Compounds							Qvalue
2) Propene	4.19	42	21664	0.741	ng		97
3) Dichlorodifluoromethan...	4.35	85	39792	1.039	ng		100
4) Chloromethane	4.63	50	30975	1.262	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	4.91	135	23591	1.121	ng		100
6) Vinyl Chloride	5.05	62	31308	0.998	ng		100
7) 1,3-Butadiene	5.33	54	20092	1.044	ng		98
8) Bromomethane	5.76	94	14878	0.844	ng		99
9) Chloroethane	6.10	64	12498	0.903	ng		100
10) Ethanol	6.44	45	50925	3.349	ng		97
11) Acetonitrile	6.72	41	34364	0.794	ng		99
12) Acrolein	6.92	56	22362	1.800	ng		99
13) Acetone	7.14	58	70055	4.795	ng	#	71
14) Trichlorofluoromethane	7.40	101	32021	0.905	ng		99
15) 2-Propanol (Isopropanol)	7.62	45	98666	2.293	ng		93
16) Acrylonitrile	7.89	53	47985	1.787	ng		100
17) 1,1-Dichloroethene	8.36	96	16602	0.780	ng		92
18) 2-Methyl-2-Propanol (t...	8.52	59	86936	1.928	ng		93
19) Methylene Chloride	8.57	84	17985	0.882	ng		93
20) 3-Chloro-1-propene (Al...	8.74	41	25915	0.943	ng		96
21) Trichlorotrifluoroethane	9.01	151	14402	0.902	ng		96
22) Carbon Disulfide	8.85	76	127108	1.835	ng		99
23) trans-1,2-Dichloroethene	9.85	61	25699	0.873	ng		98
24) 1,1-Dichloroethane	10.11	63	31658	0.877	ng		100
25) Methyl tert-Butyl Ether	10.23	73	50341	0.975	ng		99
26) Vinyl Acetate	10.37	86	9335	2.729	ng	#	42
27) 2-Butanone (MEK)	10.62	72	25037	1.903	ng	#	74
28) cis-1,2-Dichloroethene	11.12	61	24830	0.866	ng		96
29) Diisopropyl Ether	11.43	87	33467	1.964	ng	#	12
30) Ethyl Acetate	11.43	61	29874	3.987	ng		89
31) n-Hexane	11.42	57	31051	1.077	ng		98
32) Chloroform	11.47	83	32072	0.898	ng		100
34) Tetrahydrofuran (THF)	11.89	72	22399	1.757	ng	#	90
35) Ethyl tert-Butyl Ether	12.03	87	39335	1.992	ng	#	84
36) 1,2-Dichloroethane	12.27	62	25248	0.928	ng		100
38) 1,1,1-Trichloroethane	12.55	97	28293	0.910	ng		98
39) Isopropyl Acetate	0.00	61	0	N.D.	d		
40) 1-Butanol	0.00	56	0	N.D.	d		
41) Benzene	13.03	78	70442	0.842	ng		99
42) Carbon Tetrachloride	13.20	117	22363	0.890	ng		99
43) Cyclohexane	13.33	84	53834	1.860	ng		90
44) tert-Amyl Methyl Ether	13.68	73	98652	1.941	ng		94
45) 1,2-Dichloropropane	13.89	63	17354	0.902	ng		100
46) Bromodichloromethane	14.08	83	23336	0.900	ng		99
47) Trichloroethene	14.13	130	18059	0.806	ng		99
48) 1,4-Dioxane	14.12	88	15654	0.835	ng		90
49) 2,2,4-Trimethylpentane...	14.20	57	74397	0.932	ng		93
50) Methyl Methacrylate	14.34	100	14170	1.660	ng	#	86

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202231.D Vial: 15
Acq On : 21 Jan 2022 00:38 Operator: WA
Sample : 1.0ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172210 (2/16)

Quant Time: Jan 21 06:10:58 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

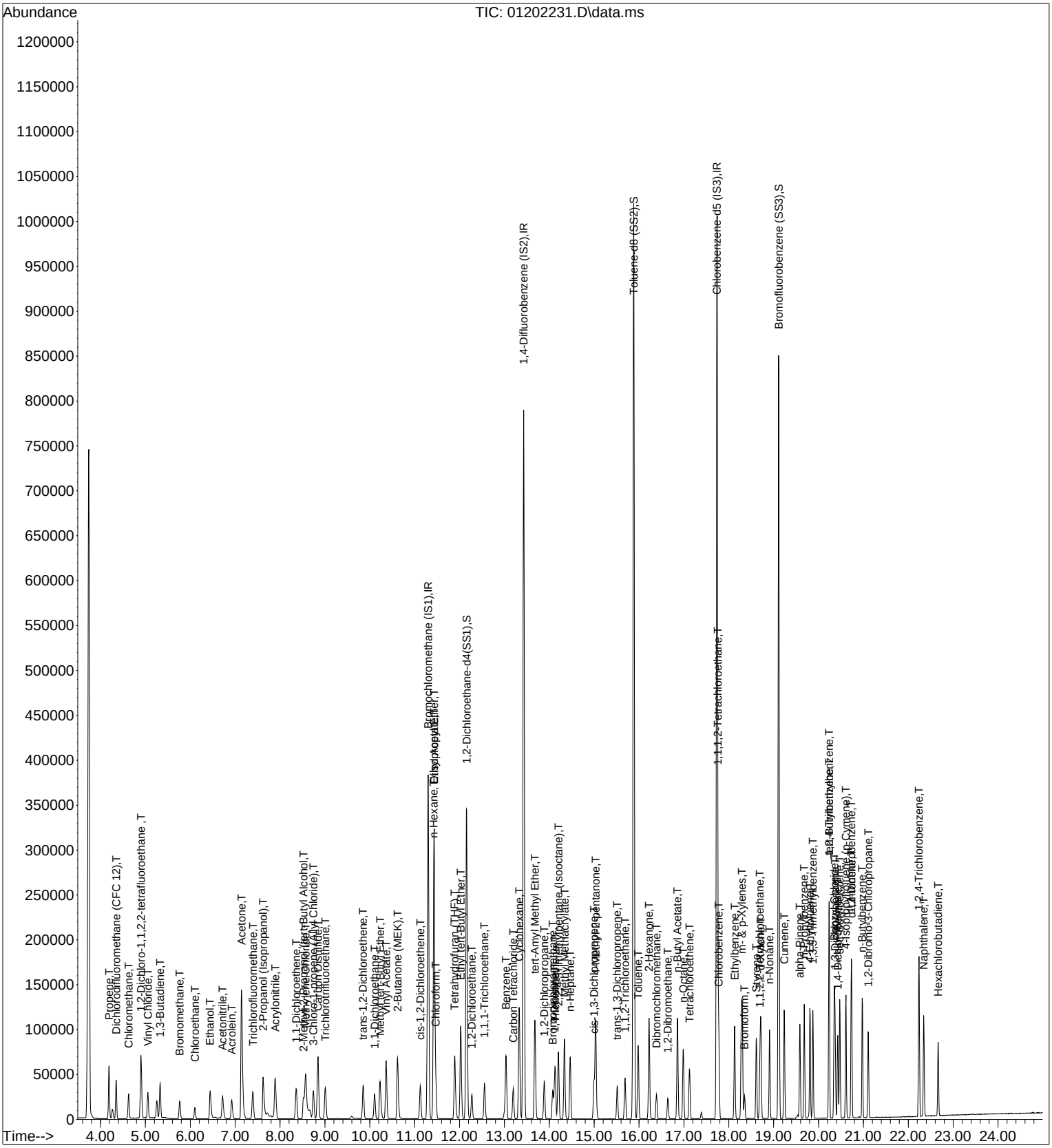
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	14.47	71	18101	0.885 ng		95
52) cis-1,3-Dichloropropene	15.00	75	27078	0.925 ng		99
53) 4-Methyl-2-pentanone	15.03	58	33107	1.847 ng		81
54) trans-1,3-Dichloropropene	15.51	75	23576	0.877 ng		100
55) 1,1,2-Trichloroethane	15.69	97	16570	0.884 ng		99
58) Toluene	15.98	91	70385	0.860 ng		99
59) 2-Hexanone	16.22	43	87548	1.950 ng		90
60) Dibromochloromethane	16.39	129	17306	0.822 ng		100
61) 1,2-Dibromoethane	16.64	107	18896	0.828 ng		99
62) n-Butyl Acetate	16.85	43	94873	1.920 ng		92
63) n-Octane	16.99	57	14982	0.892 ng		92
64) Tetrachloroethene	17.12	166	18382	0.778 ng		99
65) Chlorobenzene	17.78	112	47203	0.870 ng		100
66) Ethylbenzene	18.13	91	79820	0.813 ng		97
67) m- & p-Xylenes	18.29	91	124228	1.654 ng		95
68) Bromoform	18.35	173	12362	0.743 ng		100
69) Styrene	18.61	104	46278	0.813 ng		98
70) o-Xylene	18.71	91	63295	0.892 ng		95
71) n-Nonane	18.91	43	36206	0.954 ng		88
72) 1,1,2,2-Tetrachloroethane	18.69	83	29258	0.883 ng		99
74) Cumene	19.24	105	79588	0.875 ng		96
75) alpha-Pinene	19.58	93	40519	0.938 ng		97
76) n-Propylbenzene	19.68	91	97467	0.889 ng		96
77) 3-Ethyltoluene	0.00	105	0	N.D. d		
78) 4-Ethyltoluene	19.81	105	78126	0.838 ng		96
79) 1,3,5-Trimethylbenzene	19.87	105	63252	0.820 ng		95
80) alpha-Methylstyrene	0.00	118	0	N.D. d		
81) 2-Ethyltoluene	0.00	105	0	N.D. d		
82) 1,2,4-Trimethylbenzene	20.24	105	64664	0.922 ng		97
83) n-Decane	0.00	58	0	N.D. d		
84) Benzyl Chloride	20.35	91	87574	1.740 ng		92
85) 1,3-Dichlorobenzene	20.37	146	36632	0.892 ng		100
86) 1,4-Dichlorobenzene	20.43	146	35740	0.835 ng		99
87) sec-Butylbenzene	20.47	105	86133	0.876 ng		96
88) 4-Isopropyltoluene (p-...	20.61	119	73045	0.823 ng		96
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D. d		
90) 1,2-Dichlorobenzene	20.73	146	35045	0.894 ng		100
91) d-Limonene	20.74	68	23320	0.855 ng		91
92) 1,2-Dibromo-3-Chloropr...	21.11	157	22852	1.470 ng	#	59
93) n-Undecane	0.00	57	0	N.D.		
94) 1,2,4-Trichlorobenzene	22.24	180	51277	1.559 ng		99
95) Naphthalene	22.34	128	86305	0.831 ng		99
96) n-Dodecane	0.00	57	0	N.D. d		
97) Hexachlorobutadiene	22.67	225	14613	0.725 ng		99
98) Cyclohexanone	0.00	55	0	N.D. d		
99) tert-Butylbenzene	20.24	119	63527	0.918 ng		98
100) n-Butylbenzene	20.97	91	70950	0.898 ng		96
101) 1,1,1,2-Tetrachloroethane	17.76	131	16365	0.851 ng		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202231.D Vial: 15
Acq On : 21 Jan 2022 00:38 Operator: WA
Sample : 1.0ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172210 (2/16)

Quant Time: Jan 21 06:10:58 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202232.D Vial: 15
Acq On : 21 Jan 2022 1:11 Operator: WA
Sample : 5.0ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172210 (2/16)

Quant Time: Jan 21 06:11:54 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022 1/21/22
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.31	130	158024	12.500	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	13.43	114	734829	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	17.73	54	135428	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.16	65	277963	13.210	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.68%				
57) Toluene-d8 (SS2)	15.88	98	802019	12.367	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
73) Bromofluorobenzene (SS3)	19.12	174	253002	11.474	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 91.76%				
Target Compounds							Qvalue
2) Propene	4.17	42	154241	5.248	ng		98
3) Dichlorodifluoromethan...	4.34	85	199937	5.188	ng		100
4) Chloromethane	4.62	50	115746	4.689	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	4.90	135	115157	5.439	ng		100
6) Vinyl Chloride	5.05	62	152545	4.835	ng		100
7) 1,3-Butadiene	5.32	54	102922	5.319	ng		95
8) Bromomethane	5.76	94	73503	4.144	ng		100
9) Chloroethane	6.11	64	62057	4.460	ng		100
10) Ethanol	6.46	45	256530	16.774	ng		100
11) Acetonitrile	6.73	41	172773	3.967	ng		100
12) Acrolein	6.93	56	113221	9.061	ng		99
13) Acetone	7.14	58	355665	24.203	ng	#	78
14) Trichlorofluoromethane	7.40	101	161351	4.534	ng		100
15) 2-Propanol (Isopropanol)	7.63	45	365581	8.448	ng		96
16) Acrylonitrile	7.90	53	245923	9.104	ng		99
17) 1,1-Dichloroethene	8.36	96	84798	3.960	ng		93
18) 2-Methyl-2-Propanol (t...	8.51	59	460293	10.150	ng		95
19) Methylene Chloride	8.58	84	92454	4.510	ng		94
20) 3-Chloro-1-propene (Al...	8.75	41	132718	4.801	ng		96
21) Trichlorotrifluoroethane	9.01	151	74642	4.647	ng		97
22) Carbon Disulfide	8.85	76	655570	9.411	ng		99
23) trans-1,2-Dichloroethene	9.86	61	132076	4.460	ng		96
24) 1,1-Dichloroethane	10.11	63	159895	4.401	ng		100
25) Methyl tert-Butyl Ether	10.22	73	262425	5.051	ng		100
26) Vinyl Acetate	10.37	86	54828	15.937	ng	#	55
27) 2-Butanone (MEK)	10.61	72	131640	9.948	ng	#	79
28) cis-1,2-Dichloroethene	11.13	61	125351	4.344	ng		96
29) Diisopropyl Ether	11.43	87	189214	11.038	ng	#	35
30) Ethyl Acetate	11.43	61	167290	22.198	ng		91
31) n-Hexane	11.42	57	168689	5.815	ng		98
32) Chloroform	11.48	83	164741	4.588	ng		99
34) Tetrahydrofuran (THF)	11.88	72	116168	9.060	ng	#	91
35) Ethyl tert-Butyl Ether	12.03	87	211623	10.657	ng	#	87
36) 1,2-Dichloroethane	12.28	62	126897	4.637	ng		99
38) 1,1,1-Trichloroethane	12.56	97	144388	4.568	ng		98
39) Isopropyl Acetate	0.00	61	0	N.D.	d		
40) 1-Butanol	0.00	56	0	N.D.	d		
41) Benzene	13.04	78	359258	4.223	ng		100
42) Carbon Tetrachloride	13.20	117	118400	4.635	ng		100
43) Cyclohexane	13.33	84	291262	9.895	ng		93
44) tert-Amyl Methyl Ether	13.68	73	521463	10.086	ng		95
45) 1,2-Dichloropropane	13.89	63	89898	4.595	ng		100
46) Bromodichloromethane	14.08	83	125613	4.763	ng		99
47) Trichloroethene	14.13	130	95005	4.170	ng		100
48) 1,4-Dioxane	14.11	88	83301	4.368	ng		94
49) 2,2,4-Trimethylpentane...	14.20	57	387747	4.778	ng		94
50) Methyl Methacrylate	14.34	100	79956	9.207	ng		88

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202232.D Vial: 15
Acq On : 21 Jan 2022 1:11 Operator: WA
Sample : 5.0ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172210 (2/16)

Quant Time: Jan 21 06:11:54 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

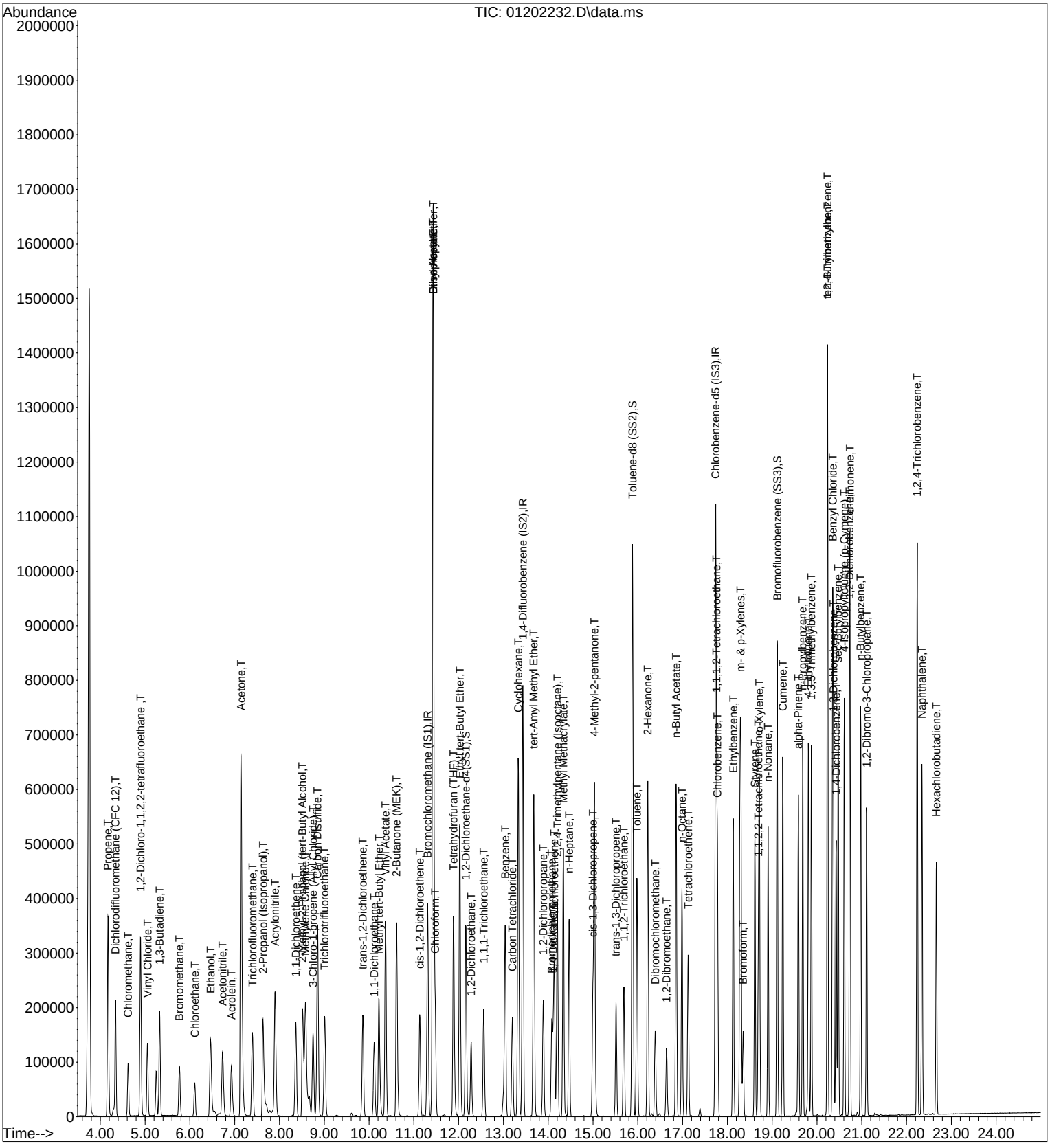
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	14.47	71	95911	4.611	ng		97
52) cis-1,3-Dichloropropene	15.00	75	147235	4.945	ng		100
53) 4-Methyl-2-pentanone	15.03	58	180136	9.880	ng		85
54) trans-1,3-Dichloropropene	15.51	75	132963	4.862	ng		100
55) 1,1,2-Trichloroethane	15.69	97	86716	4.550	ng		99
58) Toluene	15.98	91	369849	4.450	ng		99
59) 2-Hexanone	16.22	43	470967	10.333	ng		91
60) Dibromochloromethane	16.39	129	99299	4.648	ng		100
61) 1,2-Dibromoethane	16.64	107	100545	4.341	ng		100
62) n-Butyl Acetate	16.85	43	509669	10.162	ng		94
63) n-Octane	16.99	57	80952	4.745	ng		93
64) Tetrachloroethene	17.12	166	96247	4.013	ng		100
65) Chlorobenzene	17.78	112	252940	4.592	ng		100
66) Ethylbenzene	18.13	91	428719	4.303	ng		97
67) m- & p-Xylenes	18.29	91	678804	8.901	ng		96
68) Bromoform	18.35	173	75958	4.496	ng		100
69) Styrene	18.61	104	266261	4.607	ng		98
70) o-Xylene	18.71	91	342985	4.764	ng		96
71) n-Nonane	18.91	43	194356	5.044	ng		90
72) 1,1,2,2-Tetrachloroethane	18.69	83	160934	4.786	ng		100
74) Cumene	19.24	105	431414	4.670	ng		97
75) alpha-Pinene	19.58	93	226243	5.160	ng		97
76) n-Propylbenzene	19.68	91	534208	4.802	ng		96
77) 3-Ethyltoluene	0.00	105	0	N.D.	d		
78) 4-Ethyltoluene	19.81	105	430662	4.552	ng		97
79) 1,3,5-Trimethylbenzene	19.87	105	352003	4.497	ng		96
80) alpha-Methylstyrene	0.00	118	0	N.D.	d		
81) 2-Ethyltoluene	0.00	105	0	N.D.	d		
82) 1,2,4-Trimethylbenzene	20.24	105	381665	5.359	ng		98
83) n-Decane	0.00	58	0	N.D.	d		
84) Benzyl Chloride	20.35	91	603125	11.803	ng		93
85) 1,3-Dichlorobenzene	20.37	146	206351	4.951	ng		100
86) 1,4-Dichlorobenzene	20.43	146	196239	4.518	ng		100
87) sec-Butylbenzene	20.47	105	479790	4.804	ng		97
88) 4-Isopropyltoluene (p-...	20.61	119	410764	4.559	ng		97
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D.	d		
90) 1,2-Dichlorobenzene	20.73	146	199464	5.014	ng		100
91) d-Limonene	20.74	68	144109	5.202	ng		93
92) 1,2-Dibromo-3-Chloropr...	21.11	157	143109	9.067	ng	#	73
93) n-Undecane	0.00	57	0	N.D.	d		
94) 1,2,4-Trichlorobenzene	22.24	180	304521	9.117	ng		99
95) Naphthalene	22.34	128	494408	4.688	ng		99
96) n-Dodecane	0.00	57	0	N.D.	d		
97) Hexachlorobutadiene	22.67	225	82315	4.024	ng		100
98) Cyclohexanone	0.00	55	0	N.D.	d		
99) tert-Butylbenzene	20.24	119	372202	5.297	ng		98
100) n-Butylbenzene	20.97	91	393619	4.908	ng		97
101) 1,1,1,2-Tetrachloroethane	17.76	131	91381	4.682	ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202232.D Vial: 15
Acq On : 21 Jan 2022 1:11 Operator: WA
Sample : 5.0ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-01172210 (2/16)

Quant Time: Jan 21 06:11:54 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202233.D Vial: 13
Acq On : 21 Jan 2022 1:45 Operator: WA
Sample : 25ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-12292101 (1/28)

Quant Time: Jan 21 06:12:45 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

1/21/22

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	11.32	130	165518	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	13.44	114	761136	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	17.74	54	139337	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	12.17	65	283017	12.842	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.72%			
57) Toluene-d8 (SS2)	15.89	98	830173	12.442	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.52%			
73) Bromofluorobenzene (SS3)	19.12	174	265904	11.721	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 93.76%			
Target Compounds						Qvalue
2) Propene	4.17	42	649115	21.085	ng	100
3) Dichlorodifluoromethan...	4.33	85	1203479	29.817	ng	100
4) Chloromethane	4.63	50	862651	33.364	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	4.90	135	655836	29.576	ng	100
6) Vinyl Chloride	5.06	62	846290	25.607	ng	100
7) 1,3-Butadiene	5.33	54	651932	32.166	ng	100
8) Bromomethane	5.78	94	475939	25.617	ng	100
9) Chloroethane	6.12	64	380548	26.109	ng	100
10) Ethanol	6.50	45	1448544	90.429	ng	100
11) Acetonitrile	6.75	41	962388	21.097	ng	100
12) Acrolein	6.95	56	719392	54.966	ng	100
13) Acetone	7.16	58	2142116	139.172	ng	100
14) Trichlorofluoromethane	7.41	101	1005464	26.977	ng	100
15) 2-Propanol (Isopropanol)	7.66	45	2980166	65.748	ng	100
16) Acrylonitrile	7.92	53	1517266	53.625	ng	100
17) 1,1-Dichloroethene	8.38	96	560644	24.996	ng	100
18) 2-Methyl-2-Propanol (t...	8.53	59	2916330	61.396	ng	100
19) Methylene Chloride	8.60	84	579420	26.983	ng	100
20) 3-Chloro-1-propene (Al...	8.77	41	861494	29.755	ng	100
21) Trichlorotrifluoroethane	9.02	151	493462	29.329	ng	100
22) Carbon Disulfide	8.86	76	4251164	58.263	ng	100
23) trans-1,2-Dichloroethene	9.88	61	822110	26.504	ng	100
24) 1,1-Dichloroethane	10.12	63	990772	26.039	ng	100
25) Methyl tert-Butyl Ether	10.22	73	1738726	31.952	ng	100
26) Vinyl Acetate	10.38	86	458358	127.199	ng	100
27) 2-Butanone (MEK)	10.62	72	857361	61.858	ng	100
28) cis-1,2-Dichloroethene	11.14	61	783190	25.915	ng	100
29) Diisopropyl Ether	11.43	87	964044	53.693	ng	100
30) Ethyl Acetate	11.45	61	689355	87.331	ng	100
31) n-Hexane	11.42	57	755959	24.881	ng	100
32) Chloroform	11.49	83	1017687	27.060	ng	100
34) Tetrahydrofuran (THF)	11.89	72	748592	55.740	ng	100
35) Ethyl tert-Butyl Ether	12.03	87	1463573	70.363	ng	100
36) 1,2-Dichloroethane	12.29	62	766853	26.753	ng	100
38) 1,1,1-Trichloroethane	12.57	97	919870	28.094	ng	100
39) Isopropyl Acetate	0.00	61	0	N.D.	d	
40) 1-Butanol	0.00	56	0	N.D.	d	
41) Benzene	13.04	78	2351495	26.688	ng	100
42) Carbon Tetrachloride	13.20	117	782331	29.564	ng	100
43) Cyclohexane	13.34	84	1953371	64.067	ng	100
44) tert-Amyl Methyl Ether	13.68	73	3399477	63.480	ng	100
45) 1,2-Dichloropropane	13.90	63	572791	28.266	ng	100
46) Bromodichloromethane	14.08	83	826955	30.275	ng	100
47) Trichloroethene	14.14	130	668139	28.313	ng	100
48) 1,4-Dioxane	14.11	88	527500	26.706	ng	100
49) 2,2,4-Trimethylpentane...	14.21	57	2451310	29.165	ng	100
50) Methyl Methacrylate	14.34	100	564430	62.751	ng	100

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202233.D Vial: 13
Acq On : 21 Jan 2022 1:45 Operator: WA
Sample : 25ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-12292101 (1/28)

Quant Time: Jan 21 06:12:45 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

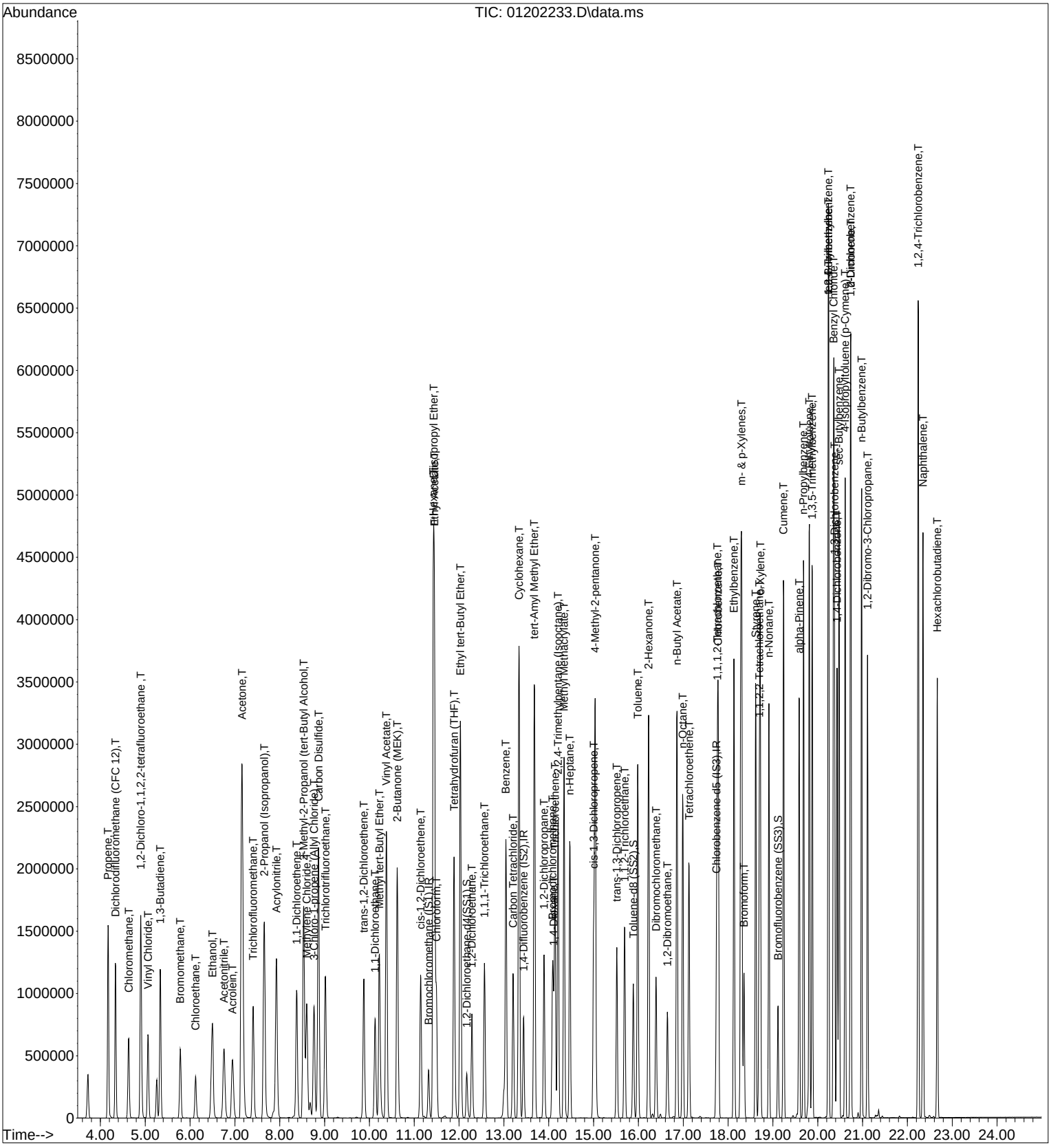
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	14.47	71	640531	29.732	ng	100
52) cis-1,3-Dichloropropene	15.00	75	997798	32.355	ng	100
53) 4-Methyl-2-pentanone	15.03	58	1101045	58.303	ng	100
54) trans-1,3-Dichloropropene	15.52	75	890810	31.448	ng	100
55) 1,1,2-Trichloroethane	15.69	97	583204	29.540	ng	100
58) Toluene	15.99	91	2461558	28.787	ng	100
59) 2-Hexanone	16.23	43	2482716	52.940	ng	100
60) Dibromochloromethane	16.39	129	703923	32.025	ng	100
61) 1,2-Dibromoethane	16.65	107	674053	28.286	ng	100
62) n-Butyl Acetate	16.86	43	2746265	53.221	ng	100
63) n-Octane	16.99	57	523543	29.826	ng	100
64) Tetrachloroethene	17.13	166	693134	28.087	ng	100
65) Chlorobenzene	17.78	112	1783614	31.474	ng	100
66) Ethylbenzene	18.13	91	2897820	28.267	ng	100
67) m- & p-Xylenes	18.30	91	4532083	57.762	ng	100
68) Bromoform	18.36	173	592179	34.067	ng	100
69) Styrene	18.61	104	1887298	31.739	ng	100
70) o-Xylene	18.72	91	2311656	31.205	ng	100
71) n-Nonane	18.91	43	1138241	28.711	ng	100
72) 1,1,2,2-Tetrachloroethane	18.70	83	1088113	31.454	ng	100
74) Cumene	19.24	105	2986862	31.422	ng	100
75) alpha-Pinene	19.59	93	1411258	31.286	ng	100
76) n-Propylbenzene	19.68	91	3589845	31.364	ng	100
77) 3-Ethyltoluene	0.00	105	0	N.D.	d	
78) 4-Ethyltoluene	19.81	105	3041047	31.240	ng	100
79) 1,3,5-Trimethylbenzene	19.87	105	2449046	30.410	ng	100
80) alpha-Methylstyrene	0.00	118	0	N.D.	d	
81) 2-Ethyltoluene	0.00	105	0	N.D.	d	
82) 1,2,4-Trimethylbenzene	20.24	105	2369052	32.328	ng	100
83) n-Decane	0.00	58	0	N.D.	d	
84) Benzyl Chloride	20.35	91	4006206	76.200	ng	100
85) 1,3-Dichlorobenzene	20.37	146	1495673	34.881	ng	100
86) 1,4-Dichlorobenzene	20.43	146	1468615	32.862	ng	100
87) sec-Butylbenzene	20.47	105	3343720	32.541	ng	100
88) 4-Isopropyltoluene (p-...	20.61	119	2968848	32.029	ng	100
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D.	d	
90) 1,2-Dichlorobenzene	20.73	146	1437730	35.129	ng	100
91) d-Limonene	20.74	68	877784	30.796	ng	100
92) 1,2-Dibromo-3-Chloropr...	21.11	157	1093542	67.338	ng	100
93) n-Undecane	0.00	57	0	N.D.	d	
94) 1,2,4-Trichlorobenzene	22.24	180	2322353	67.577	ng	100
95) Naphthalene	22.35	128	3642811	33.574	ng	100
96) n-Dodecane	0.00	57	0	N.D.	d	
97) Hexachlorobutadiene	22.67	225	654150	31.081	ng	100
98) Cyclohexanone	0.00	55	0	N.D.	d	
99) tert-Butylbenzene	20.24	119	2329398	32.220	ng	100
100) n-Butylbenzene	20.98	91	2680155	32.484	ng	100
101) 1,1,1,2-Tetrachloroethane	17.76	131	644751	32.107	ng	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202233.D Vial: 13
Acq On : 21 Jan 2022 1:45 Operator: WA
Sample : 25ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-12292101 (1/28)

Quant Time: Jan 21 06:12:45 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202234.D Vial: 13
Acq On : 21 Jan 2022 2:19 Operator: WA
Sample : 50ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-12292101 (1/28)

Quant Time: Jan 21 06:13:32 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) 1/21/22
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.33	130	175140	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	13.44	114	808697	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	17.74	54	141175	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.18	65	295357	12.665	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%				
57) Toluene-d8 (SS2)	15.89	98	881347	13.037	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.32%				
73) Bromofluorobenzene (SS3)	19.12	174	281775	12.259	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.08%				
Target Compounds							Qvalue
2) Propene	4.17	42	1257485	38.603	ng		98
3) Dichlorodifluoromethan...	4.34	85	2347360	54.962	ng		99
4) Chloromethane	4.63	50	1602868	58.586	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	4.90	135	1206168	51.406	ng		100
6) Vinyl Chloride	5.07	62	1665326	47.621	ng		100
7) 1,3-Butadiene	5.34	54	1302567	60.738	ng		97
8) Bromomethane	5.79	94	982271	49.965	ng		100
9) Chloroethane	6.13	64	782846	50.759	ng		100
10) Ethanol	6.52	45	2762728	162.994	ng		100
11) Acetonitrile	6.77	41	1933119	40.048	ng		100
12) Acrolein	6.96	56	1456659	105.183	ng		100
13) Acetone	7.17	58	3680348	225.974	ng		96
14) Trichlorofluoromethane	7.41	101	2044843	51.850	ng		100
15) 2-Propanol (Isopropanol)	7.67	45	5627765	117.337	ng		99
16) Acrylonitrile	7.94	53	2985134	99.708	ng		100
17) 1,1-Dichloroethene	8.38	96	1162743	48.992	ng		94
18) 2-Methyl-2-Propanol (t...	8.55	59	5597965	111.376	ng		98
19) Methylene Chloride	8.61	84	1189667	52.358	ng		94
20) 3-Chloro-1-propene (Al...	8.77	41	1662538	54.267	ng		96
21) Trichlorotrifluoroethane	9.02	151	1047029	58.811	ng		96
22) Carbon Disulfide	8.86	76	8051663	104.286	ng		100
23) trans-1,2-Dichloroethene	9.88	61	1636257	49.854	ng		96
24) 1,1-Dichloroethane	10.13	63	1970284	48.936	ng		99
25) Methyl tert-Butyl Ether	10.22	73	3498560	60.761	ng		99
26) Vinyl Acetate	10.39	86	892937	234.186	ng	#	76
27) 2-Butanone (MEK)	10.63	72	1667565	113.703	ng	#	86
28) cis-1,2-Dichloroethene	11.15	61	1549810	48.464	ng		96
29) Diisopropyl Ether	11.43	87	1412031	74.324	ng	#	84
30) Ethyl Acetate	11.46	61	922279	110.420	ng		96
31) n-Hexane	11.42	57	1101774	34.270	ng		98
32) Chloroform	11.50	83	1978444	49.716	ng		100
34) Tetrahydrofuran (THF)	11.89	72	1461524	102.846	ng		92
35) Ethyl tert-Butyl Ether	12.03	87	2691675	122.296	ng		93
36) 1,2-Dichloroethane	12.29	62	1485554	48.978	ng		99
38) 1,1,1-Trichloroethane	12.57	97	1841091	52.923	ng		99
39) Isopropyl Acetate	0.00	61	0	N.D.	d		
40) 1-Butanol	0.00	56	0	N.D.	d		
41) Benzene	13.05	78	4630541	49.463	ng		100
42) Carbon Tetrachloride	13.21	117	1614161	57.412	ng		100
43) Cyclohexane	13.34	84	3420166	105.578	ng		95
44) tert-Amyl Methyl Ether	13.68	73	5894454	103.596	ng		98
45) 1,2-Dichloropropane	13.90	63	1149366	53.382	ng		100
46) Bromodichloromethane	14.09	83	1649731	56.844	ng		100
47) Trichloroethene	14.14	130	1387863	55.353	ng		100
48) 1,4-Dioxane	14.11	88	1064123	50.706	ng		96
49) 2,2,4-Trimethylpentane...	14.21	57	4535699	50.791	ng		98
50) Methyl Methacrylate	14.35	100	1090993	114.158	ng		91

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202234.D Vial: 13
Acq On : 21 Jan 2022 2:19 Operator: WA
Sample : 50ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-12292101 (1/28)

Quant Time: Jan 21 06:13:32 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

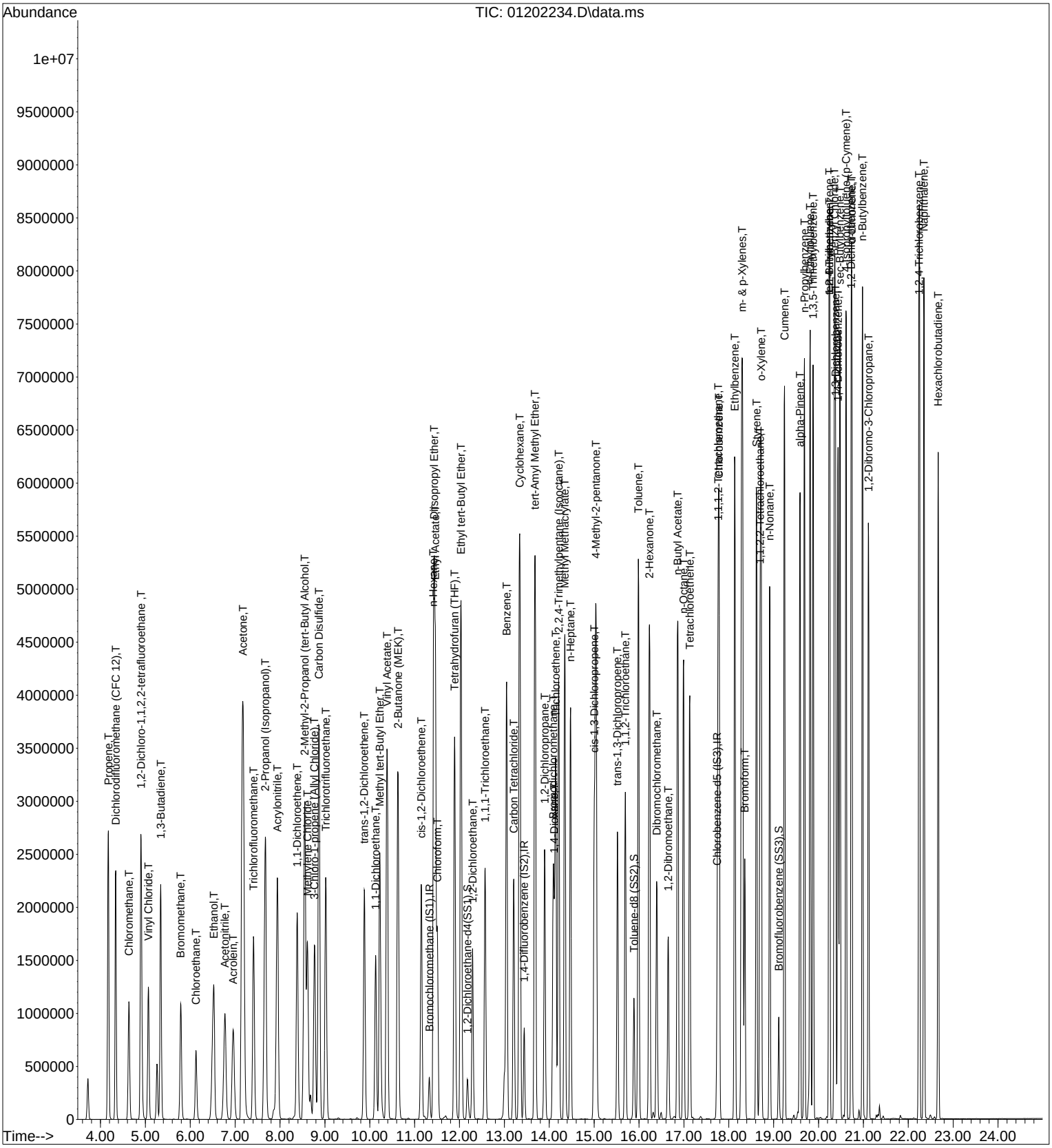
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	14.47	71	1233061	53.871 ng	97
52) cis-1,3-Dichloropropene	15.00	75	1992661	60.814 ng	100
53) 4-Methyl-2-pentanone	15.04	58	1855324	92.467 ng	92
54) trans-1,3-Dichloropropene	15.52	75	1828541	60.756 ng	99
55) 1,1,2-Trichloroethane	15.69	97	1196130	57.023 ng	99
58) Toluene	15.99	91	4838156	55.844 ng	99
59) 2-Hexanone	16.23	43	3990189	83.978 ng	96
60) Dibromochloromethane	16.39	129	1486946	66.769 ng	100
61) 1,2-Dibromoethane	16.65	107	1414055	58.567 ng	100
62) n-Butyl Acetate	16.86	43	4417948	84.502 ng	96
63) n-Octane	16.99	57	959768	53.966 ng	95
64) Tetrachloroethene	17.13	166	1446931	57.870 ng	99
65) Chlorobenzene	17.78	112	3336582	58.112 ng	100
66) Ethylbenzene	18.13	91	5403991	52.027 ng	98
67) m- & p-Xylenes	18.30	91	7726456	97.193 ng	99
68) Bromoform	18.36	173	1285102	72.968 ng	100
69) Styrene	18.62	104	3612663	59.964 ng	100
70) o-Xylene	18.72	91	4091411	54.510 ng	99
71) n-Nonane	18.91	43	1810689	45.078 ng	93
72) 1,1,2,2-Tetrachloroethane	18.70	83	1985985	56.661 ng	99
74) Cumene	19.24	105	5396815	56.037 ng	99
75) alpha-Pinene	19.59	93	2683134	58.707 ng	99
76) n-Propylbenzene	19.69	91	6331589	54.597 ng	98
77) 3-Ethyltoluene	0.00	105	0	N.D. d	
78) 4-Ethyltoluene	19.81	105	5349686	54.240 ng	99
79) 1,3,5-Trimethylbenzene	19.88	105	4420694	54.177 ng	100
80) alpha-Methylstyrene	0.00	118	0	N.D. d	
81) 2-Ethyltoluene	0.00	105	0	N.D. d	
82) 1,2,4-Trimethylbenzene	20.24	105	3455162	46.536 ng	99
83) n-Decane	0.00	58	0	N.D. d	
84) Benzyl Chloride	20.35	91	6017284	112.962 ng	99
85) 1,3-Dichlorobenzene	20.38	146	2485772	57.216 ng	100
86) 1,4-Dichlorobenzene	20.43	146	2848592	62.910 ng	100
87) sec-Butylbenzene	20.48	105	5776648	55.487 ng	98
88) 4-Isopropyltoluene (p-...	20.62	119	5081474	54.107 ng	99
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D. d	
90) 1,2-Dichlorobenzene	20.73	146	2310504	55.718 ng	100
91) d-Limonene	20.74	68	1244333	43.087 ng	93
92) 1,2-Dibromo-3-Chloropr...	21.12	157	1999934	121.549 ng	94
93) n-Undecane	0.00	57	0	N.D. d	
94) 1,2,4-Trichlorobenzene	22.24	180	3737105	107.329 ng	100
95) Naphthalene	22.35	128	6926045	63.003 ng	100
96) n-Dodecane	0.00	57	0	N.D. d	
97) Hexachlorobutadiene	22.67	225	1307897	61.334 ng	100
98) Cyclohexanone	0.00	55	0	N.D. d	
99) tert-Butylbenzene	20.24	119	3419985	46.689 ng	100
100) n-Butylbenzene	20.98	91	4608267	55.126 ng	99
101) 1,1,1,2-Tetrachloroethane	17.76	131	1212569	59.597 ng	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202234.D Vial: 13
Acq On : 21 Jan 2022 2:19 Operator: WA
Sample : 50ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-12292101 (1/28)

Quant Time: Jan 21 06:13:32 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202235.D Vial: 13
Acq On : 21 Jan 2022 2:53 Operator: WA
Sample : 100ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-12292101 (1/28)

Quant Time: Jan 21 06:14:40 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022 WA 1/21/22
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.34	130	186684	12.500	ng		0.02
37) 1,4-Difluorobenzene (IS2)	13.45	114	842354	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	17.74	54	138632	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.19	65	304540	12.252	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.00%				
57) Toluene-d8 (SS2)	15.89	98	915732	13.794	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 110.32%				
73) Bromofluorobenzene (SS3)	19.12	174	296005	13.114	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.88%				
Target Compounds							Qvalue
2) Propene	4.19	42	2534146	72.984	ng		98
3) Dichlorodifluoromethan...	4.36	85	4535582	99.630	ng		99
4) Chloromethane	4.65	50	2904328	99.591	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	4.91	135	2148073	85.887	ng		100
6) Vinyl Chloride	5.08	62	3360562	90.155	ng		99
7) 1,3-Butadiene	5.36	54	2551934	111.637	ng		94
8) Bromomethane	5.80	94	2086188	99.555	ng		100
9) Chloroethane	6.14	64	1622388	98.689	ng		99
10) Ethanol	6.57	45	4947730	273.853	ng		100
11) Acetonitrile	6.81	41	4036375	78.451	ng		99
12) Acrolein	6.98	56	2964718	200.839	ng		100
13) Acetone	7.20	58	5770942	332.425	ng		97
14) Trichlorofluoromethane	7.42	101	4115907	97.912	ng		99
15) 2-Propanol (Isopropanol)	7.70	45	9138869	178.760	ng		99
16) Acrylonitrile	7.97	53	5686207	178.183	ng		99
17) 1,1-Dichloroethene	8.40	96	2432093	96.140	ng		89
18) 2-Methyl-2-Propanol (t...	8.58	59	9875238	184.327	ng		98
19) Methylene Chloride	8.63	84	2395364	98.903	ng		85
20) 3-Chloro-1-propene (Al...	8.78	41	3250880	99.551	ng		92
21) Trichlorotrifluoroethane	9.03	151	2234620	117.756	ng		91
22) Carbon Disulfide	8.88	76	13338007	162.073	ng		99
23) trans-1,2-Dichloroethene	9.89	61	3208850	91.722	ng		92
24) 1,1-Dichloroethane	10.14	63	3956927	92.202	ng		99
25) Methyl tert-Butyl Ether	10.23	73	6829453	111.275	ng		99
26) Vinyl Acetate	10.40	86	1518491	373.620	ng	#	57
27) 2-Butanone (MEK)	10.65	72	2906130	185.902	ng	#	74
28) cis-1,2-Dichloroethene	11.16	61	3028897	88.860	ng		91
29) Diisopropyl Ether	11.45	87	1784244	88.108	ng		98
30) Ethyl Acetate	11.47	61	1294848	145.439	ng		92
31) n-Hexane	11.42	57	1646783	48.055	ng	#	96
32) Chloroform	11.53	83	3829507	90.280	ng		100
34) Tetrahydrofuran (THF)	11.90	72	2497502	164.879	ng	#	82
35) Ethyl tert-Butyl Ether	12.04	87	4176505	178.025	ng	#	87
36) 1,2-Dichloroethane	12.30	62	2823816	87.343	ng		99
38) 1,1,1-Trichloroethane	12.58	97	3603985	99.459	ng		98
39) Isopropyl Acetate	0.00	61	0	N.D.	d		
40) 1-Butanol	0.00	56	0	N.D.	d		
41) Benzene	13.06	78	8392897	86.070	ng		99
42) Carbon Tetrachloride	13.21	117	3229142	110.264	ng		100
43) Cyclohexane	13.35	84	4921858	145.863	ng		93
44) tert-Amyl Methyl Ether	13.69	73	8626558	145.556	ng		97
45) 1,2-Dichloropropane	13.90	63	2149891	95.862	ng		100
46) Bromodichloromethane	14.09	83	3001677	99.295	ng		100
47) Trichloroethene	14.15	130	2503683	95.866	ng		100
48) 1,4-Dioxane	14.12	88	1734975	79.369	ng		92
49) 2,2,4-Trimethylpentane...	14.22	57	7157041	76.943	ng		98
50) Methyl Methacrylate	14.35	100	1723847	173.171	ng	#	84

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202235.D Vial: 13
Acq On : 21 Jan 2022 2:53 Operator: WA
Sample : 100ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-12292101 (1/28)

Quant Time: Jan 21 06:14:40 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

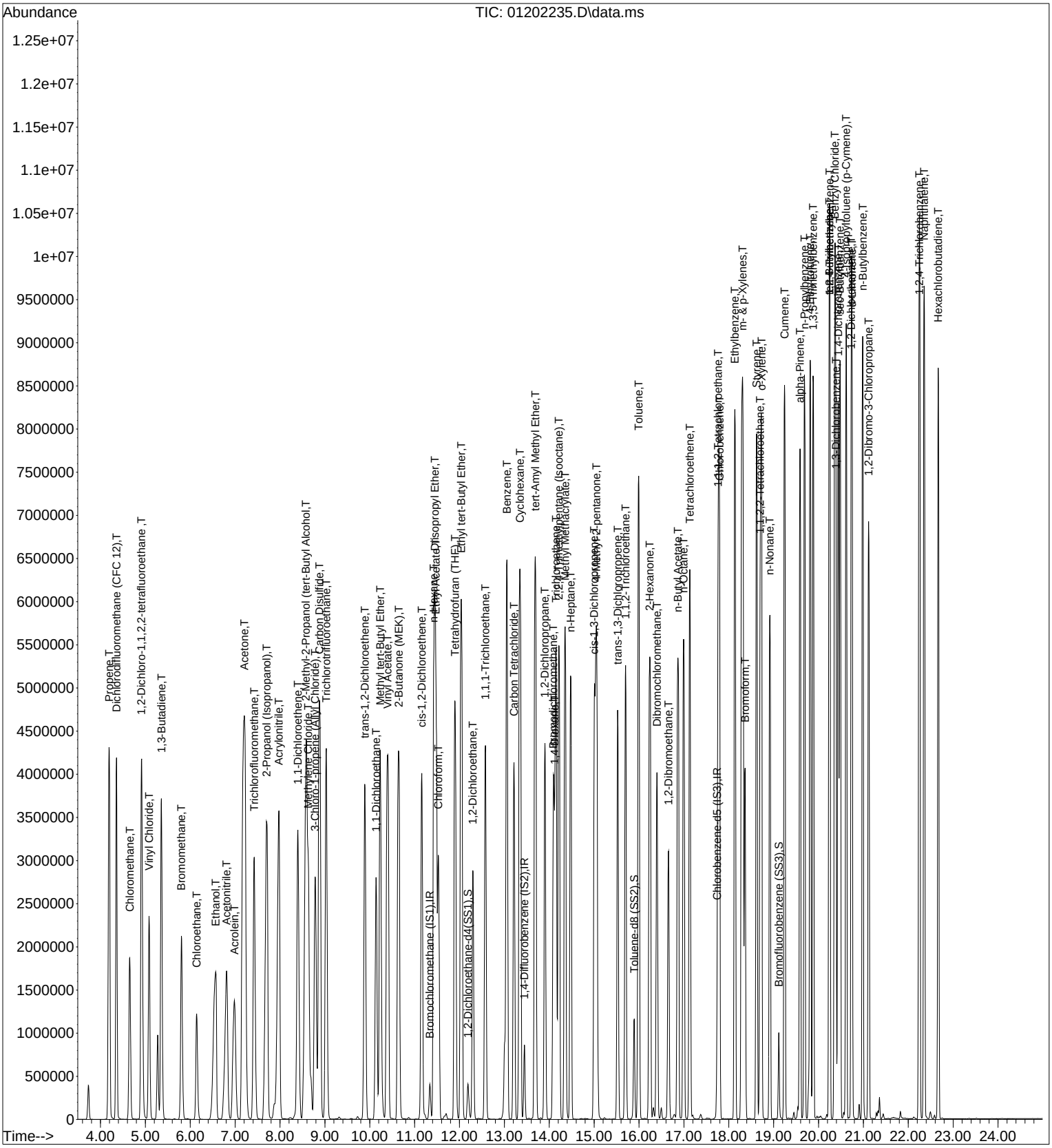
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	14.48	71	2016385	84.573	ng	95
52) cis-1,3-Dichloropropene	15.00	75	3590171	105.190	ng	99
53) 4-Methyl-2-pentanone	15.05	58	2616128	125.174	ng	86
54) trans-1,3-Dichloropropene	15.52	75	3508799	111.927	ng	99
55) 1,1,2-Trichloroethane	15.70	97	2273231	104.042	ng	98
58) Toluene	15.99	91	8075180	94.918	ng	99
59) 2-Hexanone	16.24	43	5659812	121.301	ng	94
60) Dibromochloromethane	16.40	129	2955664	135.153	ng	99
61) 1,2-Dibromoethane	16.66	107	2801588	118.163	ng	100
62) n-Butyl Acetate	16.87	43	6112236	119.053	ng	95
63) n-Octane	16.99	57	1478657	84.667	ng	90
64) Tetrachloroethene	17.13	166	2621263	106.760	ng	99
65) Chlorobenzene	17.80	112	4932500	87.483	ng	99
66) Ethylbenzene	18.14	91	8459655	82.939	ng	97
67) m- & p-Xylenes	18.31	91	11080149	141.937	ng	96
68) Bromoform	18.36	173	2457776	142.111	ng	100
69) Styrene	18.62	104	5721077	96.702	ng	99
70) o-Xylene	18.73	91	5808539	78.807	ng	100
71) n-Nonane	18.91	43	2425384	61.489	ng	86
72) 1,1,2,2-Tetrachloroethane	18.70	83	2858578	83.053	ng	100
74) Cumene	19.24	105	7972363	84.298	ng	99
75) alpha-Pinene	19.59	93	4111244	91.604	ng	99
76) n-Propylbenzene	19.69	91	9122524	80.107	ng	96
77) 3-Ethyltoluene	0.00	105	0	N.D.	d	
78) 4-Ethyltoluene	19.81	105	7730850	79.820	ng	98
79) 1,3,5-Trimethylbenzene	19.88	105	6543877	81.668	ng	99
80) alpha-Methylstyrene	0.00	118	0	N.D.	d	
81) 2-Ethyltoluene	0.00	105	0	N.D.	d	
82) 1,2,4-Trimethylbenzene	20.25	105	4725331	64.810	ng	100
83) n-Decane	0.00	58	0	N.D.	d	
84) Benzyl Chloride	20.36	91	7811181	149.328	ng	98
85) 1,3-Dichlorobenzene	20.39	146	3482737	81.634	ng	100
86) 1,4-Dichlorobenzene	20.44	146	4482046	100.800	ng	99
87) sec-Butylbenzene	20.48	105	8096661	79.198	ng	96
88) 4-Isopropyltoluene (p-...	20.62	119	7181399	77.870	ng	98
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D.	d	
90) 1,2-Dichlorobenzene	20.73	146	3250514	79.825	ng	100
91) d-Limonene	20.75	68	1575854	55.568	ng	88
92) 1,2-Dibromo-3-Chloropr...	21.12	157	2990027	185.057	ng	93
93) n-Undecane	0.00	57	0	N.D.	d	
94) 1,2,4-Trichlorobenzene	22.25	180	5475964	160.153	ng	99
95) Naphthalene	22.35	128	10388287	96.230	ng	99
96) n-Dodecane	0.00	57	0	N.D.	d	
97) Hexachlorobutadiene	22.67	225	2221301	106.079	ng	100
98) Cyclohexanone	0.00	55	0	N.D.	d	
99) tert-Butylbenzene	20.24	119	4789225	66.580	ng	100
100) n-Butylbenzene	20.98	91	6421503	78.226	ng	97
101) 1,1,1,2-Tetrachloroethane	17.76	131	1888810	94.536	ng	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202235.D Vial: 13
Acq On : 21 Jan 2022 2:53 Operator: WA
Sample : 100ng R16012022 ICAL Std Inst : GCMS-16
Misc : S35-01102201/S35-12292101 (1/28)

Quant Time: Jan 21 06:14:40 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 06:02:16 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202237.D Vial: 16
Acq On : 21 Jan 2022 4:01 Operator: WA
Sample : 25ng R16012022 ICV Std Inst : GCMS-16
Misc : S35-01102201/S35-12272103 (1/26)

Quant Time: Jan 21 14:55:05 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) 1/21/22
QLast Update : Fri Jan 21 09:34:58 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.32	130	180934	12.500	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	13.44	114	831947	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	17.74	54	145900	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.18	65	304651	12.258	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.08%				
57) Toluene-d8 (SS2)	15.89	98	895914	12.707	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.68%				
73) Bromofluorobenzene (SS3)	19.11	174	281957	12.548	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.40%				
Target Compounds							Qvalue
2) Propene	4.18	42	729437	26.465	ng		99
3) Dichlorodifluoromethan...	4.34	85	1116474	24.518	ng		100
4) Chloromethane	4.64	50	717879	21.681	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	4.91	135	612874	25.162	ng		100
6) Vinyl Chloride	5.07	62	806286	23.727	ng		100
7) 1,3-Butadiene	5.34	54	588004	25.088	ng		94
8) Bromomethane	5.79	94	466470	25.199	ng		100
9) Chloroethane	6.13	64	371665	24.883	ng		100
10) Ethanol	6.51	45	1714794	100.628	ng		100
11) Acetonitrile	6.76	41	918303	20.172	ng		100
12) Acrolein	6.95	56	641980	51.047	ng		100
13) Acetone	7.17	58	1994191	116.971	ng		100
14) Trichlorofluoromethane	7.41	101	967652	24.990	ng		100
15) 2-Propanol (Isopropanol)	7.66	45	2473531	42.566	ng		100
16) Acrylonitrile	7.93	53	1382859	46.152	ng		100
17) 1,1-Dichloroethene	8.38	96	526204	25.859	ng		99
18) 2-Methyl-2-Propanol (t...	8.54	59	2678526	49.983	ng		99
19) Methylene Chloride	8.61	84	544026	24.477	ng		98
20) 3-Chloro-1-propene (Al...	8.77	41	723188	23.298	ng		99
21) Trichlorotrifluoroethane	9.02	151	467601	26.601	ng		98
22) Carbon Disulfide	8.86	76	3837533	50.751	ng		100
23) trans-1,2-Dichloroethene	9.88	61	755822	25.122	ng		99
24) 1,1-Dichloroethane	10.13	63	942481	25.529	ng		100
25) Methyl tert-Butyl Ether	10.22	73	1522507	24.775	ng		100
26) Vinyl Acetate	10.38	86	598756	138.956	ng	#	88
27) 2-Butanone (MEK)	10.62	72	782345	49.866	ng		99
28) cis-1,2-Dichloroethene	11.15	61	719976	24.689	ng		99
29) Diisopropyl Ether	11.44	87	967845	52.945	ng	#	79
30) Ethyl Acetate	11.45	61	520299	64.641	ng		100
31) n-Hexane	11.42	57	769934	25.195	ng		100
32) Chloroform	11.49	83	954116	26.085	ng		100
34) Tetrahydrofuran (THF)	11.89	72	723732	50.552	ng		98
35) Ethyl tert-Butyl Ether	12.03	87	1295624	55.454	ng		99
36) 1,2-Dichloroethane	12.29	62	709526	24.947	ng		100
38) 1,1,1-Trichloroethane	12.57	97	872266	25.817	ng		99
39) Isopropyl Acetate	13.00	61	14057	No Calib	#		
40) 1-Butanol	13.01	56	13816	No Calib	#		
41) Benzene	13.04	78	2202273	25.474	ng		100
42) Carbon Tetrachloride	13.20	117	720305	26.206	ng		100
43) Cyclohexane	13.34	84	1788209	56.250	ng		100
44) tert-Amyl Methyl Ether	13.68	73	3060636	54.231	ng		100
45) 1,2-Dichloropropane	13.90	63	535825	25.391	ng		100
46) Bromodichloromethane	14.08	83	776164	27.406	ng		100
47) Trichloroethene	14.14	130	628393	27.190	ng		100
48) 1,4-Dioxane	14.11	88	492932	25.688	ng		100
49) 2,2,4-Trimethylpentane...	14.21	57	2191668	26.145	ng		100
50) Methyl Methacrylate	14.34	100	519686	57.831	ng		100

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202237.D Vial: 16
Acq On : 21 Jan 2022 4:01 Operator: WA
Sample : 25ng R16012022 ICV Std Inst : GCMS-16
Misc : S35-01102201/S35-12272103 (1/26)

Quant Time: Jan 21 14:55:05 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 09:34:58 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

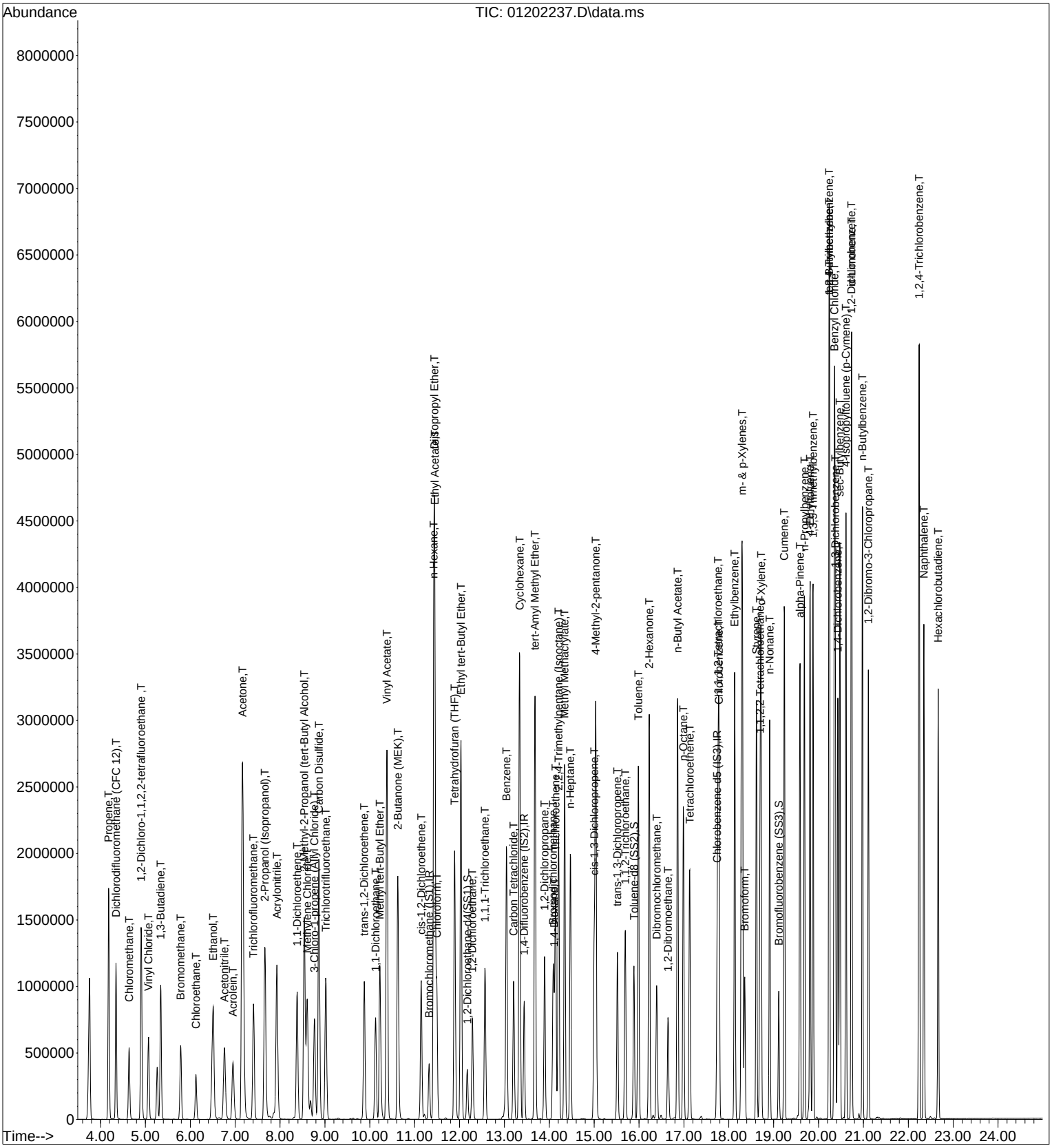
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	14.47	71	579447	26.993 ng		100
52) cis-1,3-Dichloropropene	15.00	75	919759	27.701 ng		100
53) 4-Methyl-2-pentanone	15.03	58	1025350	53.174 ng		100
54) trans-1,3-Dichloropropene	15.52	75	823152	26.985 ng		100
55) 1,1,2-Trichloroethane	15.69	97	542159	26.276 ng		100
58) Toluene	15.99	91	2290888	26.869 ng		100
59) 2-Hexanone	16.23	43	2311412	48.003 ng		100
60) Dibromochloromethane	16.39	129	644762	28.527 ng		100
61) 1,2-Dibromoethane	16.65	107	618717	26.703 ng		100
62) n-Butyl Acetate	16.86	43	2608705	49.483 ng		100
63) n-Octane	16.99	57	471385	27.678 ng		100
64) Tetrachloroethene	17.13	166	648168	28.311 ng		100
65) Chlorobenzene	17.78	112	1613933	28.609 ng		100
66) Ethylbenzene	18.13	91	2675449	28.185 ng		100
67) m- & p-Xylenes	18.30	91	4182772	57.933 ng		100
68) Bromoform	18.36	173	543798	28.102 ng		100
69) Styrene	18.61	104	1694543	28.725 ng		100
70) o-Xylene	18.72	91	2125399	29.262 ng		99
71) n-Nonane	18.91	43	1034743	27.208 ng		100
72) 1,1,2,2-Tetrachloroethane	18.70	83	996064	29.604 ng		100
74) Cumene	19.24	105	2701172	28.592 ng		99
75) alpha-Pinene	19.59	93	1435746	32.232 ng		100
76) n-Propylbenzene	19.69	91	3214002	28.665 ng		100
77) 3-Ethyltoluene	19.81	105	2692792	No Calib		
78) 4-Ethyltoluene	19.81	105	2692792	29.416 ng		100
79) 1,3,5-Trimethylbenzene	19.88	105	2255544	29.927 ng		99
80) alpha-Methylstyrene	19.88	118	17239	No Calib		
81) 2-Ethyltoluene	19.88	105	2255553	No Calib		
82) 1,2,4-Trimethylbenzene	20.24	105	2225697	30.946 ng		100
83) n-Decane	20.24	58	79159	No Calib	#	
84) Benzyl Chloride	20.35	91	3737955	64.859 ng		100
85) 1,3-Dichlorobenzene	20.37	146	1351385	31.126 ng		100
86) 1,4-Dichlorobenzene	20.43	146	1296181	28.721 ng		100
87) sec-Butylbenzene	20.47	105	3008151	29.935 ng		100
88) 4-Isopropyltoluene (p-...	20.61	119	2640655	30.114 ng		100
89) 1,2,3-Trimethylbenzene	20.61	105	98545	No Calib	#	
90) 1,2-Dichlorobenzene	20.73	146	1292812	31.582 ng		100
91) d-Limonene	20.74	68	836357	32.485 ng		99
92) 1,2-Dibromo-3-Chloropr...	21.11	157	992596	64.033 ng		99
93) n-Undecane	22.25	57	454	No Calib	#	
94) 1,2,4-Trichlorobenzene	22.24	180	2032336	62.640 ng		100
95) Naphthalene	22.35	128	2879308	26.923 ng		100
96) n-Dodecane	22.34	57	1496	No Calib	#	
97) Hexachlorobutadiene	22.67	225	593693	29.987 ng		100
98) Cyclohexanone	18.30	55	3109	No Calib		
99) tert-Butylbenzene	20.24	119	2183765	30.832 ng		100
100) n-Butylbenzene	20.98	91	2409625	29.820 ng		100
101) 1,1,1,2-Tetrachloroethane	17.76	131	584411	29.553 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 01\20\01202237.D Vial: 16
Acq On : 21 Jan 2022 4:01 Operator: WA
Sample : 25ng R16012022 ICV Std Inst : GCMS-16
Misc : S35-01102201/S35-12272103 (1/26)

Quant Time: Jan 21 14:55:05 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Fri Jan 21 09:34:58 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Initial Calibration Verification/LABORATORY CONTROL SAMPLE CHECK SHEET

WA 1/21/22

Data File Name: **01202237.D** Acq. Method File: **TO15.M**

Data File Path: **I:\MS16\DATA\2022_01\20** Sample Name: **25ng R16012022 ICV Std**

Operator: **WA** Misc Info: **S35-01102201/S35-12272103 (**

Date Acquired: **1/21/2022 4:01** Instrument Name: **GCMS-16**

#	Compound Name	Ret. Time	Amt. (ng)	Spike Amt.(ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail	ICV/AZ 70-130%
2)	**Propene**	**4.18**	**26.5**	**25.75**	103	**56**	**128**	*	*
3)	**Dichlorodifluoromethane (CFC 1**	**4.34**	**24.5**	**26.00**	94	**71**	**112**	*	*
4)	**Chloromethane**	**4.64**	**21.7**	**25.75**	84	**53**	**126**	*	*
5)	**1,2-Dichloro-1,1,2,2-tetrafluoroet**	**4.91**	**25.2**	**26.00**	97	**62**	**121**	*	*
6)	**Vinyl Chloride**	**5.07**	**23.7**	**26.00**	91	**63**	**123**	*	*
7)	**1,3-Butadiene**	**5.34**	**25.1**	**25.75**	97	**63**	**135**	*	*
8)	**Bromomethane**	**5.79**	**25.2**	**25.75**	98	**71**	**112**	*	*
9)	**Chloroethane**	**6.13**	**24.9**	**25.75**	97	**66**	**117**	*	*
10)	**Ethanol**	**6.51**	**101**	**104.00**	97	**57**	**117**	*	*
11)	**Acetonitrile**	**6.76**	**20.2**	**25.25**	80	**59**	**131**	*	*
12)	**Acrolein**	**6.95**	**51.0**	**52.00**	98	**71**	**123**	*	*
13)	**Acetone**	**7.17**	**117**	**128.00**	91	**60**	**117**	*	*
14)	**Trichlorofluoromethane**	**7.41**	**25.0**	**25.25**	99	**71**	**114**	*	*
15)	**2-Propanol (Isopropanol)**	**7.66**	**42.6**	**50.00**	85	**61**	**124**	*	*
16)	**Acrylonitrile**	**7.93**	**46.2**	**50.25**	92	**65**	**130**	*	*
17)	**1,1-Dichloroethene**	**8.38**	**25.9**	**26.25**	99	**74**	**114**	*	*
18)	2-Methyl-2-Propanol (tert-Butyl Alc	8.54	50.0	51.00	98	56	135	*	*
19)	**Methylene Chloride**	**8.61**	**24.5**	**26.00**	94	**75**	**112**	*	*
20)	**3-Chloro-1-propene (Allyl Chloric**	**8.77**	**23.3**	**25.50**	91	**57**	**127**	*	*
21)	**Trichlorotrifluoroethane**	**9.02**	**26.6**	**27.00**	99	**73**	**114**	*	*
22)	**Carbon Disulfide**	**8.86**	**50.8**	**51.75**	98	**70**	**113**	*	*
23)	**trans-1,2-Dichloroethene**	**9.88**	**25.1**	**26.00**	97	**76**	**119**	*	*
24)	**1,1-Dichloroethane**	**10.13**	**25.5**	**26.75**	95	**70**	**114**	*	*
25)	**Methyl tert-Butyl Ether**	**10.22**	**24.8**	**25.75**	96	**72**	**118**	*	*
26)	**Vinyl Acetate**	**10.38**	**139**	**117.75**	118	**56**	**137**	*	*
27)	**2-Butanone (MEK)**	**10.62**	**49.9**	**51.00**	98	**74**	**121**	*	*
28)	**cis-1,2-Dichloroethene**	**11.15**	**24.7**	**25.75**	96	**73**	**117**	*	*
29)	Diisopropyl Ether	11.44	52.9	52.25	101	58	124	*	*
30)	**Ethyl Acetate**	**11.45**	**64.6**	**72.50**	89	**59**	**161**	*	*
31)	**n-Hexane**	**11.42**	**25.2**	**26.00**	97	**55**	**130**	*	*
32)	**Chloroform**	**11.49**	**26.1**	**26.25**	99	**71**	**114**	*	*
34)	**Tetrahydrofuran (THF)**	**11.89**	**50.6**	**50.50**	100	**73**	**114**	*	*
35)	Ethyl tert-Butyl Ether	12.03	55.5	51.75	107	76	119	*	*
36)	**1,2-Dichloroethane**	**12.29**	**24.9**	**26.25**	95	**71**	**119**	*	*
38)	**1,1,1-Trichloroethane**	**12.57**	**25.8**	**26.00**	99	**73**	**119**	*	*
41)	**Benzene**	**13.04**	**25.5**	**26.00**	98	**72**	**113**	*	*
42)	**Carbon Tetrachloride**	**13.20**	**26.2**	**25.25**	104	**67**	**123**	*	*
43)	**Cyclohexane**	**13.34**	**56.3**	**51.50**	109	**70**	**119**	*	*
44)	tert-Amyl Methyl Ether	13.68	54.2	**51.50**	105	74	120	*	*
45)	**1,2-Dichloropropane**	**13.90**	**25.4**	**25.75**	99	**70**	**118**	*	*
46)	**Bromodichloromethane**	**14.08**	**27.4**	**26.00**	105	**74**	**119**	*	*
47)	**Trichloroethene**	**14.14**	**27.2**	**25.50**	107	**74**	**115**	*	*
48)	**1,4-Dioxane**	**14.11**	**25.7**	**25.75**	100	**77**	**124**	*	*
49)	2,2,4-Trimethylpentane (Isooctane)	14.21	26.1	26.25	99	65	120	*	*

Initial Calibration Verification/LABORATORY CONTROL SAMPLE CHECK SHEET

Data File Name: **01202237.D** **TO15.M**
Data File Path: **I:\MS16\DATA\2022_01\20** Sample Name: **25ng R16012022 ICV Std**
Operator: **WA** Misc Info: **S35-01102201/S35-12272103 (**
Date Acquired: **1/21/2022 4:01** Instrument Name: **GCMS-16**

#	Compound Name	Ret. Time	Amt. (ng)	Spike Amt.(ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail	ICV/AZ 70-130%
50)	**Methyl Methacrylate**	**14.34**	**57.8**	**51.25**	113	**78**	**126**	*	*
51)	**n-Heptane**	**14.47**	**27.0**	**25.75**	105	**70**	**119**	*	*
52)	**cis-1,3-Dichloropropene**	**15.00**	**27.7**	**26.00**	107	**81**	**126**	*	*
53)	**4-Methyl-2-pentanone**	**15.03**	**53.2**	**51.50**	103	**73**	**129**	*	*
54)	**trans-1,3-Dichloropropene**	**15.52**	**27.0**	**25.00**	108	**80**	**127**	*	*
55)	**1,1,2-Trichloroethane**	**15.69**	**26.3**	**26.00**	101	**78**	**117**	*	*
58)	**Toluene**	**15.99**	**26.9**	**25.75**	104	**70**	**118**	*	*
59)	**2-Hexanone**	**16.23**	**48.0**	**50.75**	95	**74**	**132**	*	*
60)	**Dibromochloromethane**	**16.39**	**28.5**	**26.25**	109	**69**	**137**	*	*
61)	**1,2-Dibromoethane**	**16.65**	**26.7**	**26.00**	103	**76**	**128**	*	*
62)	**n-Butyl Acetate**	**16.86**	**49.5**	**50.75**	98	**75**	**134**	*	*
63)	**n-Octane**	**16.99**	**27.7**	**26.00**	107	**68**	**120**	*	*
64)	**Tetrachloroethene**	**17.13**	**28.3**	**26.50**	107	**63**	**130**	*	*
65)	**Chlorobenzene**	**17.78**	**28.6**	**25.75**	111	**70**	**118**	*	*
66)	**Ethylbenzene**	**18.13**	**28.2**	**25.75**	110	**71**	**123**	*	*
67)	**m- & p-Xylenes**	**18.30**	**57.9**	**52.00**	111	**67**	**127**	*	*
68)	**Bromoform**	**18.36**	**28.1**	**26.25**	107	**65**	**149**	*	*
69)	**Styrene**	**18.61**	**28.7**	**25.25**	114	**76**	**132**	*	*
70)	**o-Xylene**	**18.72**	**29.3**	**26.00**	113	**69**	**124**	*	*
71)	**n-Nonane**	**18.91**	**27.2**	**26.00**	105	**64**	**127**	*	*
72)	**1,1,2,2-Tetrachloroethane**	**18.70**	**29.6**	**26.00**	114	**69**	**128**	*	*
74)	**Cumene**	**19.24**	**28.6**	**25.75**	111	**69**	**125**	*	*
75)	**alpha-Pinene**	**19.59**	**32.2**	**26.25**	123	**68**	**129**	*	*
76)	**n-Propylbenzene**	**19.69**	**28.7**	**26.00**	110	**70**	**127**	*	*
78)	**4-Ethyltoluene**	**19.81**	**29.4**	**26.00**	**113**	**69**	**127**	*	*
79)	**1,3,5-Trimethylbenzene**	**19.88**	**29.9**	**26.00**	**115**	**66**	**129**	*	*
82)	**1,2,4-Trimethylbenzene**	**20.24**	**30.9**	**25.75**	**120**	**63**	**142**	*	*
84)	**Benzyl Chloride**	**20.35**	**64.9**	**52.00**	**125**	**73**	**145**	*	*
85)	**1,3-Dichlorobenzene**	**20.37**	**31.1**	**26.00**	**120**	**67**	**136**	*	*
86)	**1,4-Dichlorobenzene**	**20.43**	**28.7**	**26.25**	**109**	**63**	**134**	*	*
87)	sec-Butylbenzene	20.47	29.9	25.50	**117**	68	130	*	*
88)	4-Isopropyltoluene (p-Cymene)	20.61	30.1	25.75	**117**	60	139	*	*
90)	**1,2-Dichlorobenzene**	**20.73**	**31.6**	**26.25**	**120**	**64**	**139**	*	*
91)	**d-Limonene**	**20.74**	**32.5**	**25.75**	**126**	**63**	**137**	*	*
92)	**1,2-Dibromo-3-Chloropropane**	**21.11**	**64.0**	**50.50**	**127**	**72**	**145**	*	*
94)	**1,2,4-Trichlorobenzene**	**22.24**	**62.6**	**52.50**	**119**	**62**	**154**	*	*
95)	**Naphthalene**	**22.35**	**26.9**	**26.25**	**102**	**62**	**156**	*	*
97)	**Hexachlorobutadiene**	**22.67**	**30.0**	**26.50**	**113**	55	142	*	*
99)	tert-Butylbenzene	20.24	30.8	25.75	120	61	140	*	*
100)	n-Butylbenzene	20.98	29.8	26.00	115	70	131	*	*
101)	1,1,1,2-Tetrachloroethane	17.76	29.6	25.75	115	70	130	*	*

Bold = 75 Compound List
*** = Pass**

Evaluate Continuing Calibration Report

Data File : I:\MS16\DATA\2022 03\18\03182201.D Vial: 2
Acq On : 18 Mar 2022 21:05 Operator: TZ/MT
Sample : CCV R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-02222204 (3/20)

Quant Time: Mar 18 22:03:43 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

3/19/22

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	117	0.00
2	T	Propene	1.904	1.981	-4.0	123	0.00
3	T	Dichlorodifluoromethane (CF	3.146	2.808	10.7	95	0.00
4	T	Chloromethane	2.288	2.166	5.3	99	0.00
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.683	1.438	14.6	92	0.00
6	T	Vinyl Chloride	2.348	1.999	14.9	95	0.00
7	T	1,3-Butadiene	1.619	1.478	8.7	91	0.00
8	T	Bromomethane	1.279	1.176	8.1	98	0.00
9	T	Chloroethane	1.032	1.002	2.9	104	0.00
10	T	Ethanol	1.177	1.155	1.9	112	0.00
11	T	Acetonitrile	3.145	2.989	5.0	112	0.00
12	T	Acrolein	0.869	0.963	-10.8	104	0.00
13	T	Acetone	1.178	1.081	8.2	101	0.00
14	T	Trichlorofluoromethane	2.675	2.398	10.4	95	0.00
15	T	2-Propanol (Isopropanol)	4.015	3.473	13.5	91	0.00
16	T	Acrylonitrile	2.070	2.001	3.3	104	0.00
17	T	1,1-Dichloroethene	1.406	1.316	6.4	97	0.00
18	T	2-Methyl-2-Propanol (tert-B	3.702	3.598	2.8	100	0.00
19	T	Methylene Chloride	1.535	1.420	7.5	99	0.00
20	T	3-Chloro-1-propene (Allyl C	2.145	2.056	4.1	97	0.00
21	T	Trichlorotrifluoroethane	1.214	1.203	0.9	102	0.00
22	T	Carbon Disulfide	5.224	5.145	1.5	98	0.00
23	T	trans-1,2-Dichloroethene	2.078	1.963	5.5	98	0.00
24	T	1,1-Dichloroethane	2.550	2.380	6.7	98	0.00
25	T	Methyl tert-Butyl Ether	4.246	4.143	2.4	97	0.00
26	T	Vinyl Acetate	0.298	0.312	-4.7	90	0.00
27	T	2-Butanone (MEK)	1.084	1.011	6.7	94	0.00
28	T	cis-1,2-Dichloroethene	2.015	1.903	5.6	98	0.00
29	T	Diisopropyl Ether	1.263	1.227	2.9	104	0.00
30	T	Ethyl Acetate	0.556	0.519	6.7	119	0.00
31	T	n-Hexane	2.111	2.127	-0.8	114	0.00
32	T	Chloroform	2.527	2.314	8.4	94	0.00
33	S	1,2-Dichloroethane-d4(SS1)	1.717	1.654	3.7	113	0.00
34	T	Tetrahydrofuran (THF)	0.989	0.934	5.6	95	0.00
35	T	Ethyl tert-Butyl Ether	1.614	1.740	-7.8	97	0.00
36	T	1,2-Dichloroethane	1.965	1.751	10.9	94	0.00
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	116	0.00
38	T	1,1,1-Trichloroethane	0.508	0.456	10.2	91	0.00
39	T	Isopropyl Acetate	0.000	0.000	0.0	0#	0.00
40	T	1-Butanol	0.000	0.000	0.0	0#	0.00
41	T	Benzene	1.299	1.215	6.5	95	0.00
42	T	Carbon Tetrachloride	0.413	0.393	4.8	94	0.00
43	T	Cyclohexane	0.478	0.499	-4.4	94	0.00
44	T	tert-Amyl Methyl Ether	0.848	0.885	-4.4	97	0.00
45	T	1,2-Dichloropropane	0.317	0.313	1.3	100	0.00
46	T	Bromodichloromethane	0.426	0.419	1.6	94	0.00
47	T	Trichloroethene	0.347	0.339	2.3	93	0.00
48	T	1,4-Dioxane	0.288	0.252	12.5	88	0.00
49	T	2,2,4-Trimethylpentane (Iso	1.260	1.319	-4.7	101	0.00
50	T	Methyl Methacrylate	0.135	0.140	-3.7	91	0.00
51	T	n-Heptane	0.323	0.329	-1.9	96	0.00
52	T	cis-1,3-Dichloropropene	0.499	0.508	-1.8	95	0.00
53	T	4-Methyl-2-pentanone	0.290	0.296	-2.1	99	0.00
54	T	trans-1,3-Dichloropropene	0.458	0.470	-2.6	94	0.00
55	T	1,1,2-Trichloroethane	0.310	0.299	3.5	95	0.00

Evaluate Continuing Calibration Report

Data File : I:\MS16\DATA\2022 03\18\03182201.D Vial: 2
Acq On : 18 Mar 2022 21:05 Operator: TZ/MT
Sample : CCV R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-02222204 (3/20)

Quant Time: Mar 18 22:03:43 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	122	0.00
57	S	Toluene-d8 (SS2)	6.041	5.616	7.0	115	0.00
58	T	Toluene	7.305	6.581	9.9	93	0.00
59	T	2-Hexanone	4.125	3.575	13.3	100	0.00
60	T	Dibromochloromethane	1.936	1.883	2.7	95	0.00
61	T	1,2-Dibromoethane	1.985	1.814	8.6	95	0.00
62	T	n-Butyl Acetate	4.517	4.041	10.5	102	0.00
63	T	n-Octane	1.459	1.472	-0.9	100	0.00
64	T	Tetrachloroethene	1.961	1.913	2.4	97	0.00
65	T	Chlorobenzene	4.833	4.625	4.3	91	0.00
66	T	Ethylbenzene	8.133	7.664	5.8	92	0.00
67	T	m- & p-Xylenes	6.186	5.999	3.0	93	0.00
68	T	Bromoform	1.658	1.695	-2.2	101	0.00
69	T	Styrene	5.054	4.989	1.3	92	0.00
70	T	o-Xylene	6.223	6.028	3.1	92	0.00
71	T	n-Nonane	3.258	3.325	-2.1	103	0.00
72	T	1,1,2,2-Tetrachloroethane	2.883	2.946	-2.2	96	0.00
73	S	Bromofluorobenzene (SS3)	1.925	2.144	-11.4	137	0.00
74	T	Cumene	8.094	7.832	3.2	93	0.00
75	T	alpha-Pinene	3.816	3.946	-3.4	102	0.00
76	T	n-Propylbenzene	9.606	9.461	1.5	94	0.00
77	T	3-Ethyltoluene	0.000	0.000	0.0	0#	0.00
78	T	4-Ethyltoluene	7.843	7.778	0.8	92	0.00
79	T	1,3,5-Trimethylbenzene	6.457	6.428	0.4	93	0.00
80	T	alpha-Methylstyrene	0.000	0.000	0.0	0#	0.00
81	T	2-Ethyltoluene	0.000	0.000	0.0	0#	0.00
82	T	1,2,4-Trimethylbenzene	6.162	6.632	-7.6	98	0.00
83	T	n-Decane	0.000	0.000	0.0	0#	0.00
84	T	Benzyl Chloride	4.938	5.735	-16.1	100	0.00
85	T	1,3-Dichlorobenzene	3.720	4.175	-12.2	99	0.00
86	T	1,4-Dichlorobenzene	3.867	4.056	-4.9	97	0.00
87	T	sec-Butylbenzene	8.610	8.927	-3.7	94	0.00
88	T	4-Isopropyltoluene (p-Cymen	7.513	7.826	-4.2	93	0.00
89	T	1,2,3-Trimethylbenzene	0.000	0.000	0.0	0#	0.06
90	T	1,2-Dichlorobenzene	3.507	3.974	-13.3	98	0.00
91	T	d-Limonene	2.206	2.507	-13.6	102	0.00
92	T	1,2-Dibromo-3-Chloropropane	1.328	1.628	-22.6	101	0.00
93	T	n-Undecane	0.000	0.000	0.0	0#	0.07
94	T	1,2,4-Trichlorobenzene	2.780	3.260	-17.3	97	0.00
95	T	Naphthalene	9.162	9.339	-1.9	90	0.00
96	T	n-Dodecane	0.000	0.000	0.0	0#	0.00
97	T	Hexachlorobutadiene	1.696	1.842	-8.6	98	0.00
98	T	Cyclohexanone	0.000	0.000	0.0	0#	0.00
99	T	tert-Butylbenzene	6.068	6.507	-7.2	99	0.00
100	T	n-Butylbenzene	6.923	7.220	-4.3	95	0.00
101	T	1,1,1,2-Tetrachloroethane	1.694	1.718	-1.4	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182201.D Vial: 2
Acq On : 18 Mar 2022 21:05 Operator: TZ/MT
Sample : CCV R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-02222204 (3/20)

Quant Time: Mar 18 22:03:43 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

VOA 3/19/22

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	11.32	130	193489	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	13.43	114	886356	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	17.73	54	169652	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	12.16	65	319997	12.040	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.32%				
57) Toluene-d8 (SS2)	15.88	98	952700	11.621	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 92.96%				
73) Bromofluorobenzene (SS3)	19.11	174	363737	13.921	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 111.36%				
Target Compounds							Qvalue
2) Propene	4.17	42	797201	27.046	ng		98
3) Dichlorodifluoromethan...	4.33	85	1140927	23.429	ng		100
4) Chloromethane	4.63	50	855077	24.149	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	4.89	135	601171	23.080	ng		100
6) Vinyl Chloride	5.06	62	804325	22.133	ng		100
7) 1,3-Butadiene	5.33	54	594756	23.730	ng		97
8) Bromomethane	5.78	94	464060	23.442	ng		100
9) Chloroethane	6.12	64	395541	24.764	ng		100
10) Ethanol	6.49	45	1617514	88.760	ng		100
11) Acetonitrile	6.75	41	1075672	22.096	ng		99
12) Acrolein	6.94	56	745532	55.434	ng		100
13) Acetone	7.15	58	2171916	119.129	ng		96
14) Trichlorofluoromethane	7.40	101	955645	23.079	ng		100
15) 2-Propanol (Isopropanol)	7.64	45	2715157	43.693	ng		99
16) Acrylonitrile	7.92	53	1571870	49.056	ng		99
17) 1,1-Dichloroethene	8.37	96	544892	25.039	ng		99
18) 2-Methyl-2-Propanol (t...	8.52	59	2924247	51.027	ng		98
19) Methylene Chloride	8.60	84	571630	24.050	ng		95
20) 3-Chloro-1-propene (Al...	8.76	41	835331	25.164	ng		97
21) Trichlorotrifluoroethane	9.01	151	502713	26.743	ng		94
22) Carbon Disulfide	8.85	76	4181417	51.711	ng		100
23) trans-1,2-Dichloroethene	9.87	61	805302	25.030	ng		98
24) 1,1-Dichloroethane	10.12	63	967044	24.495	ng		100
25) Methyl tert-Butyl Ether	10.21	73	1683460	25.616	ng		98
26) Vinyl Acetate	10.37	86	410394	89.062	ng	#	76
27) 2-Butanone (MEK)	10.61	72	805801	48.029	ng	#	88
28) cis-1,2-Dichloroethene	11.14	61	765839	24.558	ng		98
29) Diisopropyl Ether	11.43	87	1006320	51.478	ng	#	64
30) Ethyl Acetate	11.44	61	819490	95.206	ng		93
31) n-Hexane	11.42	57	864351	26.449	ng		99
32) Chloroform	11.48	83	958067	24.493	ng		99
34) Tetrahydrofuran (THF)	11.88	72	711974	46.504	ng		93
35) Ethyl tert-Butyl Ether	12.02	87	1413872	56.588	ng		91
36) 1,2-Dichloroethane	12.28	62	718391	23.619	ng		100
38) 1,1,1-Trichloroethane	12.56	97	840277	23.343	ng		99
39) Isopropyl Acetate	12.99	61	45670	No Calib			
40) 1-Butanol	13.01	56	23816	No Calib			
41) Benzene	13.04	78	2239505	24.315	ng		100
42) Carbon Tetrachloride	13.20	117	731721	24.987	ng		100
43) Cyclohexane	13.33	84	1829318	54.011	ng		94
44) tert-Amyl Methyl Ether	13.67	73	3280636	54.561	ng		97
45) 1,2-Dichloropropane	13.89	63	571946	25.439	ng		100
46) Bromodichloromethane	14.08	83	778987	25.817	ng		100
47) Trichloroethene	14.13	130	619253	25.149	ng		94
48) 1,4-Dioxane	14.10	88	465392	22.764	ng		95
49) 2,2,4-Trimethylpentane...	14.20	57	2477780	27.744	ng		99
50) Methyl Methacrylate	14.34	100	514736	53.764	ng		95

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182201.D Vial: 2
Acq On : 18 Mar 2022 21:05 Operator: TZ/MT
Sample : CCV R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-02222204 (3/20)

Quant Time: Mar 18 22:03:43 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M

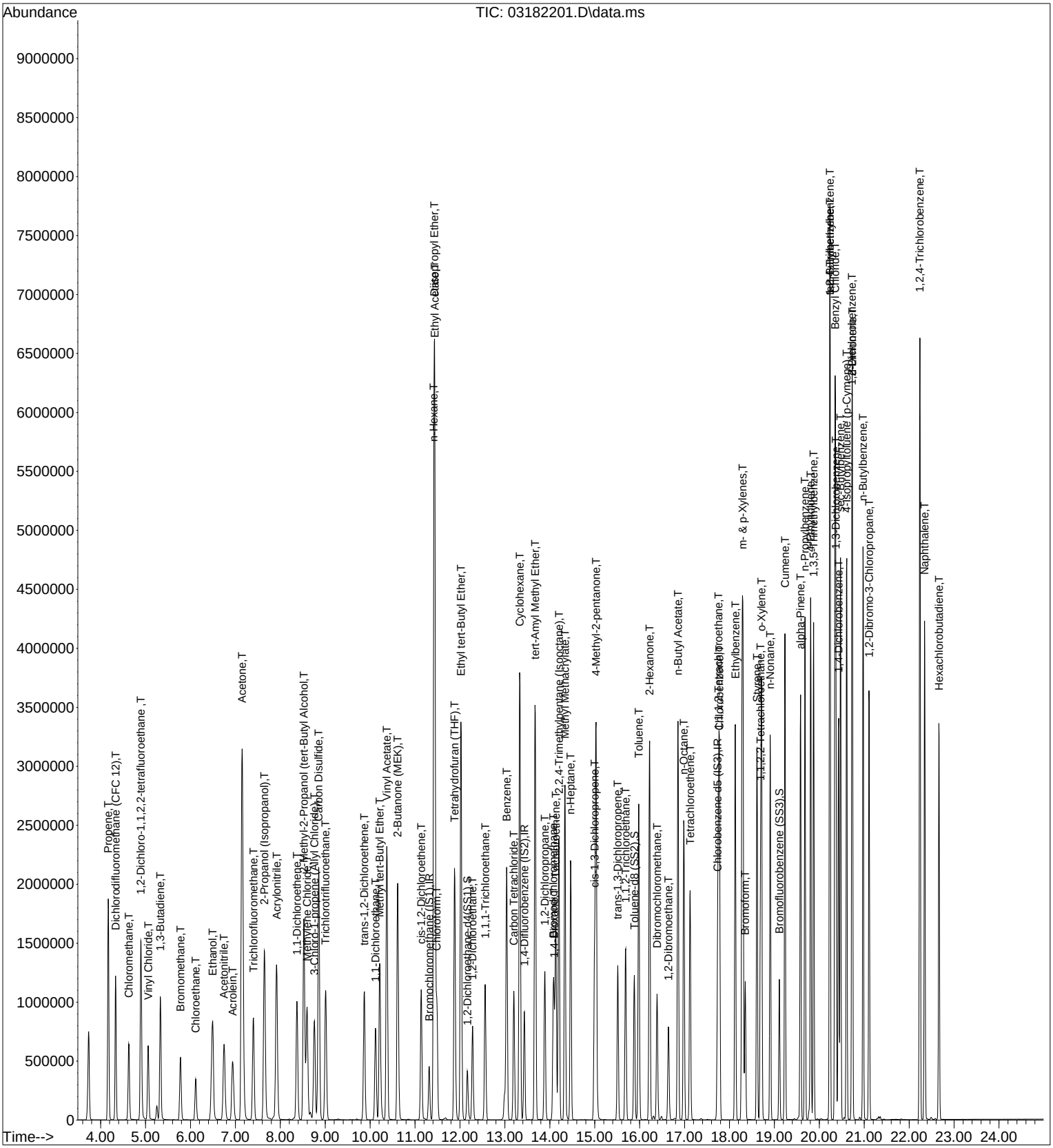
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	14.46	71	613247	26.814 ng		96
52) cis-1,3-Dichloropropene	15.00	75	944983	26.714 ng		100
53) 4-Methyl-2-pentanone	15.03	58	1090010	53.058 ng		95
54) trans-1,3-Dichloropropene	15.51	75	841047	25.879 ng		100
55) 1,1,2-Trichloroethane	15.69	97	551262	25.077 ng		99
58) Toluene	15.98	91	2300100	23.200 ng		100
59) 2-Hexanone	16.22	43	2486927	44.417 ng		98
60) Dibromochloromethane	16.39	129	670996	25.531 ng		100
61) 1,2-Dibromoethane	16.64	107	640000	23.754 ng		100
62) n-Butyl Acetate	16.85	43	2797227	45.630 ng		98
63) n-Octane	16.98	57	524271	26.474 ng		94
64) Tetrachloroethene	17.12	166	675023	25.357 ng		100
65) Chlorobenzene	17.78	112	1631912	24.878 ng		100
66) Ethylbenzene	18.13	91	2678341	24.265 ng		100
67) m- & p-Xylenes	18.29	91	4192837	49.942 ng		99
68) Bromoform	18.35	173	597982	26.576 ng		100
69) Styrene	18.61	104	1743699	25.420 ng		99
70) o-Xylene	18.71	91	2127082	25.185 ng		100
71) n-Nonane	18.91	43	1173212	26.530 ng		96
72) 1,1,2,2-Tetrachloroethane	18.69	83	1039408	26.568 ng		100
74) Cumene	19.24	105	2763573	25.157 ng		99
75) alpha-Pinene	19.58	93	1446156	27.920 ng		99
76) n-Propylbenzene	19.68	91	3370746	25.854 ng		99
77) 3-Ethyltoluene	19.81	105	2797499	No Calib		
78) 4-Ethyltoluene	19.81	105	2797499	26.281 ng		100
79) 1,3,5-Trimethylbenzene	19.87	105	2268312	25.883 ng		100
80) alpha-Methylstyrene	19.87	118	17839	No Calib	#	
81) 2-Ethyltoluene	19.87	105	2268312	No Calib		
82) 1,2,4-Trimethylbenzene	20.24	105	2317620	27.713 ng		99
83) n-Decane	20.24	58	89448	No Calib	#	
84) Benzyl Chloride	20.35	91	4008791	59.820 ng		98
85) 1,3-Dichlorobenzene	20.37	146	1473419	29.186 ng		100
86) 1,4-Dichlorobenzene	20.43	146	1431238	27.273 ng		100
87) sec-Butylbenzene	20.47	105	3150273	26.960 ng		99
88) 4-Isopropyltoluene (p-...	20.61	119	2761646	27.084 ng		98
89) 1,2,3-Trimethylbenzene	20.61	105	98749	No Calib	#	
90) 1,2-Dichlorobenzene	20.73	146	1415988	29.748 ng		100
91) d-Limonene	20.74	68	893129	29.833 ng		95
92) 1,2-Dibromo-3-Chloropr...	21.11	157	1104832	61.295 ng		98
93) n-Undecane	22.33	57	1339	No Calib	#	
94) 1,2,4-Trichlorobenzene	22.24	180	2256464	59.811 ng		100
95) Naphthalene	22.34	128	3295443	26.500 ng		100
96) n-Dodecane	22.33	57	1339	No Calib	#	
97) Hexachlorobutadiene	22.67	225	643869	27.968 ng		100
98) Cyclohexanone	18.29	55	3351	No Calib		
99) tert-Butylbenzene	20.24	119	2296033	27.878 ng		98
100) n-Butylbenzene	20.97	91	2547590	27.113 ng		99
101) 1,1,1,2-Tetrachloroethane	17.76	131	606090	26.358 ng		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS16\DATA\2022 03\18\03182201.D Vial: 2
Acq On : 18 Mar 2022 21:05 Operator: TZ/MT
Sample : CCV R16031822 25ng Inst : GCMS-16
Misc : S35-01102201/S35-02222204 (3/20)

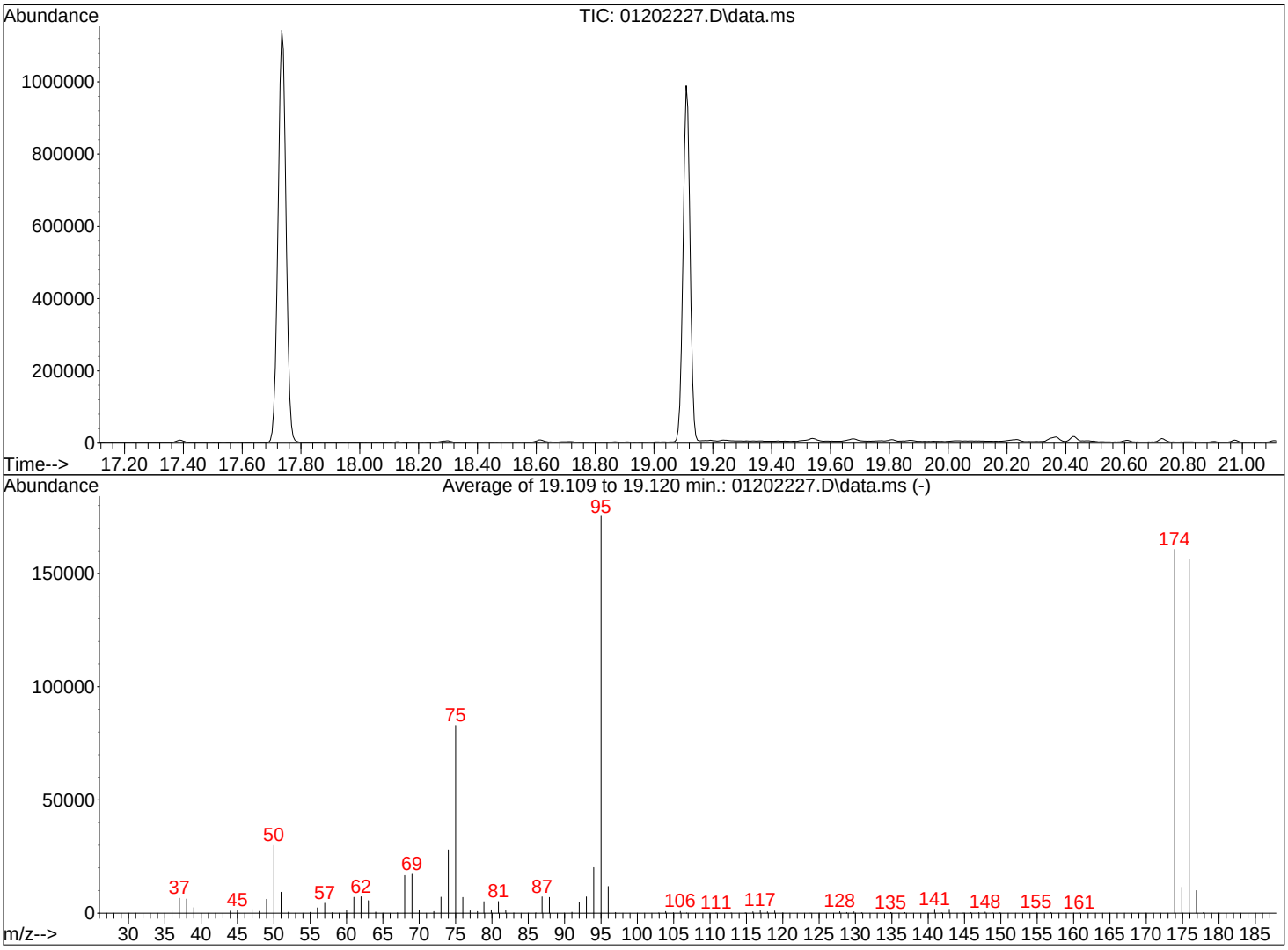
Quant Time: Mar 18 22:03:43 2022
Quant Method : I:\MS16\METHODS\R16012022B.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jan 27 06:34:43 2022
Response via : Initial Calibration
DataAcq Meth:TO15.M



Data Path : I:\MS16\DATA\2022 01\20\
Data File : 01202227.D
Acq On : 20 Jan 2022 22:22
Operator : WA
Sample : R16012022 BFB Std
Misc : S35-01102201
ALS Vial : 2 Sample Multiplier: 1

Integration File: LSCINT.P

Method : I:\MS16\METHODS\R16012022B.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Fri Jan 21 09:34:58 2022



AutoFind: Scans 2841, 2842, 2843; Background Corrected with Scan 2832

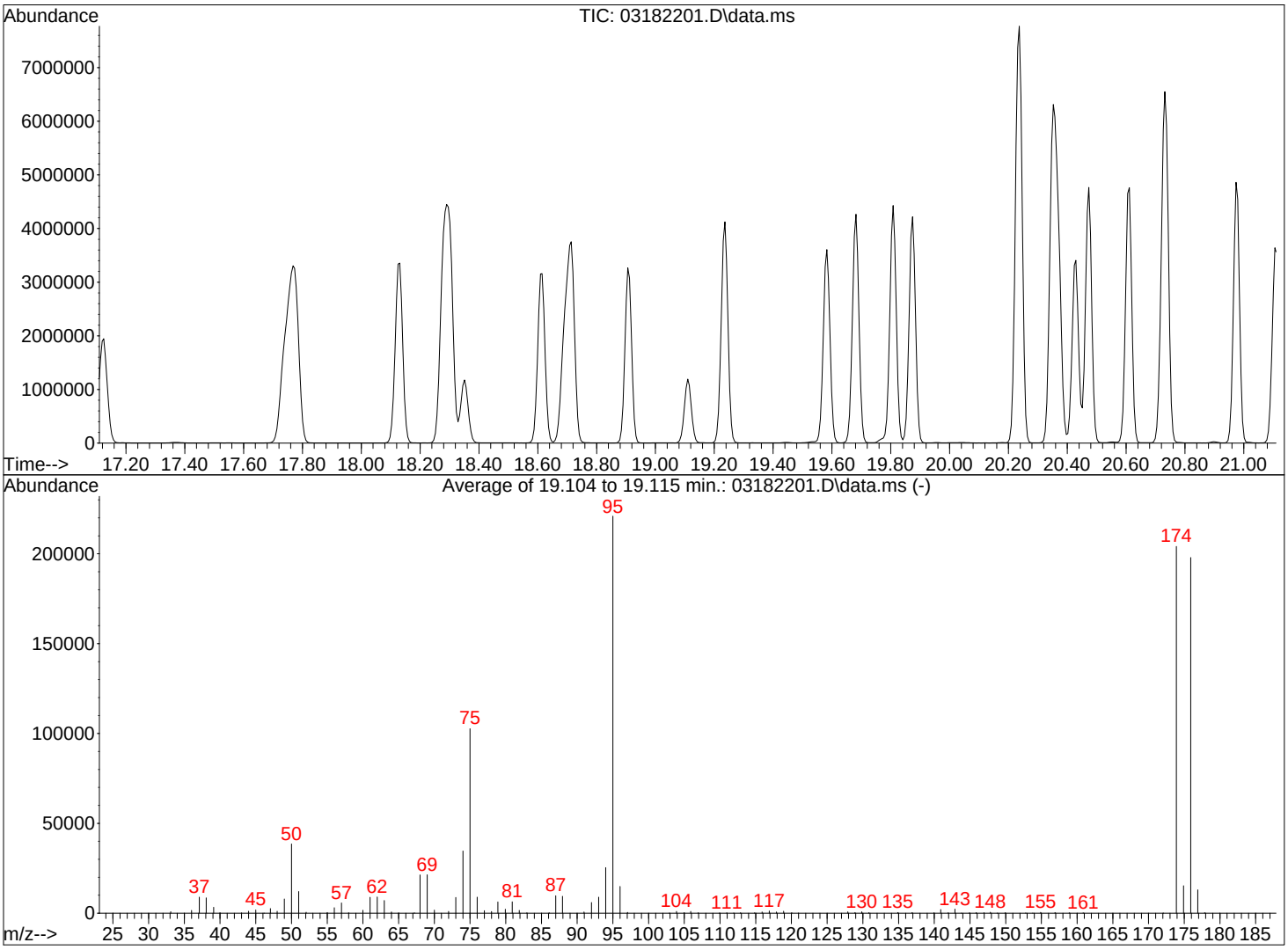
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.1	29944	PASS
75	95	30	66	47.3	82880	PASS
95	95	100	100	100.0	175296	PASS
96	95	5	9	6.7	11808	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	91.6	160619	PASS
175	174	4	9	7.2	11495	PASS
176	174	93	101	97.4	156456	PASS
177	176	5	9	6.4	10001	PASS

WA 1/21/22

Data Path : I:\MS16\DATA\2022 03\18\
Data File : 03182201.D
Acq On : 18 Mar 2022 21:05
Operator : TZ/MT
Sample : CCV R16031822 25ng
Misc : S35-01102201/S35-02222204 (3/20)
ALS Vial : 2 Sample Multiplier: 1

Integration File: LSCINT.P

Method : I:\MS16\METHODS\R16012022B.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Jan 27 06:34:43 2022



AutoFind: Scans 2840, 2841, 2842; Background Corrected with Scan 2832

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.4	38504	PASS
75	95	30	66	46.5	102688	PASS
95	95	100	100	100.0	220949	PASS
96	95	5	9	6.7	14851	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	92.4	204139	PASS
175	174	4	9	7.5	15253	PASS
176	174	93	101	96.9	197909	PASS
177	176	5	9	6.6	13025	PASS

3/19/22

Injection Log

Directory: J:\MS16\DATA\2022_01\20\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
27	1/20/22 22:22	01202227.D	R16012022_BFB Std	S35-01102201	WA	2	*Pass*
28	1/20/22 22:56	01202228.D	0.1ng R16012022 ICAL Std	S35-01102201/S35-01172211 (2/16)	WA	12	*R16012022B.M*
30	1/20/22 23:30	01202229.D	0.2ng R16012022 ICAL Std	S35-01102201/S35-01172211 (2/16)	WA	12	
32	1/21/22 0:04	01202230.D	0.5ng R16012022 ICAL Std	S35-01102201/S35-01172211 (2/16)	WA	12	
34	1/21/22 0:38	01202231.D	1.0ng R16012022 ICAL Std	S35-01102201/S35-01172210 (2/16)	WA	15	
35	1/21/22 1:11	01202232.D	5.0ng R16012022 ICAL Std	S35-01102201/S35-01172210 (2/16)	WA	15	
36	1/21/22 1:45	01202233.D	25ng R16012022 ICAL Std	S35-01102201/S35-12292101 (1/28)	WA	13	
38	1/21/22 2:19	01202234.D	50ng R16012022 ICAL Std	S35-01102201/S35-12292101 (1/28)	WA	13	
39	1/21/22 2:53	01202235.D	100ng R16012022 ICAL Std	S35-01102201/S35-12292101 (1/28)	WA	13	
40	1/21/22 3:27	01202236.D	Blank	S35-01102201	WA	2	
41	1/21/22 4:01	01202237.D	25ng R16012022 ICV Std	S35-01102201/S35-12272103 (1/26)	WA	16	*Pass*
42	1/21/22 4:34	01202238.D	25ng R16012022_ICV Std	S35-01102201/S35-12292101 (1/28)	WA	2	*Pass*
	R16012022B.M : good for low level compounds, ranges from 0.1ng --> 100ng; except: EtOH from 1ng -->362ng, Acetonitrile, tBA, DIPE, 1,2,4-TCB						
	from 0.2ng --> 100ng; Vinyl Ac from 2.5ng --> 340ng; Ethyl Ac from 0.4ng --> 200ng; Bromoform from 1.0ng --> 200ng and Benzyl-Cl: 1ng --> 100ng						

1/21/22

Injection Log

Directory: I:\MS16\DATA\2022_03\18\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	*Comment*
1	3/18/22 21:05	03182201.D	CCV R16031822_25ng	S35-01102201/S35-02222204 (3/20)	TZ/MT	2	*Passed*
2	3/18/22 21:38	03182202.D	Blank	S35-01102201	TZ/MT	2	
3	3/18/22 22:12	03182203.D	MB R16031822_1000mL	S35-01102201	TZ/MT	2	*Passed*
4	3/18/22 22:45	03182204.D	LCS R16031822_25ng	S35-01102201/S35-03072204 (4/6)	TZ/MT	2	*Passed*
5	3/18/22 23:19	03182205.D	LCSD R16031822_25ng	S35-01102201/S35-03072204 (4/6)	TZ/MT	2	*Passed*
6	3/18/22 23:52	03182206.D	Blank	S35-01102201	TZ/MT	2	
7	3/19/22 0:25	03182207.D	P2200932-011 (1000mL) pf2	S35-01102201	TZ/MT	15	
8	3/19/22 1:13	03182208.D	P2200974-001 (1000mL)	S35-01102201	TZ/MT	1	
9	3/19/22 1:54	03182209.D	P2200974-002 (1000mL)	S35-01102201	TZ/MT	3	
10	3/19/22 10:04	03182210.D	P2200974-003 (1000mL)	S35-01102201	TZ/MT	1	
11	3/19/22 10:54	03182211.D	P2200974-004 (1000mL)	S35-01102201	TZ/MT	3	
12	3/19/22 11:38	03182212.D	P2200974-005 (1000mL)	S35-01102201	TZ/MT	4	
13	3/19/22 12:21	03182213.D	P2200974-006 (1000mL)	S35-01102201	TZ/MT	5	
14	3/19/22 13:09	03182214.D	P2200974-007 (1000mL)	S35-01102201	TZ/MT	6	
15	3/19/22 13:43	03182215.D	System	S35-01102201/S35-02222204 (3/20)	TZ/MT	2	
16	3/19/22 14:16	03182216.D	P2201155-001 (1000mL)	S35-01102201	TZ/MT	7	
17	3/19/22 14:50	03182217.D	P2201155-002 (1000mL)	S35-01102201	TZ/MT	8	
18	3/19/22 15:24	03182218.D	P2201155-003 (1000mL)	S35-01102201	TZ/MT	9	
19	3/19/22 15:58	03182219.D	P2201155-004 (1000mL)	S35-01102201	TZ/MT	10	
20	3/19/22 16:32	03182220.D	P2201155-005 (1000mL)	S35-01102201	TZ/MT	11	
21	3/19/22 17:06	03182221.D	System	S35-01102201/S35-02222204 (3/20)	TZ/MT	2	
22	3/19/22 17:39	03182222.D	P2201155-006 (1000mL)	S35-01102201	TZ/MT	12	
23	3/19/22 18:13	03182223.D	P2201155-007 (1000mL)	S35-01102201	TZ/MT	13	
24	3/19/22 18:49	03182224.D	P2201204-001 (1000mL)	S35-01102201	TZ/MT	14	
25	3/19/22 19:23	03182225.D	P2201204-002 (1000mL)	S35-01102201	TZ/MT	15	
26	3/19/22 19:57	03182226.D	CCVend R16031822_25ng	S35-01102201/S35-02222204 (3/20)	TZ/MT	2	*Passed*
						WA 3/20/22	

Quantitation Report (QT Reviewed)

Data Path : I:\MS21\DATA\2021 08\10\
Data File : 08102119.D
Acq On : 10 Aug 2021 18:15
Operator : WA\RVT
Sample : TTS00006 TTF00010,5,17
Misc : 117973 // 117969 (Sig #1); S34-07142108 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 11 06:49:09 2021
Quant Method : I:\MS21\Methods\F21051321.M
Quant Title : EPA TO-15
QLast Update : Fri May 14 07:54:01 2021
Response via : Initial Calibration

RVT 8/11/21

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Bromochloromethane (IS1)	7.489	130	68812	1000.00 pg		0.00
37) 1,4-Difluorobenzene (IS2)	9.651	114	144179	1000.00 pg		0.00
56) Chlorobenzene-d5 (IS3)	14.674	54	20685	1000.00 pg	#	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4 ...	8.291	65	76618	709.81 pg		0.00
Spiked Amount 1000.000			Recovery = 70.98%			
57) Toluene-d8 (SS2)	12.572	98	128786	1232.61 pg		0.00
Spiked Amount 1000.000			Recovery = 123.26%			
74) Bromofluorobenzene (SS3)	16.111	174	45451	1104.22 pg		0.00
Spiked Amount 1000.000			Recovery = 110.42%			
Target Compounds						Qvalue
2] * Propene	3.487	42	340	4.78 pg		89
3) * Dichlorodifluoromethane	0.000		0	N.D.		
4] * Chloromethane	3.685	50	162	1.14 pg	#	18
5) * 1,2-Dichloro-1,1,2,2...	0.000		0	N.D.		
6) * Vinyl Chloride	0.000		0	N.D.		
7] * 1,3-Butadiene	3.964	54	31	0.36 pg	#	8
8] * Bromomethane	4.165	94	50	0.63 pg		98
9) * Chloroethane	0.000		0	N.D.		
10] * Ethanol	4.410	45	841	18.39 pg		98
11] * Acetonitrile	4.581	41	76	0.62 pg	#	77
12] * Acrolein	4.675	56	348	6.25 pg	#	82
13] * Acetone	4.800	58	2489	37.22 pg	#	37
14) * Trichlorofluoromethane	0.000		0	N.D.		
15] * 2-Propanol (Isopropa...	5.001	45	580	2.83 pg	#	25
16] * Acrylonitrile	5.155	53	55	0.55 pg		88
17] * 1,1-Dichloroethene	5.381	96	724	7.15 pg	#	37
18] tert-Butanol	5.007	59	91	6.60 pg	#	24
19] * Methylene Chloride	5.517	84	195	2.05 pg		99
20) * 3-Chloro-1-propene (...	0.000		0	N.D.		
21) * Trichlorotrifluoroet...	0.000		0	N.D.		
22] * Carbon Disulfide	5.785	76	8575	23.18 pg		98
23) * trans-1,2-Dichloroet...	0.000		0	N.D.		
24) * 1,1-Dichloroethane	0.000		0	N.D.		
25) * Methyl tert-Butyl Ether	0.000		0	N.D.		
26] * Vinyl Acetate	6.655	86	76	3.54 pg	#	1
27] * 2-Butanone (MEK)	6.941	72	219	3.73 pg	#	46
28) * cis-1,2-Dichloroethene	0.000		0	N.D.		
29) DIPE	0.000		0	N.D.		
30) * Ethyl Acetate	0.000		0	N.D.		
31) * n-Hexane	0.000		0	N.D.		
32) * Chloroform	0.000		0	N.D.		
34) * Tetrahydrofuran	0.000		0	N.D.		
35) ETBE	0.000		0	N.D.		
36) * 1,2-Dichloroethane	0.000		0	N.D.		
38) * 1,1,1-Trichloroethane	0.000		0	N.D.		
39] * Benzene	9.229	78	684	4.10 pg		96
40) Isopropyl Acetate	0.000		0	N.D.		
41) 1-Butanol	9.224	56	150	No Calib	#	
42) * Carbon Tetrachloride	0.000		0	N.D.		
43) * Cyclohexane	0.000		0	N.D.		
44) TAME	0.000		0	N.D.		
45) * 1,2-Dichloropropane	0.000		0	N.D.		
46) * Bromodichloromethane	0.000		0	N.D.		
47] * Trichloroethene	10.427	130	309	5.23 pg	#	53

Data Path : I:\MS21\DATA\2021 08\10\
Data File : 08102119.D
Acq On : 10 Aug 2021 18:15
Operator : WA\RVT
Sample : TTS00006 TTF00010,5,17
Misc : 117973 // 117969 (Sig #1); S34-07142108 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

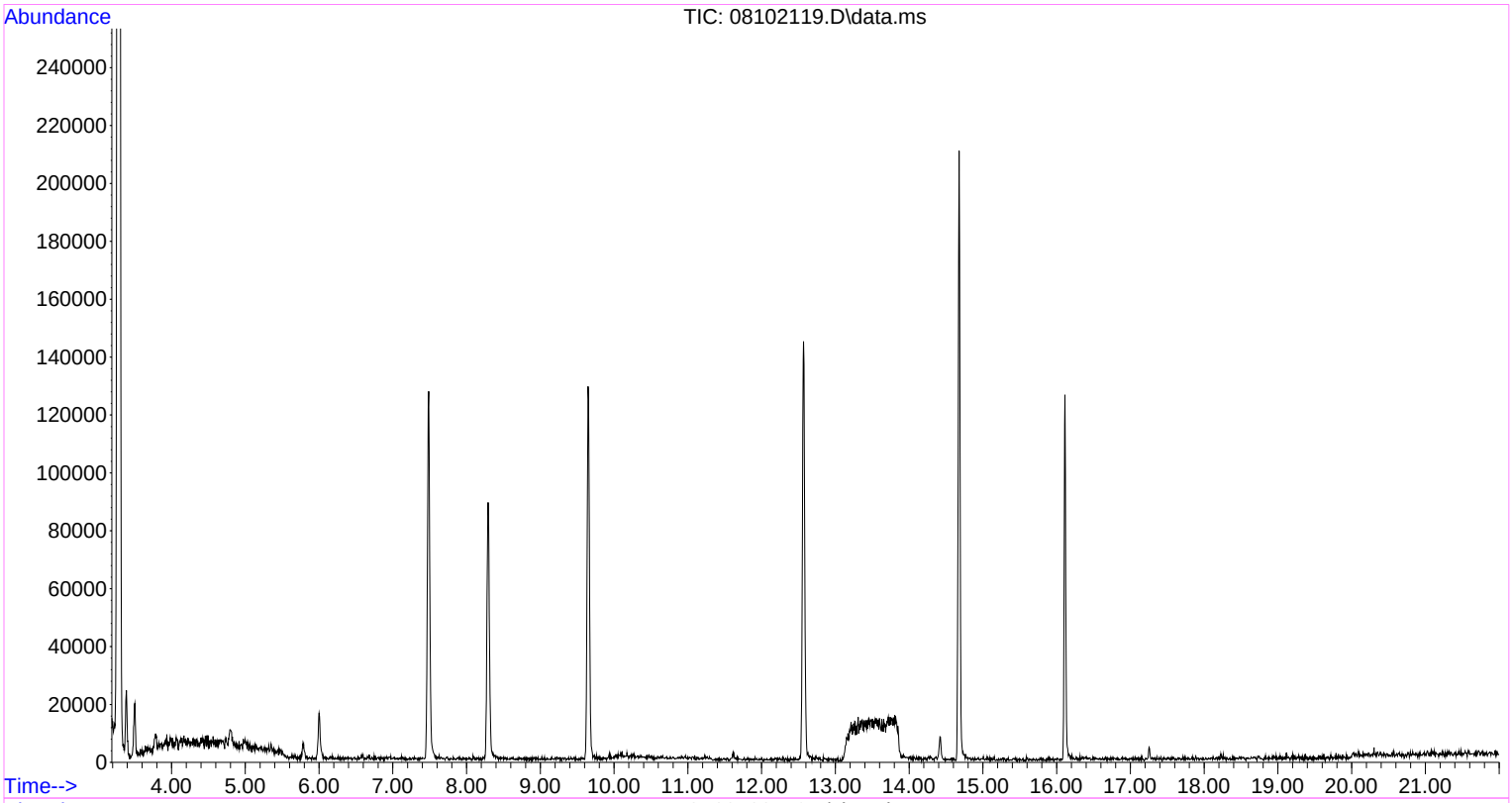
Quant Time: Aug 11 06:49:09 2021
Quant Method : I:\MS21\Methods\F21051321.M
Quant Title : EPA TO-15
QLast Update : Fri May 14 07:54:01 2021
Response via : Initial Calibration

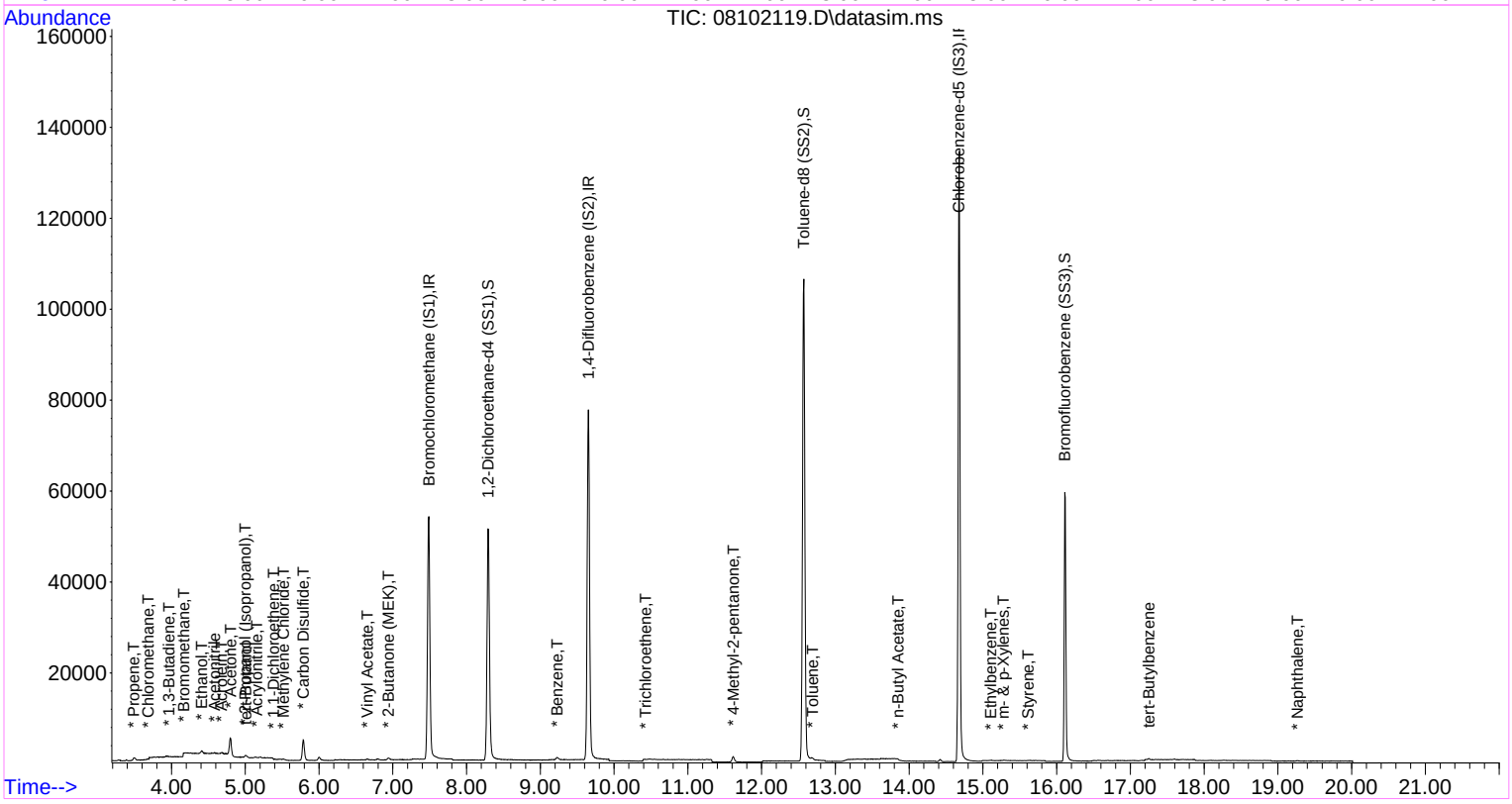
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48) * 1,4-Dioxane	0.000		0	N.D.			
49) Isooctane	0.000		0	N.D.			
50) * Methyl Methacrylate	0.000		0	N.D.			
51) * n-Heptane	0.000		0	N.D.			
52) * cis-1,3-Dichloropropene	0.000		0	N.D.			
53] * 4-Methyl-2-pentanone	11.616	58	720	19.32	pg		93
54) * trans-1,3-Dichloropr...	0.000		0	N.D.			
55) * 1,1,2-Trichloroethane	0.000		0	N.D.			
58] * Toluene	12.691	91	401	2.95	pg		97
59) * 2-Hexanone	0.000		0	N.D.			
60) * Dibromochloromethane	0.000		0	N.D.			
61) * 1,2-Dibromoethane	0.000		0	N.D.			
62] * n-Butyl Acetate	13.850	56	72	2.45	pg	#	1
63) * n-Octane	0.000		0	N.D.			
64) * Tetrachloroethene	0.000		0	N.D.			
65) * Chlorobenzene	0.000		0	N.D.			
66] * Ethylbenzene	15.107	91	120	0.68	pg	#	43
67] * m- & p-Xylenes	15.278	91	141	1.02	pg	#	29
68) * Bromoform	0.000		0	N.D.			
69) Cyclohexanone	0.000		0	N.D.			
70] * Styrene	15.614	104	53	0.55	pg	#	30
71) * o-Xylene	0.000		0	N.D.			
72) * n-Nonane	0.000		0	N.D.			
73) * 1,1,2,2-Tetrachloroe...	0.000		0	N.D.			
75) * Cumene	0.000		0	N.D.			
76) * alpha-Pinene	0.000		0	N.D.			
77) * n-Propylbenzene	0.000		0	N.D.			
78) 3-Ethyltoluene	0.000		0	N.D.			
79) * 4-Ethyltoluene	0.000		0	N.D.			
80) * 1,3,5-Trimethylbenzene	0.000		0	N.D.			
81) alpha-Methylstyrene	0.000		0	N.D.			
82) 2-Ethyltoluene	0.000		0	N.D.			
83] tert-Butylbenzene	17.251	134	87	2.80	pg	#	1
84) * 1,2,4-Trimethylbenzene	0.000		0	N.D.			
85) * Benzyl Chloride	0.000		0	N.D.			
86) * 1,3-Dichlorobenzene	0.000		0	N.D.			
87) * 1,4-Dichlorobenzene	0.000		0	N.D.			
88) n-Decane	0.000		0	N.D.			
89) sec-Butylbenzene	0.000		0	N.D.			
90) 1,2,3-Trimethylbenzene	0.000		0	N.D.			
91) p-Isopropyltoluene	0.000		0	N.D.			
92) * 1,2-Dichlorobenzene	0.000		0	N.D.			
93) * D-Limonene	0.000		0	N.D.			
94) n-Butylbenzene	0.000		0	N.D.			
95) * 1,2-Dibromo-3-chloro...	0.000		0	N.D.			
96) n-Undecane	0.000		0	N.D.			
97) * 1,2,4-Trichlorobenzene	0.000		0	N.D.			
98] * Naphthalene	19.262	128	136	0.92	pg	#	69
99) n-Dodecane	0.000		0	N.D.			
100) * Hexachlorobutadiene	0.000		0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\MS21\DATA\2021 08\10\
Data File : 08102119.D
Acq On : 10 Aug 2021 18:15
Operator : WA\RVT
Sample : TTS00006 TTF00010,5,17
Misc : 117973 // 117969 (Sig #1); S34-07142108 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 11 06:49:09 2021
Quant Method : I:\MS21\Methods\F21051321.M
Quant Title : EPA TO-15
QLast Update : Fri May 14 07:54:01 2021
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : I:\MS21\DATA\2021 11\04\
Data File : 11042127.D
Acq On : 4 Nov 2021 23:46
Operator : RVT
Sample : TTS00018 TTF00012,23
Misc : 120388 (Sig #1); S34-09242101 (Sig #2)
ALS Vial : 208 Sample Multiplier: 1

RVT 11/5/21

Quant Time: Nov 05 06:49:25 2021
Quant Method : I:\MS21\Methods\F21091821.M
Quant Title : EPA TO-15
QLast Update : Mon Sep 20 12:19:59 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS1)	7.489	130	33057	1000.00	pg	0.00
37) 1,4-Difluorobenzene (IS2)	9.651	114	59406	1000.00	pg	0.00
56) Chlorobenzene-d5 (IS3)	14.680	54	9564	1000.00	pg	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4 ...	8.296	65	39460	904.53	pg	0.00
Spiked Amount 1000.000			Recovery = 90.45%			
57) Toluene-d8 (SS2)	12.572	98	50475	923.91	pg	0.00
Spiked Amount 1000.000			Recovery = 92.39%			
74) Bromofluorobenzene (SS3)	16.111	174	19003	917.92	pg	0.00
Spiked Amount 1000.000			Recovery = 91.79%			
Target Compounds						Qvalue
2] * Propene	3.491	42	130	4.95	pg #	1
3] * Dichlorodifluoromethane	3.556	85	103	1.12	pg #	42
4] * Chloromethane	3.685	50	183	2.64	pg #	41
5] * 1,2-Dichloro-1,1,2,2...	3.556	85	103	1.15	pg #	42
6) * Vinyl Chloride	0.000		0	N.D.		
7] * 1,3-Butadiene	3.964	54	49	0.89	pg #	49
8] * Bromomethane	4.181	94	76	1.25	pg #	2
9) * Chloroethane	0.000		0	N.D.		
10] * Ethanol	4.425	45	1632	46.52	pg	99
11) * Acetonitrile	0.000		0	N.D.		
12] * Acrolein	4.691	56	163	4.68	pg #	30
13] * Acetone	4.810	58	2853	70.14	pg	77
14] * Trichlorofluoromethane	4.923	101	888	8.29	pg #	24
15] * 2-Propanol (Isopropa...	5.036	45	1494	14.66	pg #	77
16) * Acrylonitrile	0.000		0	N.D.		
17] * 1,1-Dichloroethene	5.381	96	101	1.93	pg #	1
18] tert-Butanol	5.036	59	386	65.11	pg #	7
19] * Methylene Chloride	5.527	84	272	5.25	pg	84
20] * 3-Chloro-1-propene (...	5.678	41	53	1.53	pg #	27
21) * Trichlorotrifluoroet...	0.000		0	N.D.		
22] * Carbon Disulfide	5.789	76	4740	28.87	pg	98
23) * trans-1,2-Dichloroet...	0.000		0	N.D.		
24) * 1,1-Dichloroethane	0.000		0	N.D.		
25) * Methyl tert-Butyl Ether	0.000		0	N.D.		
26) * Vinyl Acetate	0.000		0	N.D.		
27) * 2-Butanone (MEK)	0.000		0	N.D.		
28) * cis-1,2-Dichloroethene	0.000		0	N.D.		
29) DIPE	0.000		0	N.D.		
30) * Ethyl Acetate	0.000		0	N.D.		
31) * n-Hexane	0.000		0	N.D.		
32) * Chloroform	0.000		0	N.D.		
34) * Tetrahydrofuran	0.000		0	N.D.		
35) ETBE	0.000		0	N.D.		
36) * 1,2-Dichloroethane	0.000		0	N.D.		
38) * 1,1,1-Trichloroethane	0.000		0	N.D.		
39] * Benzene	9.229	78	218	2.58	pg #	19
40) Isopropyl Acetate	9.193	61	75	No Calib	#	
41) 1-Butanol	0.000		0	N.D.		
42) * Carbon Tetrachloride	0.000		0	N.D.		
43) * Cyclohexane	0.000		0	N.D.		
44) TAME	0.000		0	N.D.		
45) * 1,2-Dichloropropane	0.000		0	N.D.		
46) * Bromodichloromethane	0.000		0	N.D.		
47] * Trichloroethene	10.392	130	300	8.12	pg #	42

Quantitation Report (QT Reviewed)

Data Path : I:\MS21\DATA\2021 11\04\
Data File : 11042127.D
Acq On : 4 Nov 2021 23:46
Operator : RVT
Sample : TTS00018 TTF00012,23
Misc : 120388 (Sig #1); S34-09242101 (Sig #2)
ALS Vial : 208 Sample Multiplier: 1

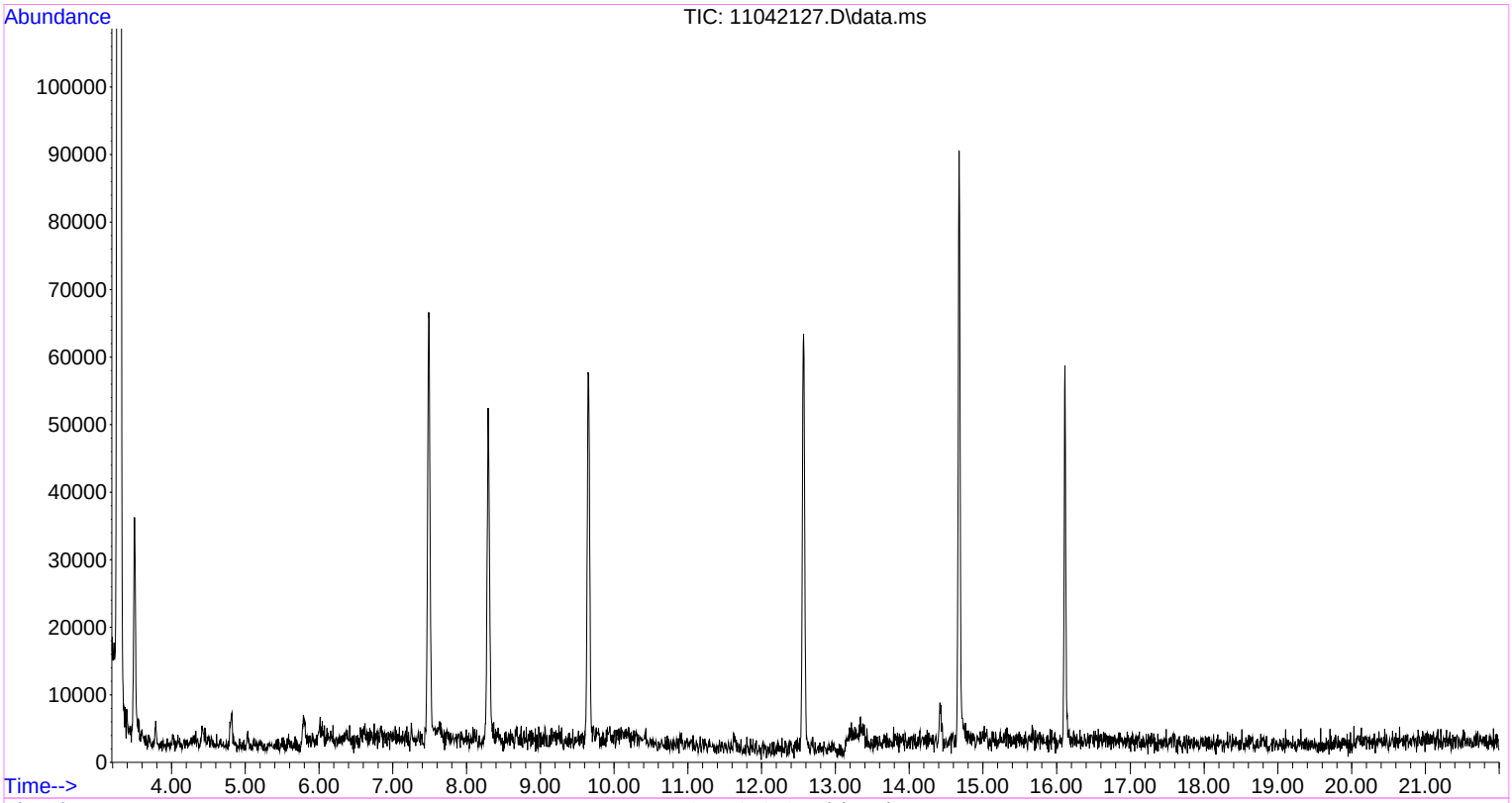
Quant Time: Nov 05 06:49:25 2021
Quant Method : I:\MS21\Methods\F21091821.M
Quant Title : EPA TO-15
QLast Update : Mon Sep 20 12:19:59 2021
Response via : Initial Calibration

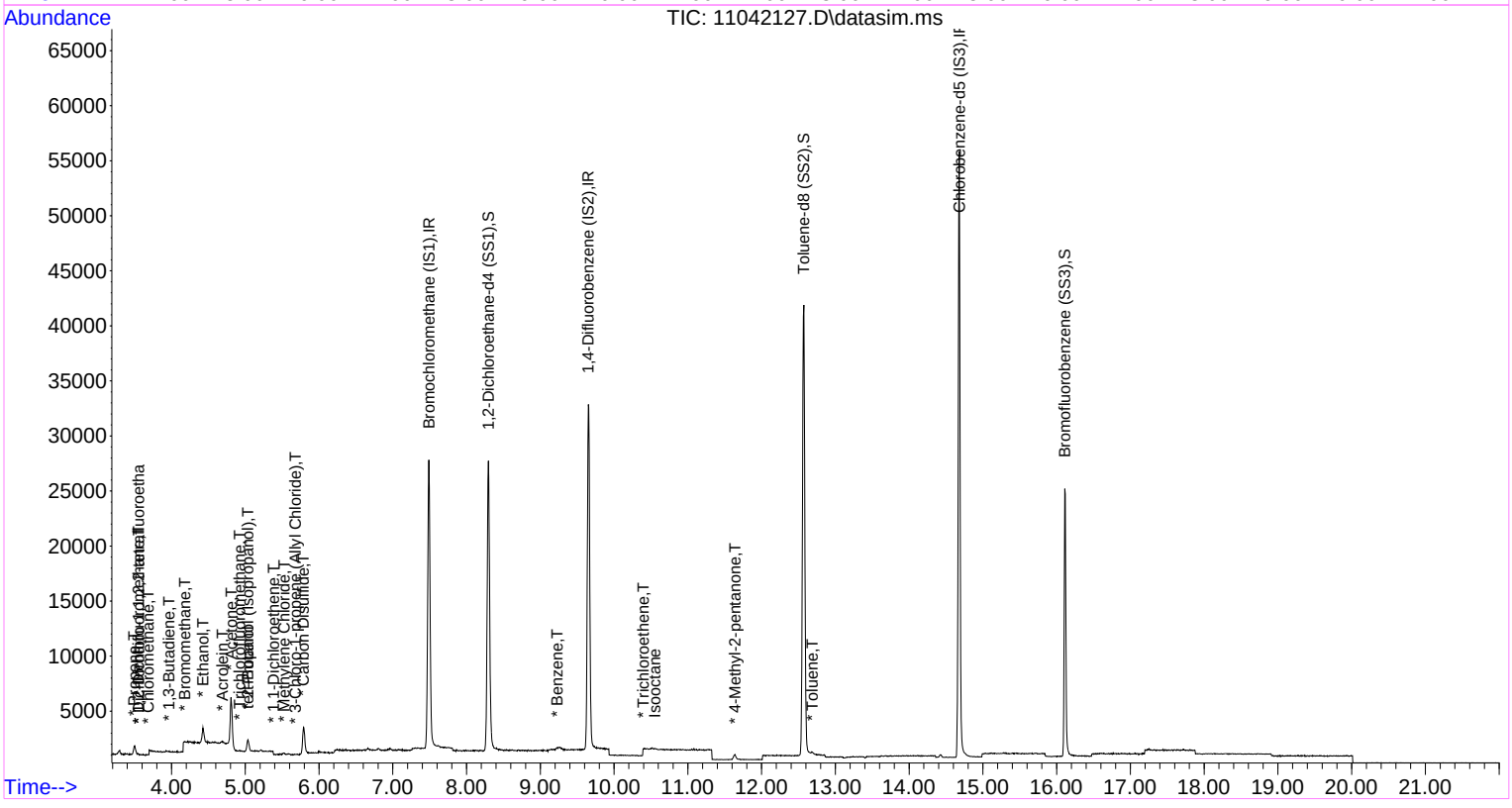
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48) * 1,4-Dioxane	0.000		0	N.D.			
49] Isooctane	10.551	56	206	6.54	pg	#	21
50) * Methyl Methacrylate	0.000		0	N.D.			
51) * n-Heptane	0.000		0	N.D.			
52) * cis-1,3-Dichloropropene	0.000		0	N.D.			
53] * 4-Methyl-2-pentanone	11.638	58	264	29.39	pg	#	79
54) * trans-1,3-Dichloropr...	0.000		0	N.D.			
55) * 1,1,2-Trichloroethane	0.000		0	N.D.			
58] * Toluene	12.685	91	255	3.62	pg		93
59) * 2-Hexanone	0.000		0	N.D.			
60) * Dibromochloromethane	0.000		0	N.D.			
61) * 1,2-Dibromoethane	0.000		0	N.D.			
62) * n-Butyl Acetate	0.000		0	N.D.			
63) * n-Octane	0.000		0	N.D.			
64) * Tetrachloroethene	0.000		0	N.D.			
65) * Chlorobenzene	0.000		0	N.D.			
66) * Ethylbenzene	0.000		0	N.D.			
67) * m- & p-Xylenes	0.000		0	N.D.			
68) * Bromoform	0.000		0	N.D.			
69) Cyclohexanone	0.000		0	N.D.			
70) * Styrene	0.000		0	N.D.			
71) * o-Xylene	0.000		0	N.D.			
72) * n-Nonane	0.000		0	N.D.			
73) * 1,1,2,2-Tetrachloroe...	0.000		0	N.D.			
75) * Cumene	0.000		0	N.D.			
76) * alpha-Pinene	0.000		0	N.D.			
77) * n-Propylbenzene	0.000		0	N.D.			
78) 3-Ethyltoluene	0.000		0	N.D.			
79) * 4-Ethyltoluene	0.000		0	N.D.			
80) * 1,3,5-Trimethylbenzene	0.000		0	N.D.			
81) alpha-Methylstyrene	0.000		0	N.D.			
82) 2-Ethyltoluene	0.000		0	N.D.			
83) tert-Butylbenzene	0.000		0	N.D.			
84) * 1,2,4-Trimethylbenzene	0.000		0	N.D.			
85) * Benzyl Chloride	0.000		0	N.D.			
86) * 1,3-Dichlorobenzene	0.000		0	N.D.			
87) * 1,4-Dichlorobenzene	0.000		0	N.D.			
88) n-Decane	0.000		0	N.D.			
89) sec-Butylbenzene	0.000		0	N.D.			
90) 1,2,3-Trimethylbenzene	0.000		0	N.D.			
91) p-Isopropyltoluene	0.000		0	N.D.			
92) * 1,2-Dichlorobenzene	0.000		0	N.D.			
93) * D-Limonene	0.000		0	N.D.			
94) n-Butylbenzene	0.000		0	N.D.			
95) * 1,2-Dibromo-3-chloro...	0.000		0	N.D.			
96) n-Undecane	0.000		0	N.D.			
97) * 1,2,4-Trichlorobenzene	0.000		0	N.D.			
98) * Naphthalene	0.000		0	N.D.			
99) n-Dodecane	0.000		0	N.D.			
100) * Hexachlorobutadiene	0.000		0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\MS21\DATA\2021 11\04\
Data File : 11042127.D
Acq On : 4 Nov 2021 23:46
Operator : RVT
Sample : TTS00018 TTF00012,23
Misc : 120388 (Sig #1); S34-09242101 (Sig #2)
ALS Vial : 208 Sample Multiplier: 1

Quant Time: Nov 05 06:49:25 2021
Quant Method : I:\MS21\Methods\F21091821.M
Quant Title : EPA TO-15
QLast Update : Mon Sep 20 12:19:59 2021
Response via : Initial Calibration





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ANALYTICAL RESULTS FOR:

KATHERINE COOPER
TETRA TECH
1 S WACKER DRIVE
SUITE 3700
CHICAGO, IL 60606

PROJECT SITE:	PWDF; PLAINFIELD, IN
SUBCONTRACT / PO #:	1168710 / CT-38
PROJECT #:	103X903100320001DC104
SDG:	168330
PREPARED:	March 29, 2022
TOTAL # OF PAGES:	717

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

APPROVED BY: Brett Szymanski
PROJECT MANAGER

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

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Table of Contents

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Case Narrative

Client: Tetra Tech
Project: PWDF; Plainfield, IN
Sample Receipt Date: 03/19/2022
SDG #: 168330

Three solid waste samples were received and analyzed for SVOCs and TAL Metals. There was limited volume received for each sample so the prep masses were reduced for each parameter, resulting in elevated reporting limits. There was insufficient volume to perform % solids analysis for moisture correction so the samples were reported on a wet weight basis. The assigned sample ID numbers, date sampled, and date received are indicated in the attached Project Summary. The samples were received intact and at a temperature within method specified acceptance limits unless specifically stated otherwise in this case narrative or in the sample receipt documents.

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

Sample Analysis and Quality Control

Semi-Volatile Analysis:

The samples were analyzed using US EPA Method 8270D (SVOC). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Surrogate Recovery Data
Matrix Spike/Matrix Spike Duplicate Recovery Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log
Chromatograms

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

Detailed reports were provided for the 8270D data for all detected compounds, as well as, for those compounds manually integrated (if applicable). Compounds not reported on the form 1's were either not detected or did not meet identification criteria so they were reported as non-detects.

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

SVOC (8270D) Solid Analysis

Analytical Run # 210458

Laboratory Control Sample (LCS) 1121219 and Laboratory Control Sample Duplicate (LCSD) 1121220 had a low recovery of hexachlorocyclopentadiene. This analyte was qualified with a "Q" flag in the associated samples. The RPDs between the LCS and LCSD were high for 2 analytes: 4-chloroaniline and hexachlorocyclopentadiene. These analytes were qualified with a "Y" flag in the associated samples.

All surrogate recoveries in the Method Blank (MB) and LCS/LCSD were within the QC limits. All surrogate recoveries in the associated samples were outside the QC limits (low), except for phenol-d5 in sample 1121147. This is due to the sample matrix; the samples were ash from a fire. The low surrogate recoveries were confirmed by repeat analysis. Surrogates with low recoveries were qualified with an "S" flag.

Metals Analysis:

The samples were analyzed using US EPA Methods 6010D (ICP Metals) and 7471B (Mercury). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

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

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

ICP Metals (6010D) Solid Analysis

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

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

Analytical Run # 210424

A Serial Dilution (L) was analyzed and was not applicable for sodium, potassium, silver, arsenic, barium, beryllium, cadmium, cobalt, chromium, copper, iron, manganese, nickel, lead, selenium, antimony, thallium, and vanadium because the parent sample raw results were less than 50 times the Limit of Quantitation (LOQ). The L was not acceptable for aluminum and magnesium because the results exceeded the RPD limit. A Post Digestion Spike (PDS) was analyzed and was unacceptable for iron. The parent sample was reported and qualified with an "M" flag for the failing element. The parent sample was reported and not qualified for zinc because the L was acceptable.

CVAA Mercury (7471B) Solid Analysis

Analytical Run # 210467

No Duplicate (DUP), Matrix Spike (MS), or Matrix Spike Duplicate (MSD) were analyzed because there was insufficient sample. A Laboratory Control Sample Duplicate (LCSD) was analyzed and was acceptable.

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

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Data Qualifiers

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

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MANUAL INTEGRATION REASON CODES

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

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

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

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

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

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

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

Sample Delivery Group

168330

TETRA TECH
KATHERINE COOPER
1 S WACKER DRIVE
SUITE 3700
CHICAGO, IL 60606

Project Name: PWDF
Project #: 103X903100320001DC104

	CT Sample #	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
1	1121147	168330		PWDF-WS-01-031722	SOIL	03/17/2022	03/19/2022
2	1121148	168330		PWDF-WS-02-031722	SOIL	03/17/2022	03/19/2022
3	1121149	168330		PWDF-WS-03-031722	SOIL	03/17/2022	03/19/2022

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QC Batch Cross Reference Summary

TETRA TECH
KATHERINE COOPER
1 S WACKER DRIVE
SUITE 3700
CHICAGO, IL 60606

Copy: R5 START LIST

Project Name:	PWDF
Project #:	103X903100320001DC104
Report Date:	03/29/2022
Date Received:	03/21/2022
SDG #:	168330

Metal Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1121147	Mercury QSM 5.0	EPA 7471B	SOIL	94697	210467
1121148	Mercury QSM 5.0	EPA 7471B	SOIL	94697	210467
1121149	Mercury QSM 5.0	EPA 7471B	SOIL	94697	210467

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1121147	ICP Metals QSM 5.0	EPA 6010D	SOIL	94695	210424
1121148	ICP Metals QSM 5.0	EPA 6010D	SOIL	94695	210424
1121149	ICP Metals QSM 5.0	EPA 6010D	SOIL	94695	210424

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1121147	Potassium QSM 5.0	EPA 6010D	SOIL	94695	210424
1121148	Potassium QSM 5.0	EPA 6010D	SOIL	94695	210424
1121149	Potassium QSM 5.0	EPA 6010D	SOIL	94695	210424

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1121147	Sodium QSM 5.0	EPA 6010D	SOIL	94695	210424
1121148	Sodium QSM 5.0	EPA 6010D	SOIL	94695	210424
1121149	Sodium QSM 5.0	EPA 6010D	SOIL	94695	210424

Organic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
1121147	SVOC 8270 QSM	EPA 8270D	SOIL	94704	210458
1121148	SVOC 8270 QSM	EPA 8270D	SOIL	94704	210458
1121149	SVOC 8270 QSM	EPA 8270D	SOIL	94704	210458

SEMI-VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL SUMMARY
DOCUMENTS

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1B

SEMIVOLATILE ORGANICS ANALYSIS

Sample Description

PWDF-WS-01-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOIL	SDG No.:	168330
Sample wt/vol:	9.61 (g/L)	CTL Sample ID:	1121147
% Solids:	100	Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Date & Time Analyzed:	03/23/2022 / 13:01	GPC Cleanup Date/Time:	03/22/2022 / 09:06
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
92-52-4	1,1'-Biphenyl	245		42	100	210	210
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U	100	210	420	420
95-95-4	2,4,5-Trichlorophenol	520	U	210	520	1000	1000
88-06-2	2,4,6-Trichlorophenol	520	U	210	520	1000	1000
120-83-2	2,4-Dichlorophenol	520	U	240	520	1000	1000
105-67-9	2,4-Dimethylphenol	520	U	160	520	1000	1000
51-28-5	2,4-Dinitrophenol	520	U	210	520	1000	1000
121-14-2	2,4-Dinitrotoluene	100	U	52	100	210	210
606-20-2	2,6-Dinitrotoluene	100	U	52	100	210	210
91-58-7	2-Chloronaphthalene	56.1	J	42	100	210	210
95-57-8	2-Chlorophenol	520	U	160	520	1000	1000
91-57-6	2-Methylnaphthalene	110	J	52	100	210	210
95-48-7	2-Methylphenol	241	J	210	520	1000	1000
88-74-4	2-Nitroaniline	210	U	83	210	420	420
88-75-5	2-Nitrophenol	520	U	310	520	1000	1000
1319-77-3	3 & 4-Methylphenol	517	J	310	1000	2100	2100
91-94-1	3,3'-Dichlorobenzidine	210	U	83	210	420	420
99-09-2	3-Nitroaniline	100	U	42	100	210	210
534-52-1	4,6-Dinitro-2-methylphenol	520	U	210	520	1000	1000
101-55-3	4-Bromophenyl-phenyl ether	100	U	52	100	210	210
59-50-7	4-Chloro-3-methylphenol	520	U	210	520	1000	1000
106-47-8	4-Chloroaniline	210	U Y	52	210	420	420
7005-72-3	4-Chlorophenyl-phenyl ether	100	U	52	100	210	210
100-01-6	4-Nitroaniline	100	U	42	100	210	210

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1B

SEMIVOLATILE ORGANICS ANALYSIS

Sample Description: **PWDF-WS-01-031722**

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOIL	SDG No.:	168330
Sample wt/vol:	9.61 (g/L)	CTL Sample ID:	1121147
% Solids:	100	Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Date & Time Analyzed:	03/23/2022 / 13:01	GPC Cleanup Date/Time:	03/22/2022 / 09:06
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
100-02-7	4-Nitrophenol	520	U	310	520	1000	1000
83-32-9	Acenaphthene	210	U	73	210	420	420
208-96-8	Acenaphthylene	85.8	J	52	100	210	210
98-86-2	Acetophenone	924		52	100	210	210
120-12-7	Anthracene	100	U	42	100	210	210
1912-24-9	Atrazine	100	U	42	100	210	210
100-52-7	Benzaldehyde	1560		52	100	210	210
56-55-3	Benzo(a)anthracene	100	U	42	100	210	210
50-32-8	Benzo(a)pyrene	100	U	42	100	210	210
205-99-2	Benzo(b)fluoranthene	100	U	52	100	210	210
191-24-2	Benzo(g,h,i)perylene	100	U	42	100	210	210
207-08-9	Benzo(k)fluoranthene	100	U	52	100	210	210
111-91-1	Bis(2-chloroethoxy)methane	100	U	42	100	210	210
111-44-4	Bis(2-chloroethyl)ether	100	U	52	100	210	210
108-60-1	Bis(2-chloroisopropyl)ether	100	U	52	100	210	210
117-81-7	Bis(2-ethylhexyl)phthalate	171	J	52	100	210	210
85-68-7	Butylbenzylphthalate	210	U	83	210	420	420
105-60-2	Caprolactam	838		100	210	420	420
86-74-8	Carbazole	210	U	62	210	420	420
218-01-9	Chrysene	100	U	42	100	210	210
53-70-3	Dibenzo(a,h)anthracene	100	U	52	100	210	210
132-64-9	Dibenzofuran	100	U	42	100	210	210
84-66-2	Diethylphthalate	100	U	42	100	210	210
131-11-3	Dimethylphthalate	100	U	52	100	210	210

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1B

SEMIVOLATILE ORGANICS ANALYSIS

Sample Description

PWDF-WS-01-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOIL	SDG No.:	168330
Sample wt/vol:	9.61 (g/L)	CTL Sample ID:	1121147
% Solids:	100	Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Date & Time Analyzed:	03/23/2022 / 13:01	GPC Cleanup Date/Time:	03/22/2022 / 09:06
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
84-74-2	Di-n-butylphthalate	110	J	100	210	420	420
117-84-0	Di-n-octylphthalate	100	U	42	100	210	210
206-44-0	Fluoranthene	100	U	42	100	210	210
86-73-7	Fluorene	100	U	52	100	210	210
118-74-1	Hexachlorobenzene	100	U	52	100	210	210
87-68-3	Hexachlorobutadiene	100	U	52	100	210	210
77-47-4	Hexachlorocyclopentadiene	100	U Q,Y	52	100	210	210
67-72-1	Hexachloroethane	100	U	42	100	210	210
193-39-5	Indeno(1,2,3-cd)pyrene	100	U	42	100	210	210
78-59-1	Isophorone	100	U	42	100	210	210
91-20-3	Naphthalene	1060		42	100	210	210
98-95-3	Nitrobenzene	100	U	42	100	210	210
621-64-7	N-Nitroso-di-n-propylamine	100	U	52	100	210	210
86-30-6/122-39-4	N-Nitrosodiphenylamine & Diphn	210	U	100	210	420	420
87-86-5	Pentachlorophenol	520	U	210	520	1000	1000
85-01-8	Phenanthrene	100	U	42	100	210	210
108-95-2	Phenol	2760		210	520	1000	1000
129-00-0	Pyrene	100	U	52	100	210	210

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SEMIVOLATILE ORGANICS ANALYSIS

Sample Description: **PWDF-WS-02-031722**

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOIL	SDG No.:	168330
Sample wt/vol:	5.31 (g/L)	CTL Sample ID:	1121148
% Solids:	100	Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Date & Time Analyzed:	03/23/2022 / 13:24	GPC Cleanup Date/Time:	03/22/2022 / 09:06
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
92-52-4	1,1'-Biphenyl	153	J	75	190	380	380
95-94-3	1,2,4,5-Tetrachlorobenzene	380	U	190	380	750	750
95-95-4	2,4,5-Trichlorophenol	940	U	380	940	1900	1900
88-06-2	2,4,6-Trichlorophenol	940	U	380	940	1900	1900
120-83-2	2,4-Dichlorophenol	940	U	430	940	1900	1900
105-67-9	2,4-Dimethylphenol	940	U	280	940	1900	1900
51-28-5	2,4-Dinitrophenol	940	U	380	940	1900	1900
121-14-2	2,4-Dinitrotoluene	190	U	94	190	380	380
606-20-2	2,6-Dinitrotoluene	190	U	94	190	380	380
91-58-7	2-Chloronaphthalene	77.8	J	75	190	380	380
95-57-8	2-Chlorophenol	940	U	280	940	1900	1900
91-57-6	2-Methylnaphthalene	190	U	94	190	380	380
95-48-7	2-Methylphenol	940	U	380	940	1900	1900
88-74-4	2-Nitroaniline	380	U	150	380	750	750
88-75-5	2-Nitrophenol	940	U	560	940	1900	1900
1319-77-3	3 & 4-Methylphenol	1900	U	560	1900	3800	3800
91-94-1	3,3'-Dichlorobenzidine	380	U	150	380	750	750
99-09-2	3-Nitroaniline	190	U	75	190	380	380
534-52-1	4,6-Dinitro-2-methylphenol	940	U	380	940	1900	1900
101-55-3	4-Bromophenyl-phenyl ether	190	U	94	190	380	380
59-50-7	4-Chloro-3-methylphenol	940	U	380	940	1900	1900
106-47-8	4-Chloroaniline	380	U Y	94	380	750	750
7005-72-3	4-Chlorophenyl-phenyl ether	190	U	94	190	380	380
100-01-6	4-Nitroaniline	190	U	75	190	380	380

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SEMIVOLATILE ORGANICS ANALYSIS

Sample Description

PWDF-WS-02-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOIL	SDG No.:	168330
Sample wt/vol:	5.31 (g/L)	CTL Sample ID:	1121148
% Solids:	100	Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Date & Time Analyzed:	03/23/2022 / 13:24	GPC Cleanup Date/Time:	03/22/2022 / 09:06
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
100-02-7	4-Nitrophenol	940	U	560	940	1900	1900
83-32-9	Acenaphthene	380	U	130	380	750	750
208-96-8	Acenaphthylene	190	U	94	190	380	380
98-86-2	Acetophenone	357	J	94	190	380	380
120-12-7	Anthracene	190	U	75	190	380	380
1912-24-9	Atrazine	190	U	75	190	380	380
100-52-7	Benzaldehyde	818		94	190	380	380
56-55-3	Benzo(a)anthracene	190	U	75	190	380	380
50-32-8	Benzo(a)pyrene	190	U	75	190	380	380
205-99-2	Benzo(b)fluoranthene	190	U	94	190	380	380
191-24-2	Benzo(g,h,i)perylene	190	U	75	190	380	380
207-08-9	Benzo(k)fluoranthene	190	U	94	190	380	380
111-91-1	Bis(2-chloroethoxy)methane	190	U	75	190	380	380
111-44-4	Bis(2-chloroethyl)ether	190	U	94	190	380	380
108-60-1	Bis(2-chloroisopropyl)ether	190	U	94	190	380	380
117-81-7	Bis(2-ethylhexyl)phthalate	151	J	94	190	380	380
85-68-7	Butylbenzylphthalate	380	U	150	380	750	750
105-60-2	Caprolactam	380	U	190	380	750	750
86-74-8	Carbazole	380	U	110	380	750	750
218-01-9	Chrysene	190	U	75	190	380	380
53-70-3	Dibenzo(a,h)anthracene	190	U	94	190	380	380
132-64-9	Dibenzofuran	190	U	75	190	380	380
84-66-2	Diethylphthalate	190	U	75	190	380	380
131-11-3	Dimethylphthalate	190	U	94	190	380	380

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SEMIVOLATILE ORGANICS ANALYSIS

Sample Description

PWDF-WS-02-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOIL	SDG No.:	168330
Sample wt/vol:	5.31 (g/L)	CTL Sample ID:	1121148
% Solids:	100	Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Date & Time Analyzed:	03/23/2022 / 13:24	GPC Cleanup Date/Time:	03/22/2022 / 09:06
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
84-74-2	Di-n-butylphthalate	275	J	190	380	750	750
117-84-0	Di-n-octylphthalate	190	U	75	190	380	380
206-44-0	Fluoranthene	190	U	75	190	380	380
86-73-7	Fluorene	190	U	94	190	380	380
118-74-1	Hexachlorobenzene	190	U	94	190	380	380
87-68-3	Hexachlorobutadiene	190	U	94	190	380	380
77-47-4	Hexachlorocyclopentadiene	190	U Q,Y	94	190	380	380
67-72-1	Hexachloroethane	190	U	75	190	380	380
193-39-5	Indeno(1,2,3-cd)pyrene	190	U	75	190	380	380
78-59-1	Isophorone	148	J	75	190	380	380
91-20-3	Naphthalene	857		75	190	380	380
98-95-3	Nitrobenzene	190	U	75	190	380	380
621-64-7	N-Nitroso-di-n-propylamine	190	U	94	190	380	380
86-30-6/122-39-4	N-Nitrosodiphenylamine & Diphn	380	U	190	380	750	750
87-86-5	Pentachlorophenol	940	U	380	940	1900	1900
85-01-8	Phenanthrene	190	U	75	190	380	380
108-95-2	Phenol	940	U	380	940	1900	1900
129-00-0	Pyrene	190	U	94	190	380	380

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SEMIVOLATILE ORGANICS ANALYSIS

Sample Description: **PWDF-WS-03-031722**

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOIL	SDG No.:	168330
Sample wt/vol:	5.95 (g/L)	CTL Sample ID:	1121149
% Solids:	100	Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Date & Time Analyzed:	03/23/2022 / 13:47	GPC Cleanup Date/Time:	03/22/2022 / 09:06
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
92-52-4	1,1'-Biphenyl	170	U	67	170	340	340
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U	170	340	670	670
95-95-4	2,4,5-Trichlorophenol	840	U	340	840	1700	1700
88-06-2	2,4,6-Trichlorophenol	840	U	340	840	1700	1700
120-83-2	2,4-Dichlorophenol	840	U	390	840	1700	1700
105-67-9	2,4-Dimethylphenol	840	U	250	840	1700	1700
51-28-5	2,4-Dinitrophenol	840	U	340	840	1700	1700
121-14-2	2,4-Dinitrotoluene	170	U	84	170	340	340
606-20-2	2,6-Dinitrotoluene	170	U	84	170	340	340
91-58-7	2-Chloronaphthalene	170	U	67	170	340	340
95-57-8	2-Chlorophenol	840	U	250	840	1700	1700
91-57-6	2-Methylnaphthalene	170	U	84	170	340	340
95-48-7	2-Methylphenol	840	U	340	840	1700	1700
88-74-4	2-Nitroaniline	340	U	130	340	670	670
88-75-5	2-Nitrophenol	840	U	500	840	1700	1700
1319-77-3	3 & 4-Methylphenol	1700	U	500	1700	3400	3400
91-94-1	3,3'-Dichlorobenzidine	340	U	130	340	670	670
99-09-2	3-Nitroaniline	170	U	67	170	340	340
534-52-1	4,6-Dinitro-2-methylphenol	840	U	340	840	1700	1700
101-55-3	4-Bromophenyl-phenyl ether	170	U	84	170	340	340
59-50-7	4-Chloro-3-methylphenol	840	U	340	840	1700	1700
106-47-8	4-Chloroaniline	340	U Y	84	340	670	670
7005-72-3	4-Chlorophenyl-phenyl ether	170	U	84	170	340	340
100-01-6	4-Nitroaniline	170	U	67	170	340	340

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SEMIVOLATILE ORGANICS ANALYSIS

Sample Description

PWDF-WS-03-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOIL	SDG No.:	168330
Sample wt/vol:	5.95 (g/L)	CTL Sample ID:	1121149
% Solids:	100	Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Date & Time Analyzed:	03/23/2022 / 13:47	GPC Cleanup Date/Time:	03/22/2022 / 09:06
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
100-02-7	4-Nitrophenol	840	U	500	840	1700	1700
83-32-9	Acenaphthene	340	U	120	340	670	670
208-96-8	Acenaphthylene	170	U	84	170	340	340
98-86-2	Acetophenone	338	J	84	170	340	340
120-12-7	Anthracene	170	U	67	170	340	340
1912-24-9	Atrazine	170	U	67	170	340	340
100-52-7	Benzaldehyde	170	U	84	170	340	340
56-55-3	Benzo(a)anthracene	170	U	67	170	340	340
50-32-8	Benzo(a)pyrene	170	U	67	170	340	340
205-99-2	Benzo(b)fluoranthene	170	U	84	170	340	340
191-24-2	Benzo(g,h,i)perylene	170	U	67	170	340	340
207-08-9	Benzo(k)fluoranthene	170	U	84	170	340	340
111-91-1	Bis(2-chloroethoxy)methane	170	U	67	170	340	340
111-44-4	Bis(2-chloroethyl)ether	170	U	84	170	340	340
108-60-1	Bis(2-chloroisopropyl)ether	170	U	84	170	340	340
117-81-7	Bis(2-ethylhexyl)phthalate	112	J	84	170	340	340
85-68-7	Butylbenzylphthalate	340	U	130	340	670	670
105-60-2	Caprolactam	340	U	170	340	670	670
86-74-8	Carbazole	340	U	100	340	670	670
218-01-9	Chrysene	170	U	67	170	340	340
53-70-3	Dibenzo(a,h)anthracene	170	U	84	170	340	340
132-64-9	Dibenzofuran	170	U	67	170	340	340
84-66-2	Diethylphthalate	170	U	67	170	340	340
131-11-3	Dimethylphthalate	170	U	84	170	340	340

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SEMIVOLATILE ORGANICS ANALYSIS

Sample Description

PWDF-WS-03-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOIL	SDG No.:	168330
Sample wt/vol:	5.95 (g/L)	CTL Sample ID:	1121149
% Solids:	100	Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Date & Time Analyzed:	03/23/2022 / 13:47	GPC Cleanup Date/Time:	03/22/2022 / 09:06
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
84-74-2	Di-n-butylphthalate	340	U	170	340	670	670
117-84-0	Di-n-octylphthalate	170	U	67	170	340	340
206-44-0	Fluoranthene	170	U	67	170	340	340
86-73-7	Fluorene	170	U	84	170	340	340
118-74-1	Hexachlorobenzene	170	U	84	170	340	340
87-68-3	Hexachlorobutadiene	170	U	84	170	340	340
77-47-4	Hexachlorocyclopentadiene	170	U Q,Y	84	170	340	340
67-72-1	Hexachloroethane	170	U	67	170	340	340
193-39-5	Indeno(1,2,3-cd)pyrene	170	U	67	170	340	340
78-59-1	Isophorone	170	U	67	170	340	340
91-20-3	Naphthalene	183	J	67	170	340	340
98-95-3	Nitrobenzene	170	U	67	170	340	340
621-64-7	N-Nitroso-di-n-propylamine	170	U	84	170	340	340
86-30-6/122-39-4	N-Nitrosodiphenylamine & Diphn	340	U	170	340	670	670
87-86-5	Pentachlorophenol	840	U	340	840	1700	1700
85-01-8	Phenanthrene	170	U	67	170	340	340
108-95-2	Phenol	840	U	340	840	1700	1700
129-00-0	Pyrene	170	U	84	170	340	340

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SEMIVOLATILE ORGANICS ANALYSIS (MB or CC

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:		SDG No.:	168330
Sample wt/vol:	10.00 (g/L)	CTL Sample ID:	1121218
% Solids:		Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Cleanup Date/Time/Type:	03/22/2022 09:06 (GPC) , 03/22/2022 13:00 (Sulfur) , ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
92-52-4	1,1'-Biphenyl	03/23/2022	11:29	40	U	40	200	***100***
95-94-3	1,2,4,5-Tetrachlorobenzene	03/23/2022	11:29	100	U	100	400	***200***
95-95-4	2,4,5-Trichlorophenol	03/23/2022	11:29	200	U	200	1000	***500***
88-06-2	2,4,6-Trichlorophenol	03/23/2022	11:29	200	U	200	1000	***500***
120-83-2	2,4-Dichlorophenol	03/23/2022	11:29	230	U	230	1000	***500***
105-67-9	2,4-Dimethylphenol	03/23/2022	11:29	150	U	150	1000	***500***
51-28-5	2,4-Dinitrophenol	03/23/2022	11:29	200	U	200	1000	***500***
121-14-2	2,4-Dinitrotoluene	03/23/2022	11:29	50	U	50	200	***100***
606-20-2	2,6-Dinitrotoluene	03/23/2022	11:29	50	U	50	200	***100***
91-58-7	2-Chloronaphthalene	03/23/2022	11:29	40	U	40	200	***100***
95-57-8	2-Chlorophenol	03/23/2022	11:29	150	U	150	1000	***500***
91-57-6	2-Methylnaphthalene	03/23/2022	11:29	50	U	50	200	***100***
95-48-7	2-Methylphenol	03/23/2022	11:29	200	U	200	1000	***500***
88-74-4	2-Nitroaniline	03/23/2022	11:29	80	U	80	400	***200***
88-75-5	2-Nitrophenol	03/23/2022	11:29	300	U	300	1000	***500***
1319-77-3	3 & 4-Methylphenol	03/23/2022	11:29	300	U	300	2000	***1000***
91-94-1	3,3'-Dichlorobenzidine	03/23/2022	11:29	80	U	80	400	***200***
99-09-2	3-Nitroaniline	03/23/2022	11:29	40	U	40	200	***100***
534-52-1	4,6-Dinitro-2-methylphenol	03/23/2022	11:29	200	U	200	1000	***500***
101-55-3	4-Bromophenyl-phenyl ether	03/23/2022	11:29	50	U	50	200	***100***
59-50-7	4-Chloro-3-methylphenol	03/23/2022	11:29	200	U	200	1000	***500***
106-47-8	4-Chloroaniline	03/23/2022	11:29	50	U	50	400	***200***
7005-72-3	4-Chlorophenyl-phenyl ether	03/23/2022	11:29	50	U	50	200	***100***

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SEMIVOLATILE ORGANICS ANALYSIS (MB or CC

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:		SDG No.:	168330
Sample wt/vol:	10.00 (g/L)	CTL Sample ID:	1121218
% Solids:		Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Cleanup Date/Time/Type:	03/22/2022 09:06 (GPC) , 03/22/2022 13:00 (Sulfur) , ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
100-01-6	4-Nitroaniline	03/23/2022	11:29	40	U	40	200	***100***
100-02-7	4-Nitrophenol	03/23/2022	11:29	300	U	300	1000	***500***
83-32-9	Acenaphthene	03/23/2022	11:29	70	U	70	400	***200***
208-96-8	Acenaphthylene	03/23/2022	11:29	50	U	50	200	***100***
98-86-2	Acetophenone	03/23/2022	11:29	50	U	50	200	***100***
120-12-7	Anthracene	03/23/2022	11:29	40	U	40	200	***100***
1912-24-9	Atrazine	03/23/2022	11:29	40	U	40	200	***100***
100-52-7	Benzaldehyde	03/23/2022	11:29	50	U	50	200	***100***
56-55-3	Benzo(a)anthracene	03/23/2022	11:29	40	U	40	200	***100***
50-32-8	Benzo(a)pyrene	03/23/2022	11:29	40	U	40	200	***100***
205-99-2	Benzo(b)fluoranthene	03/23/2022	11:29	50	U	50	200	***100***
191-24-2	Benzo(g,h,i)perylene	03/23/2022	11:29	40	U	40	200	***100***
207-08-9	Benzo(k)fluoranthene	03/23/2022	11:29	50	U	50	200	***100***
111-91-1	Bis(2-chloroethoxy)methane	03/23/2022	11:29	40	U	40	200	***100***
111-44-4	Bis(2-chloroethyl)ether	03/23/2022	11:29	50	U	50	200	***100***
108-60-1	Bis(2-chloroisopropyl)ether	03/23/2022	11:29	50	U	50	200	***100***
117-81-7	Bis(2-ethylhexyl)phthalate	03/23/2022	11:29	50	U	50	200	***100***
85-68-7	Butylbenzylphthalate	03/23/2022	11:29	80	U	80	400	***200***
105-60-2	Caprolactam	03/23/2022	11:29	100	U	100	400	***200***
86-74-8	Carbazole	03/23/2022	11:29	60	U	60	400	***200***
218-01-9	Chrysene	03/23/2022	11:29	40	U	40	200	***100***
53-70-3	Dibenzo(a,h)anthracene	03/23/2022	11:29	50	U	50	200	***100***
132-64-9	Dibenzofuran	03/23/2022	11:29	40	U	40	200	***100***

CT LABORATORIES
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1B-2

SEMIVOLATILE ORGANICS ANALYSIS (MB or CC

Sample Description

METHOD BLANK

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:		SDG No.:	168330
Sample wt/vol:	10.00 (g/L)	CTL Sample ID:	1121218
% Solids:		Date Received:	03/19/2022
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	03/21/2022 / 11:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	94704
Analytical Run #:	210458	Dilution Factor:	1
Cleanup Date/Time/Type:	03/22/2022 09:06 (GPC) , 03/22/2022 13:00 (Sulfur) , ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			/
ICAL Calibration #:	1S031722	Concentration Units:	ug/kg

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
84-66-2	Diethylphthalate	03/23/2022	11:29	40	U	40	200	***100***
131-11-3	Dimethylphthalate	03/23/2022	11:29	50	U	50	200	***100***
84-74-2	Di-n-butylphthalate	03/23/2022	11:29	100	U	100	400	***200***
117-84-0	Di-n-octylphthalate	03/23/2022	11:29	40	U	40	200	***100***
206-44-0	Fluoranthene	03/23/2022	11:29	40	U	40	200	***100***
86-73-7	Fluorene	03/23/2022	11:29	50	U	50	200	***100***
118-74-1	Hexachlorobenzene	03/23/2022	11:29	50	U	50	200	***100***
87-68-3	Hexachlorobutadiene	03/23/2022	11:29	50	U	50	200	***100***
77-47-4	Hexachlorocyclopentadiene	03/23/2022	11:29	50	U	50	200	***100***
67-72-1	Hexachloroethane	03/23/2022	11:29	40	U	40	200	***100***
193-39-5	Indeno(1,2,3-cd)pyrene	03/23/2022	11:29	40	U	40	200	***100***
78-59-1	Isophorone	03/23/2022	11:29	40	U	40	200	***100***
91-20-3	Naphthalene	03/23/2022	11:29	40	U	40	200	***100***
98-95-3	Nitrobenzene	03/23/2022	11:29	40	U	40	200	***100***
621-64-7	N-Nitroso-di-n-propylamine	03/23/2022	11:29	50	U	50	200	***100***
86-30-6/122-39-4	N-Nitrosodiphenylamine & Diphn	03/23/2022	11:29	100	U	100	400	***200***
87-86-5	Pentachlorophenol	03/23/2022	11:29	200	U	200	1000	***500***
85-01-8	Phenanthrene	03/23/2022	11:29	40	U	40	200	***100***
108-95-2	Phenol	03/23/2022	11:29	200	U	200	1000	***500***
129-00-0	Pyrene	03/23/2022	11:29	50	U	50	200	***100***

CT LABORATORIES
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2D

SOIL SEMI VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Analytical Method:	EPA 8270D	SDG:	168330
Analytical Run #:	210458	ICAL Calibration #:	1S031722

CTLab #	1121147				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	16.8	39	132	*FAIL*
Surr: 2-Fluorobiphenyl	100	29.0	44	115	*FAIL*
Surr: 2-Fluorophenol	100	33.3	35	115	*FAIL*
Surr: Nitrobenzene-d5	100	36.2	37	122	*FAIL*
Surr: Phenol-d5	100	36.3	33	122	
Surr: Terphenyl-d14	100	1.06	54	127	*FAIL*

CTLab #	1121148				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	9.39	39	132	*FAIL*
Surr: 2-Fluorobiphenyl	100	12.7	44	115	*FAIL*
Surr: 2-Fluorophenol	100	10.8	35	115	*FAIL*
Surr: Nitrobenzene-d5	100	19.5	37	122	*FAIL*
Surr: Phenol-d5	100	10.6	33	122	*FAIL*
Surr: Terphenyl-d14	100	0	54	127	*FAIL*

CTLab #	1121149				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	7.81	39	132	*FAIL*
Surr: 2-Fluorobiphenyl	100	15.4	44	115	*FAIL*
Surr: 2-Fluorophenol	100	14.3	35	115	*FAIL*
Surr: Nitrobenzene-d5	100	25.9	37	122	*FAIL*
Surr: Phenol-d5	100	16.0	33	122	*FAIL*
Surr: Terphenyl-d14	100	0	54	127	*FAIL*

CTLab #	1121218	Sample Type:	Method Blank		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	68.6	39	132	
Surr: 2-Fluorobiphenyl	100	70.2	44	115	
Surr: 2-Fluorophenol	100	70.3	35	115	
Surr: Nitrobenzene-d5	100	73.8	37	122	
Surr: Phenol-d5	100	72.2	33	122	
Surr: Terphenyl-d14	100	79.0	54	127	

CTLab #	1121219	Sample Type:	Lab Control Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	73.4	39	132	
Surr: 2-Fluorobiphenyl	100	77.0	44	115	
Surr: 2-Fluorophenol	100	77.3	35	115	
Surr: Nitrobenzene-d5	100	78.9	37	122	
Surr: Phenol-d5	100	77.9	33	122	
Surr: Terphenyl-d14	100	82.4	54	127	

CT LABORATORIES
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2D

SOIL SEMI VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Analytical Method:	EPA 8270D	SDG:	168330
Analytical Run #:	210458	ICAL Calibration #:	1S031722

CTLab #	1121220	Sample Type:	Lab Control Spike Duplicate		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	76.2	39	132	
Surr: 2-Fluorobiphenyl	100	73.2	44	115	
Surr: 2-Fluorophenol	100	73.5	35	115	
Surr: Nitrobenzene-d5	100	76.2	37	122	
Surr: Phenol-d5	100	74.8	33	122	
Surr: Terphenyl-d14	100	86.2	54	127	

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3D

Sample Description

LCS

SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories
Contract: TETRA TECH-PWDF
Sample No.: 1121219
SDG No.: 168330
Analytical Method: EPA 8270D
Concentration Units: ug/kg

Sample No.: 1121219
Parent Sample No.: 0
Analytical Prep Batch #: 94704
Analytical Preparation Date/Time: 03/21/2022 11:30
Analytical Run #: 210458
ICAL Calibration #: 1S031722

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1'-Biphenyl	03/23/2022	11:52	40-117	1510		2000	76
1,2,4,5-Tetrachlorobenzene	03/23/2022	11:52	47-106	1570		2000	78
2,4,5-Trichlorophenol	03/23/2022	11:52	41-124	1490		2000	74
2,4,6-Trichlorophenol	03/23/2022	11:52	39-126	1480		2000	74
2,4-Dichlorophenol	03/23/2022	11:52	40-122	1570		2000	78
2,4-Dimethylphenol	03/23/2022	11:52	30-127	1590		2000	80
2,4-Dinitrophenol	03/23/2022	11:52	16-102	1520		2000	76
2,4-Dinitrotoluene	03/23/2022	11:52	48-126	1620		2000	81
2,6-Dinitrotoluene	03/23/2022	11:52	46-124	1600		2000	80
2-Chloronaphthalene	03/23/2022	11:52	41-114	1430		2000	72
2-Chlorophenol	03/23/2022	11:52	34-121	1550		2000	78
2-Methylnaphthalene	03/23/2022	11:52	38-122	1500		2000	75
2-Methylphenol	03/23/2022	11:52	32-122	1550		2000	78
2-Nitroaniline	03/23/2022	11:52	44-127	1560		2000	78
2-Nitrophenol	03/23/2022	11:52	36-123	1560		2000	78
3 & 4-Methylphenol	03/23/2022	11:52	34-119	1590		2000	80
3,3'-Dichlorobenzidine	03/23/2022	11:52	22-121	805		2000	40
3-Nitroaniline	03/23/2022	11:52	33-119	1140		2000	57
4,6-Dinitro-2-methylphenol	03/23/2022	11:52	29-132	1700		2000	85
4-Bromophenyl-phenyl ether	03/23/2022	11:52	46-124	1610		2000	80
4-Chloro-3-methylphenol	03/23/2022	11:52	45-122	1700		2000	85
4-Chloroaniline	03/23/2022	11:52	1-100	791		2000	40
4-Chlorophenyl-phenyl ether	03/23/2022	11:52	45-121	1560		2000	78
4-Nitroaniline	03/23/2022	11:52	44-125	1510		2000	76
4-Nitrophenol	03/23/2022	11:52	30-132	1550		2000	78
Acenaphthene	03/23/2022	11:52	40-123	1500		2000	75
Acenaphthylene	03/23/2022	11:52	32-132	1490		2000	74
Acetophenone	03/23/2022	11:52	33-115	1530		2000	76

CT LABORATORIES
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3D

Sample Description

LCS

SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories
Contract: TETRA TECH-PWDF
Sample No.: 1121219
SDG No.: 168330
Analytical Method: EPA 8270D
Concentration Units: ug/kg

Sample No.: 1121219
Parent Sample No.: 0
Analytical Prep Batch #: 94704
Analytical Preparation Date/Time: 03/21/2022 11:30
Analytical Run #: 210458
ICAL Calibration #: 1S031722

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R	
Anthracene	03/23/2022	11:52	47-123	1610		2000	80	
Atrazine	03/23/2022	11:52	47-127	1650		2000	82	
Benzaldehyde	03/23/2022	11:52	6-185	1580		2000	79	
Benzo(a)anthracene	03/23/2022	11:52	49-126	1600		2000	80	
Benzo(a)pyrene	03/23/2022	11:52	54-129	1650		2000	82	
Benzo(b)fluoranthene	03/23/2022	11:52	45-132	1650		2000	82	
Benzo(g,h,i)perylene	03/23/2022	11:52	43-134	1610		2000	80	
Benzo(k)fluoranthene	03/23/2022	11:52	47-132	1660		2000	83	
Bis(2-chloroethoxy)methane	03/23/2022	11:52	36-121	1560		2000	78	
Bis(2-chloroethyl)ether	03/23/2022	11:52	31-120	1510		2000	76	
Bis(2-chloroisopropyl)ether	03/23/2022	11:52	33-131	1470		2000	74	
Bis(2-ethylhexyl)phthalate	03/23/2022	11:52	51-133	1550		2000	78	
Butylbenzylphthalate	03/23/2022	11:52	48-132	1580		2000	79	
Caprolactam	03/23/2022	11:52	46-117	2000		2000	100	
Carbazole	03/23/2022	11:52	50-123	1630		2000	82	
Chrysene	03/23/2022	11:52	50-124	1640		2000	82	
Dibenzo(a,h)anthracene	03/23/2022	11:52	45-134	1530		2000	76	
Dibenzofuran	03/23/2022	11:52	44-120	1540		2000	77	
Diethylphthalate	03/23/2022	11:52	50-124	1610		2000	80	
Dimethylphthalate	03/23/2022	11:52	48-124	1580		2000	79	
Di-n-butylphthalate	03/23/2022	11:52	51-128	1660		2000	83	
Di-n-octylphthalate	03/23/2022	11:52	51-128	1510		2000	76	
Fluoranthene	03/23/2022	11:52	50-127	1690		2000	84	
Fluorene	03/23/2022	11:52	43-125	1590		2000	80	
Hexachlorobenzene	03/23/2022	11:52	45-122	1610		2000	80	
Hexachlorobutadiene	03/23/2022	11:52	32-123	1570		2000	78	
Hexachlorocyclopentadiene	03/23/2022	11:52	35-106	78.7		2000	4	*FAIL*
Hexachloroethane	03/23/2022	11:52	28-117	1430		2000	72	

CT LABORATORIES
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Sample Description

LCS

SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories
Contract: TETRA TECH-PWDF
Sample No.: 1121219
SDG No.: 168330
Analytical Method: EPA 8270D
Concentration Units: ug/kg

Sample No.: 1121219
Parent Sample No.: 0
Analytical Prep Batch #: 94704
Analytical Preparation Date/Time: 03/21/2022 11:30
Analytical Run #: 210458
ICAL Calibration #: 1S031722

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
Indeno(1,2,3-cd)pyrene	03/23/2022	11:52	45-133	1590		2000	80
Isophorone	03/23/2022	11:52	30-122	1500		2000	75
Naphthalene	03/23/2022	11:52	35-123	1560		2000	78
Nitrobenzene	03/23/2022	11:52	34-122	1550		2000	78
N-Nitroso-di-n-propylamine	03/23/2022	11:52	36-120	1540		2000	77
N-Nitrosodiphenylamine & Diphn	03/23/2022	11:52	38-127	3270		4000	82
Pentachlorophenol	03/23/2022	11:52	25-133	1290		2000	64
Phenanthrene	03/23/2022	11:52	50-121	1620		2000	81
Phenol	03/23/2022	11:52	34-121	1450		2000	72
Pyrene	03/23/2022	11:52	47-127	1630		2000	82

Spike Recovery: 1 out of 66 outside limits

CT LABORATORIES
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Sample Description

LCSD

SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

Sample No.: 1121220 SDG No.: 168330

Analytical Method: EPA 8270D Concentration Units: ug/kg

Analytical Run #: 210458 Sample No.: 1121220 Parent Sample No.: 1121219

Analytical Prep Batch #: 94704 Analytical Preparation Date/Time: 03/21/2022 11:30

ICAL Calibration #: 1S031722

Analyte	Analysis Date/Time		Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)	
1,1'-Biphenyl	03/23/2022	12:15	1470	1510	2000	74	3	40-117	20	
1,2,4,5-Tetrachlorobenzene	03/23/2022	12:15	1510	1570	2000	76	4	47-106	20	
2,4,5-Trichlorophenol	03/23/2022	12:15	1520	1490	2000	76	2	41-124	20	
2,4,6-Trichlorophenol	03/23/2022	12:15	1500	1480	2000	75	1	39-126	20	
2,4-Dichlorophenol	03/23/2022	12:15	1550	1570	2000	78	1	40-122	20	
2,4-Dimethylphenol	03/23/2022	12:15	1630	1590	2000	82	2	30-127	20	
2,4-Dinitrophenol	03/23/2022	12:15	1420	1520	2000	71	7	16-102	20	
2,4-Dinitrotoluene	03/23/2022	12:15	1670	1620	2000	84	3	48-126	20	
2,6-Dinitrotoluene	03/23/2022	12:15	1640	1600	2000	82	2	46-124	20	
2-Chloronaphthalene	03/23/2022	12:15	1380	1430	2000	69	4	41-114	20	
2-Chlorophenol	03/23/2022	12:15	1530	1550	2000	76	1	34-121	20	
2-Methylnaphthalene	03/23/2022	12:15	1450	1500	2000	72	3	38-122	20	
2-Methylphenol	03/23/2022	12:15	1560	1550	2000	78	1	32-122	20	
2-Nitroaniline	03/23/2022	12:15	1570	1560	2000	78	1	44-127	20	
2-Nitrophenol	03/23/2022	12:15	1540	1560	2000	77	1	36-123	20	
3 & 4-Methylphenol	03/23/2022	12:15	1540	1590	2000	77	3	34-119	20	
3,3'-Dichlorobenzidine	03/23/2022	12:15	910	805	2000	46	12	22-121	20	
3-Nitroaniline	03/23/2022	12:15	1330	1140	2000	66	15	33-119	20	
4,6-Dinitro-2-methylphenol	03/23/2022	12:15	1590	1700	2000	80	7	29-132	20	
4-Bromophenyl-phenyl ether	03/23/2022	12:15	1580	1610	2000	79	2	46-124	20	
4-Chloro-3-methylphenol	03/23/2022	12:15	1630	1700	2000	82	4	45-122	20	
4-Chloroaniline	03/23/2022	12:15	1010	791	2000	50	24	1-100	20	*FAIL*
4-Chlorophenyl-phenyl ether	03/23/2022	12:15	1490	1560	2000	74	5	45-121	20	
4-Nitroaniline	03/23/2022	12:15	1560	1510	2000	78	3	44-125	20	
4-Nitrophenol	03/23/2022	12:15	1620	1550	2000	81	4	30-132	20	
Acenaphthene	03/23/2022	12:15	1460	1500	2000	73	3	40-123	20	
Acenaphthylene	03/23/2022	12:15	1430	1490	2000	72	4	32-132	20	
Acetophenone	03/23/2022	12:15	1490	1530	2000	74	3	33-115	20	

CT LABORATORIES
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Sample Description: LCSD

SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

Sample No.: 1121220 SDG No.: 168330

Analytical Method: EPA 8270D Concentration Units: ug/kg

Analytical Run #: 210458 Sample No.: 1121220 Parent Sample No.: 1121219

Analytical Prep Batch #: 94704 Analytical Preparation Date/Time: 03/21/2022 11:30

ICAL Calibration #: 1S031722

Analyte	Analysis Date/Time		Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)	
Anthracene	03/23/2022	12:15	1620	1610	2000	81	1	47-123	20	
Atrazine	03/23/2022	12:15	1710	1650	2000	86	4	47-127	20	
Benzaldehyde	03/23/2022	12:15	1530	1580	2000	76	3	6-185	20	
Benzo(a)anthracene	03/23/2022	12:15	1660	1600	2000	83	4	49-126	20	
Benzo(a)pyrene	03/23/2022	12:15	1730	1650	2000	86	5	54-129	20	
Benzo(b)fluoranthene	03/23/2022	12:15	1820	1650	2000	91	10	45-132	20	
Benzo(g,h,i)perylene	03/23/2022	12:15	1550	1610	2000	78	4	43-134	20	
Benzo(k)fluoranthene	03/23/2022	12:15	1770	1660	2000	88	6	47-132	20	
Bis(2-chloroethoxy)methane	03/23/2022	12:15	1450	1560	2000	72	7	36-121	20	
Bis(2-chloroethyl)ether	03/23/2022	12:15	1470	1510	2000	74	3	31-120	20	
Bis(2-chloroisopropyl)ether	03/23/2022	12:15	1410	1470	2000	70	4	33-131	20	
Bis(2-ethylhexyl)phthalate	03/23/2022	12:15	1580	1550	2000	79	2	51-133	20	
Butylbenzylphthalate	03/23/2022	12:15	1670	1580	2000	84	6	48-132	20	
Caprolactam	03/23/2022	12:15	1980	2000	2000	99	1	46-117	20	
Carbazole	03/23/2022	12:15	1650	1630	2000	82	1	50-123	20	
Chrysene	03/23/2022	12:15	1680	1640	2000	84	2	50-124	20	
Dibenzo(a,h)anthracene	03/23/2022	12:15	1500	1530	2000	75	2	45-134	20	
Dibenzofuran	03/23/2022	12:15	1490	1540	2000	74	3	44-120	20	
Diethylphthalate	03/23/2022	12:15	1630	1610	2000	82	1	50-124	20	
Dimethylphthalate	03/23/2022	12:15	1610	1580	2000	80	2	48-124	20	
Di-n-butylphthalate	03/23/2022	12:15	1670	1660	2000	84	1	51-128	20	
Di-n-octylphthalate	03/23/2022	12:15	1480	1510	2000	74	2	51-128	20	
Fluoranthene	03/23/2022	12:15	1680	1690	2000	84	1	50-127	20	
Fluorene	03/23/2022	12:15	1550	1590	2000	78	3	43-125	20	
Hexachlorobenzene	03/23/2022	12:15	1630	1610	2000	82	1	45-122	20	
Hexachlorobutadiene	03/23/2022	12:15	1500	1570	2000	75	5	32-123	20	
Hexachlorocyclopentadiene	03/23/2022	12:15	0	78.7	2000		200	35-106	20	*FAIL*
Hexachloroethane	03/23/2022	12:15	1390	1430	2000	70	3	28-117	20	

CT LABORATORIES
delivering more than data from your environmental analyses

3D

Sample Description

LCSD

SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

Sample No.: 1121220 SDG No.: 168330

Analytical Method: EPA 8270D Concentration Units: ug/kg

Analytical Run #: 210458 Sample No.: 1121220 Parent Sample No.: 1121219

Analytical Prep Batch #: 94704 Analytical Preparation Date/Time: 03/21/2022 11:30

ICAL Calibration #: 1S031722

Analyte	Analysis Date/Time		Spike Result	Parent Result	Spike Amount	%R	%RPD	Control Limit (%R)	Control Limit (%RPD)
Indeno(1,2,3-cd)pyrene	03/23/2022	12:15	1510	1590	2000	76	5	45-133	20
Isophorone	03/23/2022	12:15	1460	1500	2000	73	3	30-122	20
Naphthalene	03/23/2022	12:15	1480	1560	2000	74	5	35-123	20
Nitrobenzene	03/23/2022	12:15	1490	1550	2000	74	4	34-122	20
N-Nitroso-di-n-propylamine	03/23/2022	12:15	1510	1540	2000	76	2	36-120	20
N-Nitrosodiphenylamine & Diphn	03/23/2022	12:15	3240	3270	4000	81	1	38-127	20
Pentachlorophenol	03/23/2022	12:15	1360	1290	2000	68	5	25-133	20
Phenanthrene	03/23/2022	12:15	1660	1620	2000	83	2	50-121	20
Phenol	03/23/2022	12:15	1440	1450	2000	72	1	34-121	20
Pyrene	03/23/2022	12:15	1750	1630	2000	88	7	47-127	20

RPD or Spike Recovery: 2 out of 66 outside QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Sample ID:	1121218	SDG No.:	168330
Matrix:	SOLID	Date Extracted:	03/21/2022
Date Analyzed:	03/23/2022	Time Analyzed:	11:29
Analytical Method:	EPA 8270D	Extraction Method:	SW3546
Analytical Run #:	210458	Extraction Batch #:	94704
		ICAL Calibration #:	1S031722

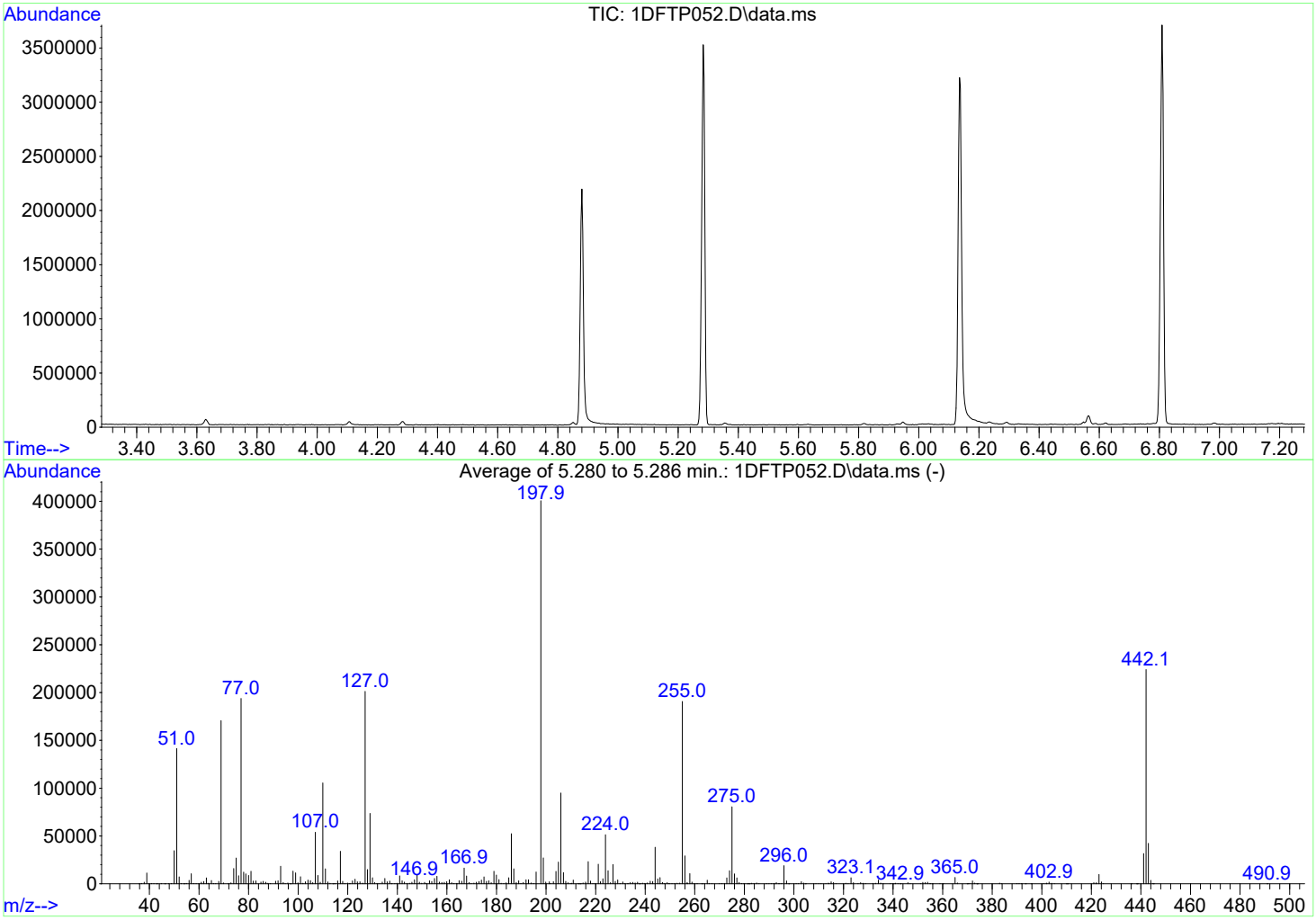
THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	MBS	1121218	03/23/2022 11:29	1S031722
2	LCSS	1121219	03/23/2022 11:52	1S031722
3	LCSDS	1121220	03/23/2022 12:15	1S031722
4	PWDF-WS-01-031722	1121147	03/23/2022 13:01	1S031722
5	PWDF-WS-02-031722	1121148	03/23/2022 13:24	1S031722
6	PWDF-WS-03-031722	1121149	03/23/2022 13:47	1S031722

Data Path : C:\INSTARCH\DATA\1S031722\
Data File : 1DFTP052.D
Acq On : 17 Mar 2022 12:36
Operator : JJY
Sample : DFTPP TUNE SVMS9169
Misc : SVMS1,25ng DFTPP
ALS Vial : 1 Sample Multiplier: 1

Integration File: DDD.p

Method : C:\INSTARCH\METHOD\1DFTPP.M
Title : DFTPP TUNE
Last Update : Thu Mar 17 12:48:04 2022



AutoFind: Scans 773, 774, 775; Background Corrected with Scan 764

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.3	141443	PASS
68	69	0.00	2	1.5	2628	PASS
70	69	0.00	2	0.5	903	PASS
127	198	10	80	50.2	201259	PASS
197	198	0.00	2	0.0	0	PASS
198	198	50	100	100.0	400619	PASS
199	198	5	9	6.8	27072	PASS
275	198	10	60	20.1	80552	PASS
365	198	1	100	1.7	6619	PASS
441	442	0.01	24	14.1	31549	PASS
442	198	50	100	55.9	224107	PASS
443	442	15	24	18.9	42315	PASS

Injection Log Summary Report

Method : C:\INSTARCH\METHOD\1S031722.M (RTE Integrator)
Title : Method for 8270 Analysis
Start (Tune) File ID : C:\INSTARCH\DATA\1S031722\1DFTP052.D
Injection Date : 17 Mar 2022 Log Time Period (hrs) : 12
Injection Time : 12:36 Total files within period : 21
Sample Directory : C:\INSTARCH\DATA\1S031722\

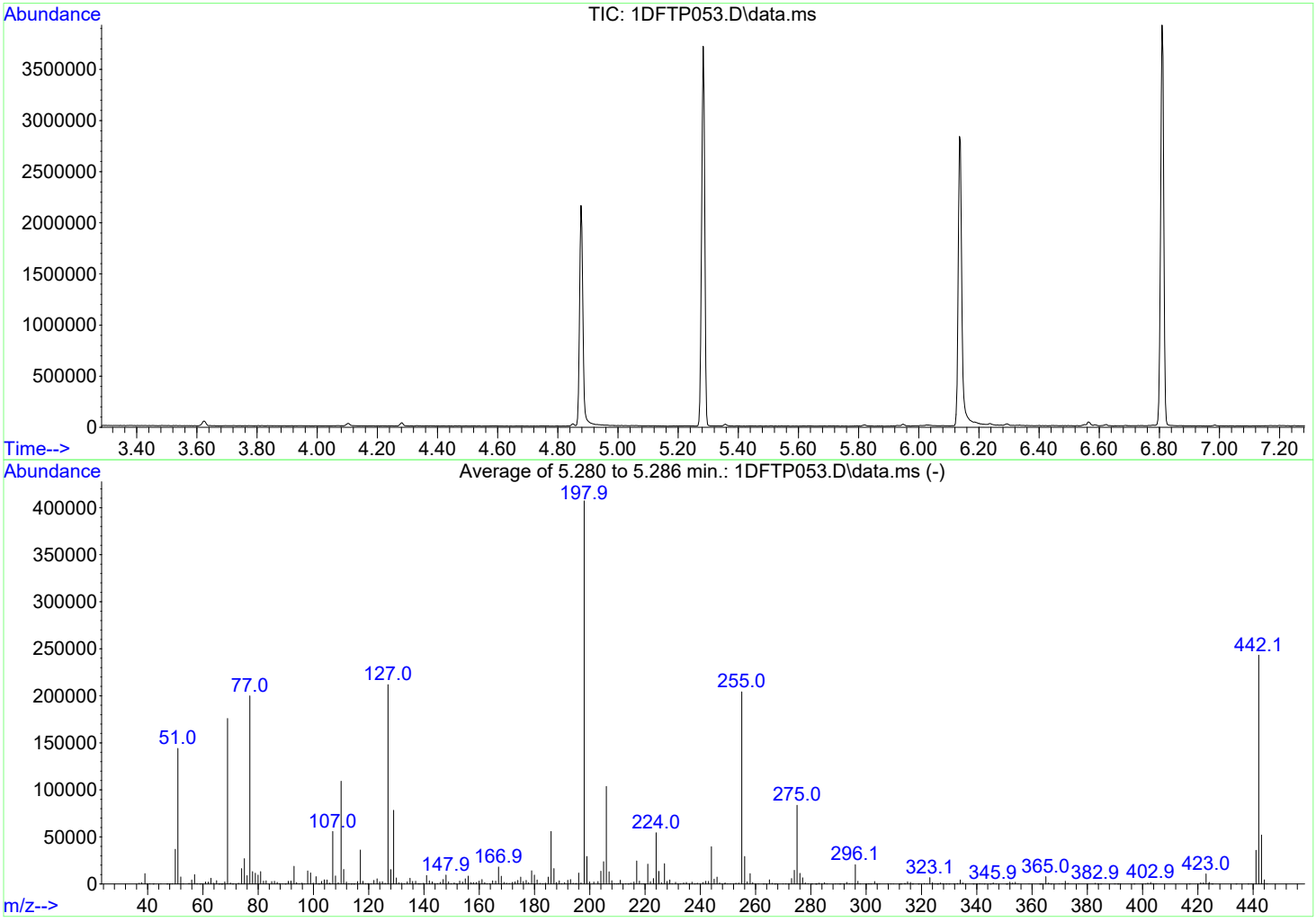
Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
1IB01	1.00	1.00	1.00	InstrumentBlank 500ul+5ul S4585A	17 Mar 2022	12:52
1ICAL7	1.00	1.00	1.00	ICAL 50 ug/ml SVMS9155 500ul+5ul S4539C	17 Mar 2022	13:15
1ICAL6	1.00	1.00	1.00	ICAL 40 ug/ml SVMS9154 500ul+5ul S4539C	17 Mar 2022	13:38
1ICAL5	1.00	1.00	1.00	ICAL 30 ug/ml SVMS9153 500ul+5ul S4539C	17 Mar 2022	14:01
1ICAL4	1.00	1.00	1.00	ICAL 20 ug/ml SVMS9152 500ul+5ul S4539C	17 Mar 2022	14:24
1ICAL3	1.00	1.00	1.00	ICAL 10 ug/ml SVMS9151 500ul+5ul S4539C	17 Mar 2022	14:47
1ICAL2	1.00	1.00	1.00	ICAL 5 ug/ml SVMS9150 500ul+5ul S4539C	17 Mar 2022	15:10
1ICAL1	1.00	1.00	1.00	ICAL 1 ug/ml SVMS9149 500ul+5ul S4539C	17 Mar 2022	15:33
1ICV1	1.00	1.00	1.00	ICV 20 ug/ml SVMS9156 500ul+5ul S4539C	17 Mar 2022	15:56
1ICV2	1.00	1.00	1.00	ICV 40 ug/ml SVMS9157 500ul+5ul S4539C	17 Mar 2022	16:19
1IB02	1.00	1.00	1.00	InstrumentBlank 500ul+5ul S4585A	17 Mar 2022	16:42
1ICAL7A	1.00	1.00	1.00	ICAL A 50 ug/ml SVMS9245 500ul+5ul S4539C	17 Mar 2022	17:04
1ICAL6A	1.00	1.00	1.00	ICAL A 40 ug/ml SVMS9244 500ul+5ul S4539C	17 Mar 2022	17:28
1ICAL5A	1.00	1.00	1.00	ICAL A 30 ug/ml SVMS9243 500ul+5ul S4539C	17 Mar 2022	17:51
1ICAL4A	1.00	1.00	1.00	ICAL A 20 ug/ml SVMS9242 500ul+5ul S4539C	17 Mar 2022	18:13
1ICAL3A	1.00	1.00	1.00	ICAL A 10 ug/ml SVMS9241 500ul+5ul S4539C	17 Mar 2022	18:37
1ICAL2A	1.00	1.00	1.00	ICAL A 5 ug/ml SVMS9240 500ul+5ul S4539C	17 Mar 2022	19:00
1ICAL1A	1.00	1.00	1.00	ICAL A 1 ug/ml SVMS9239 500ul+5ul S4539C	17 Mar 2022	19:23
1ICV1A	1.00	1.00	1.00	ICV A 20 ug/ml SVMS9246 500ul+5ul S4539C	17 Mar 2022	19:46
1ICV2A	1.00	1.00	1.00	ICV A 40 ug/ml SVMS9247 500ul+5ul S4539C	17 Mar 2022	20:08
1IB03	1.00	1.00	1.00	InstrumentBlank 500ul+5ul S4585A	17 Mar 2022	20:31

Data Path : C:\INSTARCH\DATA\1S032322\
Data File : 1DFTP053.D
Acq On : 23 Mar 2022 10:24
Operator : JJY
Sample : DFTPP TUNE SVMS9169
Misc : SVMS1,25ng DFTPP
ALS Vial : 1 Sample Multiplier: 1

Integration File: DDD.p

Method : C:\INSTARCH\METHOD\1DFTPP.M
Title : DFTPP TUNE
Last Update : Thu Mar 17 12:48:04 2022



AutoFind: Scans 773, 774, 775; Background Corrected with Scan 765

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.4	144060	PASS
68	69	0.00	2	1.3	2241	PASS
70	69	0.00	2	0.6	1025	PASS
127	198	10	80	52.0	211968	PASS
197	198	0.00	2	0.3	1196	PASS
198	198	50	100	100.0	407253	PASS
199	198	5	9	7.2	29301	PASS
275	198	10	60	20.6	83720	PASS
365	198	1	100	1.9	7858	PASS
441	442	0.01	24	14.7	35787	PASS
442	198	50	100	59.7	243200	PASS
443	442	15	24	21.4	52013	PASS

Injection Log Summary Report

Method : C:\INSTARCH\METHOD\1S031722.M (RTE Integrator)
Title : Method for 8270 Analysis
Start (Tune) File ID : C:\INSTARCH\DATA\1S032322\1DFTP053.D
Injection Date : 23 Mar 2022 Log Time Period (hrs) : 12
Injection Time : 10:24 Total files within period : 15
Sample Directory : C:\INSTARCH\DATA\1S032322\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
1CCV053	1.00	1.00	1.00	CCV 20 ug/ml SVMS9158 500ul+5ul S4539C	23 Mar 2022	10:43
1CCV054	1.00	1.00	1.00	CCV A 20 ug/ml SVMS9248 500ul+5ul S4539C	23 Mar 2022	11:06
1MBS01	1.00	1.00	1.00	210458,MBS, 1121218,500ul+5ul S4585A	23 Mar 2022	11:29
1LCSS01	1.00	1.00	1.00	210458,LCSS, 1121219,500ul+5ul S4585A	23 Mar 2022	11:52
1LCSDS01	1.00	1.00	1.00	210458,LCSDS, 1121220,500ul+5ul S4585A	23 Mar 2022	12:15
1IB01	1.00	1.00	1.00	InstrumentBlank 500ul+5ul S4585A	23 Mar 2022	12:38
1121147	1.00	1.00	1.00	210458,1121147, 500ul+5ul S4585A	23 Mar 2022	13:01
1121148	1.00	1.00	1.00	210458,1121148, 500ul+5ul S4585A	23 Mar 2022	13:24
1121149	1.00	1.00	1.00	210458,1121149, 500ul+5ul S4585A	23 Mar 2022	13:47
1121147R	1.00	1.00	1.00	210458,1121147, 500ul+5ul S4585A	23 Mar 2022	14:11
1121148R	1.00	1.00	1.00	210458,1121148, 500ul+5ul S4585A	23 Mar 2022	14:34
1121149R	1.00	1.00	1.00	210458,1121149, 500ul+5ul S4585A	23 Mar 2022	14:57
1IB02	1.00	1.00	1.00	InstrumentBlank 500ul+5ul S4585A	23 Mar 2022	15:20
1CCV055	1.00	1.00	1.00	CCV 20 ug/ml SVMS9158 500ul+5ul S4539C	23 Mar 2022	15:43
1CCV056	1.00	1.00	1.00	CCV A 20 ug/ml SVMS9248 500ul+5ul S4539C	23 Mar 2022	16:06

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Contract :
Project : Site : Location : Group :
Lab File ID (Standard): 1ICAL4.D Date Analyzed : 17 Mar 2022
Instrument ID : SVMS1 Time Analyzed : 14:24
GC Column : ID : (mm) Heated Purge (Y:N) :

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	Area #	RT #	Area #	RT #	Area #	RT #
ICAL MID PT	197336	3.79	990240	5.42	517266	7.34
UPPER LIMIT	394672	4.29	1980480	5.92	1034532	7.84
LOWER LIMIT	98668	3.29	495120	4.92	258633	6.84
File ID Sample						
1121147 210458,11	184129	3.78	929969	5.42	496036	7.34
1121147R 210458,11	197128	3.79	1002292	5.42	532495	7.34
1121148 210458,11	187847	3.78	962021	5.42	516859	7.34
1121148R 210458,11	202359	3.78	1035745	5.42	549826	7.34
1121149 210458,11	206818	3.78	1057810	5.42	575742	7.34
1121149R 210458,11	205444	3.78	1043046	5.42	569264	7.34
1CCV053 CCV 20 ug	195239	3.78	974402	5.42	511342	7.34
1CCV054 CCV A 20	199579	3.78	985575	5.42	534116	7.34
1CCV055 CCV 20 ug	198695	3.78	973904	5.42	513682	7.34
1CCV056 CCV A 20	220140	3.78	1148915	5.42	607939	7.34
1IB01 Instrumen	199479	3.78	1013334	5.42	561720	7.34
1IB02 Instrumen	213474	3.79	1092264	5.42	600505	7.35
1LCSDS01 210458,LC	200092	3.78	995042	5.42	533613	7.34
1LCSS01 210458,LC	190144	3.78	931296	5.42	509638	7.34
1MBS01 210458,MB	207220	3.78	1019906	5.42	557629	7.34

IS1 (DCB) = 14Diclbenzd4
IS2 (NPT) = Naphthalened8
IS3 (ANT) = Acenaphthened10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Contract :
Project : Site : Location : Group :
Lab File ID (Standard): 1ICAL4.D Date Analyzed : 17 Mar 2022
Instrument ID : SVMS1 Time Analyzed : 14:24
GC Column : ID : (mm) Heated Purge (Y:N) :

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	Area #	RT #	Area #	RT #	Area #	RT #
ICAL MID PT	663161	8.46	360611	10.22	228088	11.49
UPPER LIMIT	1326322	8.96	721222	10.72	456176	11.99
LOWER LIMIT	331581	7.96	180306	9.72	114044	10.99
File ID Sample						
1121147 210458,11	622142	8.46	411207	10.21	282834	11.49
1121147R 210458,11	655610	8.46	407349	10.21	268689	11.49
1121148 210458,11	640555	8.45	380396	10.21	249323	11.49
1121148R 210458,11	691408	8.45	433172	10.22	293418	11.49
1121149 210458,11	687969	8.45	392584	10.21	222846	11.49
1121149R 210458,11	704748	8.46	443339	10.21	299901	11.49
1CCV053 CCV 20 ug	658155	8.46	390284	10.22	260793	11.49
1CCV054 CCV A 20	638687	8.46	367362	10.21	211529	11.48
1CCV055 CCV 20 ug	663388	8.45	389450	10.22	268152	11.49
1CCV056 CCV A 20	737171	8.46	452707	10.21	282968	11.48
1IB01 Instrumen	695567	8.45	394330	10.21	213880	11.49
1IB02 Instrumen	710493	8.46	423363	10.21	241125	11.48
1LCSDS01 210458,LC	675653	8.46	370728	10.22	214991	11.49
1LCSS01 210458,LC	635897	8.46	377200	10.21	241802	11.49
1MBS01 210458,MB	691836	8.45	414591	10.21	257539	11.49

IS4 (PHN) = Phenanthrd10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

SEMI - VOLATILE ORGANIC ANALYSIS
SAMPLE DATA
DOCUMENTS

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121147.D Vial: 8
Acq On : 23 Mar 2022 13:01 Operator: JJY
Sample : 210458,1121147, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:18:09 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	184129	20.00	ug/mL	0.00
21) Naphthalened8	5.424	136	929969	20.00	ug/mL	0.00
39) Acenaphthened10	7.342	164	496036	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	622142	20.00	ug/mL	0.00
75) Chrysene-d12	10.212	240	411207	20.00	ug/mL	0.00
86) Perylene-d12	11.488	264	282834	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.674	112	166375	33.25	%REC	0.02
Spiked Amount 100.000			Recovery = 33.25%			
7) SURRPhenol-d5	3.427	99	217775	36.29	%REC	0.01
Spiked Amount 100.000			Recovery = 36.29%			
22) SURRNitrbenzened5	4.433	82	96014	36.23	%REC	0.00
Spiked Amount 100.000			Recovery = 36.23%			
44) SURR2Flbiphenyl	6.748	172	210386	29.01	%REC	0.00
Spiked Amount 100.000			Recovery = 29.01%			
62) SURR246Tribrphenl	7.979	330	21291	16.79	%REC	0.00
Spiked Amount 100.000			Recovery = 16.79%			
78) SURRTerphenyl-d14	9.499	244	3214	1.06	%REC	0.00
Spiked Amount 100.000			Recovery = 1.06%			
Target Compounds						Qvalue
2) Ntrsdimeth	2.080	74	15217	1.8460	ug/mL#	28
3) Pyridine	1.998	79	4669	0.3412	ug/mL	60
5) Aniline	3.438	93	7968	0.4395	ug/mL#	1
6) bis2Clethletr	3.523	93	2439	0.2001	ug/mL#	1
8) Phenol	3.441	94	454331	26.5243	ug/mL	99
9) 2-Cl-phenol	3.572	128	9009	0.7439	ug/mL	88
10) 13Diclbenz	3.722	146	16105	1.1166	ug/mL	97
11) 14Diclbenz	3.805	146	11194	0.7925	ug/mL	97
12) 12Diclbenz	3.967	146	20125	1.5015	ug/mL	97
13) Benzyl alcoho	3.955	108	8264	1.0455	ug/mL	89
14) bis2clispreth	4.052	45	2522	0.1767	ug/mL	68
15) 2Methylphenol	4.089	107	21971	2.3150	ug/mL	92
16) Ntrspyrrol	4.257	100	1703	0.3008	ug/mL#	1
17) Acetophenone	4.254	105	147769	8.8772	ug/mL	98
18) Hexaclethane	4.362	117	2148	0.3784	ug/mL#	14
19) N-Ntrsdinprop	4.313	70	21385	2.4667	ug/mL	62
20) 3&4Methylphenol	4.285	107	57655	4.9691	ug/mL	97
23) Nitrobenzene	4.418	77	7423	0.5707	ug/mL#	21
24) Isophorone	4.742	82	1868	0.0752	ug/mL#	17
25) 2-Nitrophenol	4.870	139	2509	0.8988	ug/mL	59
26) 24Dimthpheno	5.007	122	1699	0.1863	ug/mL	94
27) bis2clethoxym	5.254	93	1027	0.0623	ug/mL	88
28) 24Diclphenol	5.234	162	1849	0.1495	ug/mL#	72
29) 124Triclbenz	5.350	180	6535	0.4260	ug/mL	89
30) Benzoic acid	5.120	122	24633	10.4098	ug/mL	98
31) Naphthalene	5.453	128	485057	10.2109	ug/mL	99
32) 4-Cl-aniline	5.686	127	1738	0.0949	ug/mL	82
33) 26Diclphenol	5.566	162	2021	0.1643	ug/mL#	52
36) 4Cl3methylphe	6.186	107	3207	0.2337	ug/mL	87
37) 2Methylnaphth	6.345	142	35986	1.0581	ug/mL	97
38) 1Methylnaphth	6.450	141	37051	1.2668	ug/mL	98
41) 1245Tetrclbenz	6.510	216	3669	0.1709	ug/mL	91
42) 246Triclpheno	6.660	196	2157	0.5705	ug/mL	85
43) 245Triclpheno	6.660	196	2157	0.6328	ug/mL#	67

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121147.D Vial: 8
Acq On : 23 Mar 2022 13:01 Operator: JJY
Sample : 210458,1121147, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:18:09 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

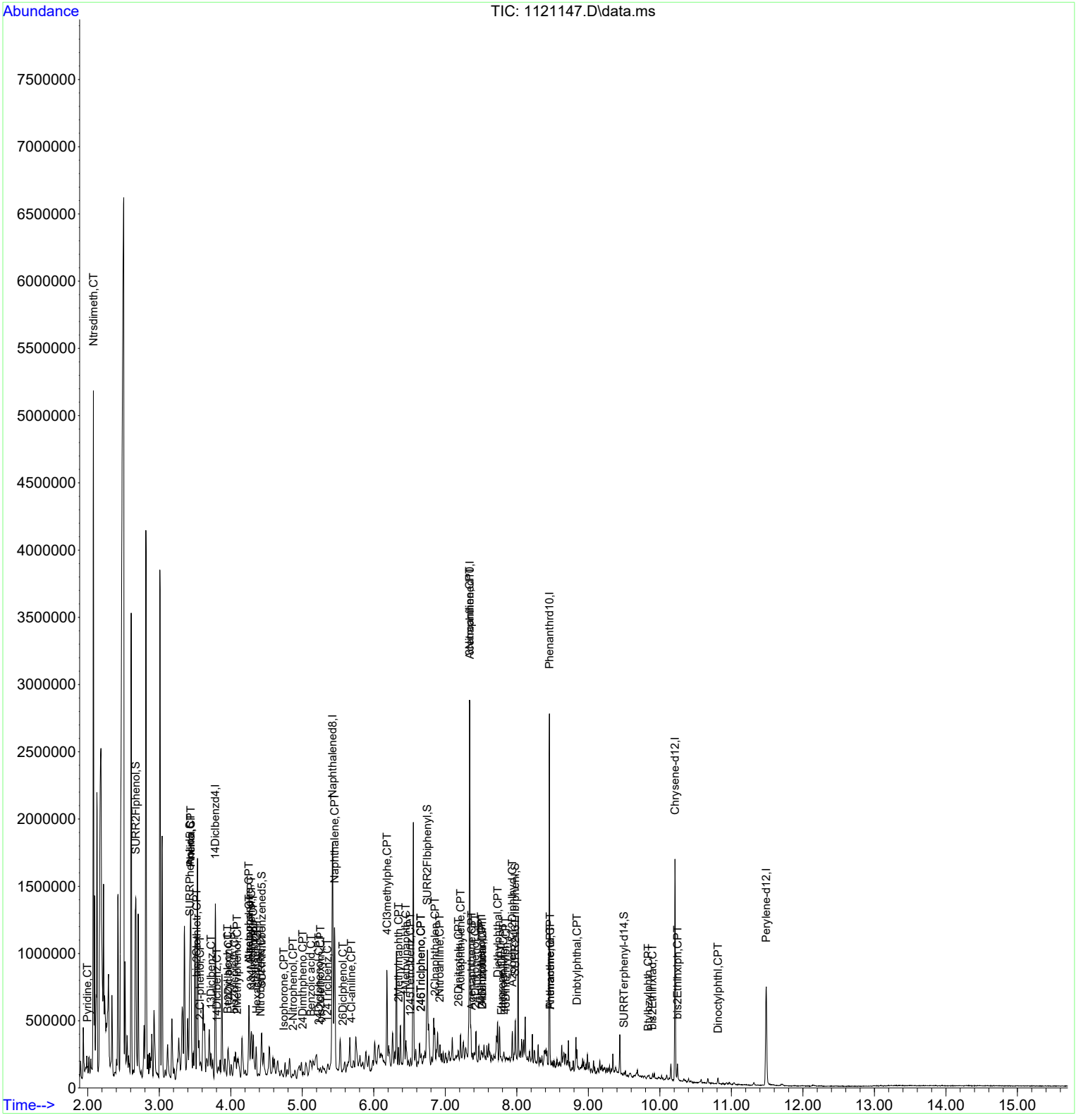
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) 2Clnaphthalen	6.856	162	18945	0.5392 ug/mL	93
46) 2Nitroaniline	6.922	65	4286	0.8629 ug/mL#	30
47) Acnaphthylene	7.214	152	45240	0.8253 ug/mL	98
49) 26Dinitrotolu	7.183	165	2051	0.2691 ug/mL#	38
50) Acenaphthene	7.368	154	4147	0.1430 ug/mL	91
51) 3Nitroaniline	7.339	138	708	0.4409 ug/mL#	1
52) 24Dinitphenol	7.419	184	717	3.8720 ug/mL#	51
53) Dibenzofuran	7.516	168	4886	0.0469 ug/mL	88
54) 24Dinitrotolu	7.518	165	5195	0.8196 ug/mL	64
55) 4-Nitrophenol	7.504	65	4806	2.6288 ug/mL#	26
58) Fluorene	7.788	166	4158	0.0678 ug/mL	71
60) Diethylphthal	7.732	149	11520	0.3393 ug/mL	98
61) 4Nitroaniline	7.811	138	1722	0.6488 ug/mL#	44
64) 46Dinit2mylph	7.845	198	1480	3.3820 ug/mL#	27
66) Azobenz&12Diphlhyd	7.936	182	22501	2.5997 ug/mL#	1
68) Hexaclbenzene	8.209	284	466	Below Cal	74
70) Phenanthrene	8.467	178	4387	0.0363 ug/mL	93
71) Anthracene	8.467	178	4387	0.1283 ug/mL	93
73) Dinbtylphthal	8.840	149	38898	1.0561 ug/mL	98
79) Btylbzylphth	9.837	149	1902	0.5864 ug/mL#	65
80) bis2Ethlhxlad	9.897	129	4993	0.8522 ug/mL	74
84) bis2Ethlhxlph	10.246	149	27163	1.6469 ug/mL	96
85) Dinoctylphthl	10.812	149	4339	0.7486 ug/mL#	78

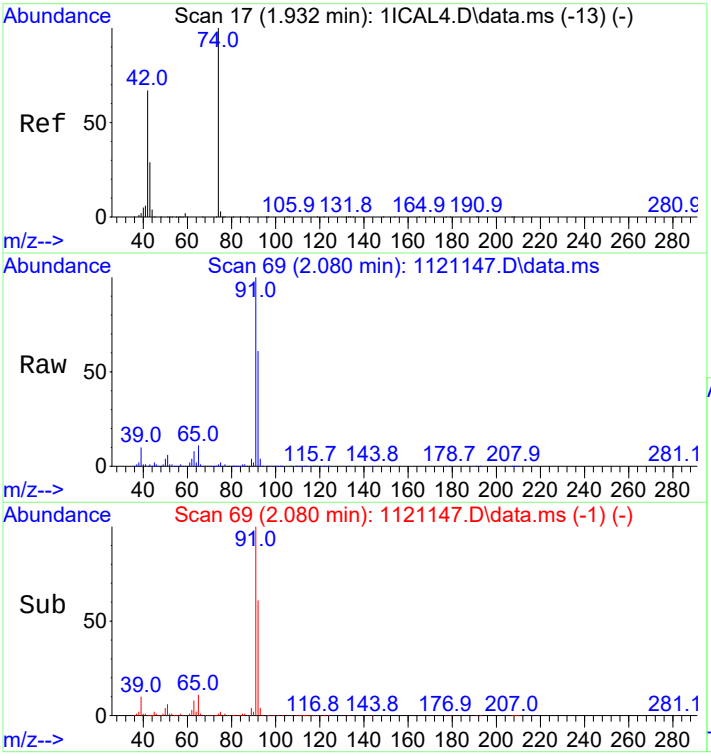
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121147.D Vial: 8
Acq On : 23 Mar 2022 13:01 Operator: JJY
Sample : 210458,1121147, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:18:09 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

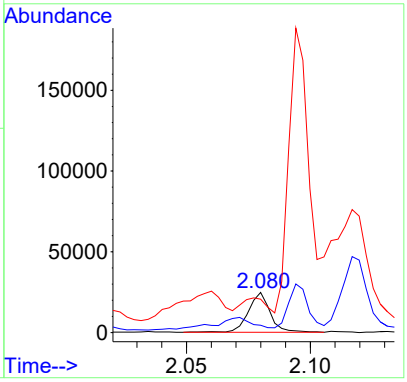


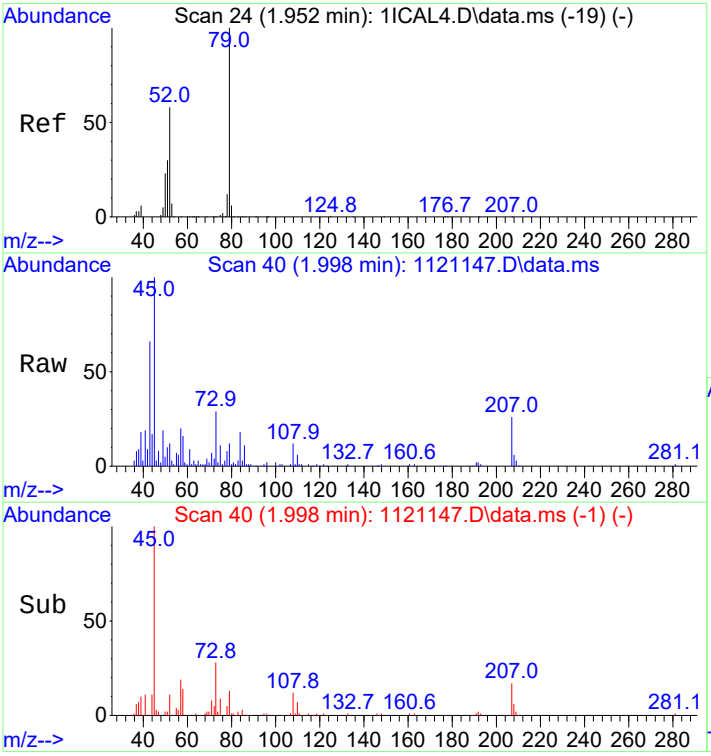


#2
Ntrsdimeth
Concen: 1.85 ug/mL
RT: 2.080 min Scan# 69
Delta R.T. 0.148 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 74 Resp: 15217

Ion	Ratio	Lower	Upper
74	100		
42	3.6	36.9	96.9#
43	0.0	0.0	58.9

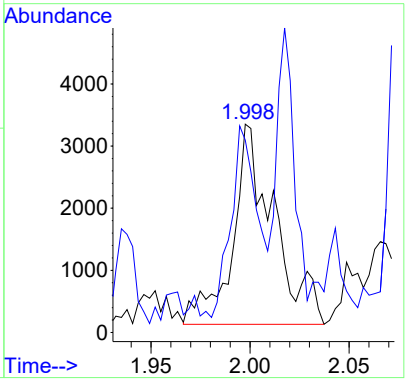


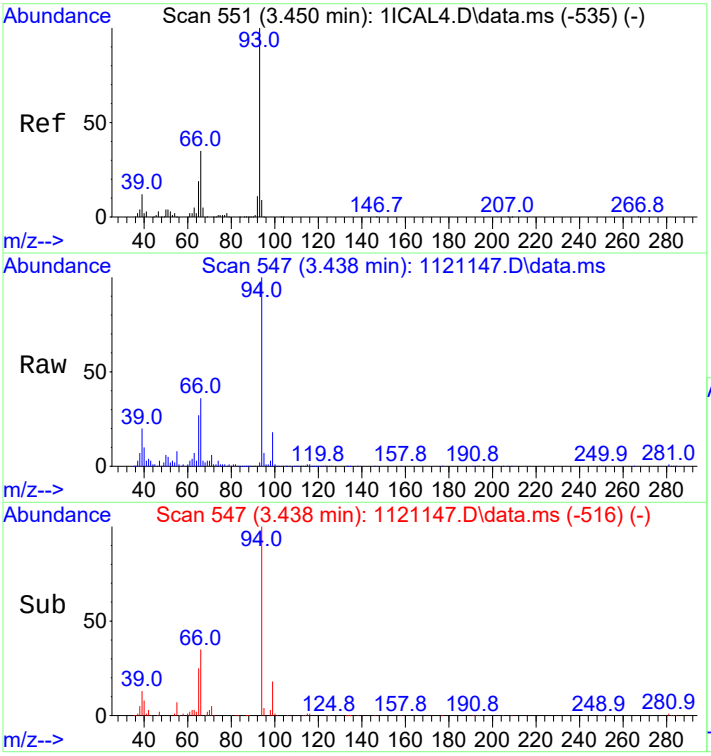


#3
Pyridine
Concen: 0.34 ug/mL
RT: 1.998 min Scan# 40
Delta R.T. 0.046 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 79 Resp: 4669

Ion	Ratio	Lower	Upper
79	100		
52	87.3	27.7	87.7

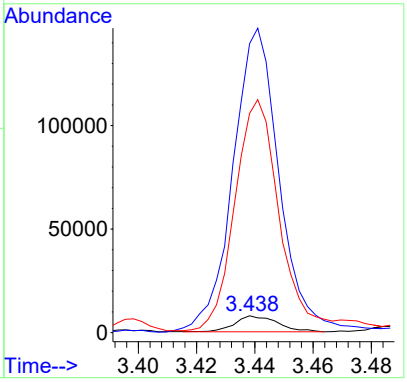


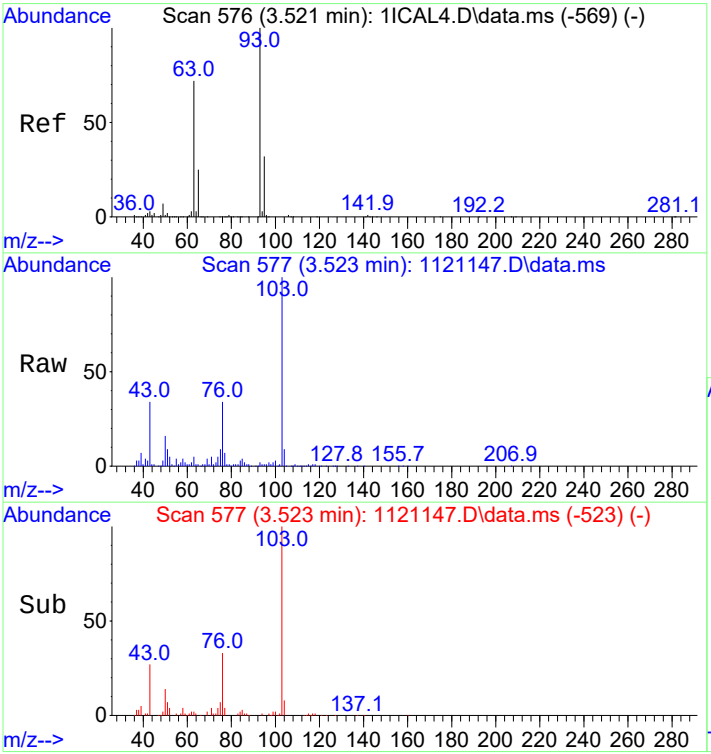


#5
Aniline
Concen: 0.44 ug/mL
RT: 3.438 min Scan# 547
Delta R.T. -0.012 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 93 Resp: 7968

Ion	Ratio	Lower	Upper
93	100		
66	2105.8	5.7	65.7#
65	1524.8	0.0	48.1#

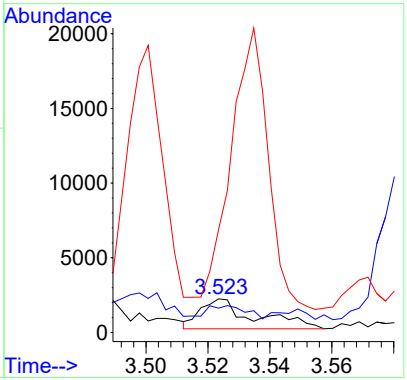


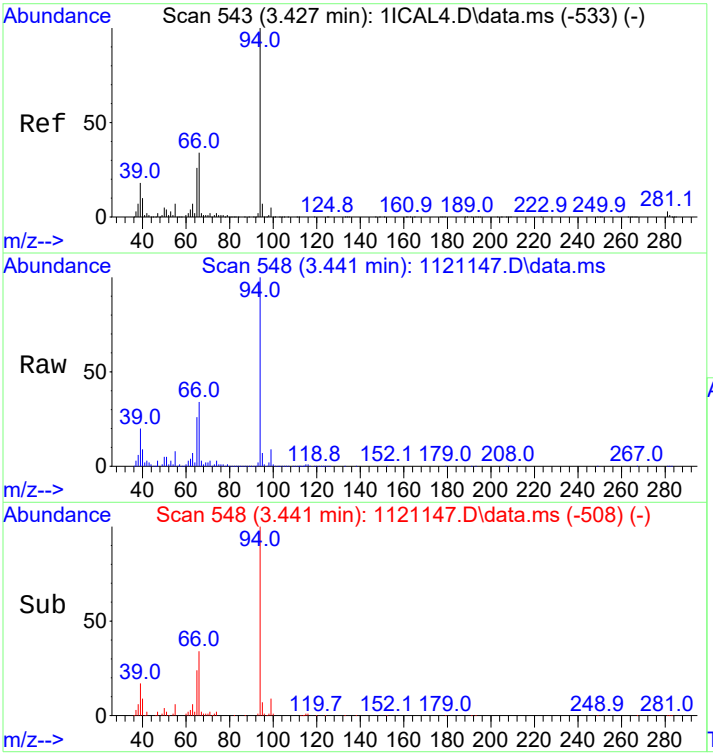


#6
bis2Clethletr
Concen: 0.20 ug/mL
RT: 3.523 min Scan# 577
Delta R.T. 0.002 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 93 Resp: 2439

Ion	Ratio	Lower	Upper
93	100		
95	27.3	1.7	61.7
63	262.0	41.1	101.1#

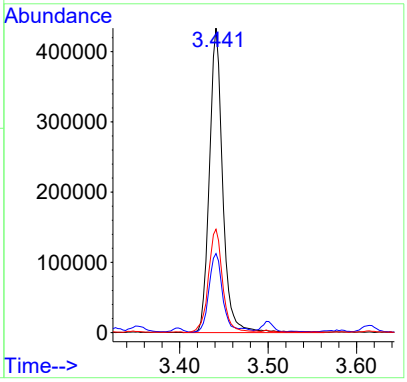


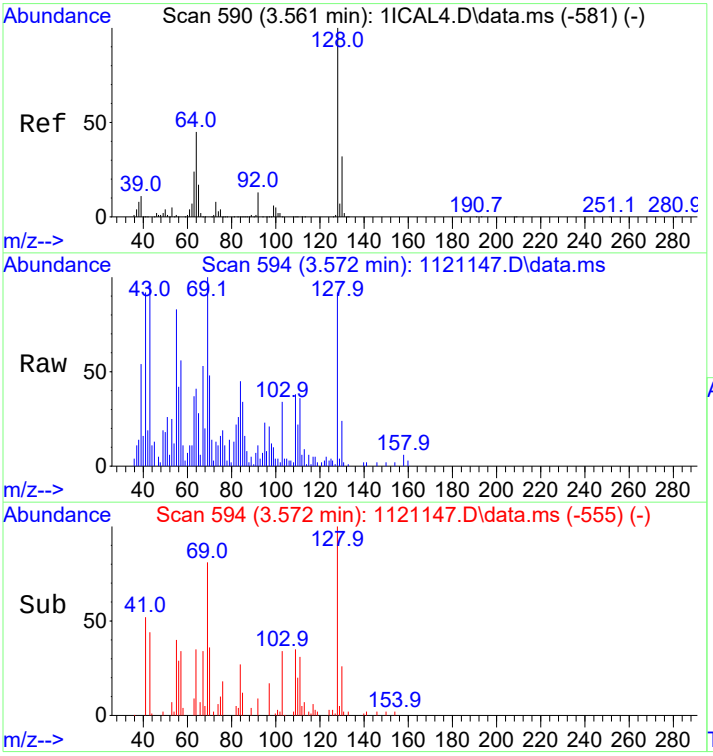


#8
Phenol
Concen: 26.52 ug/mL
RT: 3.441 min Scan# 548
Delta R.T. 0.014 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 94 Resp: 454331

Ion	Ratio	Lower	Upper
94	100		
65	25.4	0.0	56.1
66	33.8	4.1	64.1

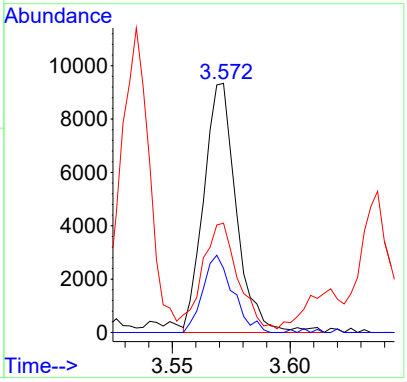


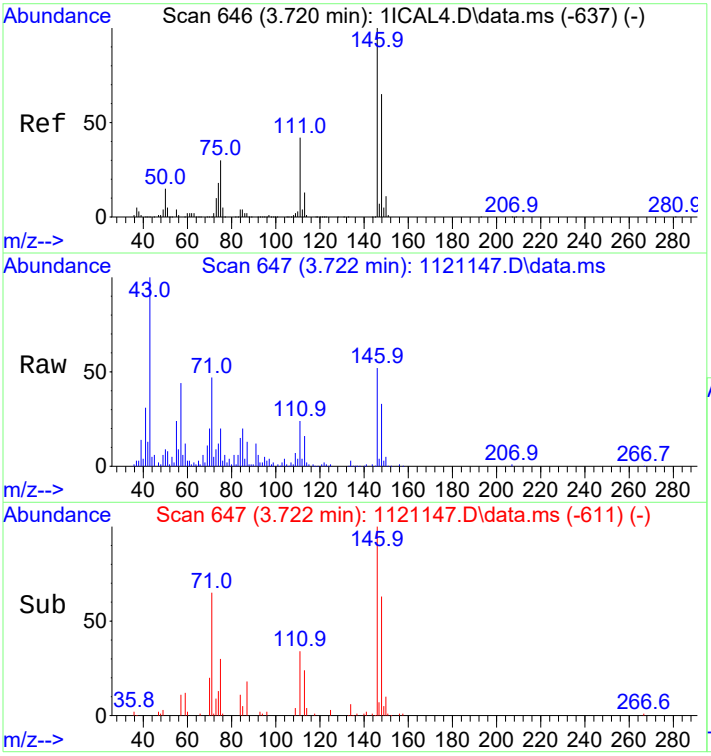


#9
2-Cl-phenol
Concen: 0.74 ug/mL
RT: 3.572 min Scan# 594
Delta R.T. 0.011 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:128 Resp: 9009

Ion	Ratio	Lower	Upper
128	100		
130	25.7	1.8	61.8
64	36.8	14.7	74.7

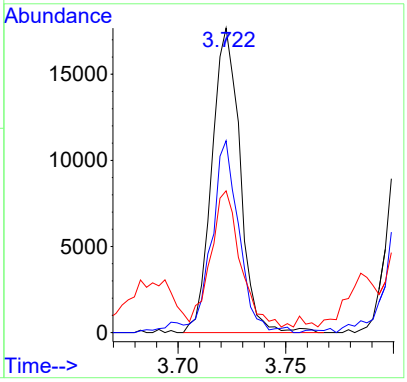


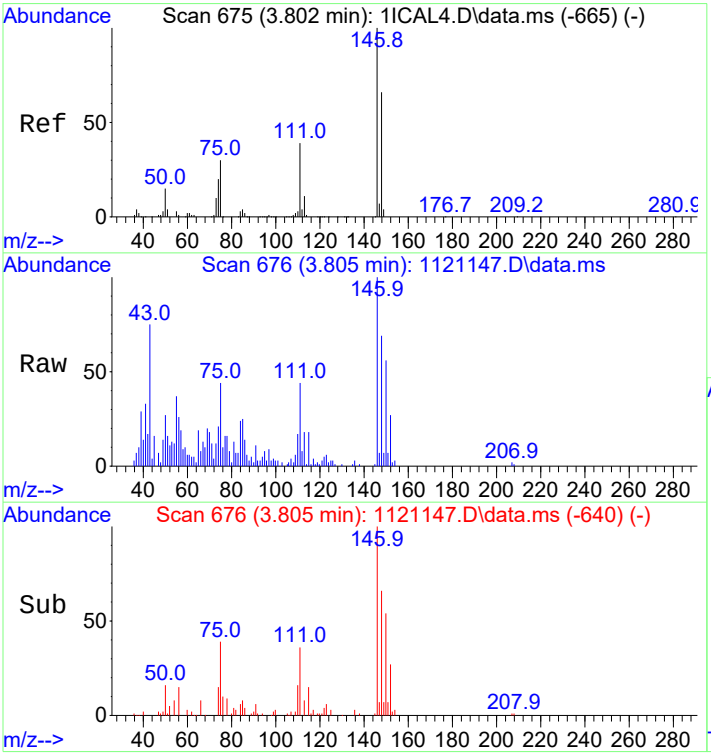


#10
13Diclbenz
Concen: 1.12 ug/mL
RT: 3.722 min Scan# 647
Delta R.T. 0.002 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:146 Resp: 16105

Ion	Ratio	Lower	Upper
146	100		
148	62.3	35.4	95.4
111	42.4	11.7	71.7

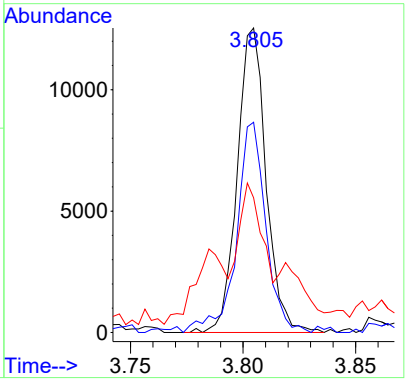


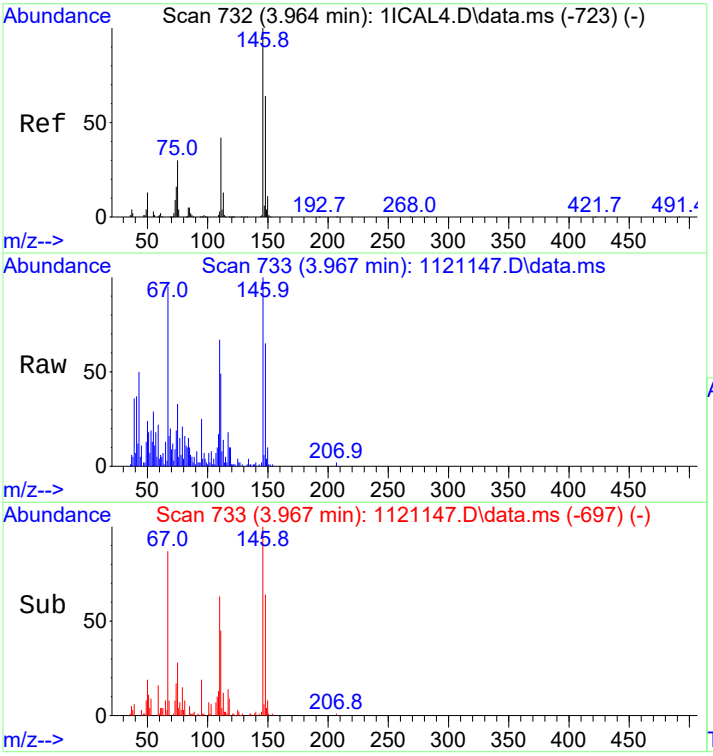


#11
14Diclbenz
Concen: 0.79 ug/mL
RT: 3.805 min Scan# 676
Delta R.T. 0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:146 Resp: 11194

Ion	Ratio	Lower	Upper
146	100		
148	69.0	35.6	95.6
111	38.3	9.1	69.1

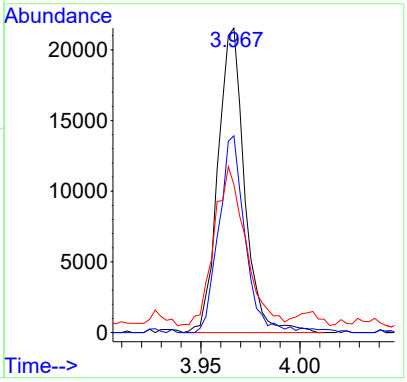


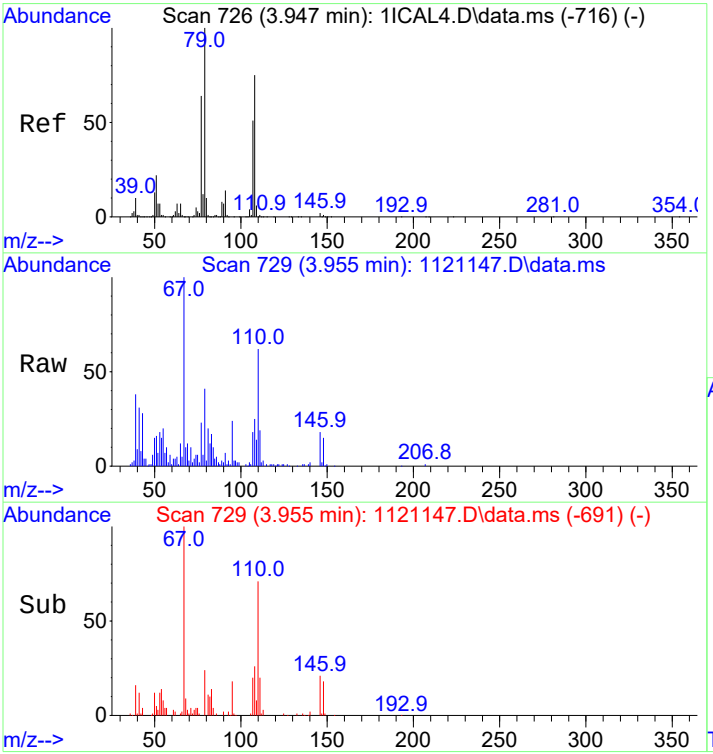


#12
12Diclbenz
Concen: 1.50 ug/mL
RT: 3.967 min Scan# 733
Delta R.T. 0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:146 Resp: 20125

Ion	Ratio	Lower	Upper
146	100		
148	64.6	33.9	93.9
111	45.9	11.9	71.9

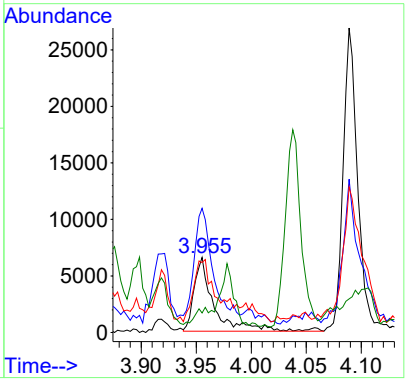


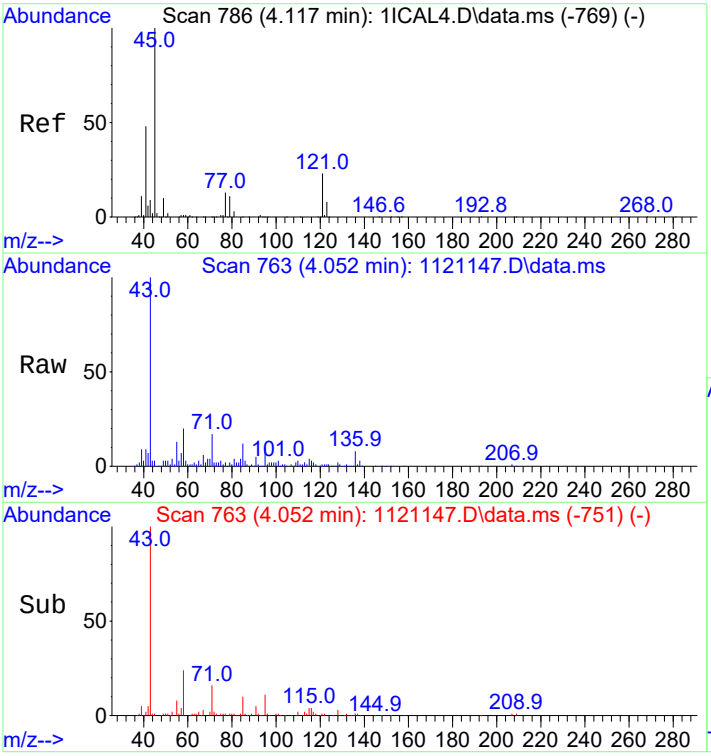


#13
Benzyl alcoho
Concen: 1.05 ug/mL
RT: 3.955 min Scan# 729
Delta R.T. 0.008 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:108 Resp: 8264

Ion	Ratio	Lower	Upper
108	100		
79	149.7	103.7	163.7
77	79.9	56.1	116.1
91	15.6	0.0	49.3

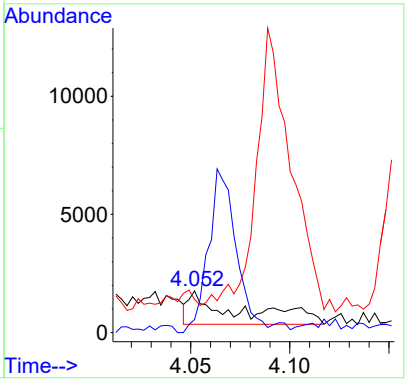


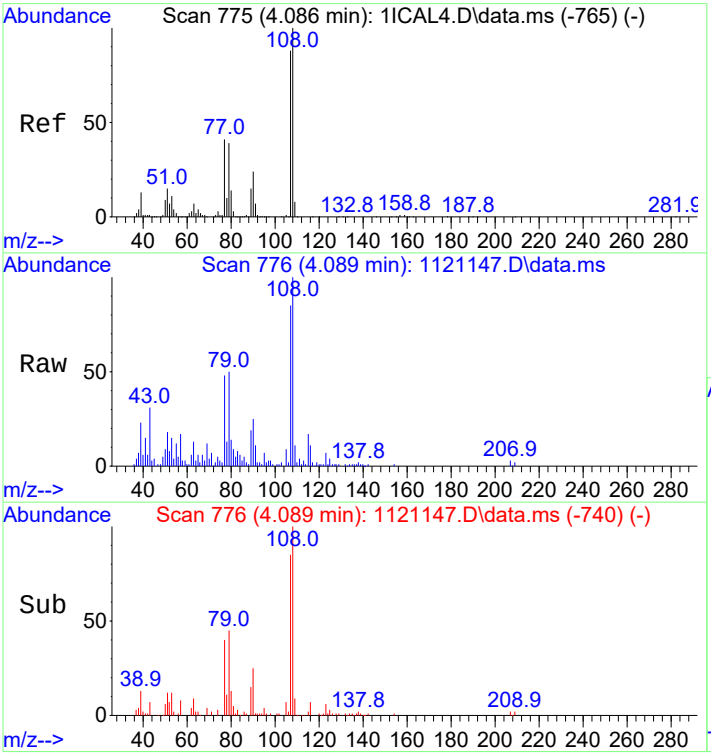


#14
bis2clispreth
Concen: 0.18 ug/mL
RT: 4.052 min Scan# 763
Delta R.T. -0.065 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 45 Resp: 2522

Ion	Ratio	Lower	Upper
45	100		
121	39.0	0.0	53.5
77	29.7	0.0	45.7

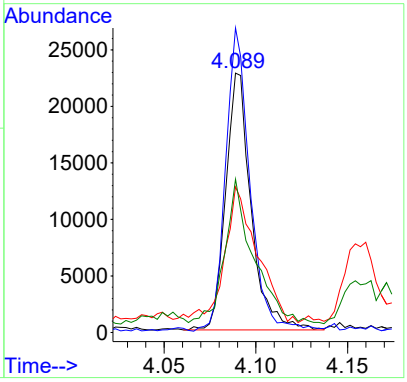


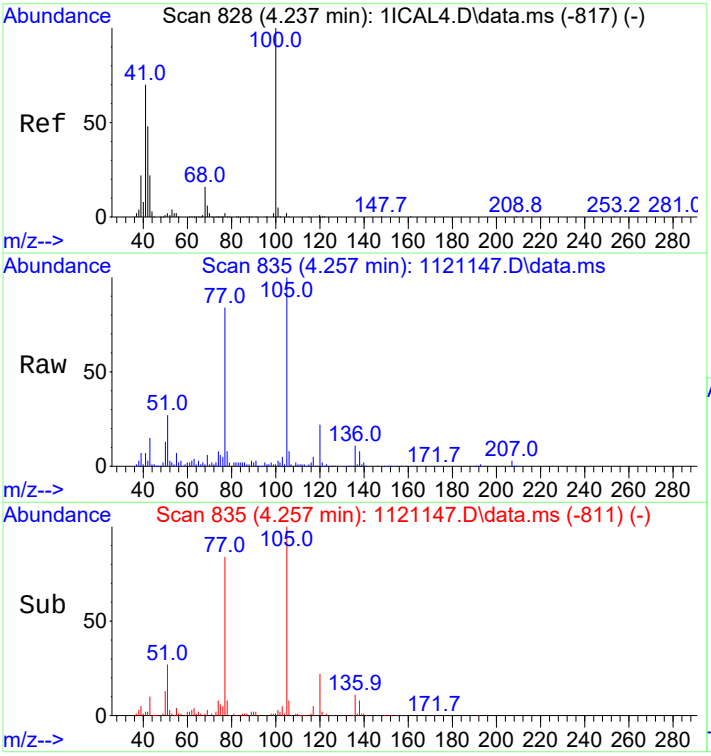


#15
2Methylphenol
Concen: 2.32 ug/mL
RT: 4.089 min Scan# 776
Delta R.T. 0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:107 Resp: 21971

Ion	Ratio	Lower	Upper
107	100		
108	117.0	83.3	143.3
77	52.3	16.9	76.9
79	56.2	14.5	74.5

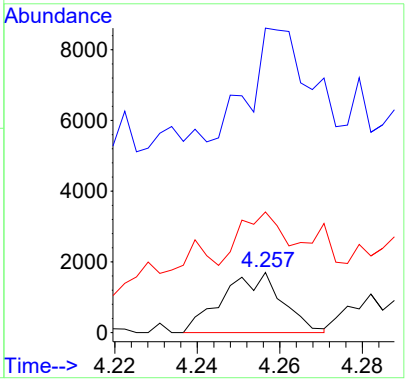


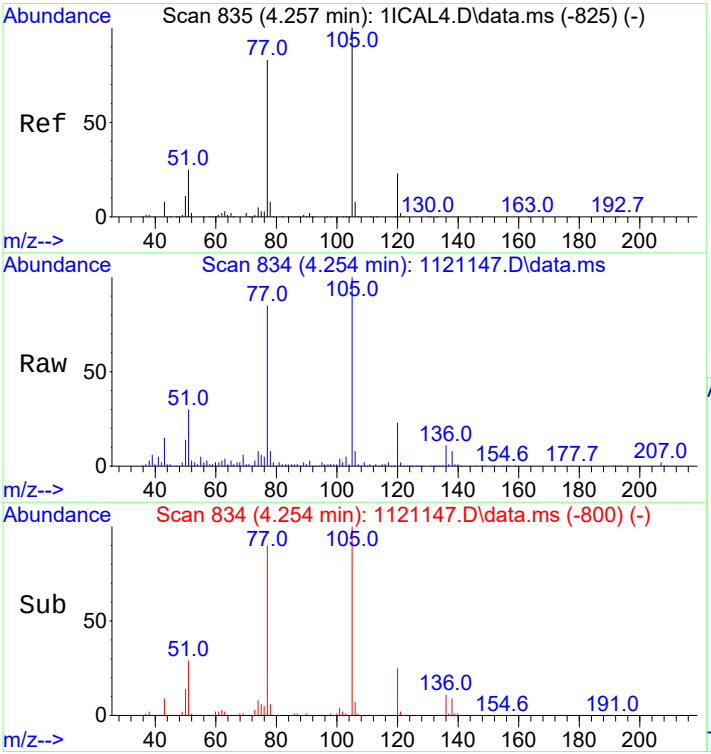


#16
Ntrspyrrol
Concen: 0.30 ug/mL
RT: 4.257 min Scan# 835
Delta R.T. 0.019 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:100 Resp: 1703

Ion	Ratio	Lower	Upper
100	100		
41	188.2	39.9	99.9#
42	88.7	18.4	78.4#

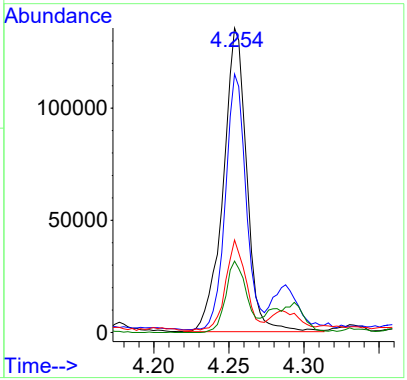


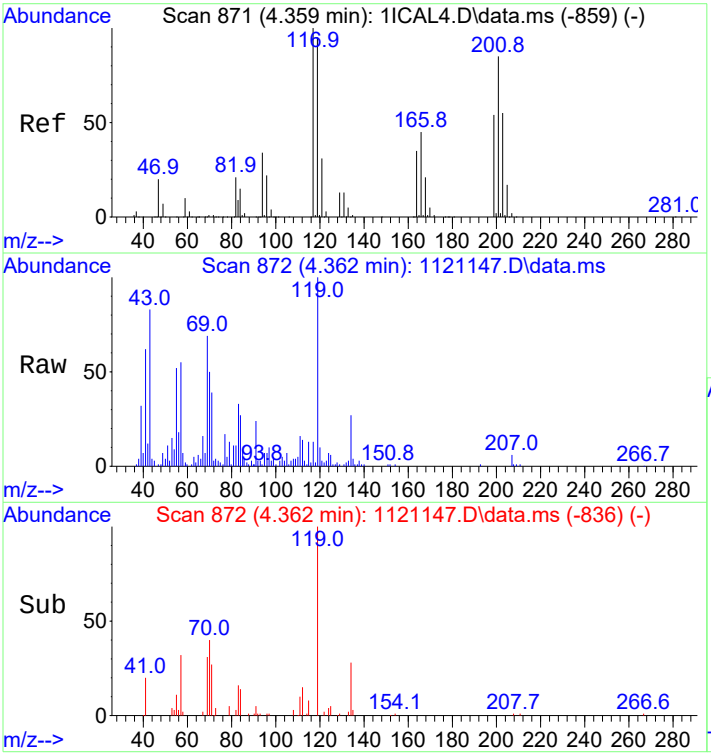


#17
Acetophenone
Concen: 8.88 ug/mL
RT: 4.254 min Scan# 834
Delta R.T. -0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:105 Resp: 147769

Ion	Ratio	Lower	Upper
105	100		
77	83.7	53.4	113.4
51	29.0	0.0	55.3
120	23.3	0.0	52.9

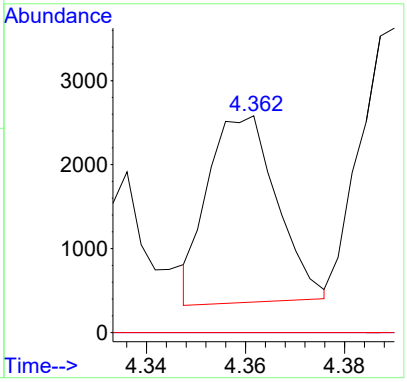


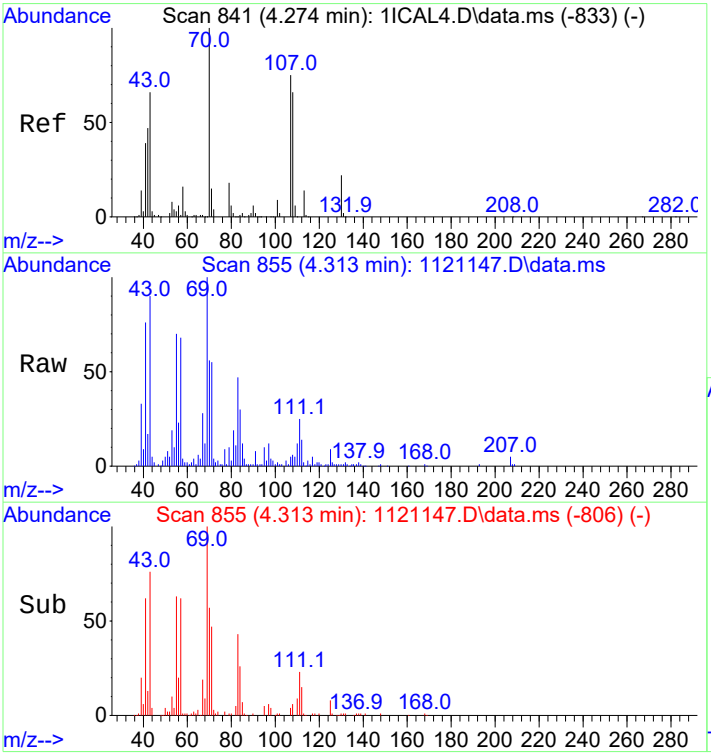


#18
Hexaclethane
Concen: 0.38 ug/mL
RT: 4.362 min Scan# 872
Delta R.T. 0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:117 Resp: 2148

Ion	Ratio	Lower	Upper
117	100		
201	0.0	55.1	115.1#
199	0.0	24.2	84.2#

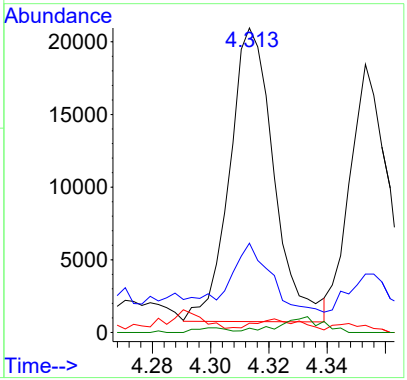


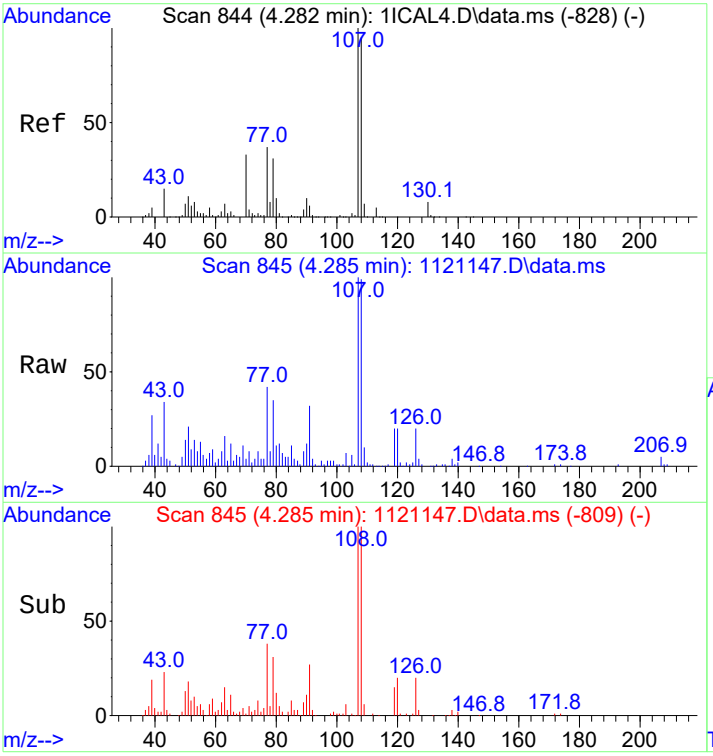


#19
N-Ntrsdinprop
Concen: 2.47 ug/mL
RT: 4.313 min Scan# 855
Delta R.T. 0.039 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 70 Resp: 21385

Ion	Ratio	Lower	Upper
70	100		
42	23.6	21.6	81.6
101	2.3	0.0	39.8
130	1.4	0.0	51.9

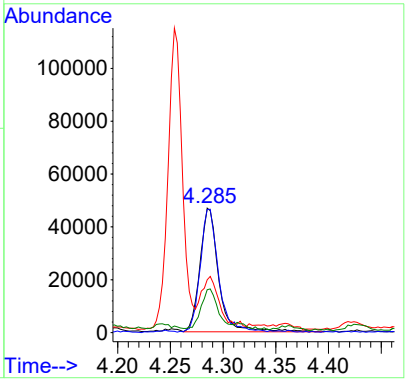


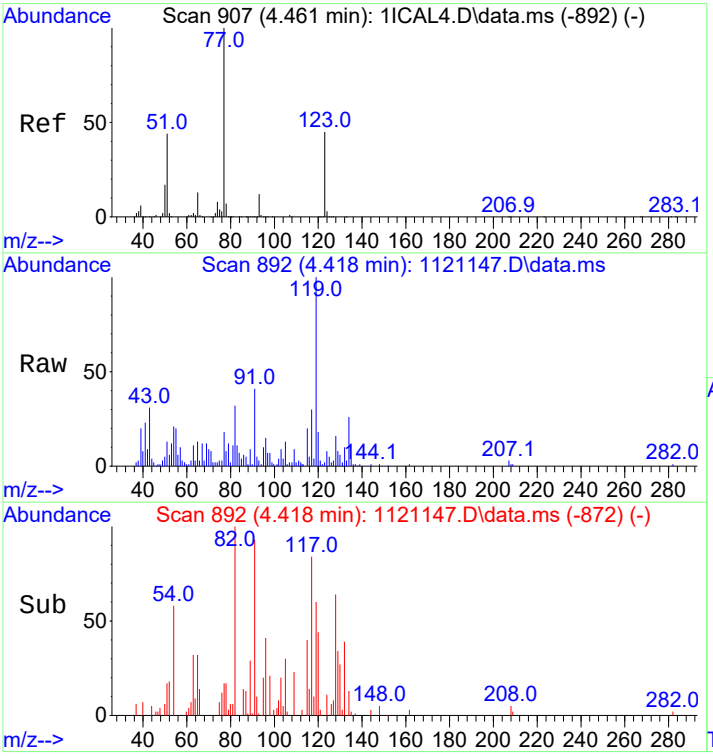


#20
3&4Methylphenol
Concen: 4.97 ug/mL
RT: 4.285 min Scan# 845
Delta R.T. 0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:107 Resp: 57655

Ion	Ratio	Lower	Upper
107	100		
108	99.0	65.4	125.4
77	39.7	8.0	68.0
79	32.6	1.0	61.0

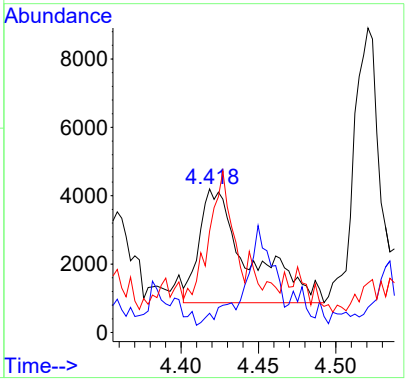


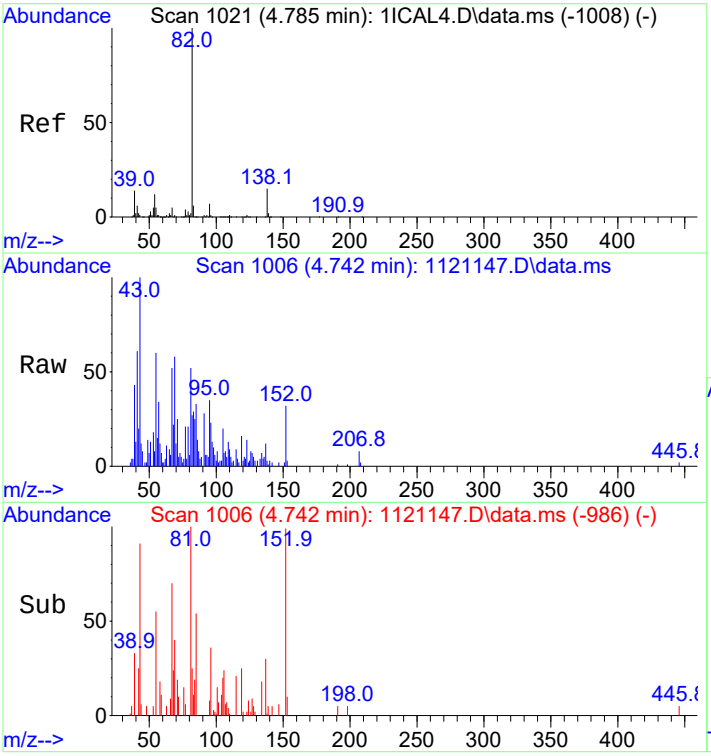


#23
Nitrobenzene
Concen: 0.57 ug/mL
RT: 4.418 min Scan# 892
Delta R.T. -0.043 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 77 Resp: 7423

Ion	Ratio	Lower	Upper
77	100		
123	3.2	14.7	74.7#
65	66.0	0.0	42.8#

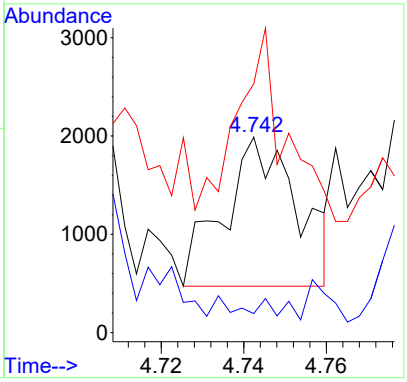


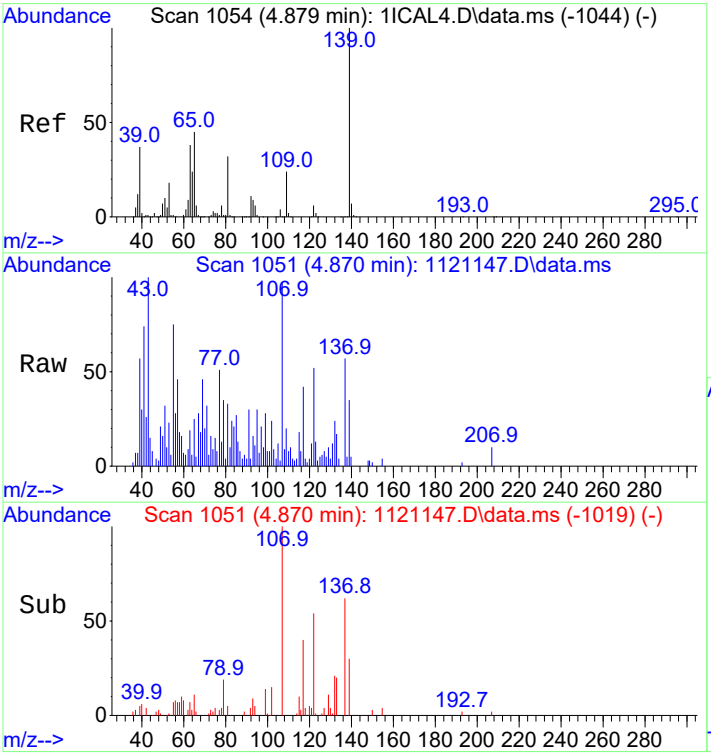


#24
Isophorone
Concen: 0.08 ug/mL
RT: 4.742 min Scan# 1006
Delta R.T. -0.043 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 82 Resp: 1868

Ion	Ratio	Lower	Upper
82	100		
138	0.0	0.0	45.3
95	71.7	0.0	36.5#

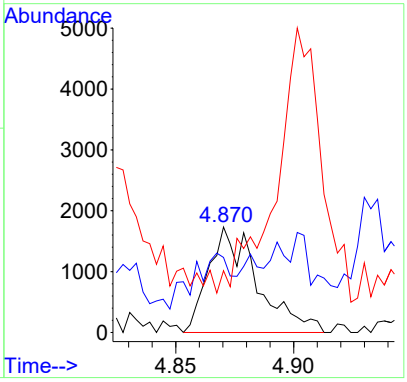


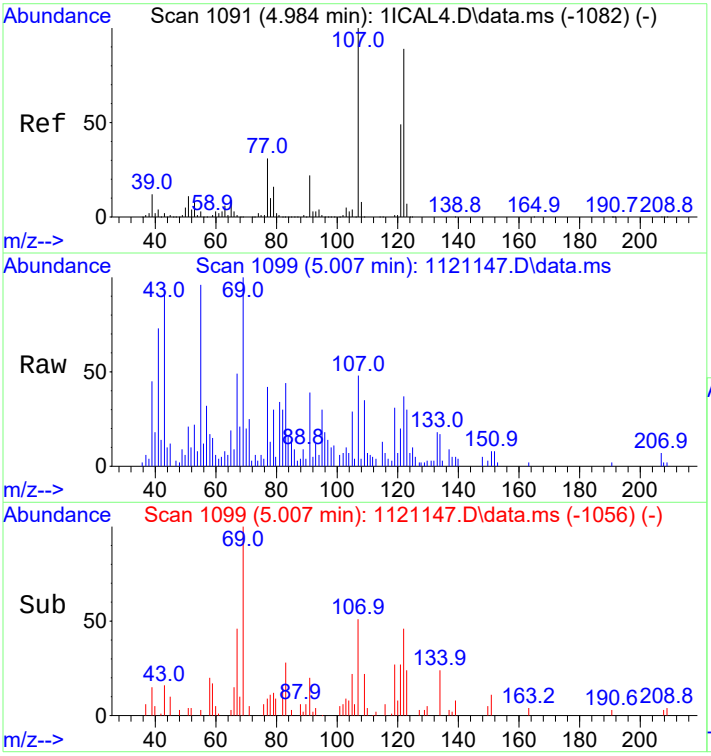


#25
2-Nitrophenol
Concen: 0.90 ug/mL
RT: 4.870 min Scan# 1051
Delta R.T. -0.009 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:139 Resp: 2509

Ion	Ratio	Lower	Upper
139	100		
65	20.4	14.8	74.8
109	0.0	0.0	53.6

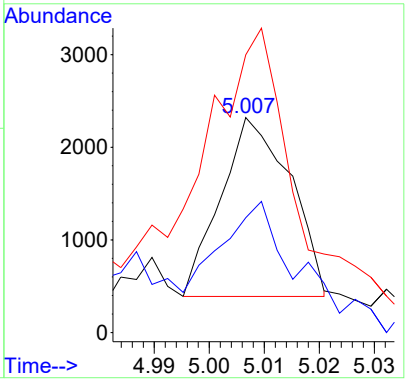


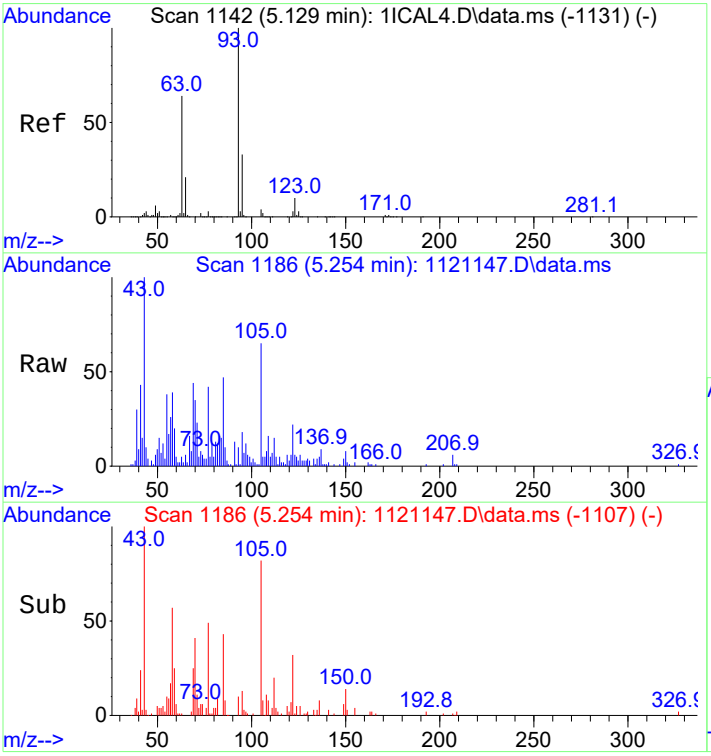


#26
24Dimthpheno
Concen: 0.19 ug/mL
RT: 5.007 min Scan# 1099
Delta R.T. 0.023 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:122 Resp: 1699

Ion	Ratio	Lower	Upper
122	100		
121	41.8	25.0	85.0
107	111.4	82.0	142.0

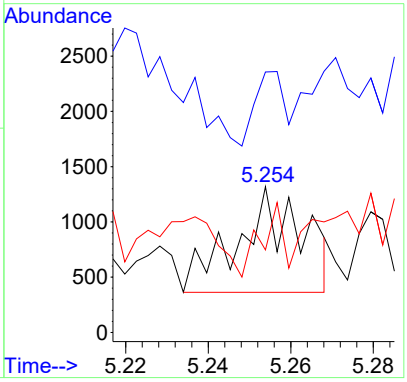


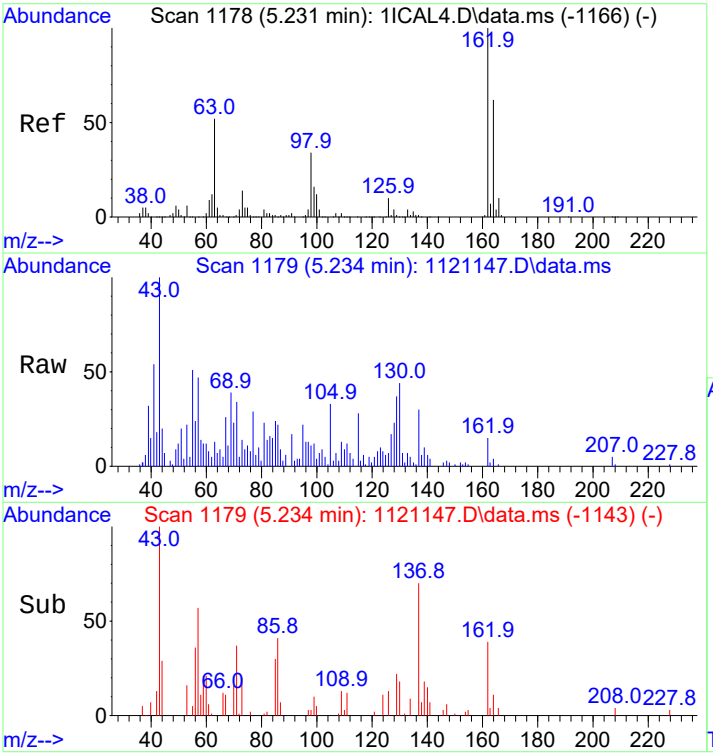


#27
bis2clethoxym
Concen: 0.06 ug/mL
RT: 5.254 min Scan# 1186
Delta R.T. 0.125 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 93 Resp: 1027

Ion	Ratio	Lower	Upper
93	100		
95	29.0	3.5	63.5
123	0.0	0.0	40.0

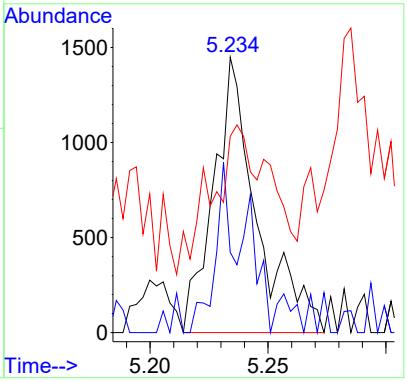


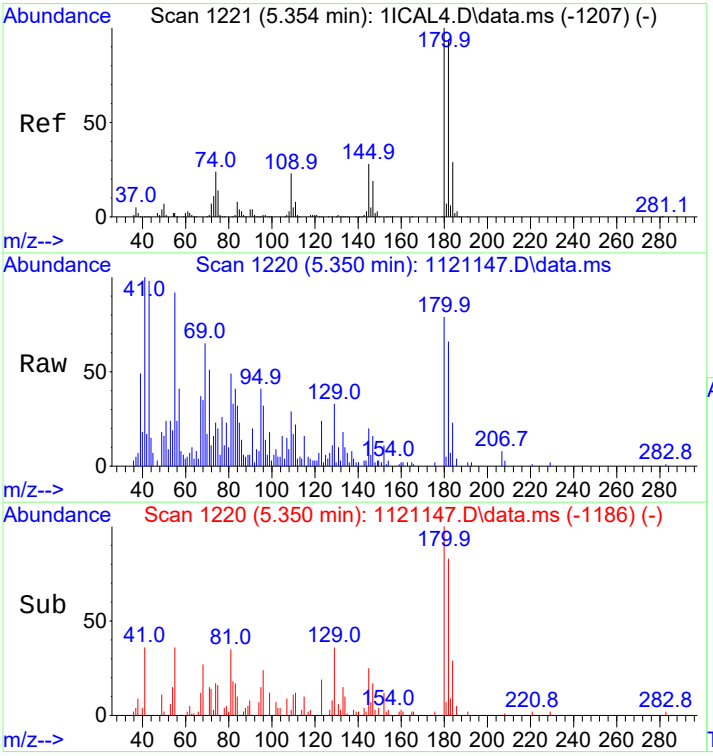


#28
24Diclphenol
Concen: 0.15 ug/mL
RT: 5.234 min Scan# 1179
Delta R.T. 0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:162 Resp: 1849

Ion	Ratio	Lower	Upper
162	100		
164	29.2	32.4	92.4#
98	34.6	4.4	64.4

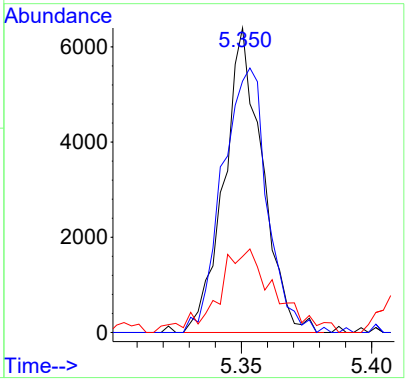


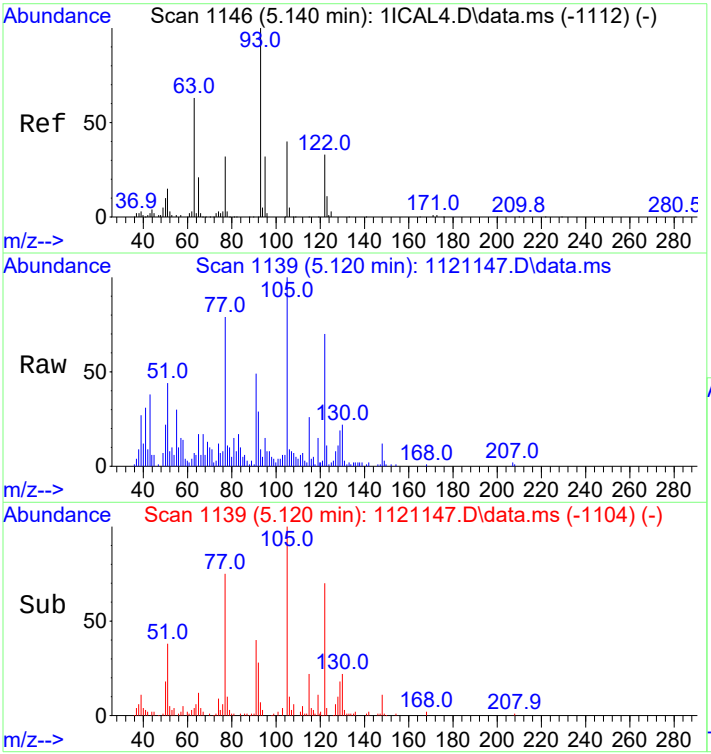


#29
124Triclbenz
Concen: 0.43 ug/mL
RT: 5.350 min Scan# 1220
Delta R.T. -0.004 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:180 Resp: 6535

Ion	Ratio	Lower	Upper
180	100		
182	82.5	64.3	124.3
145	23.3	0.0	58.1

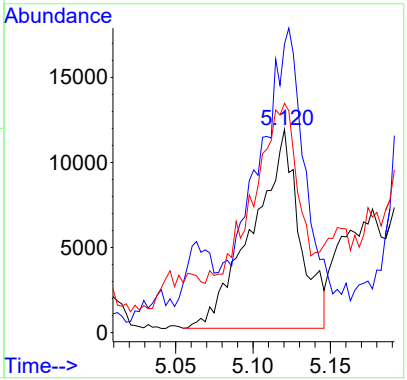


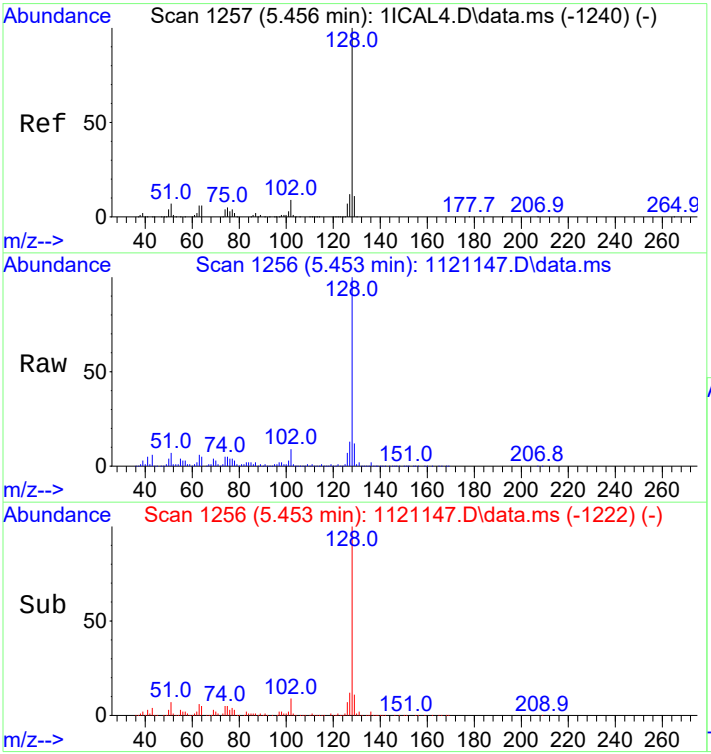


#30
Benzoic acid
Concen: 10.41 ug/mL
RT: 5.120 min Scan# 1139
Delta R.T. -0.020 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:122 Resp: 24633

Ion	Ratio	Lower	Upper
122	100		
105	120.0	90.4	150.4
77	90.4	64.5	124.5

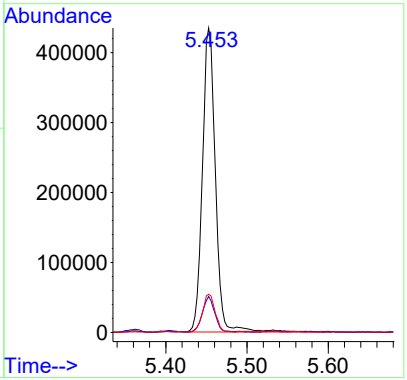


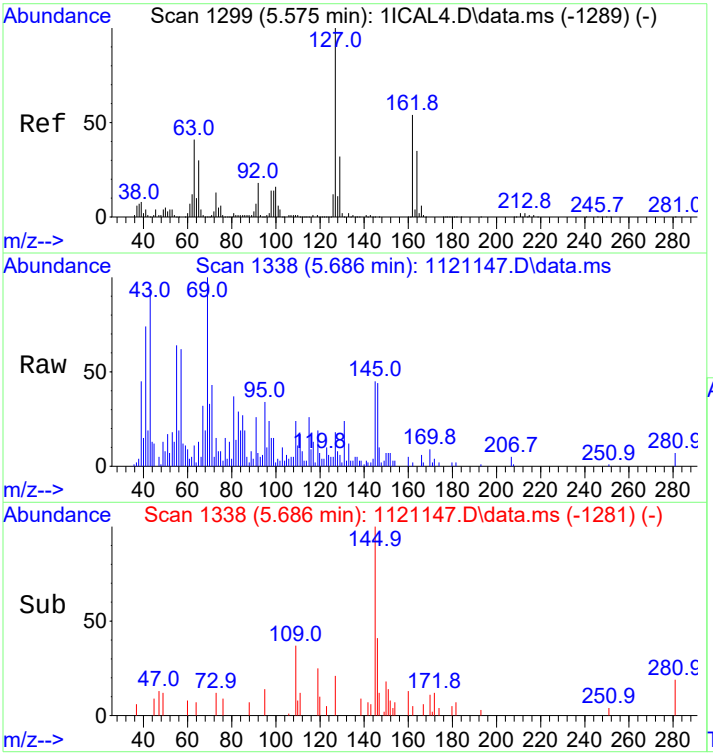


#31
Naphthalene
Concen: 10.21 ug/mL
RT: 5.453 min Scan# 1256
Delta R.T. -0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:128 Resp: 485057

Ion	Ratio	Lower	Upper
128	100		
129	11.8	0.0	40.7
127	12.5	0.0	42.5

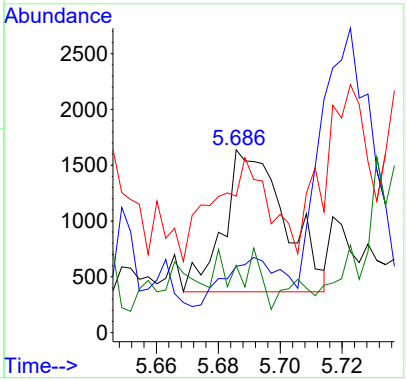


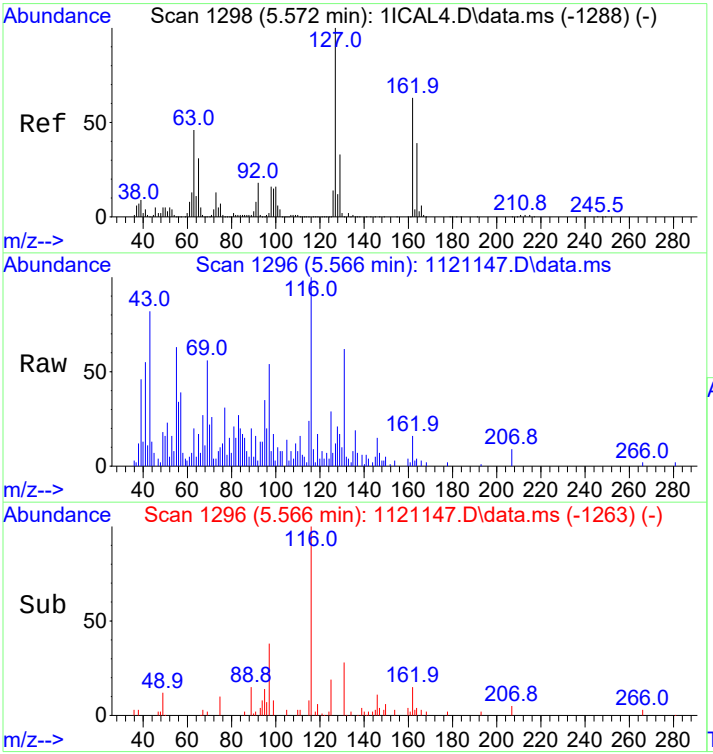


#32
4-Cl-aniline
Concen: 0.09 ug/mL
RT: 5.686 min Scan# 1338
Delta R.T. 0.111 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:127 Resp: 1738

Ion	Ratio	Lower	Upper
127	100		
129	25.5	2.2	62.2
65	46.0	0.0	59.8
92	14.0	0.0	48.1

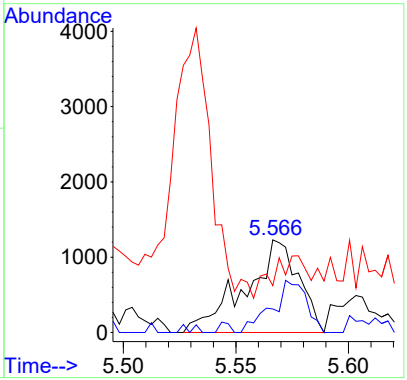


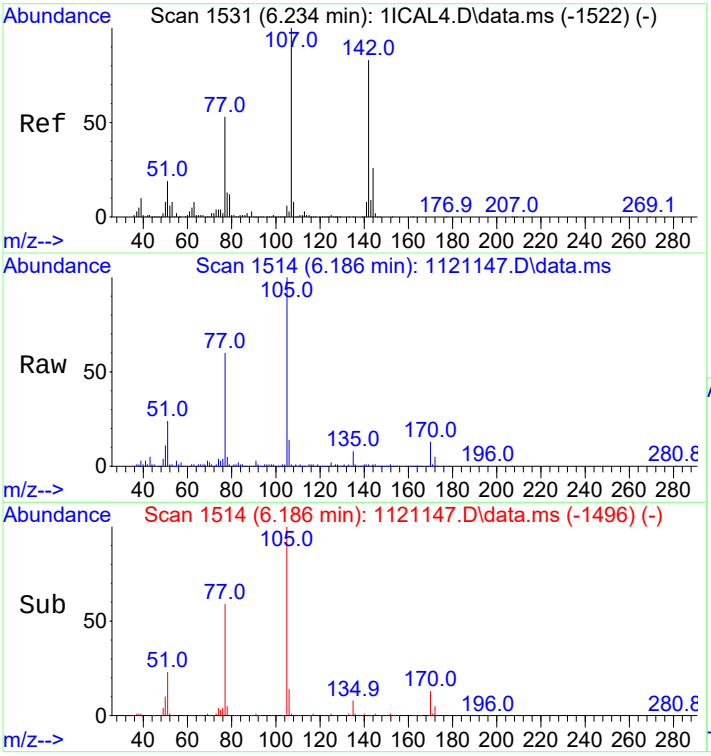


#33
26Diclphenol
Concen: 0.16 ug/mL
RT: 5.566 min Scan# 1296
Delta R.T. -0.006 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:162 Resp: 2021

Ion	Ratio	Lower	Upper
162	100		
164	25.4	32.3	92.3#
98	0.0	0.0	55.1

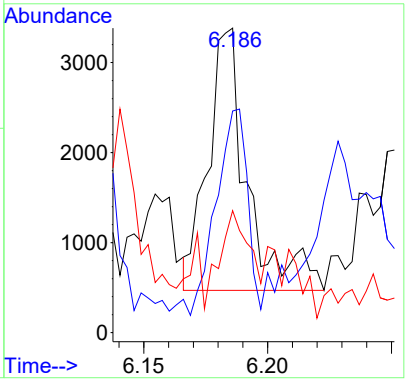


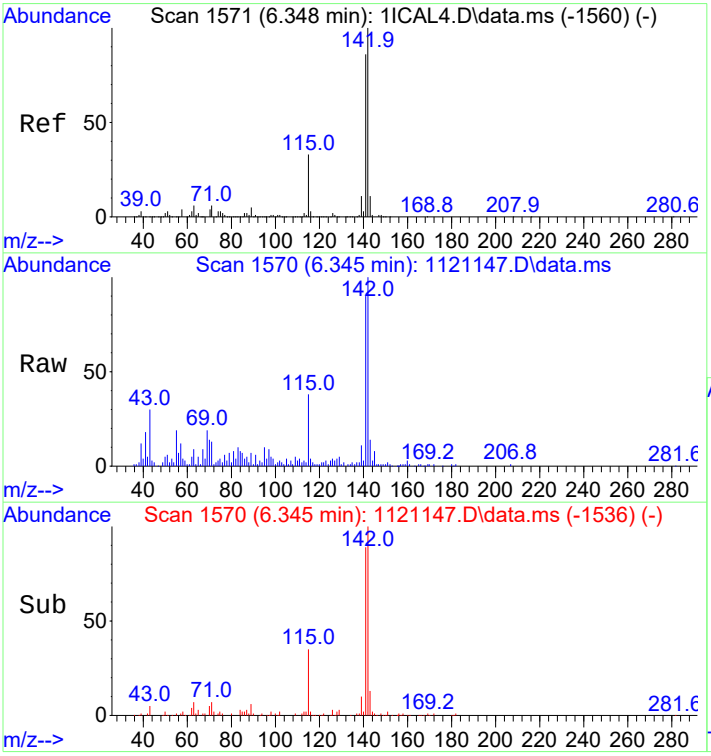


#36
4Cl3methylphe
Concen: 0.23 ug/mL
RT: 6.186 min Scan# 1514
Delta R.T. -0.048 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:107 Resp: 3207

Ion	Ratio	Lower	Upper
107	100		
142	71.8	53.4	113.4
144	32.4	0.0	56.5

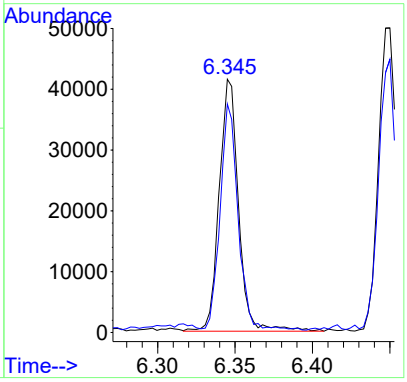


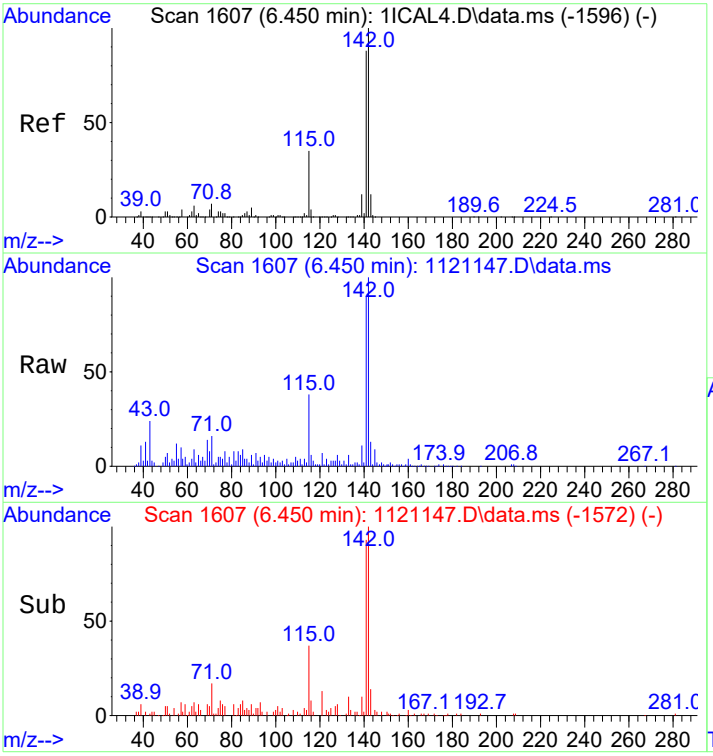


#37
2Methylnaphth
Concen: 1.06 ug/mL
RT: 6.345 min Scan# 1570
Delta R.T. -0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:142 Resp: 35986

Ion	Ratio	Lower	Upper
142	100		
141	88.8	56.2	116.2

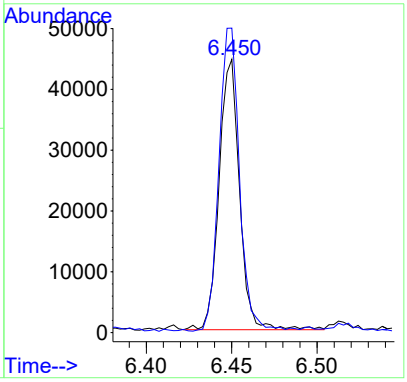


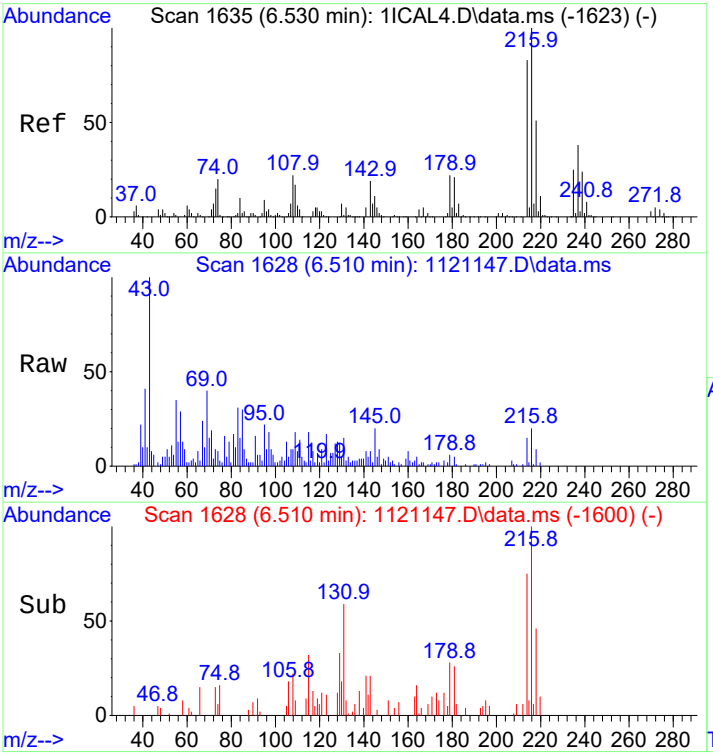


#38
1Methylnaphth
Concen: 1.27 ug/mL
RT: 6.450 min Scan# 1607
Delta R.T. 0.000 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:141 Resp: 37051

Ion	Ratio	Lower	Upper
141	100		
142	111.5	84.0	144.0

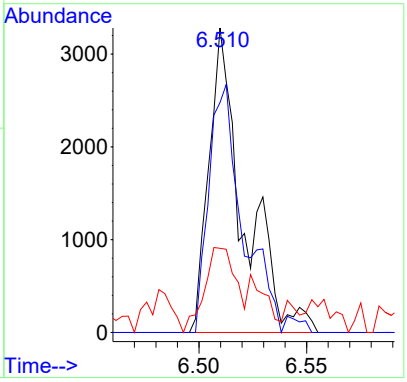


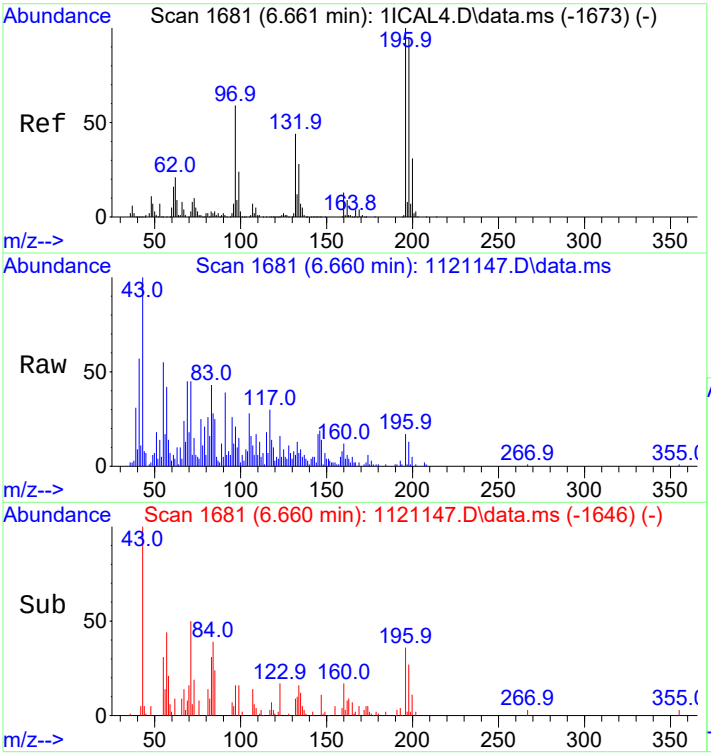


#41
1245Tetrclbenz
Concen: 0.17 ug/mL
RT: 6.510 min Scan# 1628
Delta R.T. -0.020 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:216 Resp: 3669

Ion	Ratio	Lower	Upper
216	100		
214	75.5	53.0	113.0
179	27.6	0.0	52.4

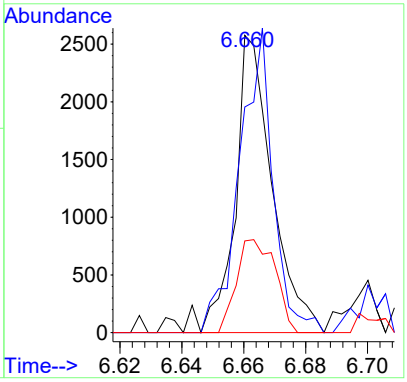


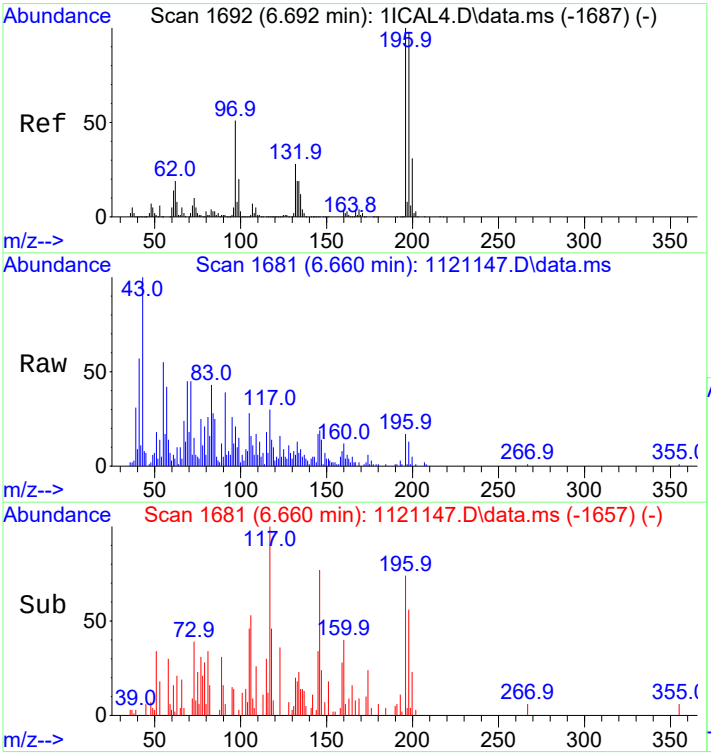


#42
246Triclpheno
Concen: 0.57 ug/mL
RT: 6.660 min Scan# 1681
Delta R.T. -0.001 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:196 Resp: 2157

Ion	Ratio	Lower	Upper
196	100		
198	75.9	65.1	125.1
200	30.9	0.6	60.6

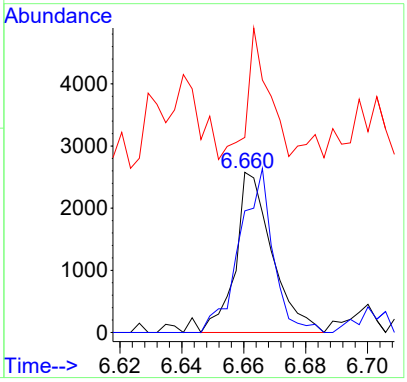


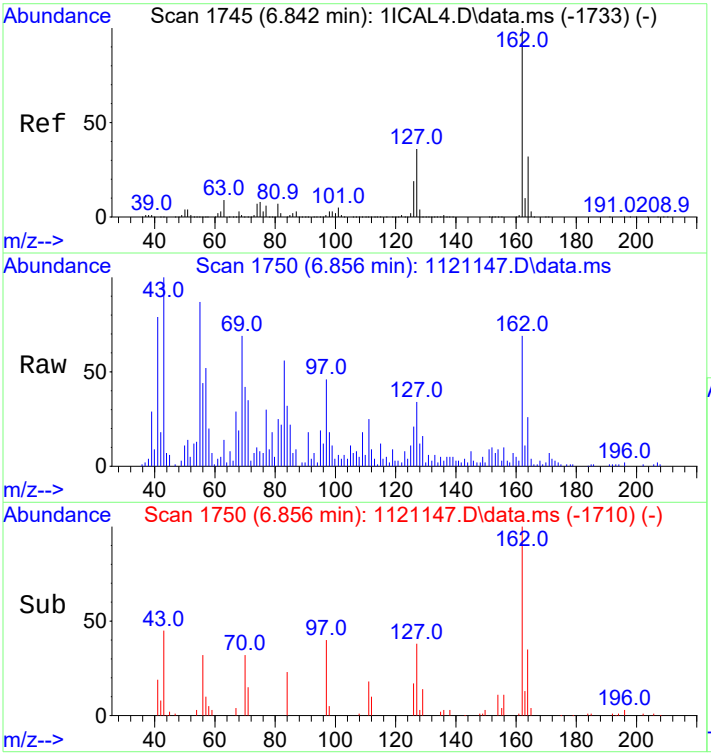


#43
245Triclpheno
Concen: 0.63 ug/mL
RT: 6.660 min Scan# 1681
Delta R.T. -0.032 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:196 Resp: 2157

Ion	Ratio	Lower	Upper
196	100		
198	75.9	67.5	127.5
97	12.7	20.3	80.3#

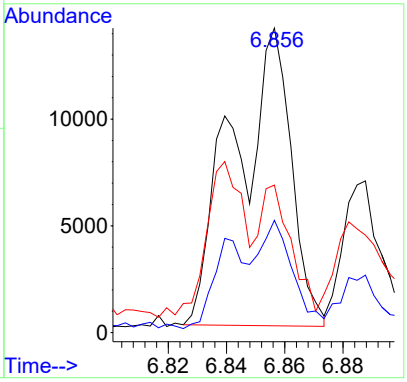


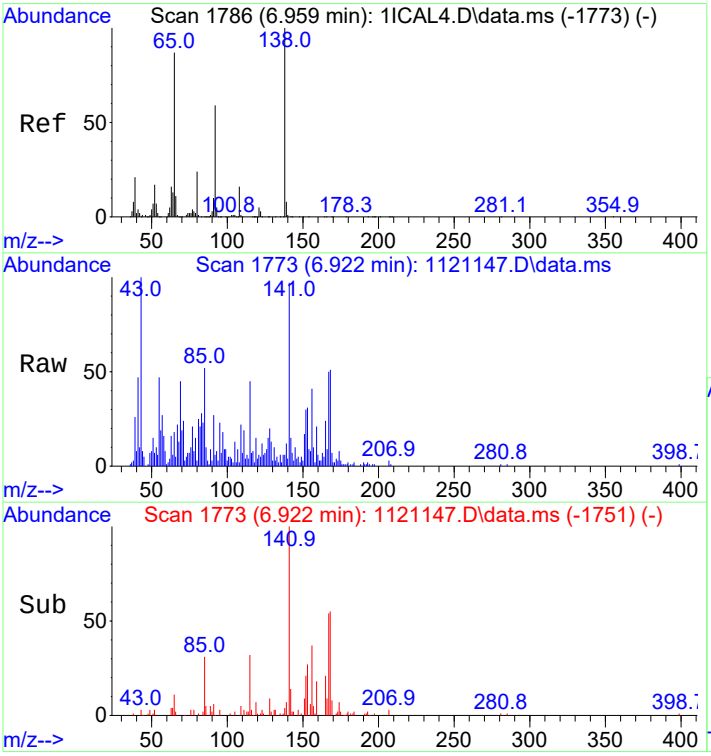


#45
2Clnaphthalen
Concen: 0.54 ug/mL
RT: 6.856 min Scan# 1750
Delta R.T. 0.014 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:162 Resp: 18945

Ion	Ratio	Lower	Upper
162	100		
164	36.5	2.0	62.0
127	39.9	6.3	66.3

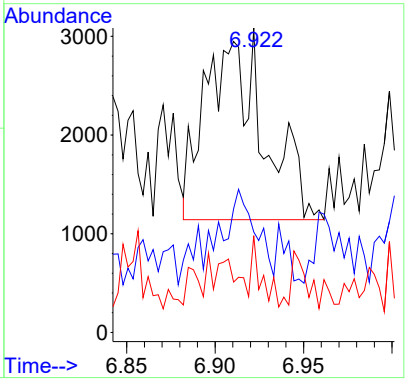


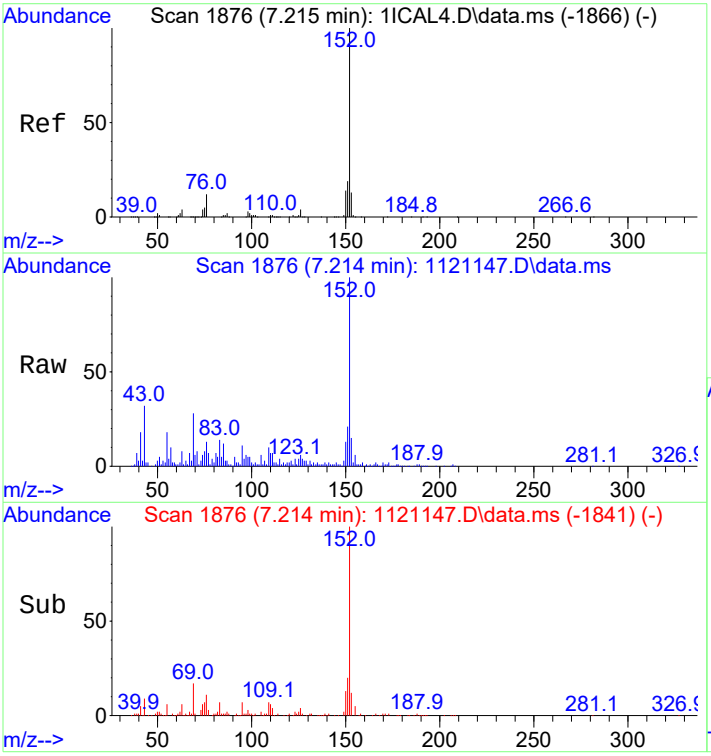


#46
2Nitroaniline
Concen: 0.86 ug/mL
RT: 6.922 min Scan# 1773
Delta R.T. -0.037 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 65 Resp: 4286

Ion	Ratio	Lower	Upper
65	100		
92	14.6	37.9	97.9#
138	36.1	84.9	144.9#

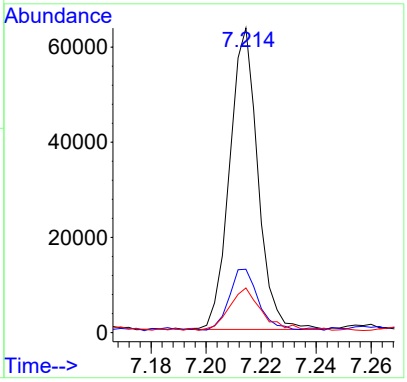


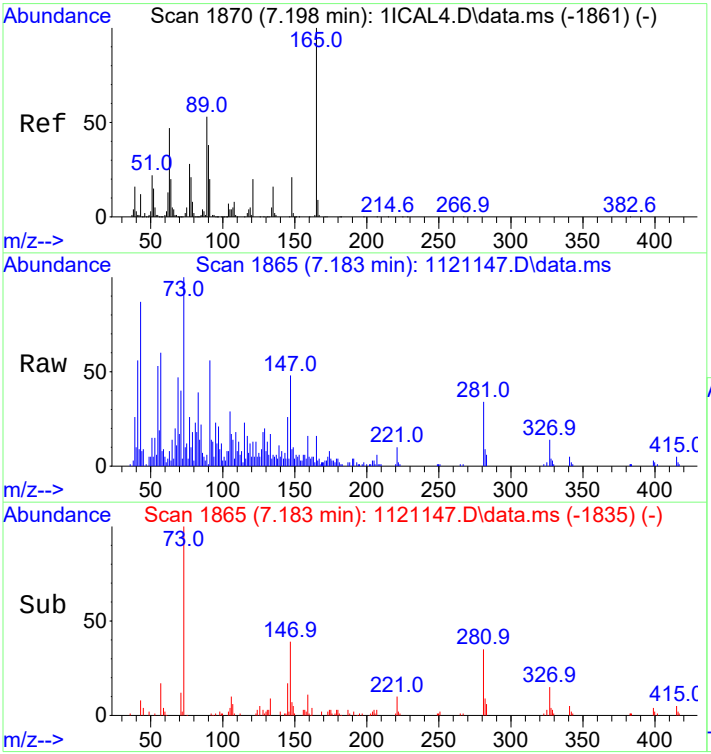


#47
Acnaphthylene
Concen: 0.83 ug/mL
RT: 7.214 min Scan# 1876
Delta R.T. -0.001 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:152 Resp: 45240

Ion	Ratio	Lower	Upper
152	100		
151	20.2	0.0	49.3
153	14.0	0.0	43.3

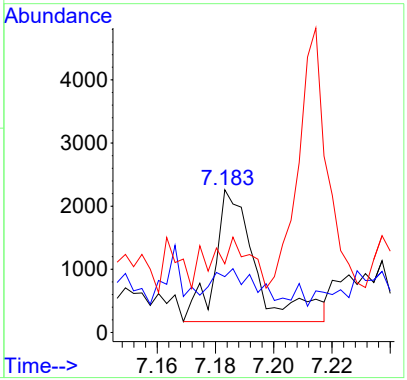


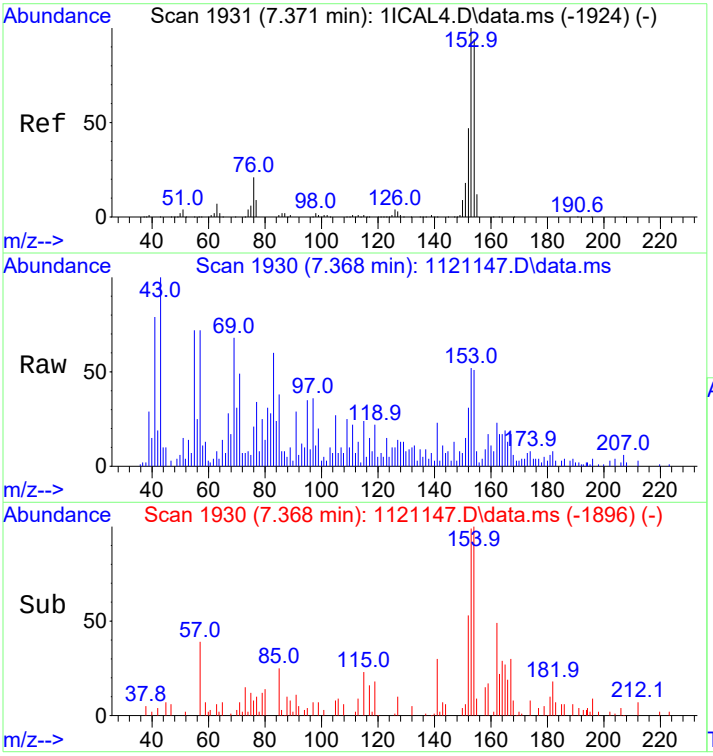


#49
26Dinitrotolu
Concen: 0.27 ug/mL
RT: 7.183 min Scan# 1865
Delta R.T. -0.015 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:165 Resp: 2051

Ion	Ratio	Lower	Upper
165	100		
89	15.1	22.9	82.9#
63	0.0	19.3	79.3#

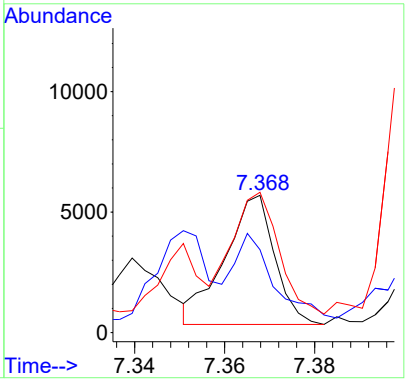


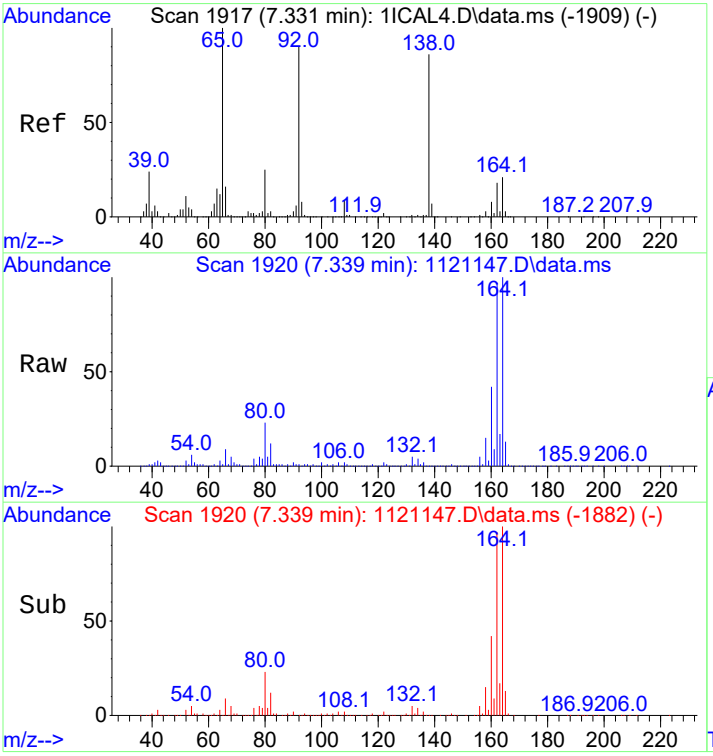


#50
Acenaphthene
Concen: 0.14 ug/mL
RT: 7.368 min Scan# 1930
Delta R.T. -0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:154 Resp: 4147

Ion	Ratio	Lower	Upper
154	100		
152	50.5	20.0	80.0
153	94.2	76.8	136.8

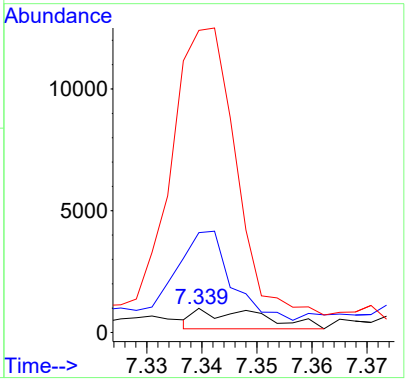


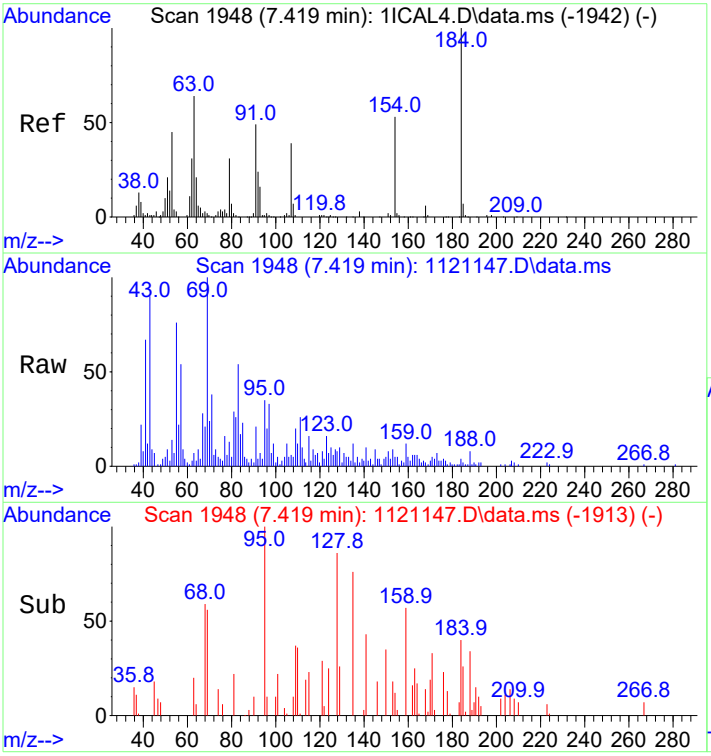


#51
3Nitroaniline
Concen: 0.44 ug/mL
RT: 7.339 min Scan# 1920
Delta R.T. 0.008 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:138 Resp: 708

Ion	Ratio	Lower	Upper
138	100		
92	402.0	75.1	135.1#
108	1391.9	0.0	40.7#

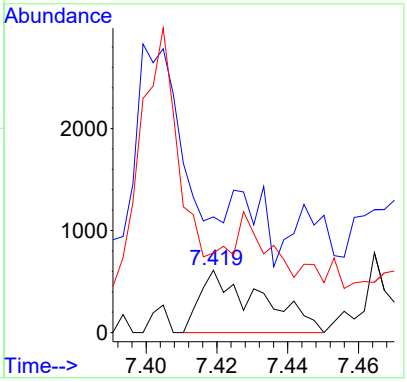


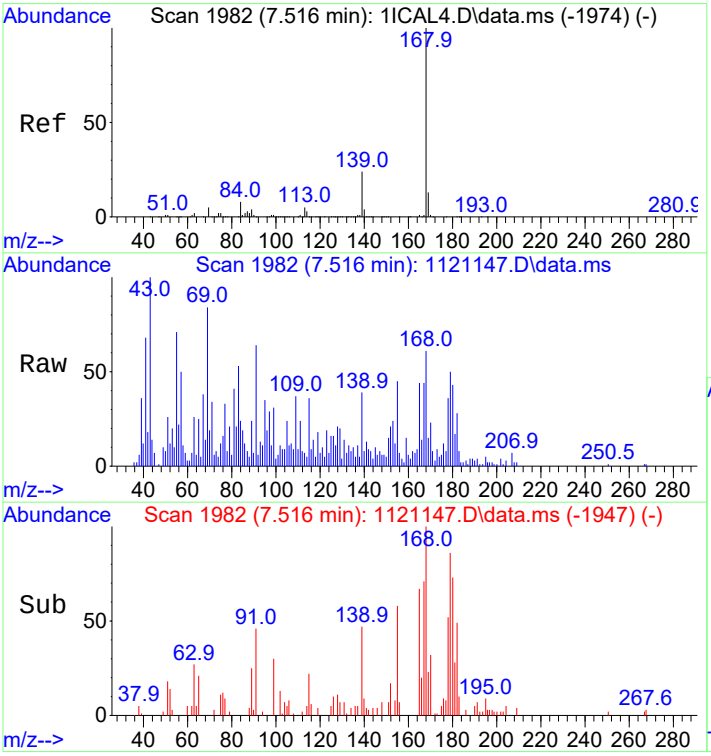


#52
24Dinitphenol
Concen: 3.87 ug/mL
RT: 7.419 min Scan# 1948
Delta R.T. 0.000 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:184 Resp: 717

Ion	Ratio	Lower	Upper
184	100		
63	0.0	33.5	93.5#
154	47.7	25.7	85.7

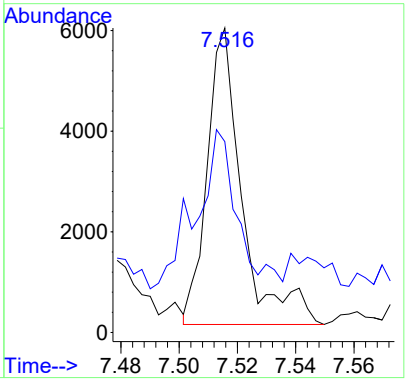


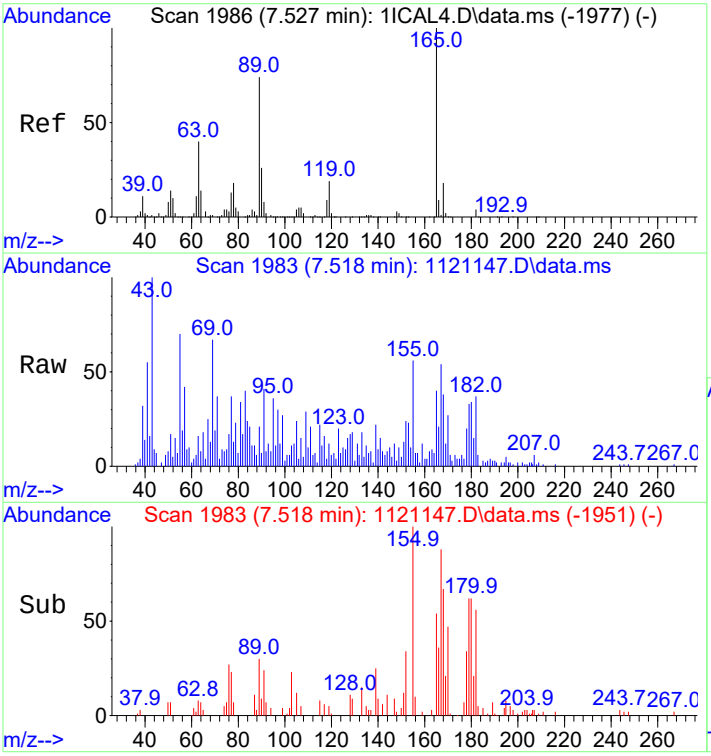


#53
Dibenzofuran
Concen: 0.05 ug/mL
RT: 7.516 min Scan# 1982
Delta R.T. -0.000 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:168 Resp: 4886

Ion	Ratio	Lower	Upper
168	100		
139	44.0	6.8	66.8

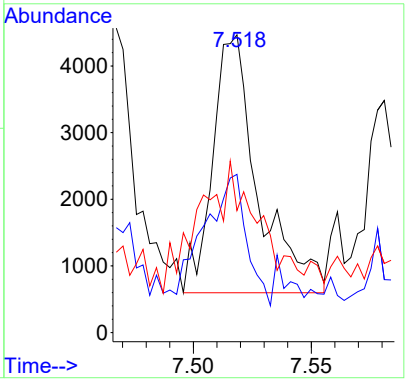


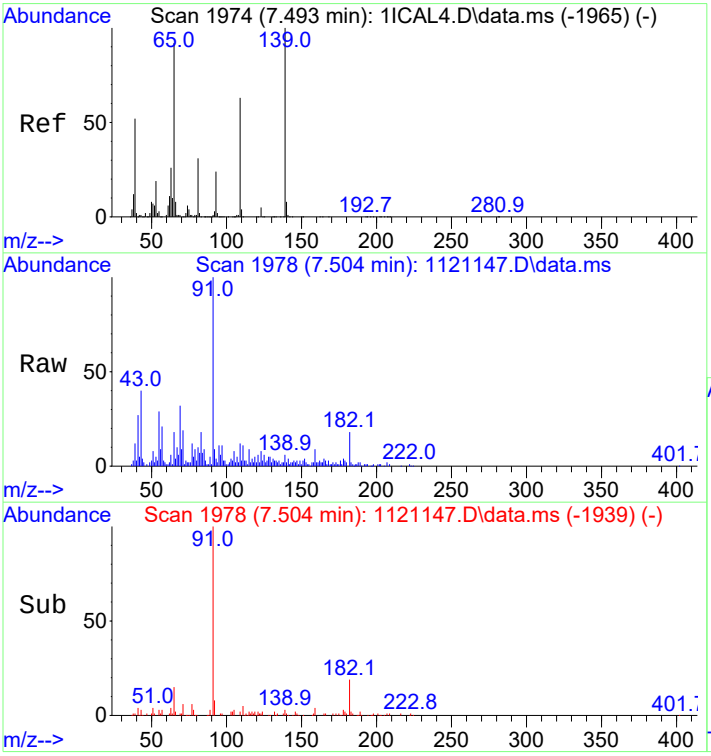


#54
24Dinitrotolu
Concen: 0.82 ug/mL
RT: 7.518 min Scan# 1983
Delta R.T. -0.009 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:165 Resp: 5195

Ion	Ratio	Lower	Upper
165	100		
89	46.5	43.8	103.8
63	16.4	12.8	72.8

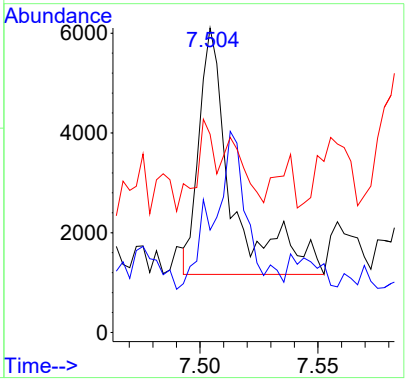


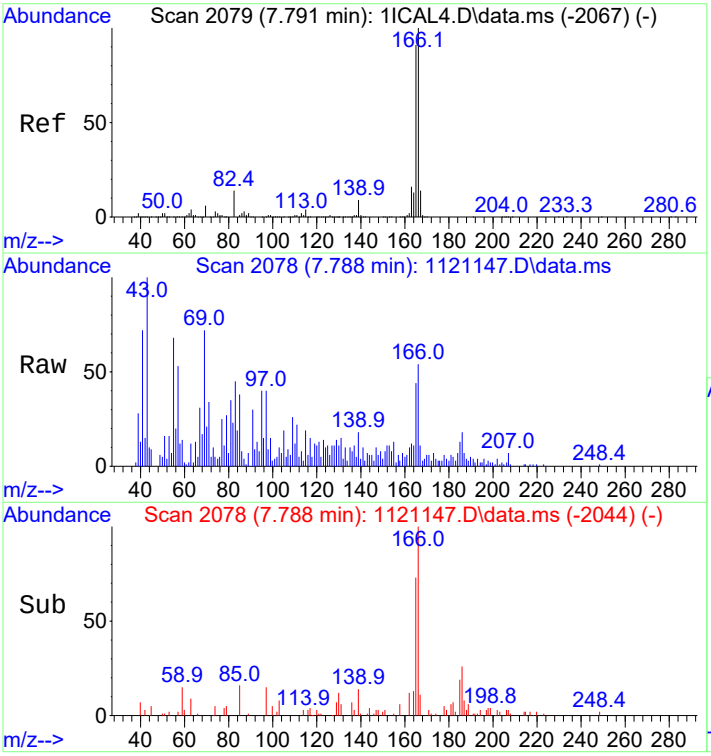


#55
4-Nitrophenol
Concen: 2.63 ug/mL
RT: 7.504 min Scan# 1978
Delta R.T. 0.011 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 65 Resp: 4806

Ion	Ratio	Lower	Upper
65	100		
139	21.7	78.2	138.2#
109	20.1	37.7	97.7#

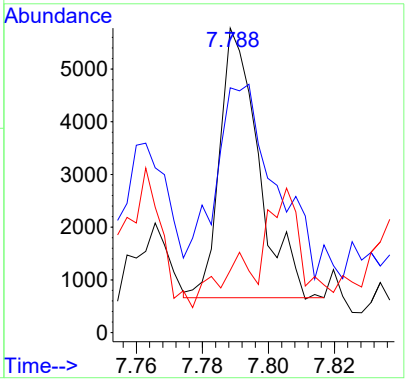


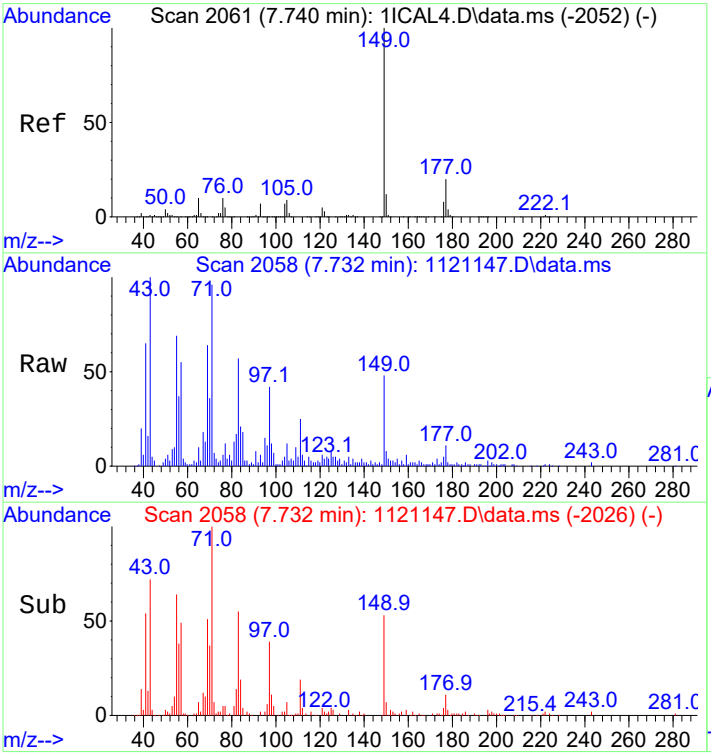


#58
Fluorene
Concen: 0.07 ug/mL
RT: 7.788 min Scan# 2078
Delta R.T. -0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:166 Resp: 4158

Ion	Ratio	Lower	Upper
166	100		
165	63.2	61.4	121.4
167	5.4	0.0	43.7

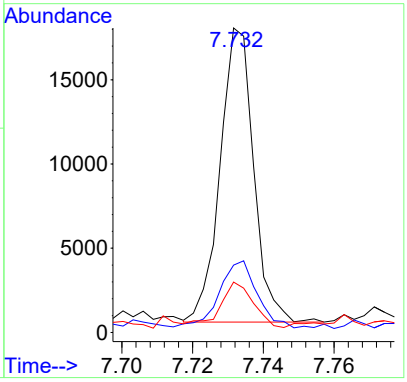


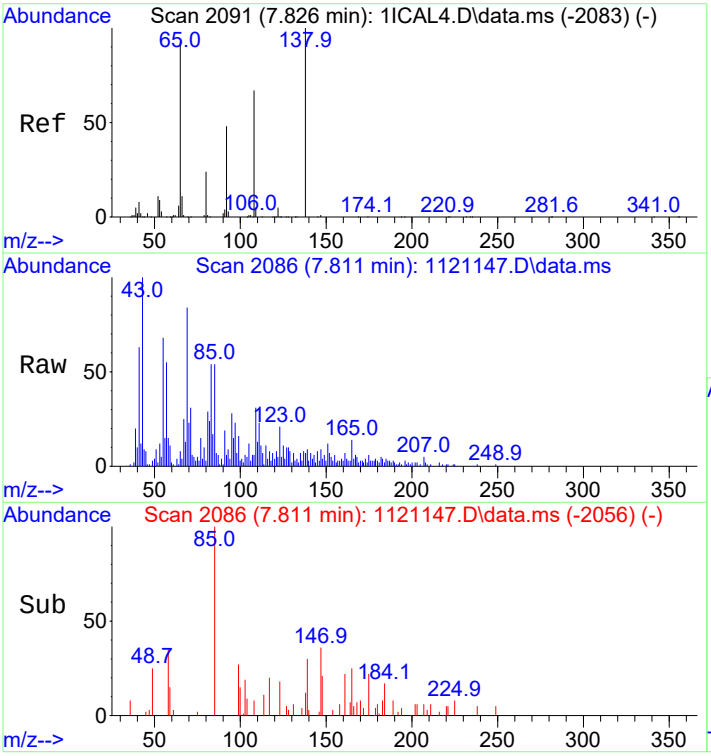


#60
Diethylphthal
Concen: 0.34 ug/mL
RT: 7.732 min Scan# 2058
Delta R.T. -0.008 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:149 Resp: 11520

Ion	Ratio	Lower	Upper
149	100		
177	20.2	0.0	50.4
150	14.3	0.0	42.3

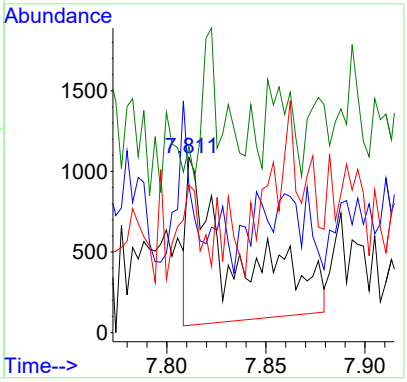


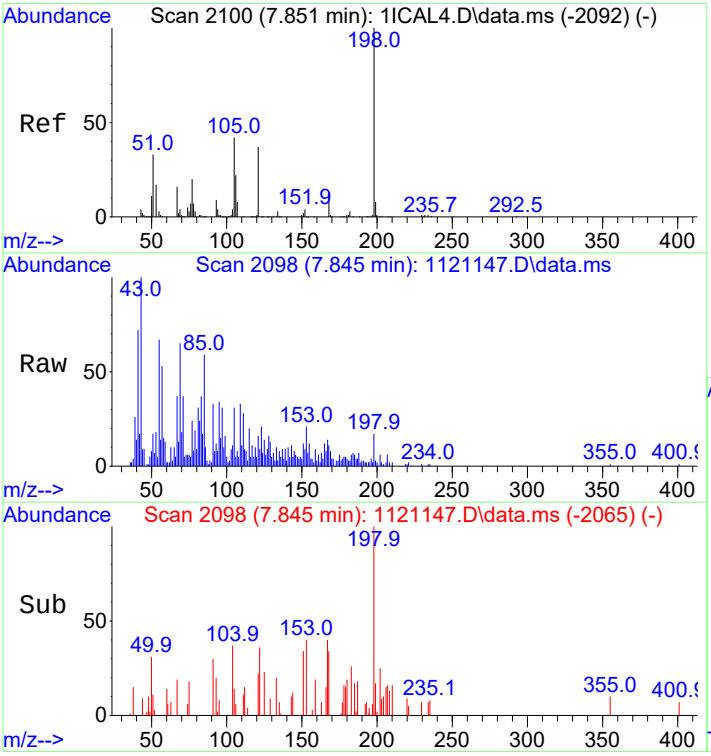


#61
4Nitroaniline
Concen: 0.65 ug/mL
RT: 7.811 min Scan# 2086
Delta R.T. -0.015 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:138 Resp: 1722

Ion	Ratio	Lower	Upper
138	100		
92	63.1	18.4	78.4
108	33.5	36.9	96.9#
65	19.5	70.8	130.8#

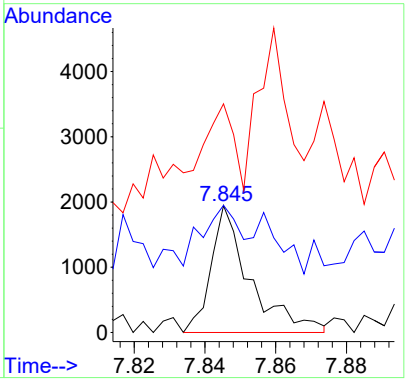


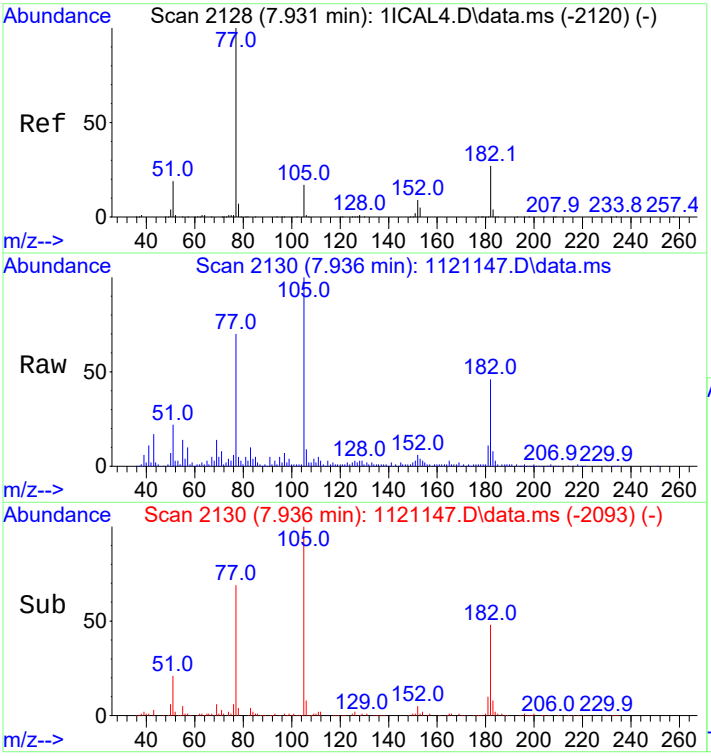


#64
46Dinit2mylph
Concen: 3.38 ug/mL
RT: 7.845 min Scan# 2098
Delta R.T. -0.006 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:198 Resp: 1480

Ion	Ratio	Lower	Upper
198	100		
51	86.5	12.1	72.1#
105	93.0	14.3	74.3#

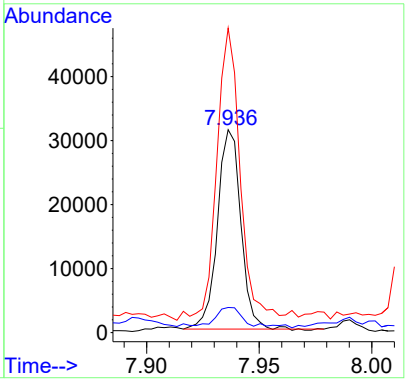


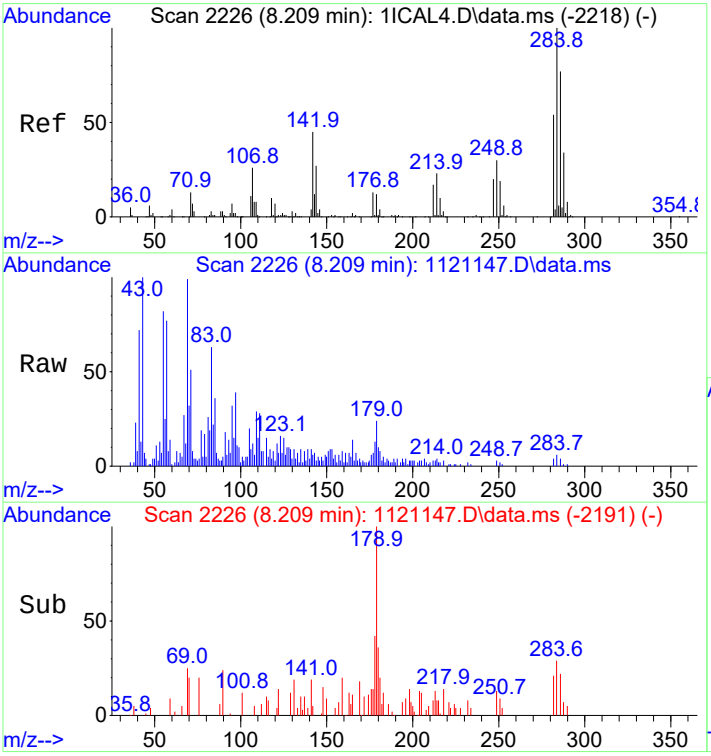


#66
Azobenz&12Diphlhyd
Concen: 2.60 ug/mL
RT: 7.936 min Scan# 2130
Delta R.T. 0.005 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:182 Resp: 22501

Ion	Ratio	Lower	Upper
182	100		
152	8.2	3.8	63.8
77	142.5	367.8	427.8#

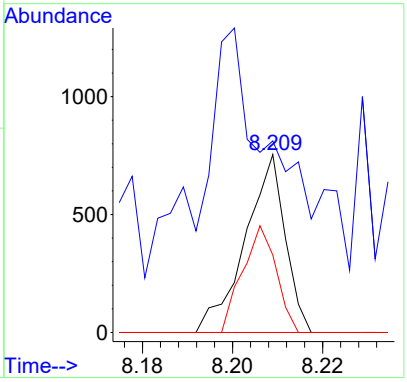


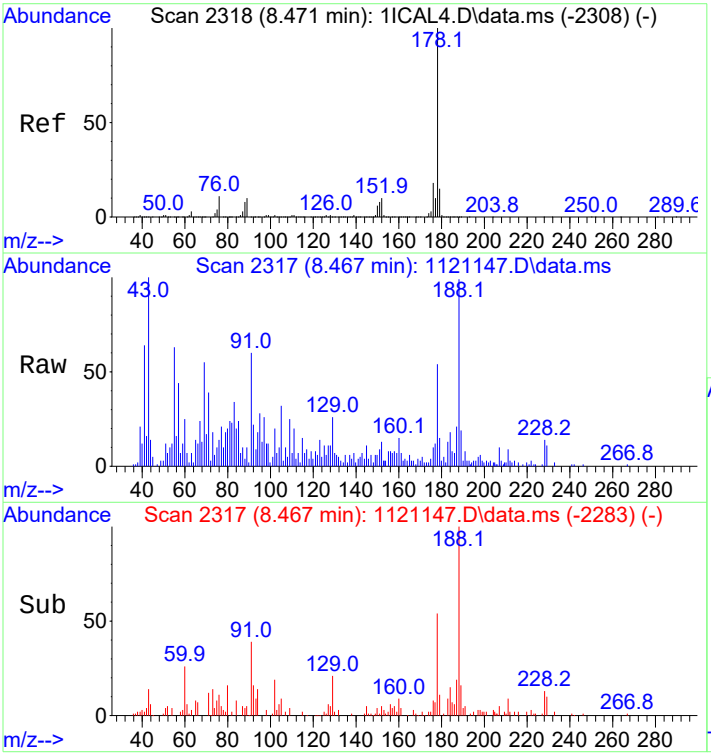


#68
Hexaclbenzene
Concen: Below Cal
RT: 8.209 min Scan# 2226
Delta R.T. -0.000 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:284 Resp: 466

Ion	Ratio	Lower	Upper
284	100		
142	27.3	15.3	75.3
249	43.5	0.9	60.9

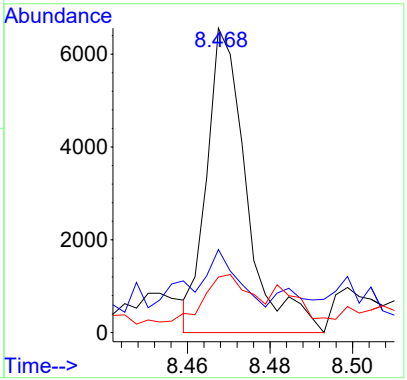


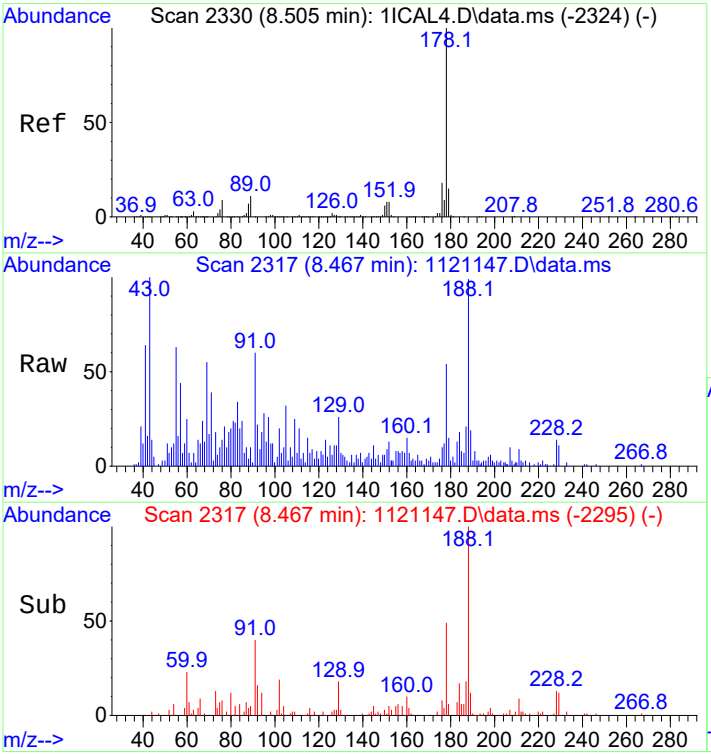


#70
Phenanthrene
Concen: 0.04 ug/mL
RT: 8.467 min Scan# 2317
Delta R.T. -0.004 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:178 Resp: 4387

Ion	Ratio	Lower	Upper
178	100		
179	16.3	0.0	45.3
176	13.4	0.0	48.3

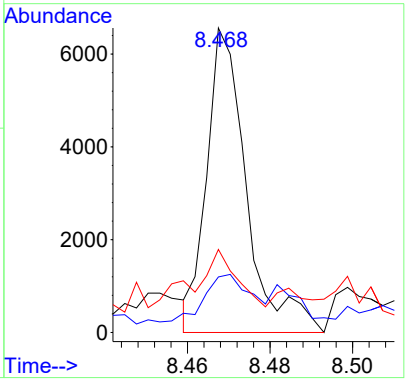


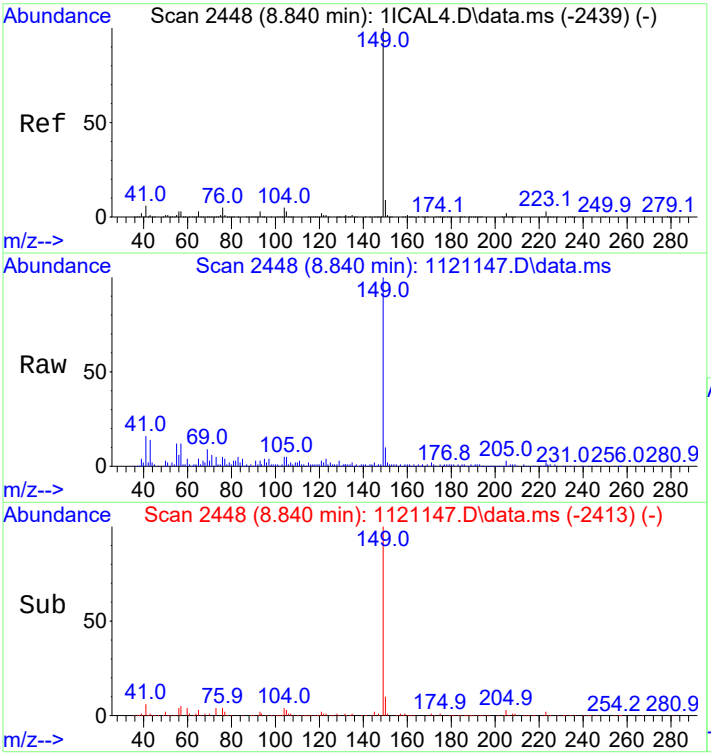


#71
Anthracene
Concen: 0.13 ug/mL
RT: 8.467 min Scan# 2317
Delta R.T. -0.038 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:178 Resp: 4387

Ion	Ratio	Lower	Upper
178	100		
176	13.4	0.0	47.9
179	16.3	0.0	45.4

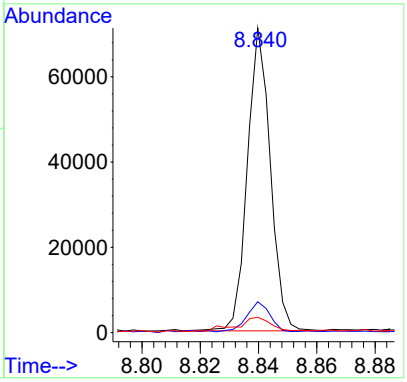


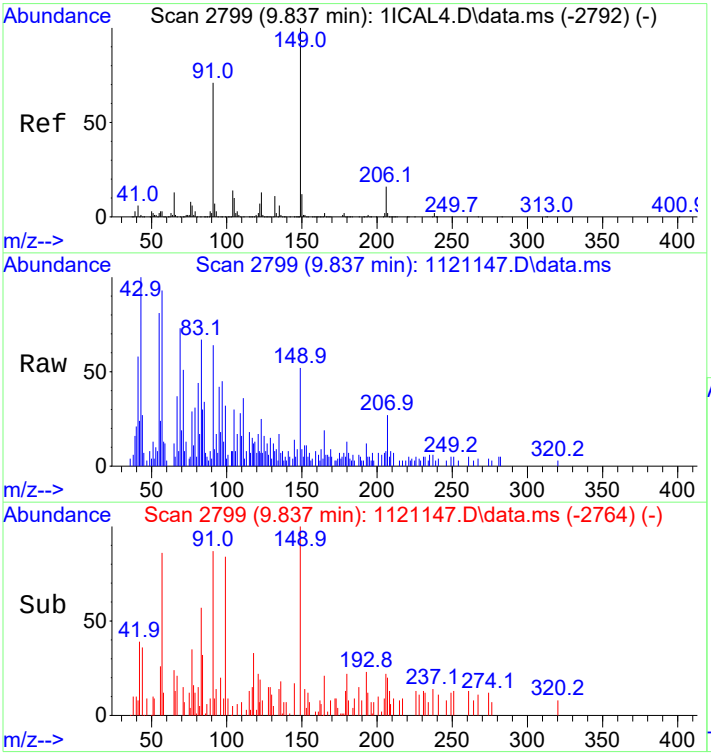


#73
Dinbtylphthal
Concen: 1.06 ug/mL
RT: 8.840 min Scan# 2448
Delta R.T. -0.000 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:149 Resp: 38898

Ion	Ratio	Lower	Upper
149	100		
150	9.8	0.0	39.1
104	4.7	0.0	35.0

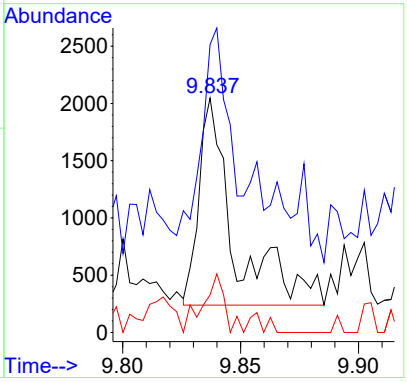


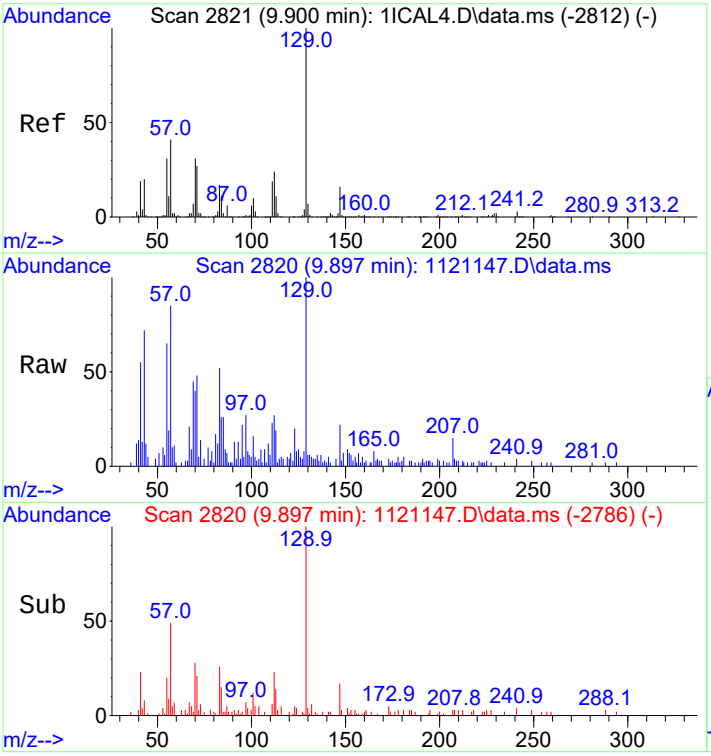


#79
Btylbzylphth
Concen: 0.59 ug/mL
RT: 9.837 min Scan# 2799
Delta R.T. 0.000 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:149 Resp: 1902

Ion	Ratio	Lower	Upper
149	100		
91	105.3	41.2	101.2#
206	18.1	0.0	45.9

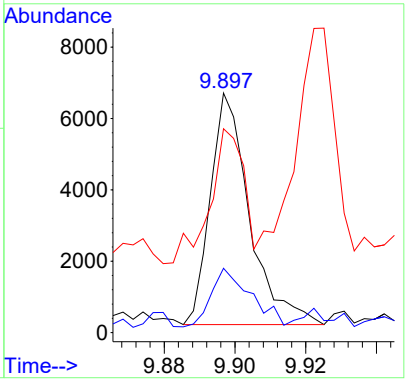


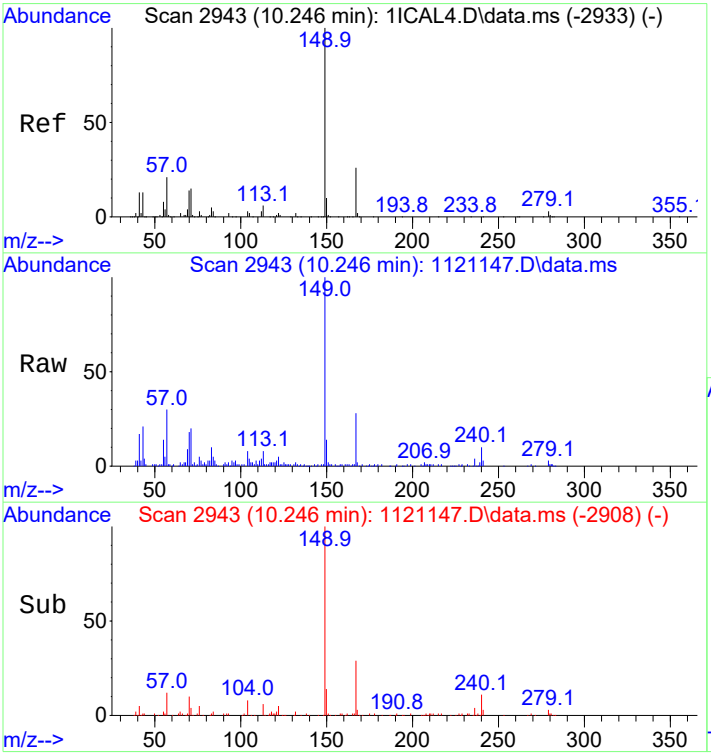


#80
bis2Ethlhxlad
Concen: 0.85 ug/mL
RT: 9.897 min Scan# 2820
Delta R.T. -0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:129 Resp: 4993

Ion	Ratio	Lower	Upper
129	100		
112	40.9	0.0	54.4
57	58.0	13.4	73.4

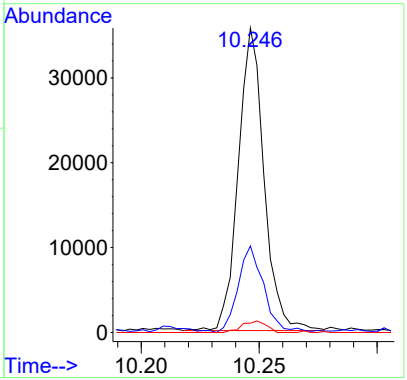


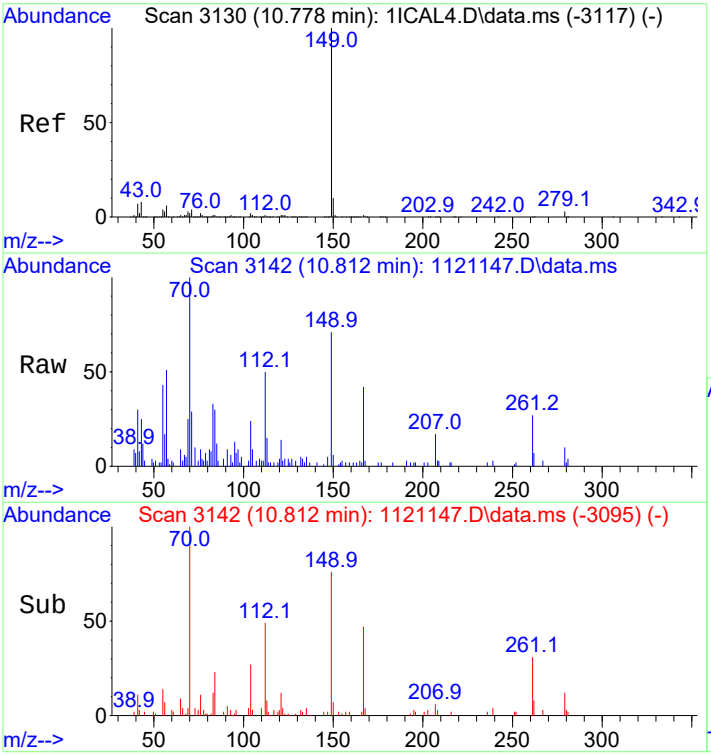


#84
bis2Ethlhxlph
Concen: 1.65 ug/mL
RT: 10.246 min Scan# 2943
Delta R.T. 0.000 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:149 Resp: 27163

Ion	Ratio	Lower	Upper
149	100		
167	28.2	0.0	56.0
279	3.9	0.0	33.2

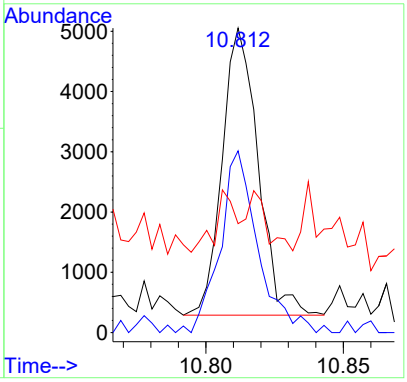




#85
Dinoctylphthl
Concen: 0.75 ug/mL
RT: 10.812 min Scan# 3142
Delta R.T. 0.034 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:149 Resp: 4339

Ion	Ratio	Lower	Upper
149	100		
167	61.1	0.0	31.3#
43	7.4	0.0	37.8



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121147.D Vial: 8
Acq On : 23 Mar 2022 13:01 Operator: JJY
Sample : 210458,1121147, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:41:21 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

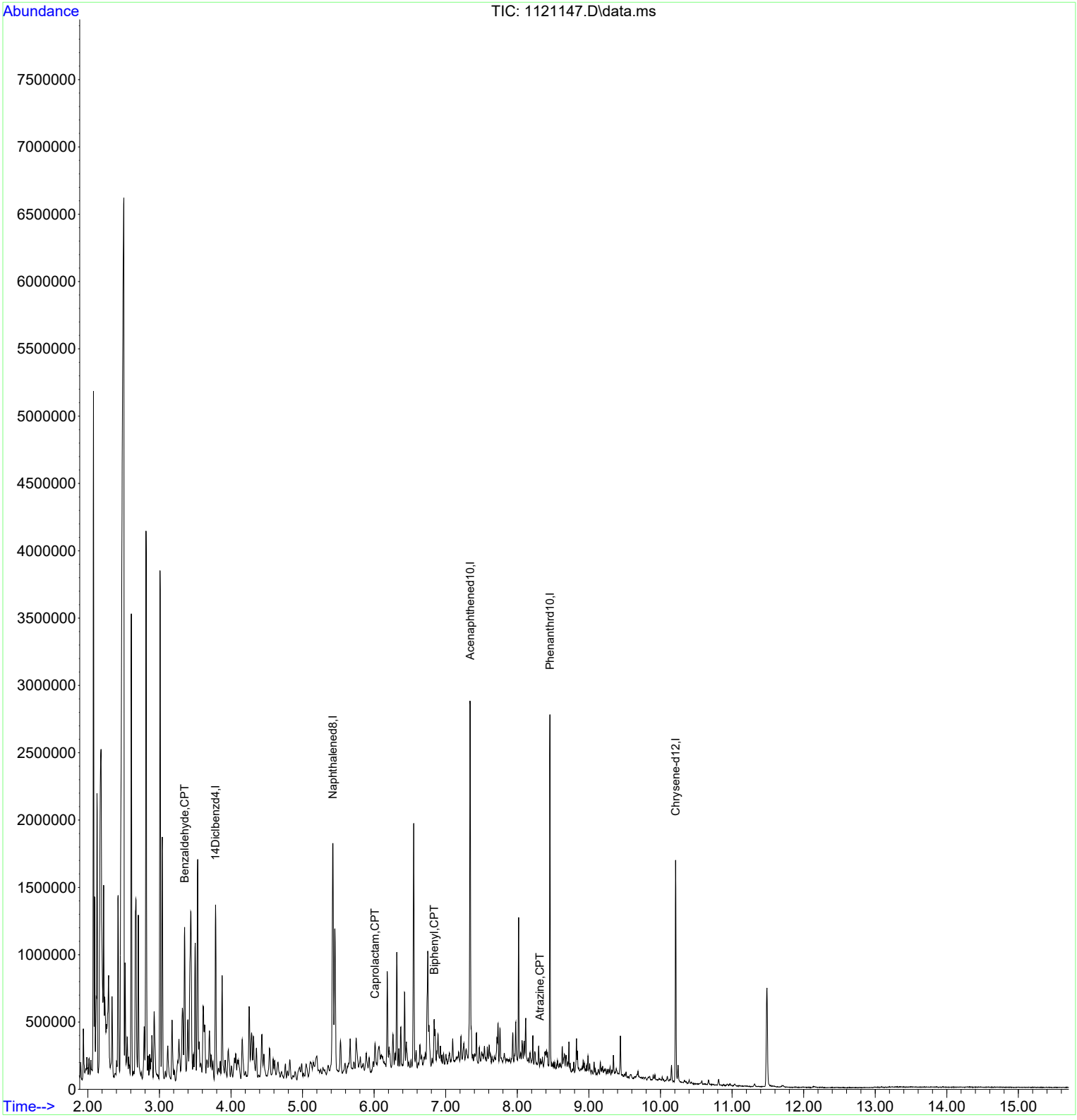
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	183768	20.00	ug/mL	0.00
3) Naphthalened8	5.424	136	936267	20.00	ug/mL	0.00
5) Acenaphthened10	7.342	164	496414	20.00	ug/mL	0.00
7) Phenanthrd10	8.456	188	629088	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	409671	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.353	77	160077	15.0024	ug/mL	76
4) Caprolactam	6.013	55	35842	8.0557	ug/mL	94
6) Biphenyl	6.839	154	84584	2.3517	ug/mL	99
8) Atrazine	8.314	200	570	0.4970	ug/mL#	50

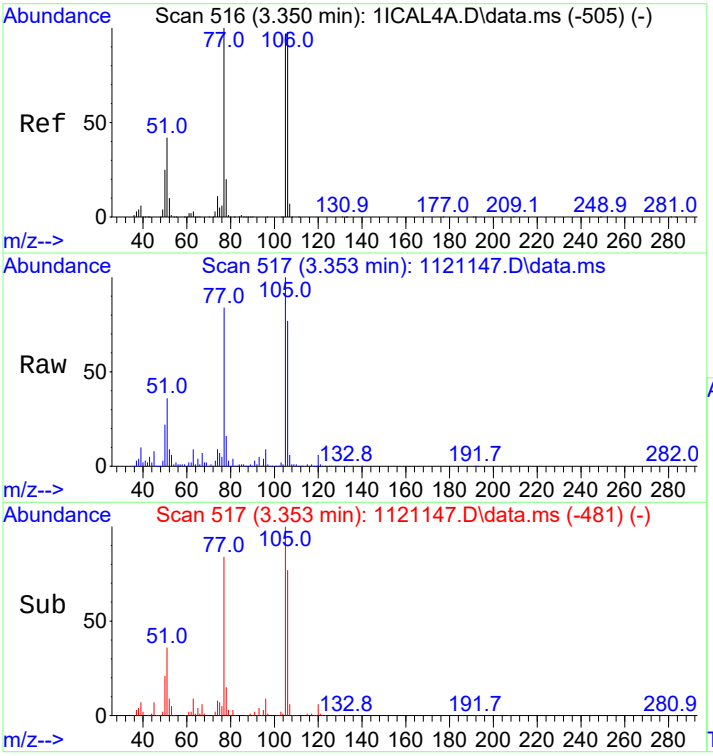
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121147.D Vial: 8
Acq On : 23 Mar 2022 13:01 Operator: JJY
Sample : 210458,1121147, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:41:21 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

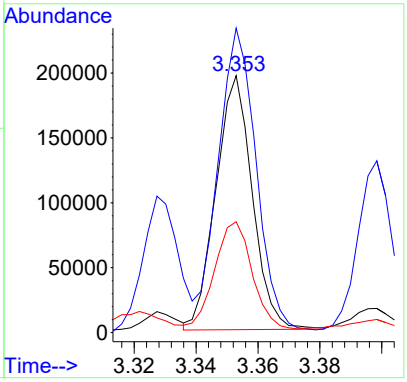


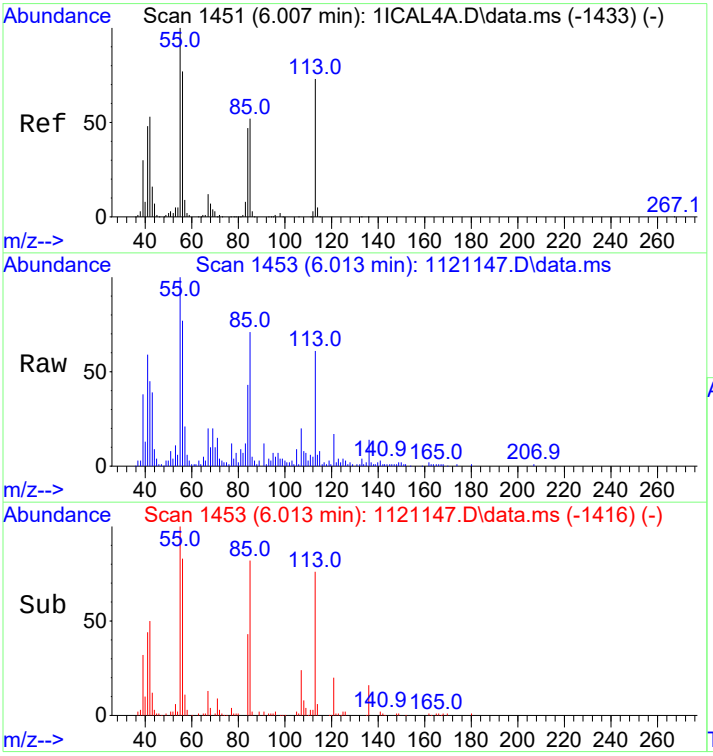


#2
Benzaldehyde
Concen: 15.00 ug/mL
RT: 3.353 min Scan# 517
Delta R.T. 0.003 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 77 Resp: 160077

Ion	Ratio	Lower	Upper
77	100		
105	124.2	65.0	125.0
51	50.2	12.5	72.5

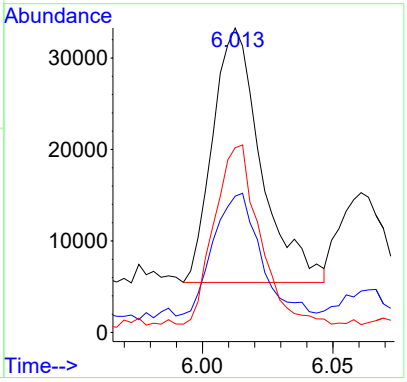


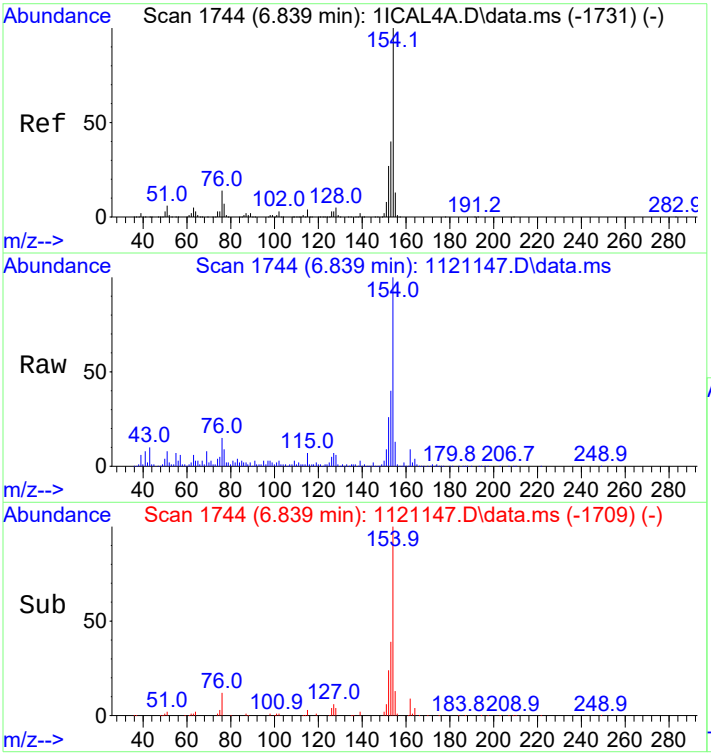


#4
Caprolactam
Concen: 8.06 ug/mL
RT: 6.013 min Scan# 1453
Delta R.T. 0.006 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion: 55 Resp: 35842

Ion	Ratio	Lower	Upper
55	100		
42	47.0	23.1	83.1
113	70.3	43.3	103.3

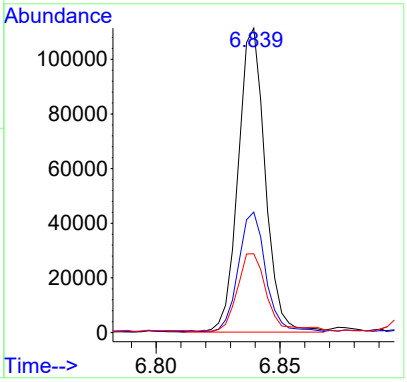


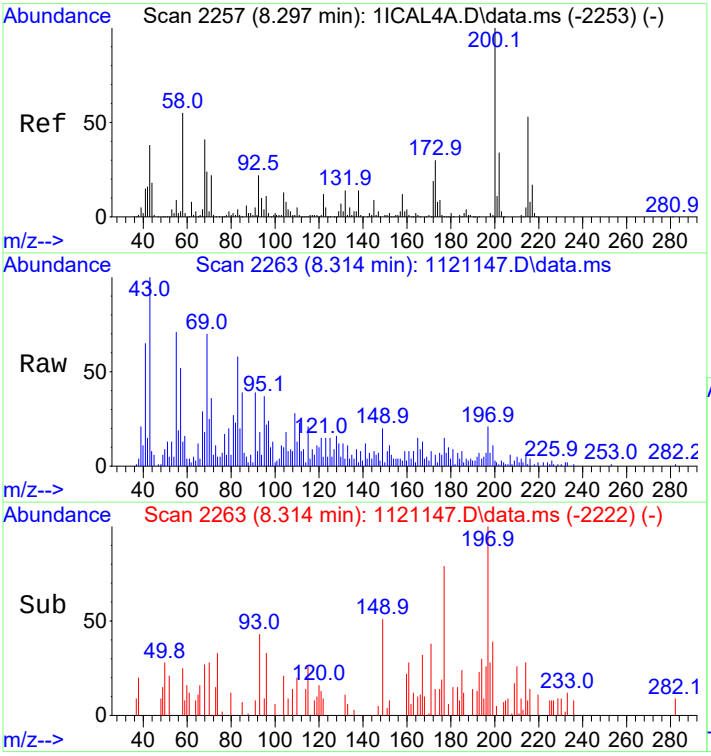


#6
Biphenyl
Concen: 2.35 ug/mL
RT: 6.839 min Scan# 1744
Delta R.T. 0.000 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:154 Resp: 84584

Ion	Ratio	Lower	Upper
154	100		
153	39.0	9.4	69.4
152	27.8	0.0	57.3

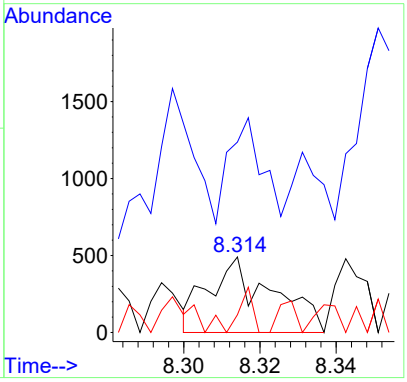




#8
Atrazine
Concen: 0.50 ug/mL
RT: 8.314 min Scan# 2263
Delta R.T. 0.017 min
Lab File: 1121147.D
Acq: 23 Mar 2022 13:01

Tgt Ion:200 Resp: 570

Ion	Ratio	Lower	Upper
200	100		
58	71.6	21.6	81.6
215	0.0	20.2	80.2#



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121148.D Vial: 9
Acq On : 23 Mar 2022 13:24 Operator: JJY
Sample : 210458,1121148, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:43:02 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	187847	20.00	ug/mL	0.00
21) Naphthalened8	5.422	136	962021	20.00	ug/mL	0.00
39) Acenaphthened10	7.340	164	516859	20.00	ug/mL	0.00
63) Phenanthrd10	8.453	188	640555	20.00	ug/mL	0.00
75) Chrysene-d12	10.212	240	380396	20.00	ug/mL	0.00
86) Perylene-d12	11.485	264	249323	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.668	112	55292	10.83	%REC	0.01
Spiked Amount 100.000			Recovery = 10.83%			
7) SURRPhenol-d5	3.427	99	64926	10.61	%REC	0.01
Spiked Amount 100.000			Recovery = 10.61%			
22) SURRNitrbenzened5	4.433	82	53499	19.51	%REC	0.00
Spiked Amount 100.000			Recovery = 19.51%			
44) SURR2Flbiphenyl	6.749	172	98552	12.73	%REC	0.00
Spiked Amount 100.000			Recovery = 12.73%			
62) SURR246Tribrphenl	7.979	330	11900	9.39	%REC	0.00
Spiked Amount 100.000			Recovery = 9.39%			
78) SURRTerphenyl-d14	0.000	244	0	0.00	%REC	
Spiked Amount 100.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.910	74	1749	0.2080	ug/mL#	25
3) Pyridine	1.992	79	2845	0.2038	ug/mL#	1
5) Aniline	3.438	93	696	0.0376	ug/mL#	1
6) bis2Clethletr	3.484	93	2238	0.1800	ug/mL#	31
8) Phenol	3.438	94	30198	1.7281	ug/mL	95
10) 13Diclbenz	3.720	146	14201	0.9651	ug/mL	94
11) 14Diclbenz	3.802	146	7629	0.5294	ug/mL	93
12) 12Diclbenz	3.964	146	10704	0.7828	ug/mL	92
14) bis2clispreth	4.058	45	5436	0.3732	ug/mL	88
15) 2Methylphenol	4.097	107	2116	0.2185	ug/mL#	76
16) Ntrspyrrol	4.251	100	1501	0.2599	ug/mL#	34
17) Acetophenone	4.254	105	32217	1.8971	ug/mL	94
18) Hexaclethane	4.419	117	4828	0.8337	ug/mL#	14
19) N-Ntrsdinprop	4.231	70	5149	0.5822	ug/mL	71
20) 3&4Methylphenol	4.282	107	12015	1.0150	ug/mL	92
23) Nitrobenzene	4.419	77	1895	0.1408	ug/mL#	1
24) Isophorone	4.777	82	20168	0.7848	ug/mL	89
26) 24Dimthpheno	4.904	122	1002	0.1062	ug/mL#	35
27) bis2clethoxym	5.160	93	898	0.0527	ug/mL	78
29) 124Triclbenz	5.351	180	2056	0.1296	ug/mL	78
30) Benzoic acid	5.103	122	21533	9.3029	ug/mL	94
31) Naphthalene	5.450	128	223700	4.5522	ug/mL	99
32) 4-Cl-aniline	5.558	127	1766	0.0932	ug/mL#	56
36) 4Cl3methylphe	6.314	107	3793	0.2672	ug/mL#	20
37) 2Methylnaphth	6.345	142	10545	0.2854	ug/mL	97
38) 1Methylnaphth	6.447	141	10463	0.3074	ug/mL	98
45) 2Clnaphthalen	6.856	162	15663	0.4139	ug/mL	97
46) 2Nitroaniline	6.999	65	1304	0.5255	ug/mL#	27
47) Acnaphthylene	7.215	152	14496	0.1941	ug/mL	98
54) 24Dinitrotolu	7.519	165	1889	0.4753	ug/mL#	47
55) 4-Nitrophenol	7.521	65	1940	2.1652	ug/mL#	35
60) Diethylphthal	7.732	149	8122	0.2296	ug/mL	92
61) 4Nitroaniline	7.950	138	4369	0.9850	ug/mL#	53
66) Azobenz&12Diphlhyd	7.936	182	4452	0.2779	ug/mL#	1

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121148.D Vial: 9
Acq On : 23 Mar 2022 13:24 Operator: JJY
Sample : 210458,1121148, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:43:02 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

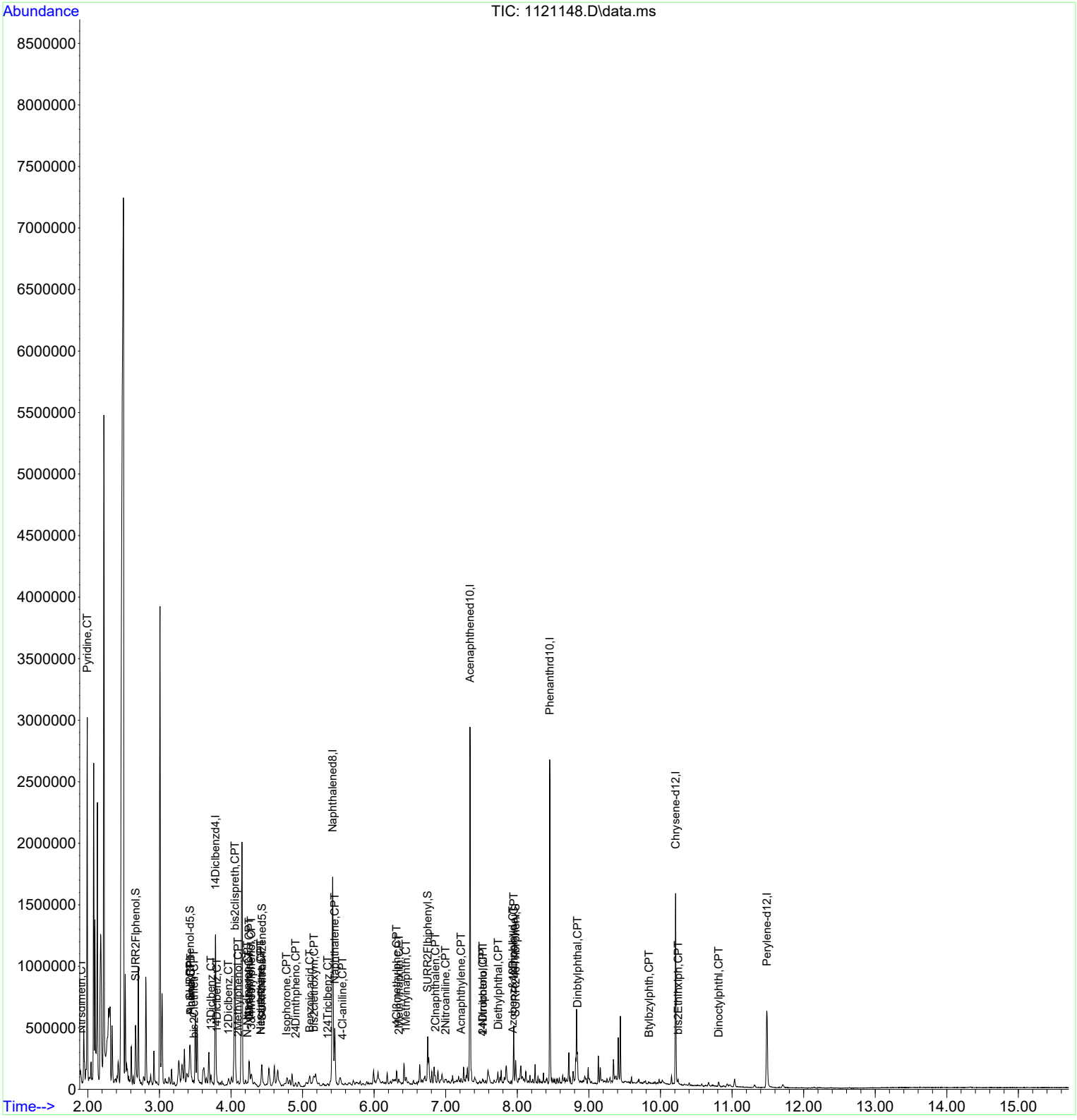
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
73) Dinbtylphthal	8.840	149	57758	1.4627	ug/mL	98
79) Btylbzylphth	9.840	149	1202	0.5528	ug/mL	78
84) bis2Ethlhxlph	10.246	149	8459	0.8046	ug/mL	98
85) Dinoctylphthl	10.815	149	3333	0.7228	ug/mL#	74

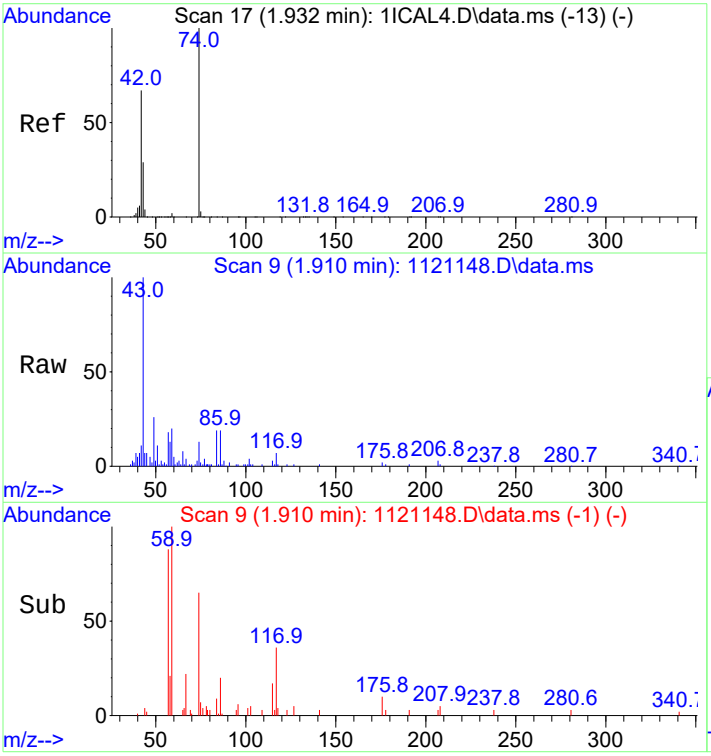
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121148.D Vial: 9
Acq On : 23 Mar 2022 13:24 Operator: JJY
Sample : 210458,1121148, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:43:02 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

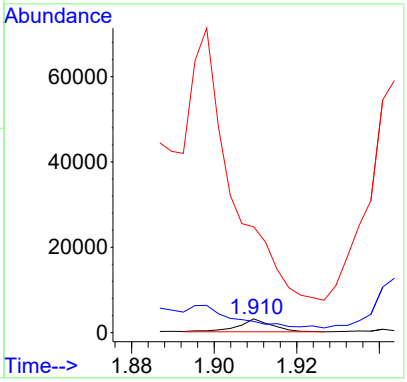


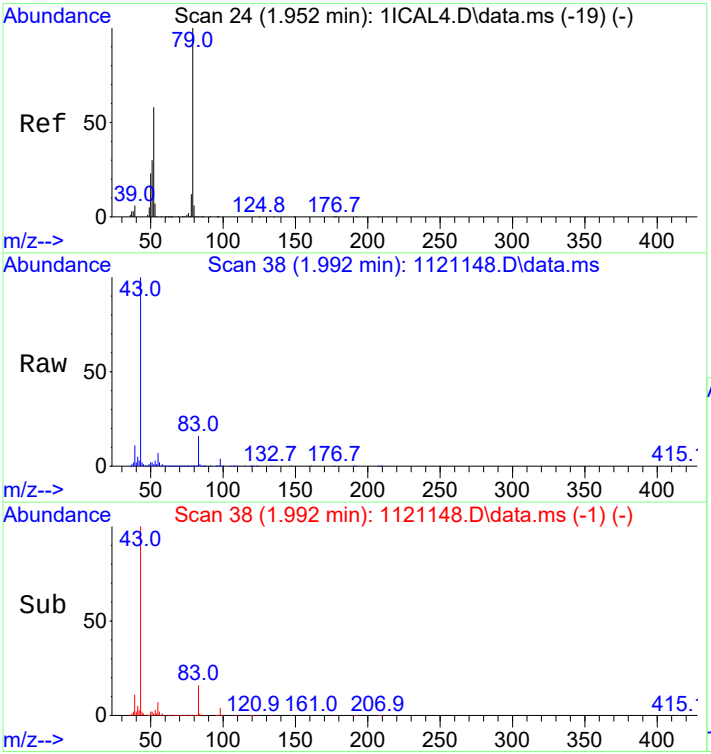


#2
Ntrsdimeth
Concen: 0.21 ug/mL
RT: 1.910 min Scan# 9
Delta R.T. -0.022 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 74 Resp: 1749

Ion	Ratio	Lower	Upper
74	100		
42	0.0	36.9	96.9#
43	0.0	0.0	58.9

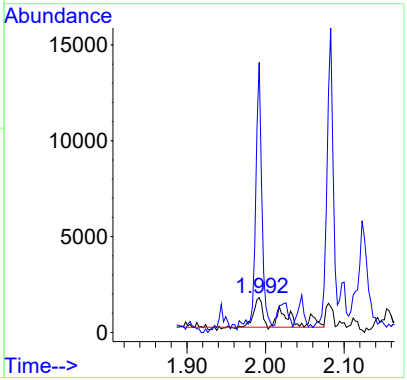


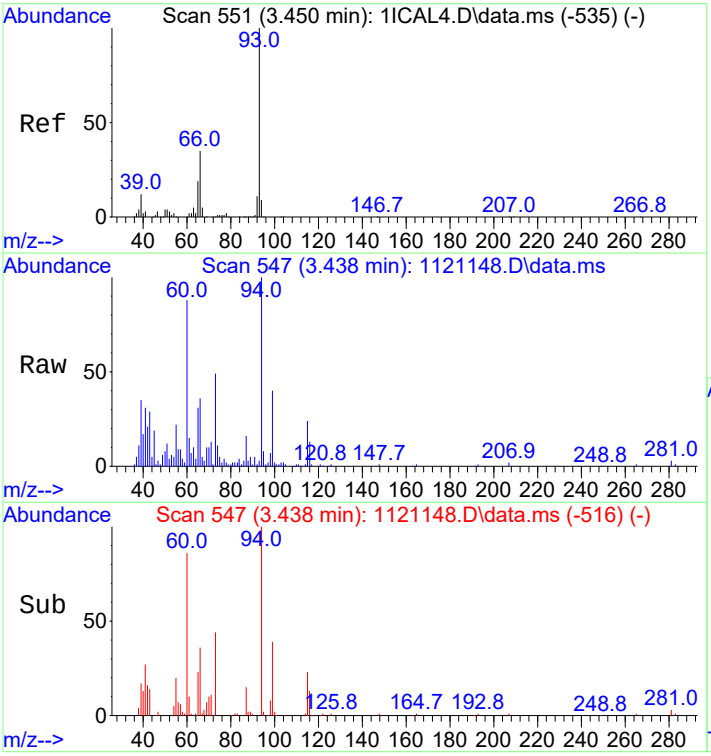


#3
Pyridine
Concen: 0.20 ug/mL
RT: 1.992 min Scan# 38
Delta R.T. 0.040 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 79 Resp: 2845

Ion	Ratio	Lower	Upper
79	100		
52	890.1	27.7	87.7#

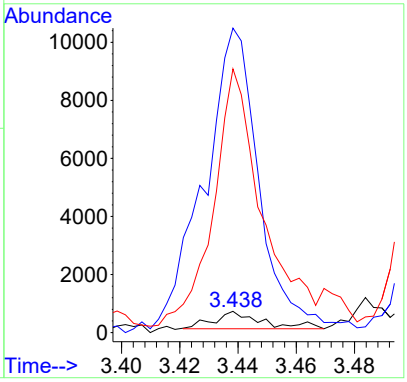


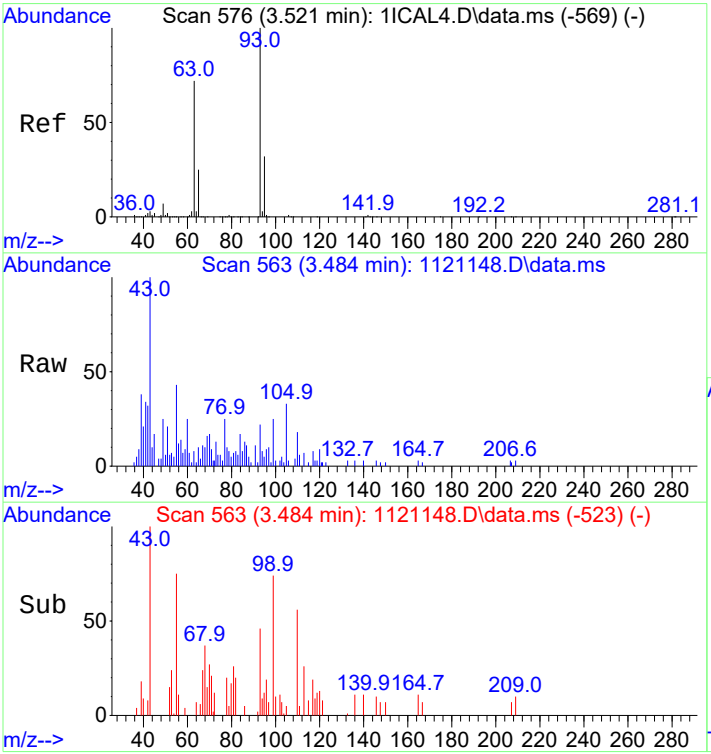


#5
Aniline
Concen: 0.04 ug/mL
RT: 3.438 min Scan# 547
Delta R.T. -0.012 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 93 Resp: 696

Ion	Ratio	Lower	Upper
93	100		
66	2028.9	5.7	65.7#
65	1571.6	0.0	48.1#

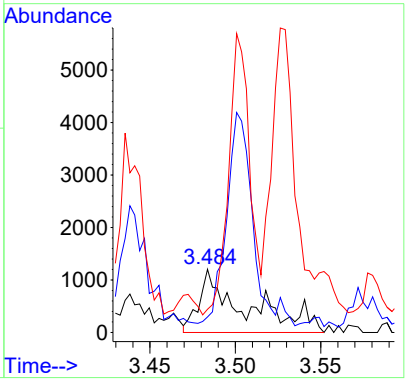


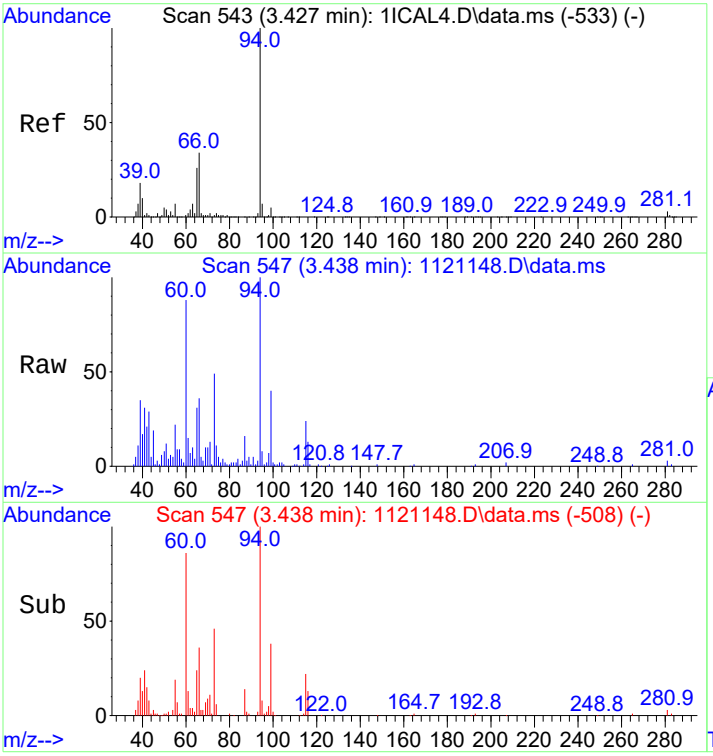


#6
bis2Clethletr
Concen: 0.18 ug/mL
RT: 3.484 min Scan# 563
Delta R.T. -0.037 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 93 Resp: 2238

Ion	Ratio	Lower	Upper
93	100		
95	15.2	1.7	61.7
63	0.0	41.1	101.1#

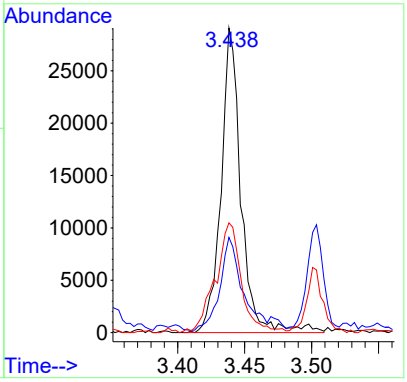


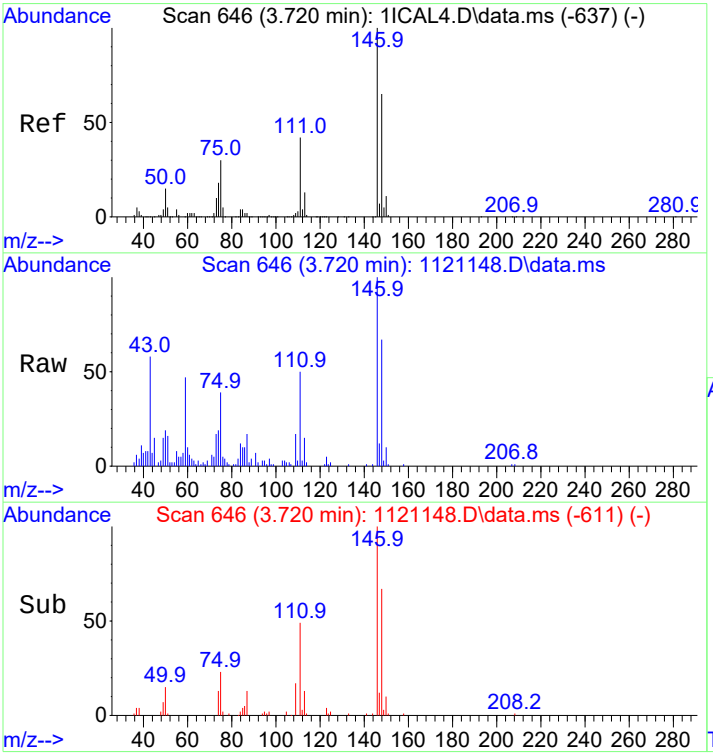


#8
Phenol
Concen: 1.73 ug/mL
RT: 3.438 min Scan# 547
Delta R.T. 0.011 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 94 Resp: 30198

Ion	Ratio	Lower	Upper
94	100		
65	30.3	0.0	56.1
66	35.8	4.1	64.1

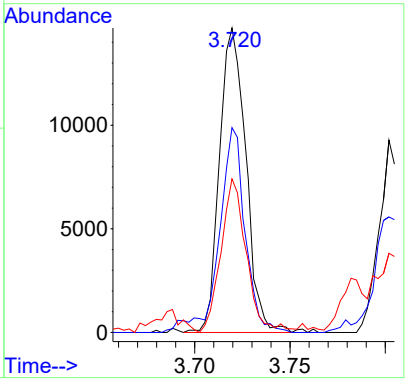


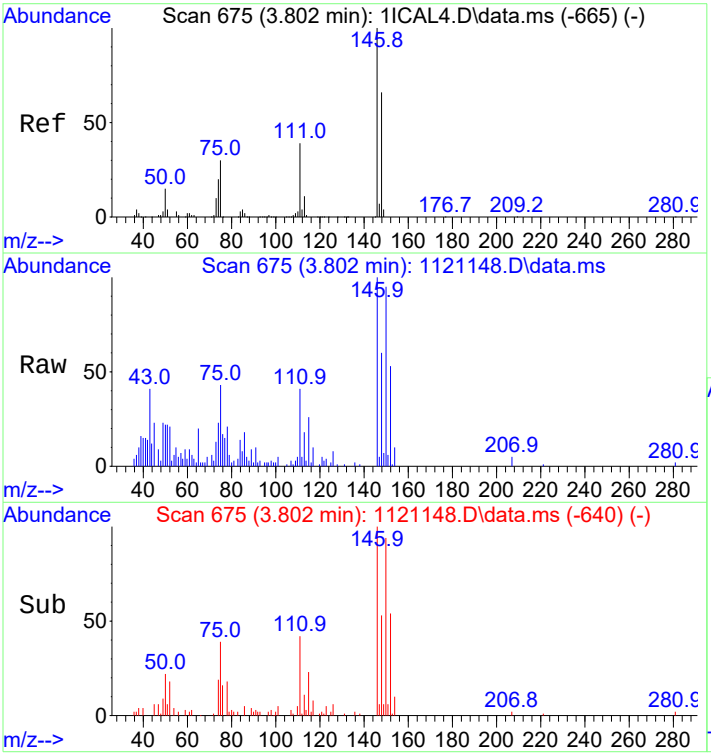


#10
13Diclbenz
Concen: 0.97 ug/mL
RT: 3.720 min Scan# 646
Delta R.T. -0.000 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:146 Resp: 14201

Ion	Ratio	Lower	Upper
146	100		
148	67.3	35.4	95.4
111	49.6	11.7	71.7

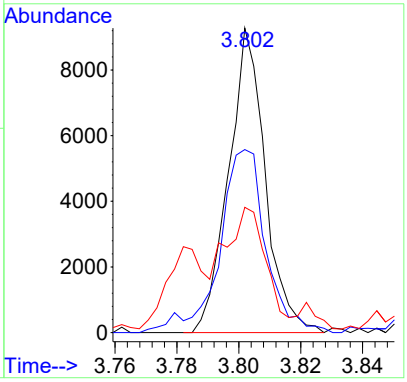


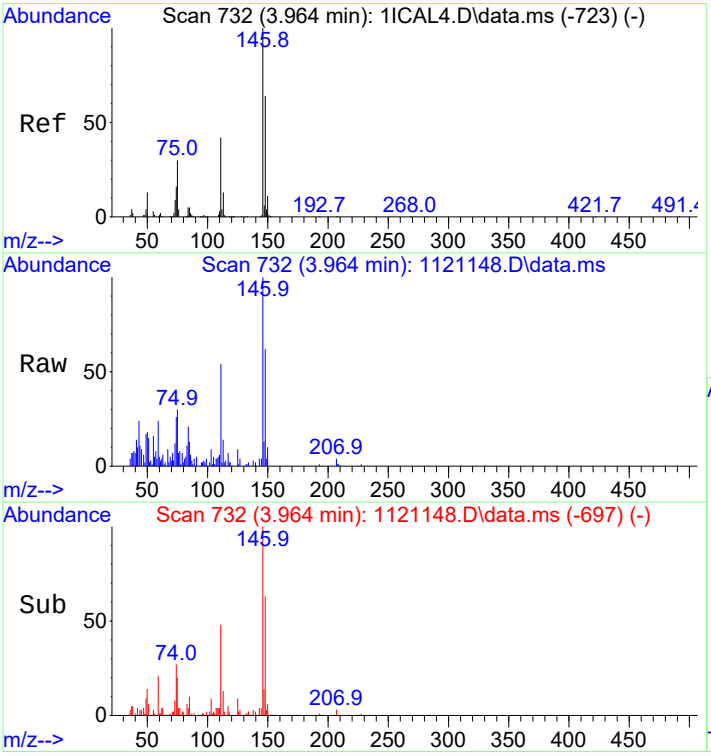


#11
14Diclbenz
Concen: 0.53 ug/mL
RT: 3.802 min Scan# 675
Delta R.T. -0.000 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:146 Resp: 7629

Ion	Ratio	Lower	Upper
146	100		
148	58.7	35.6	95.6
111	37.1	9.1	69.1

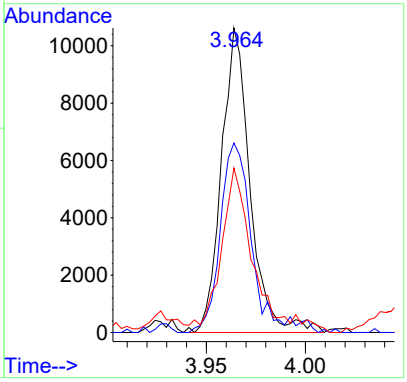


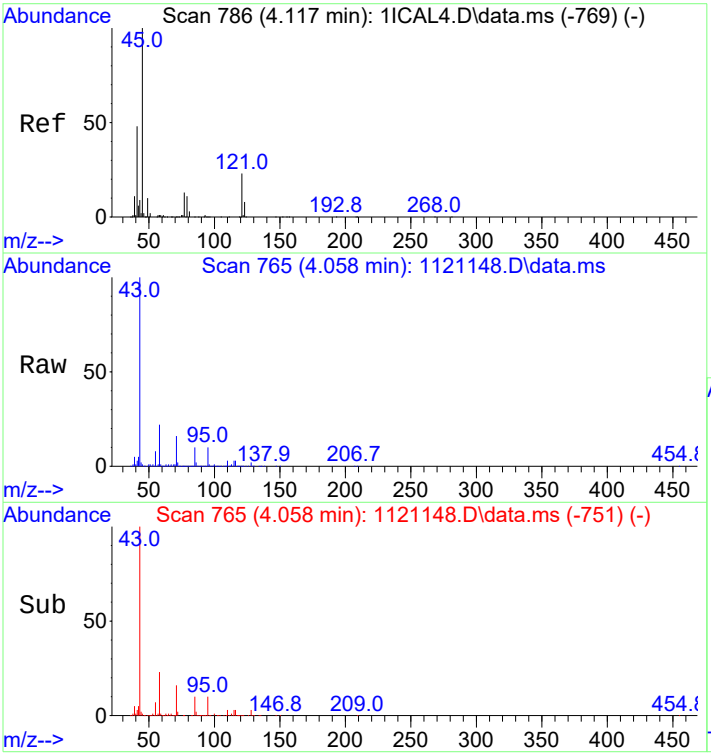


#12
12Diclbenz
Concen: 0.78 ug/mL
RT: 3.964 min Scan# 732
Delta R.T. -0.000 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:146 Resp: 10704

Ion	Ratio	Lower	Upper
146	100		
148	62.2	33.9	93.9
111	52.5	11.9	71.9

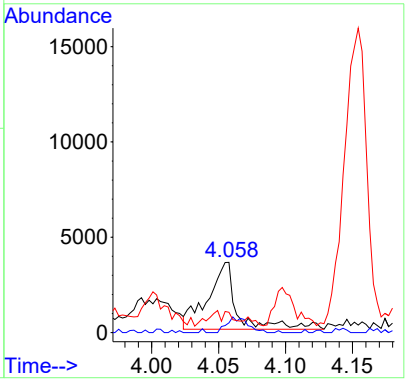


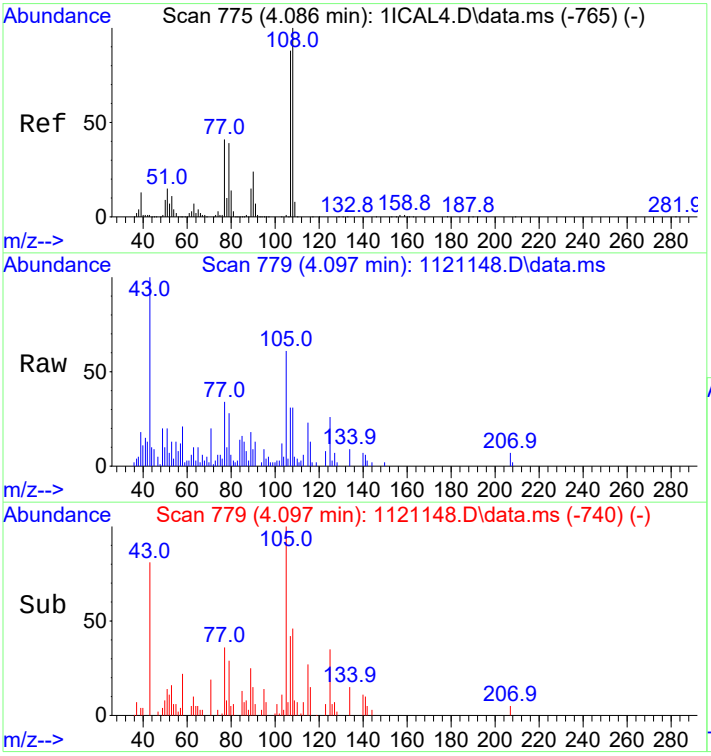


#14
bis2clispreth
Concen: 0.37 ug/mL
RT: 4.058 min Scan# 765
Delta R.T. -0.059 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 45 Resp: 5436

Ion	Ratio	Lower	Upper
45	100		
121	14.5	0.0	53.5
77	16.9	0.0	45.7

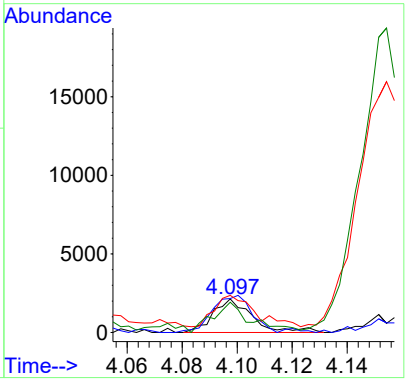


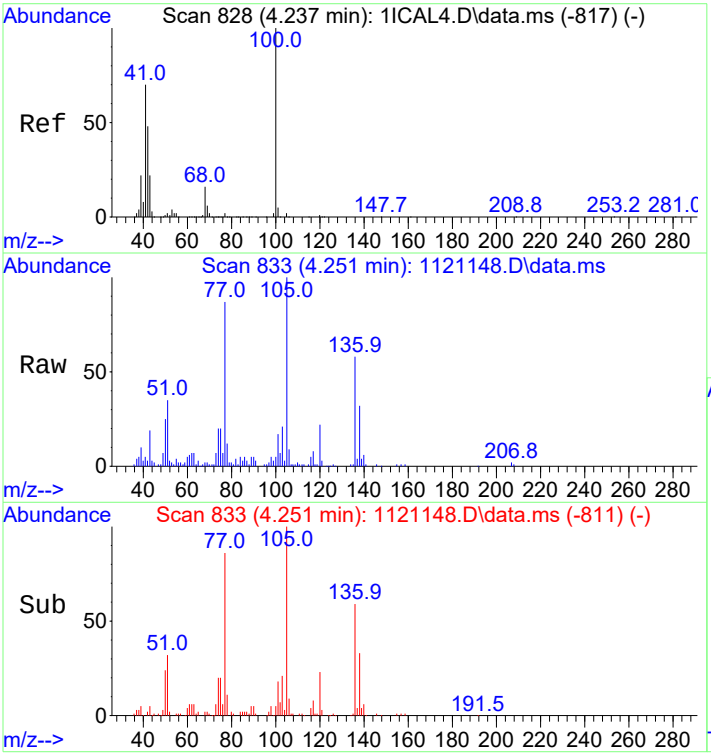


#15
2Methylphenol
Concen: 0.22 ug/mL
RT: 4.097 min Scan# 779
Delta R.T. 0.011 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:107 Resp: 2116

Ion	Ratio	Lower	Upper
107	100		
108	112.6	83.3	143.3
77	90.9	16.9	76.9#
79	70.1	14.5	74.5

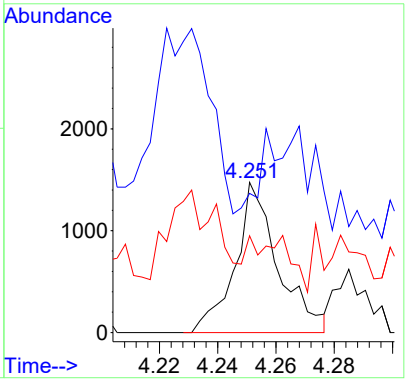


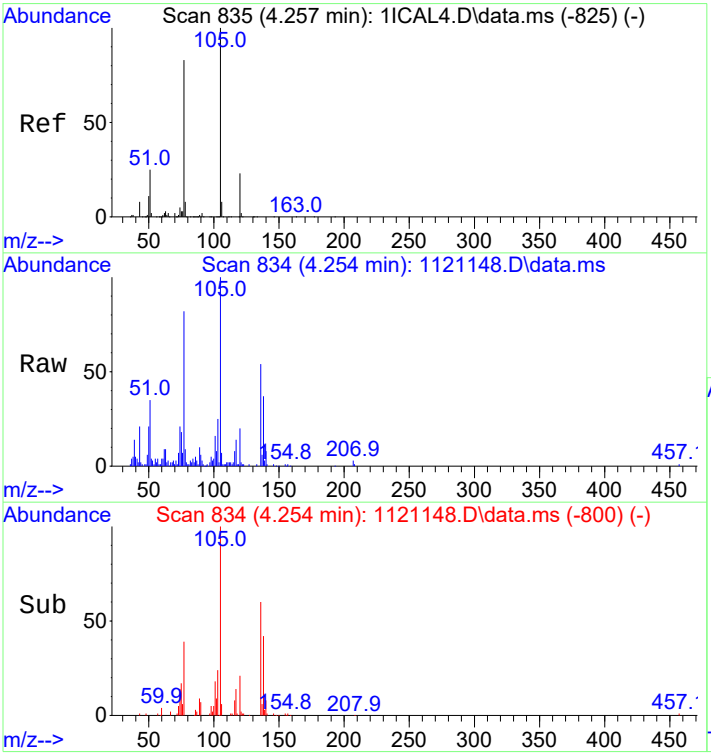


#16
Ntrspyrrol
Concen: 0.26 ug/mL
RT: 4.251 min Scan# 833
Delta R.T. 0.014 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:100 Resp: 1501

Ion	Ratio	Lower	Upper
100	100		
41	0.0	39.9	99.9#
42	23.0	18.4	78.4

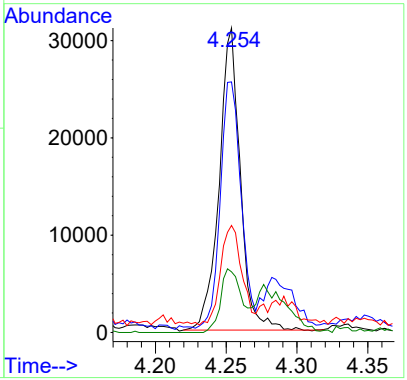


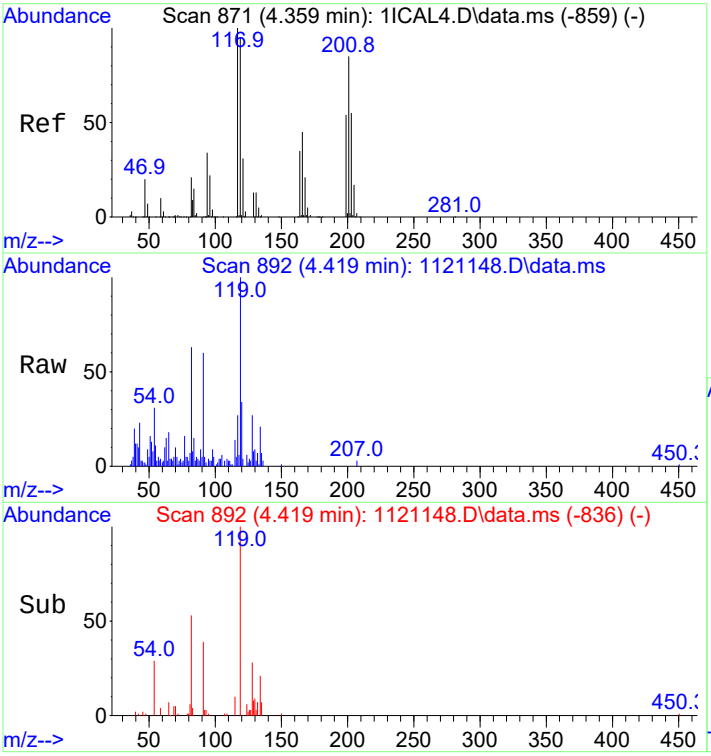


#17
Acetophenone
Concen: 1.90 ug/mL
RT: 4.254 min Scan# 834
Delta R.T. -0.003 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:105 Resp: 32217

Ion	Ratio	Lower	Upper
105	100		
77	80.7	53.4	113.4
51	31.9	0.0	55.3
120	19.8	0.0	52.9

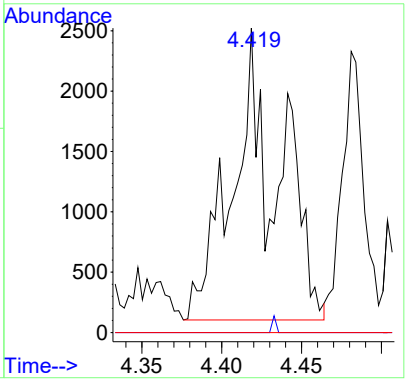


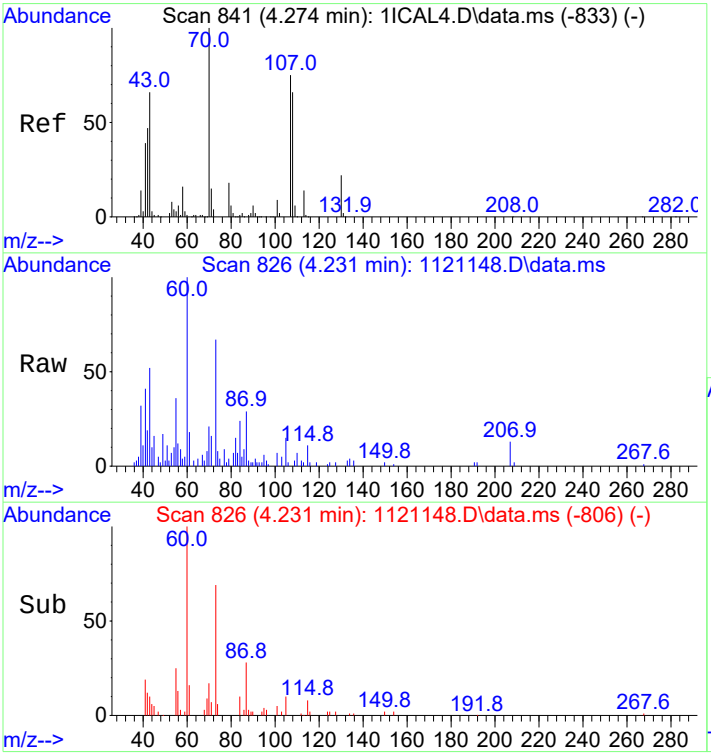


#18
Hexaclethane
Concen: 0.83 ug/mL
RT: 4.419 min Scan# 892
Delta R.T. 0.060 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:117 Resp: 4828

Ion	Ratio	Lower	Upper
117	100		
201	0.0	55.1	115.1#
199	0.0	24.2	84.2#

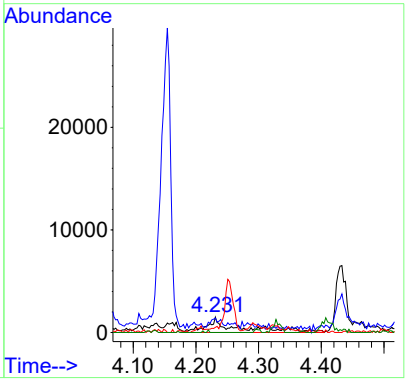


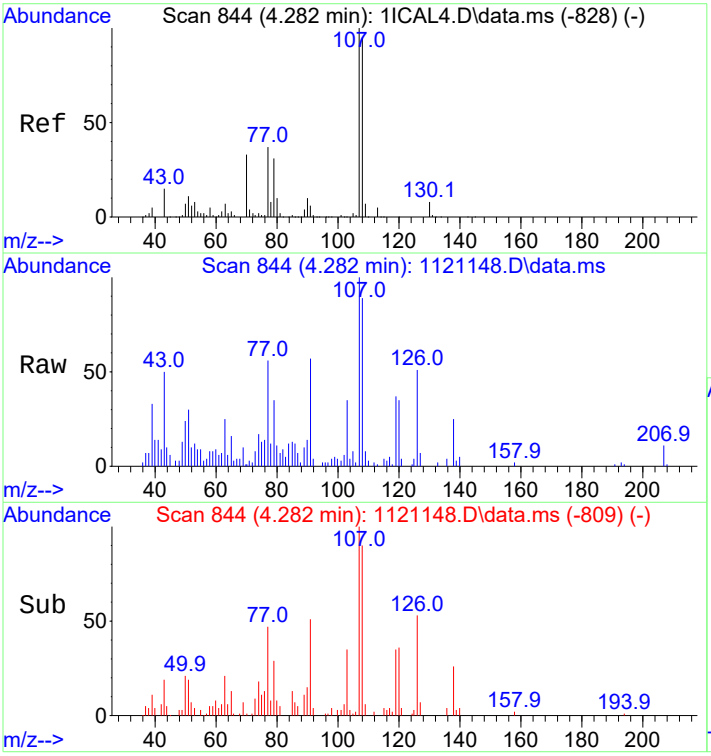


#19
N-Ntrsdinprop
Concen: 0.58 ug/mL
RT: 4.231 min Scan# 826
Delta R.T. -0.043 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 70 Resp: 5149

Ion	Ratio	Lower	Upper
70	100		
42	61.8	21.6	81.6
101	33.1	0.0	39.8
130	0.0	0.0	51.9

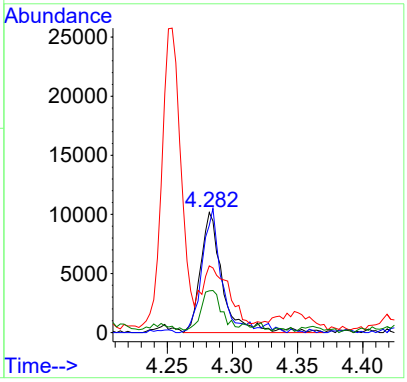


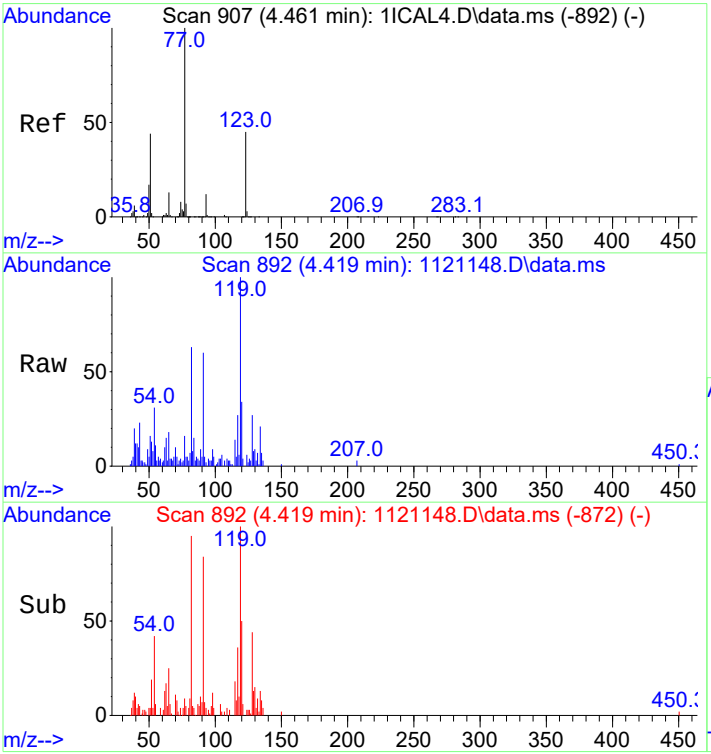


#20
3&4Methylphenol
Concen: 1.02 ug/mL
RT: 4.282 min Scan# 844
Delta R.T. 0.000 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:107 Resp: 12015

Ion	Ratio	Lower	Upper
107	100		
108	89.2	65.4	125.4
77	48.7	8.0	68.0
79	32.7	1.0	61.0

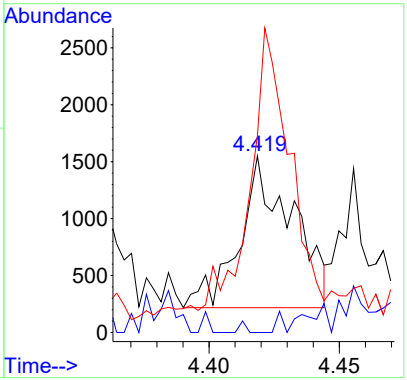


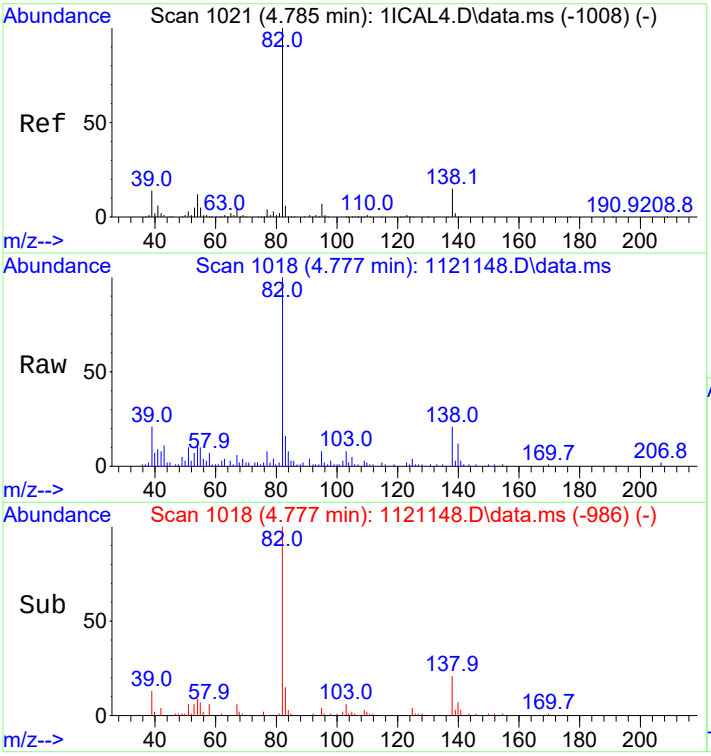


#23
Nitrobenzene
Concen: 0.14 ug/mL
RT: 4.419 min Scan# 892
Delta R.T. -0.042 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 77 Resp: 1895

Ion	Ratio	Lower	Upper
77	100		
123	0.0	14.7	74.7#
65	114.1	0.0	42.8#

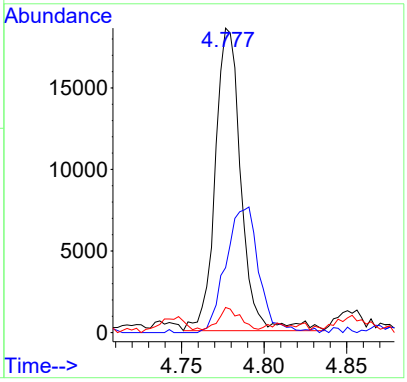


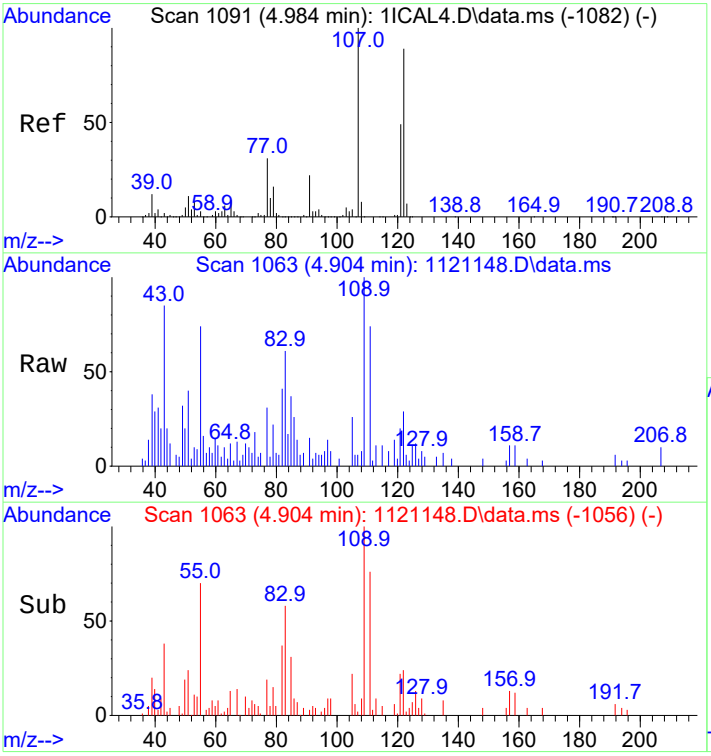


#24
Isophorone
Concen: 0.78 ug/mL
RT: 4.777 min Scan# 1018
Delta R.T. -0.008 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 82 Resp: 20168

Ion	Ratio	Lower	Upper
82	100		
138	21.5	0.0	45.3
95	7.0	0.0	36.5

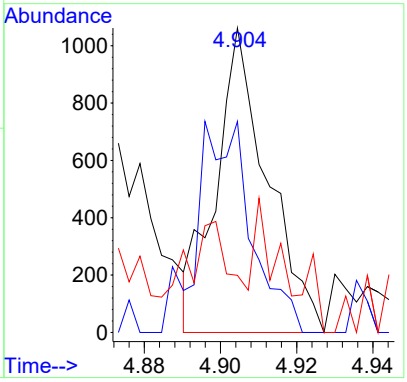


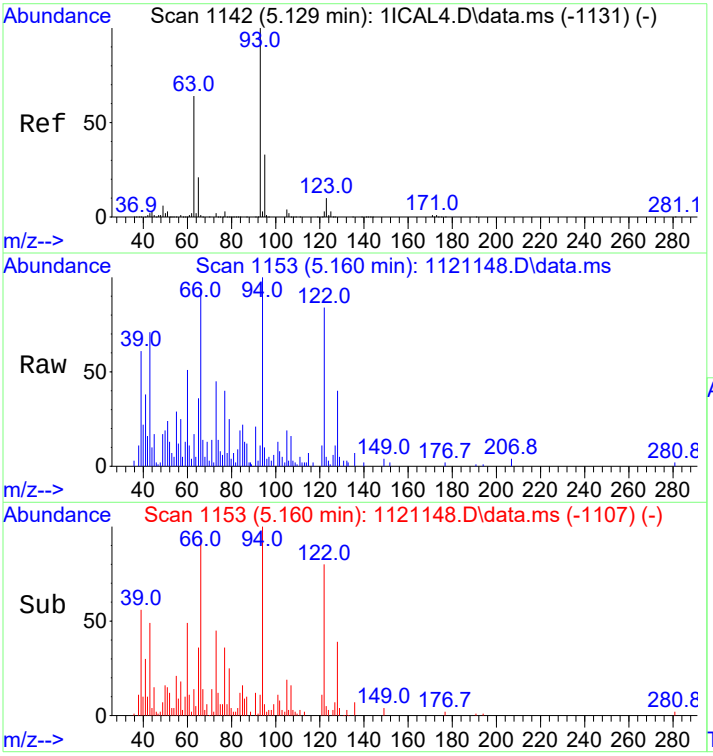


#26
24Dimthpheno
Concen: 0.11 ug/mL
RT: 4.904 min Scan# 1063
Delta R.T. -0.080 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:122 Resp: 1002

Ion	Ratio	Lower	Upper
122	100		
121	69.3	25.0	85.0
107	18.7	82.0	142.0#

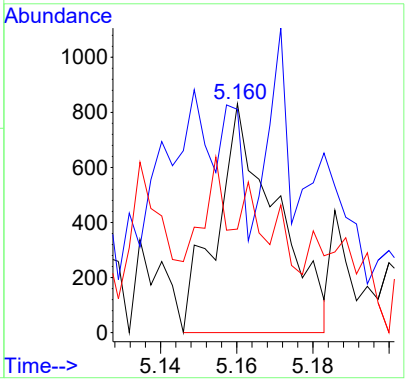


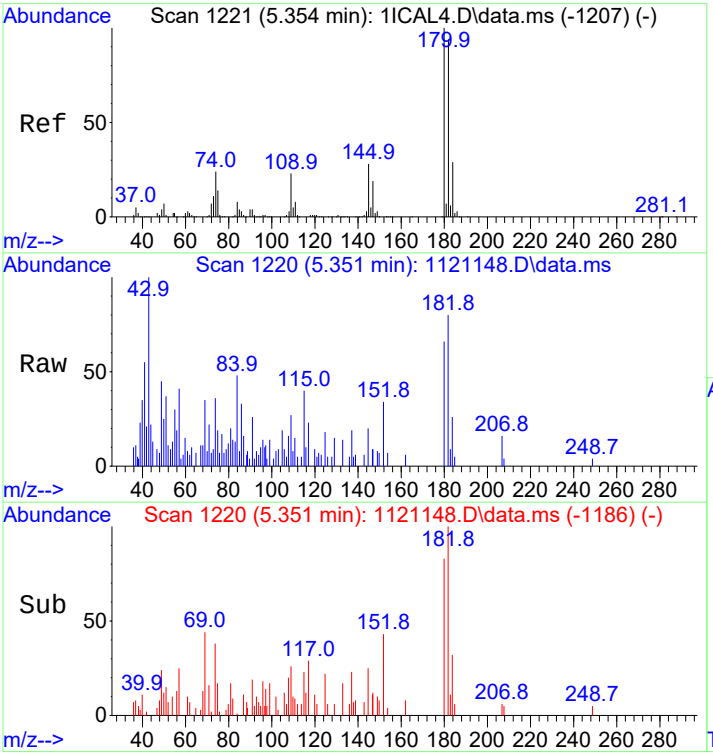


#27
bis2clethoxym
Concen: 0.05 ug/mL
RT: 5.160 min Scan# 1153
Delta R.T. 0.031 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 93 Resp: 898

Ion	Ratio	Lower	Upper
93	100		
95	19.1	3.5	63.5
123	14.2	0.0	40.0

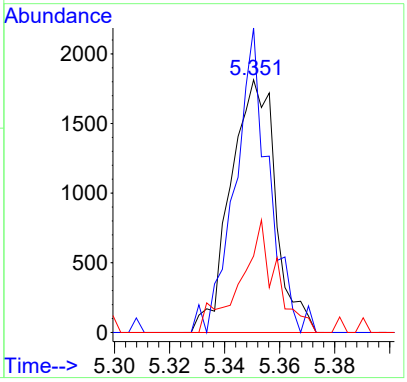


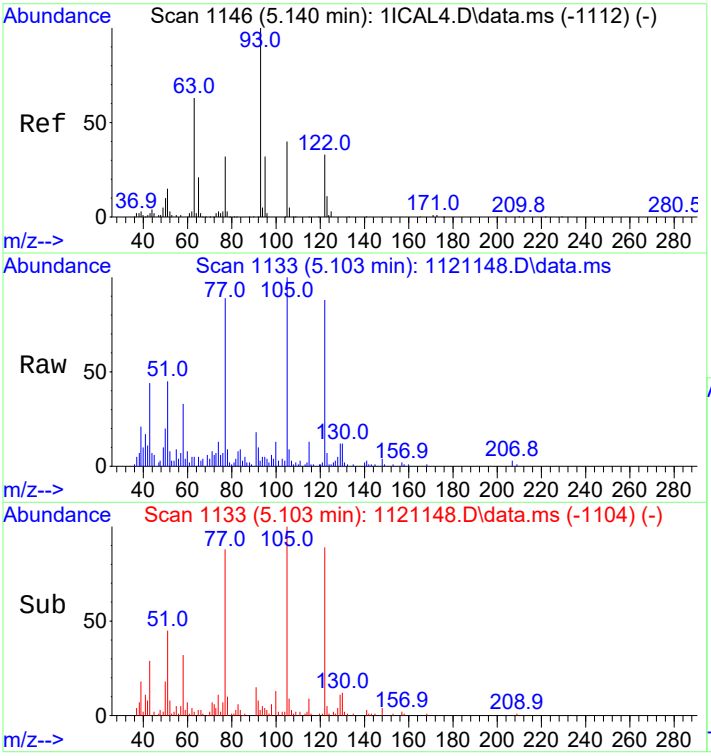


#29
124Triclbenz
Concen: 0.13 ug/mL
RT: 5.351 min Scan# 1220
Delta R.T. -0.003 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:180 Resp: 2056

Ion	Ratio	Lower	Upper
180	100		
182	120.5	64.3	124.3
145	30.3	0.0	58.1

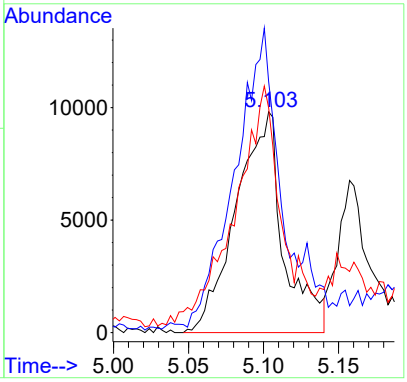


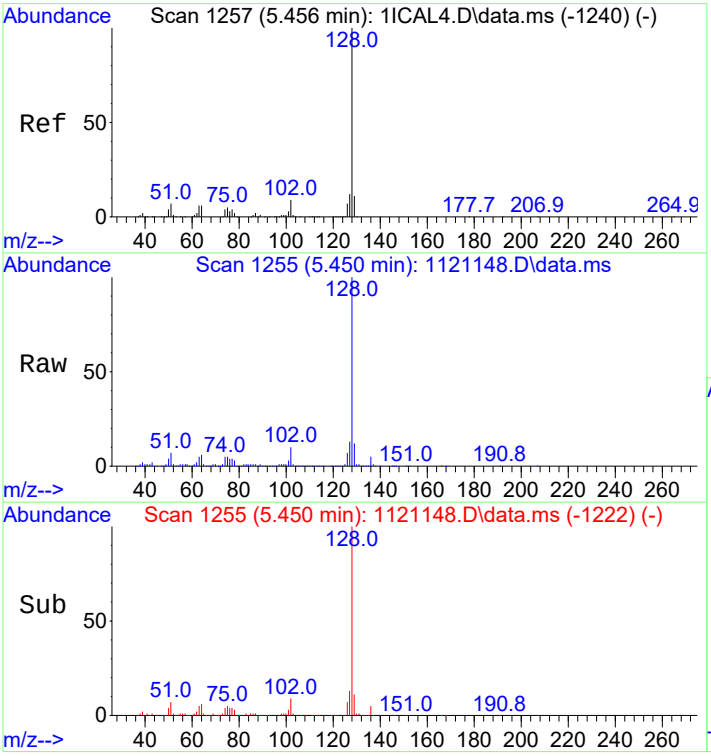


#30
Benzoic acid
Concen: 9.30 ug/mL
RT: 5.103 min Scan# 1133
Delta R.T. -0.037 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:122 Resp: 21533

Ion	Ratio	Lower	Upper
122	100		
105	110.1	90.4	150.4
77	92.3	64.5	124.5

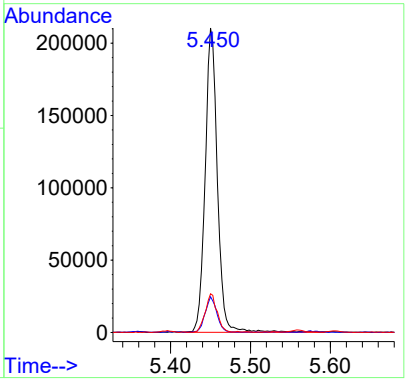


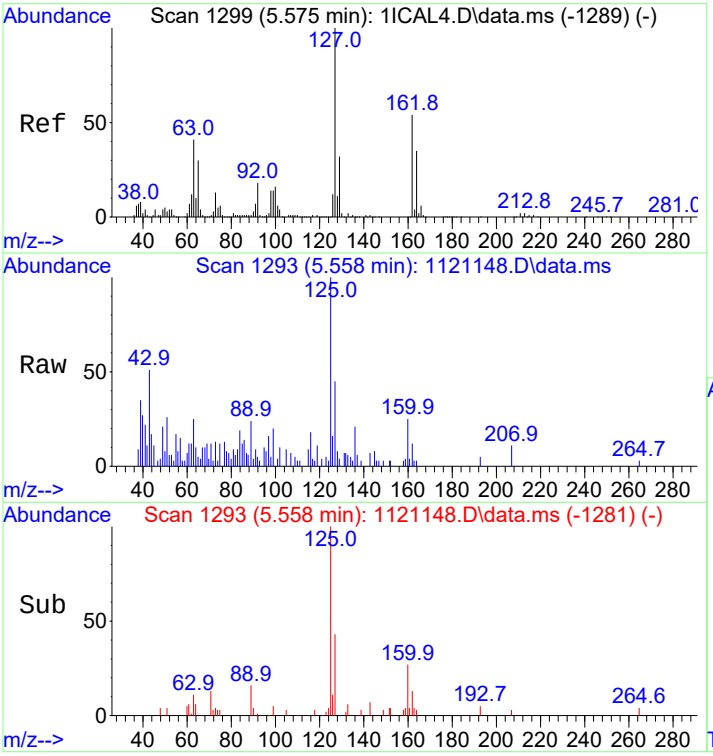


#31
Naphthalene
Concen: 4.55 ug/mL
RT: 5.450 min Scan# 1255
Delta R.T. -0.006 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:128 Resp: 223700

Ion	Ratio	Lower	Upper
128	100		
129	11.6	0.0	40.7
127	12.6	0.0	42.5

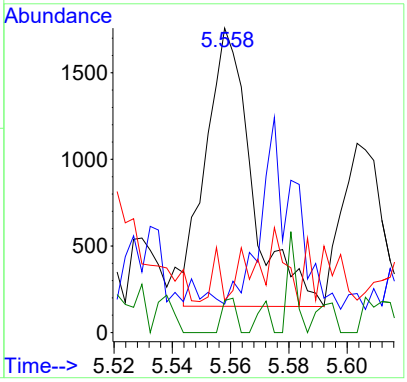


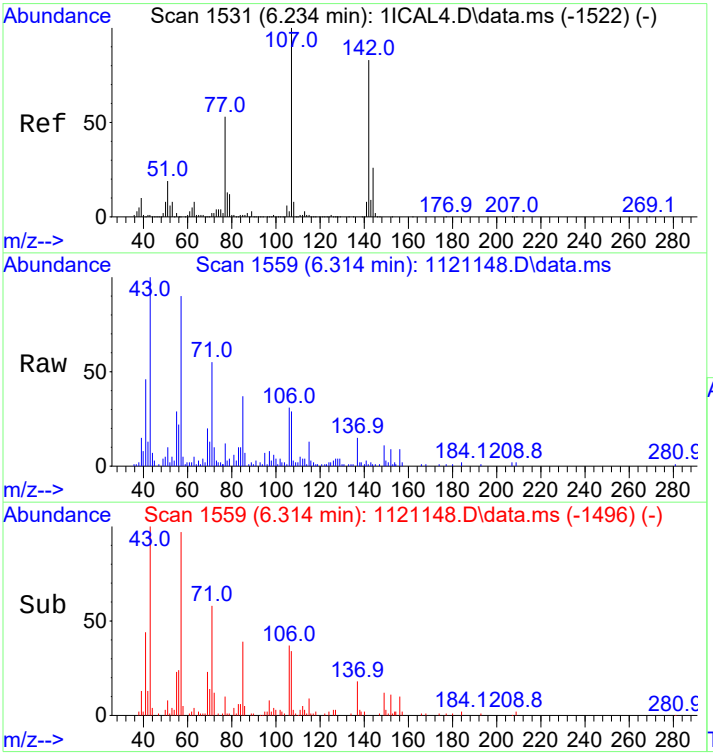


#32
4-Cl-aniline
Concen: 0.09 ug/mL
RT: 5.558 min Scan# 1293
Delta R.T. -0.017 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:127 Resp: 1766

Ion	Ratio	Lower	Upper
127	100		
129	0.0	2.2	62.2#
65	0.0	0.0	59.8
92	17.7	0.0	48.1

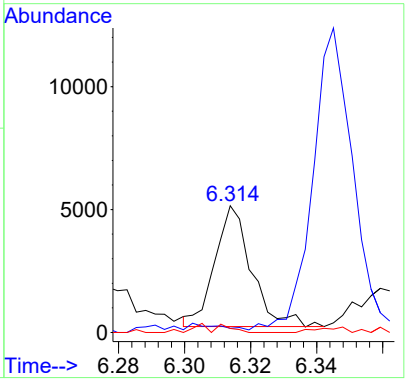


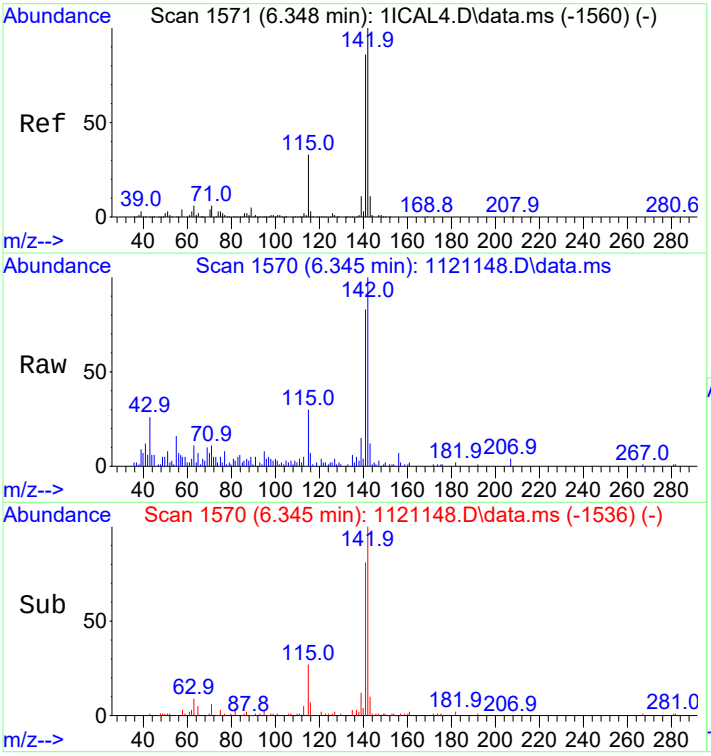


#36
4Cl3methylphe
Concen: 0.27 ug/mL
RT: 6.314 min Scan# 1559
Delta R.T. 0.080 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:107 Resp: 3793

Ion	Ratio	Lower	Upper
107	100		
142	1.1	53.4	113.4#
144	3.3	0.0	56.5

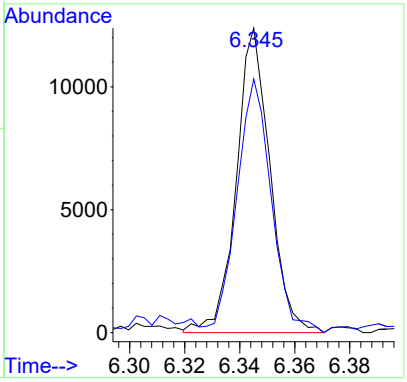


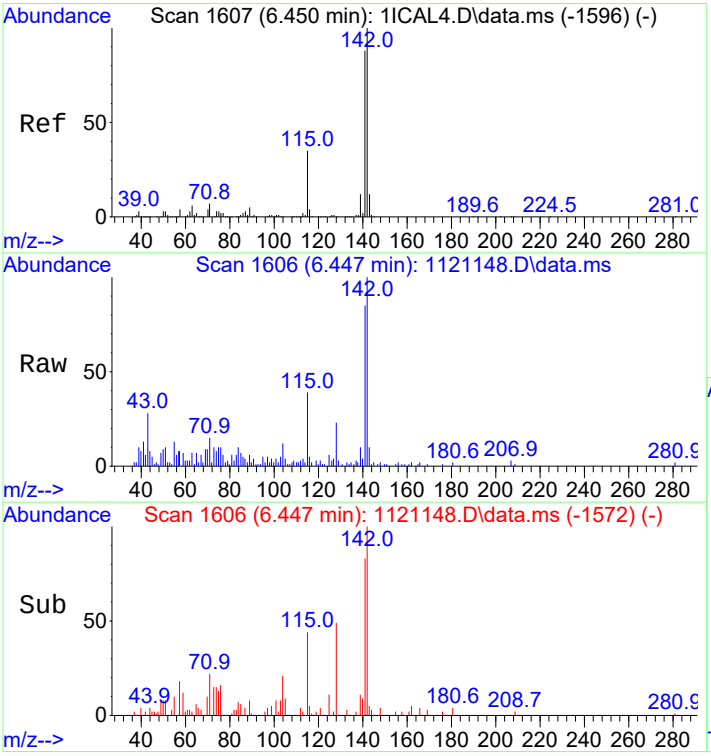


#37
2Methylnaphth
Concen: 0.29 ug/mL
RT: 6.345 min Scan# 1570
Delta R.T. -0.003 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:142 Resp: 10545

Ion	Ratio	Lower	Upper
142	100		
141	83.3	56.2	116.2

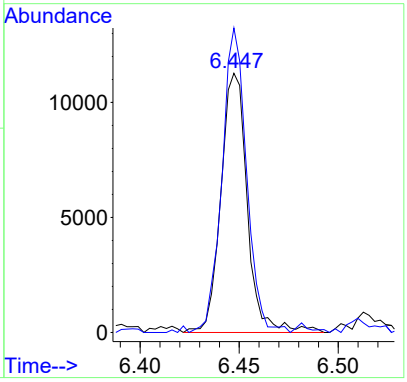


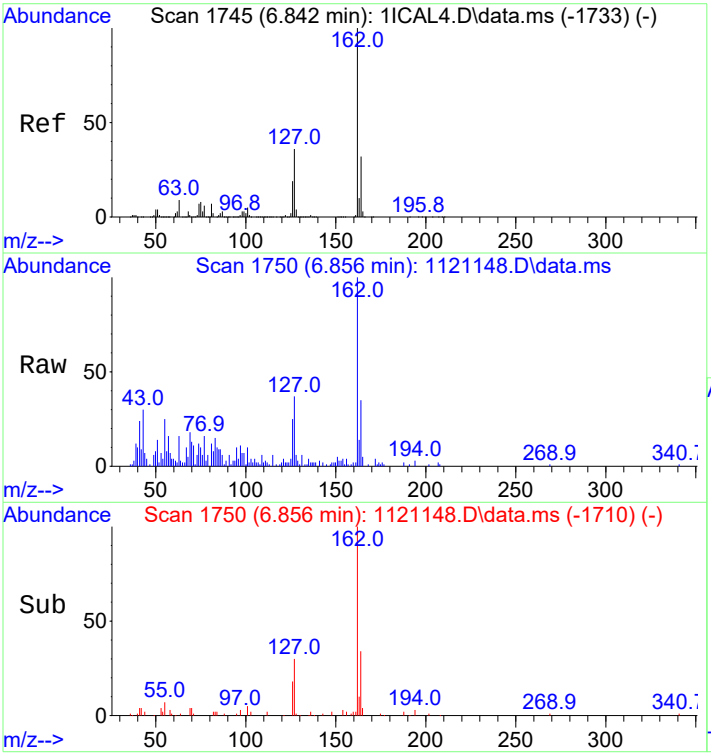


#38
1Methylnaphth
Concen: 0.31 ug/mL
RT: 6.447 min Scan# 1606
Delta R.T. -0.003 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:141 Resp: 10463

Ion	Ratio	Lower	Upper
141	100		
142	116.7	84.0	144.0

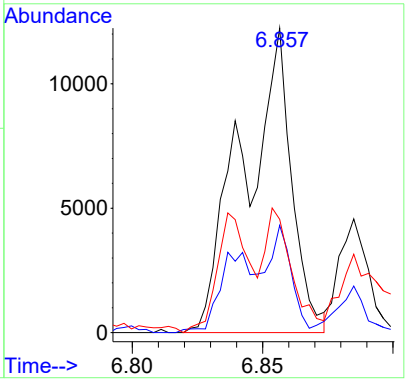


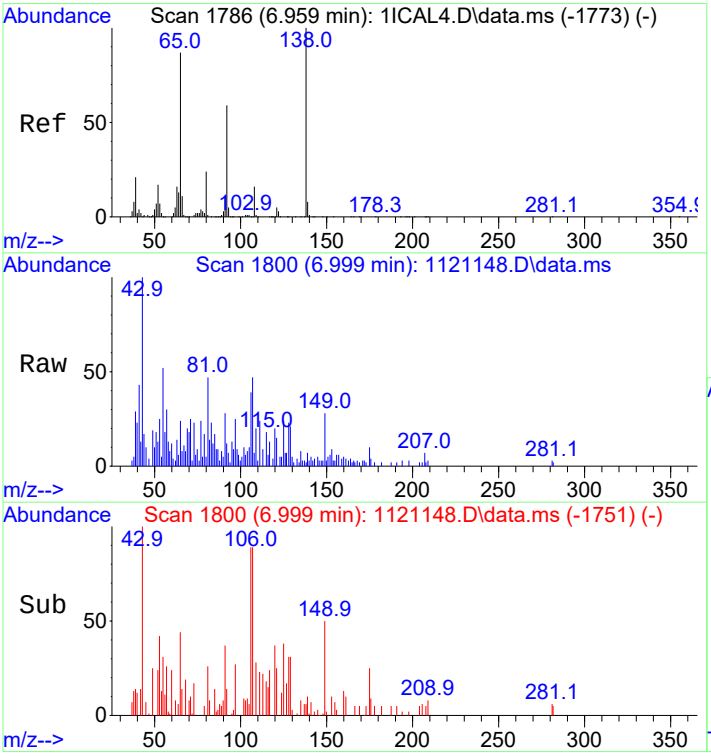


#45
2Clnaphthalen
Concen: 0.41 ug/mL
RT: 6.856 min Scan# 1750
Delta R.T. 0.014 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:162 Resp: 15663

Ion	Ratio	Lower	Upper
162	100		
164	34.2	2.0	62.0
127	37.2	6.3	66.3

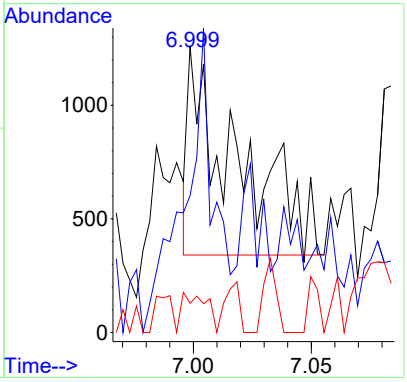


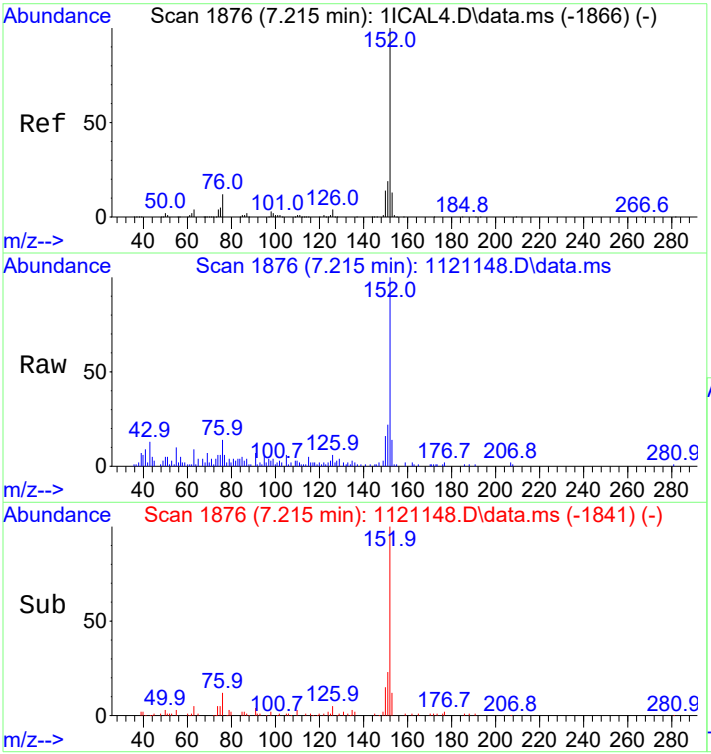


#46
2Nitroaniline
Concen: 0.53 ug/mL
RT: 6.999 min Scan# 1800
Delta R.T. 0.040 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 65 Resp: 1304

Ion	Ratio	Lower	Upper
65	100		
92	35.6	37.9	97.9#
138	14.1	84.9	144.9#

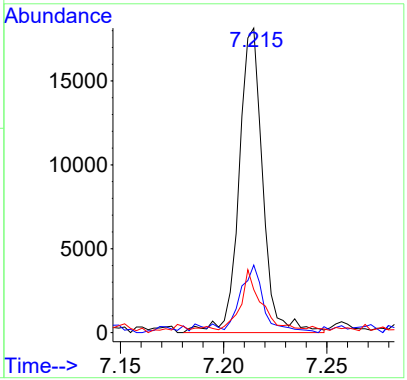


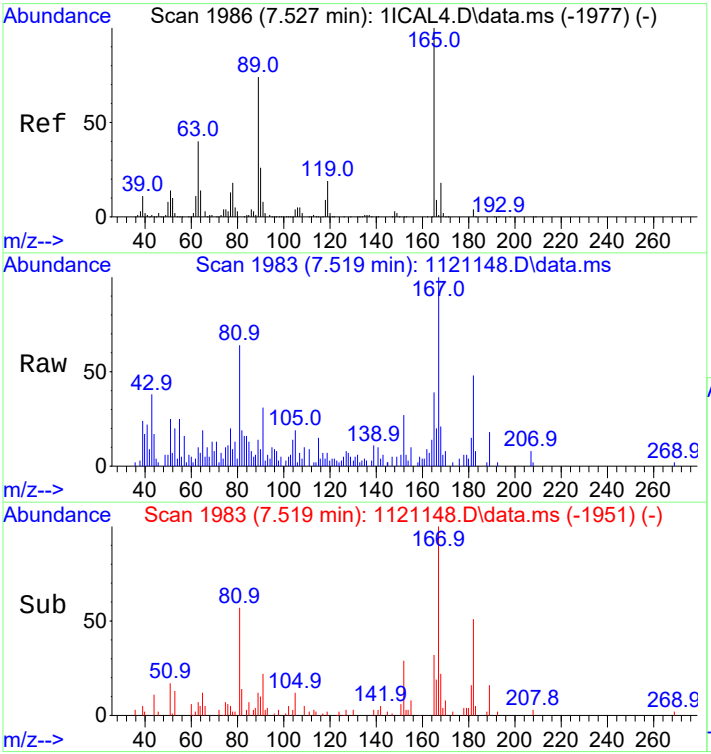


#47
Acnaphthylene
Concen: 0.19 ug/mL
RT: 7.215 min Scan# 1876
Delta R.T. -0.000 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:152 Resp: 14496

Ion	Ratio	Lower	Upper
152	100		
151	20.2	0.0	49.3
153	13.0	0.0	43.3

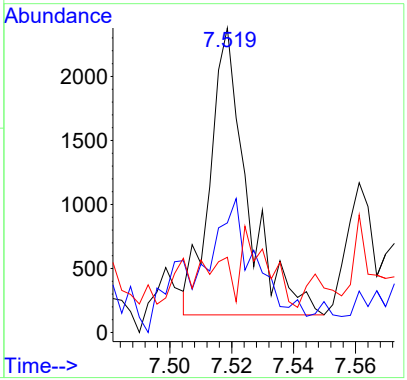


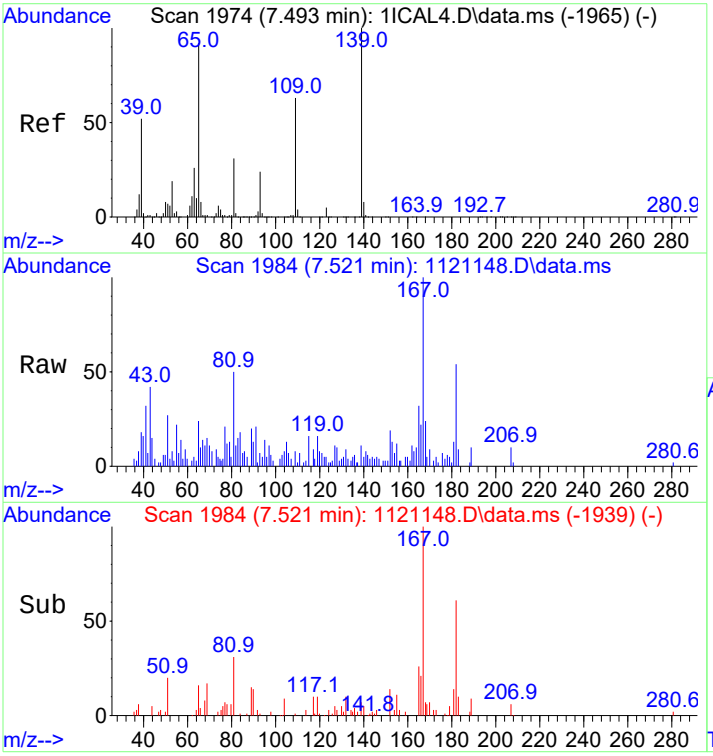


#54
24Dinitrotolu
Concen: 0.48 ug/mL
RT: 7.519 min Scan# 1983
Delta R.T. -0.008 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:165 Resp: 1889

Ion	Ratio	Lower	Upper
165	100		
89	27.5	43.8	103.8#
63	10.7	12.8	72.8#

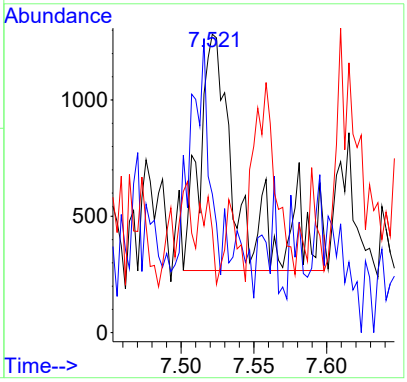


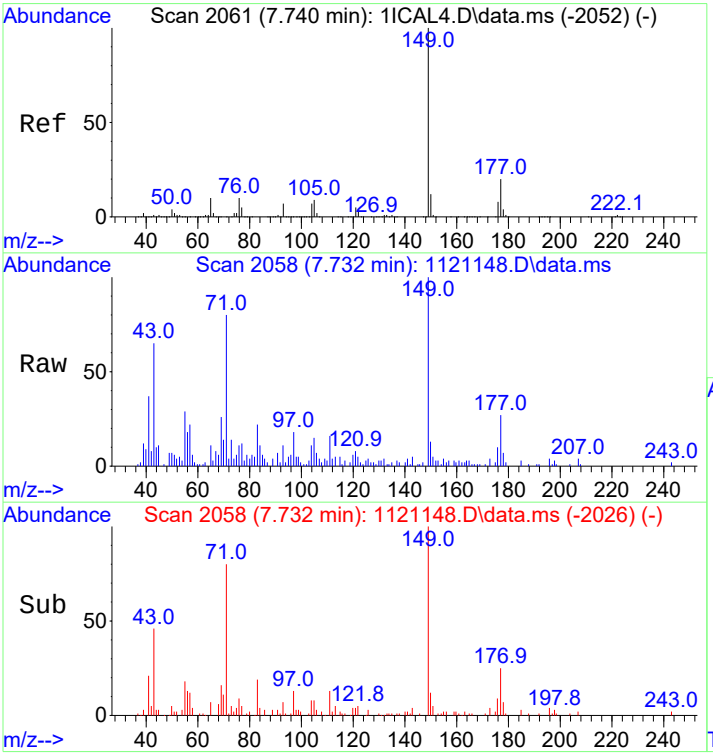


#55
4-Nitrophenol
Concen: 2.17 ug/mL
RT: 7.521 min Scan# 1984
Delta R.T. 0.028 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 65 Resp: 1940

Ion	Ratio	Lower	Upper
65	100		
139	35.4	78.2	138.2#
109	20.4	37.7	97.7#

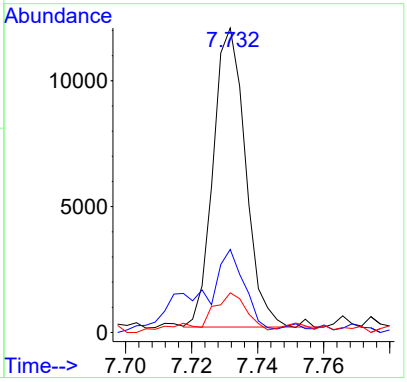


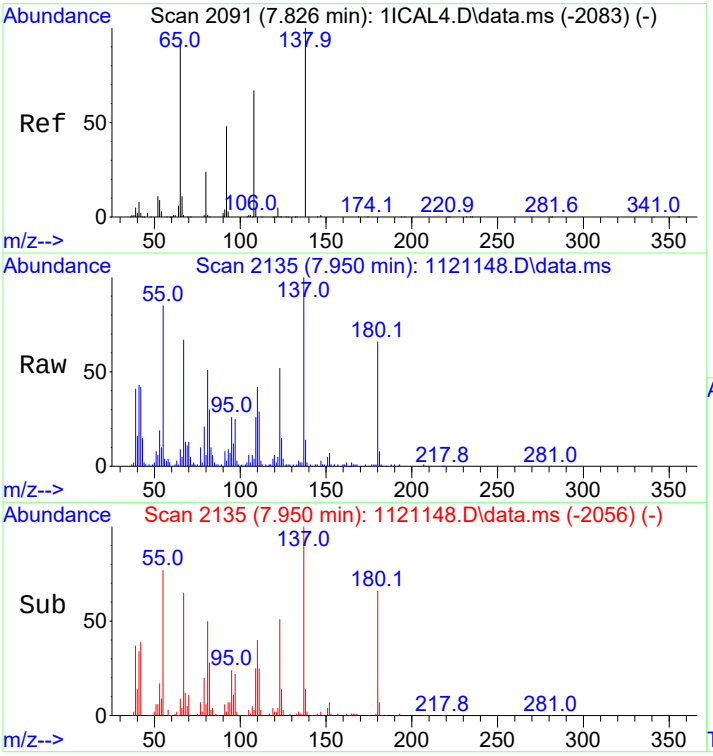


#60
Diethylphthal
Concen: 0.23 ug/mL
RT: 7.732 min Scan# 2058
Delta R.T. -0.008 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:149 Resp: 8122

Ion	Ratio	Lower	Upper
149	100		
177	25.2	0.0	50.4
150	10.9	0.0	42.3

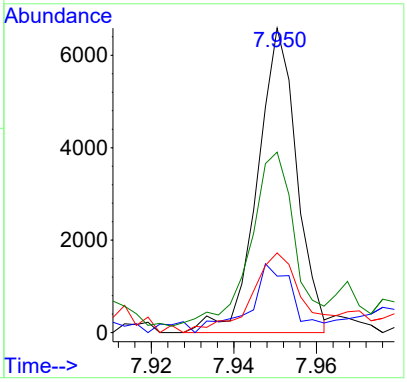


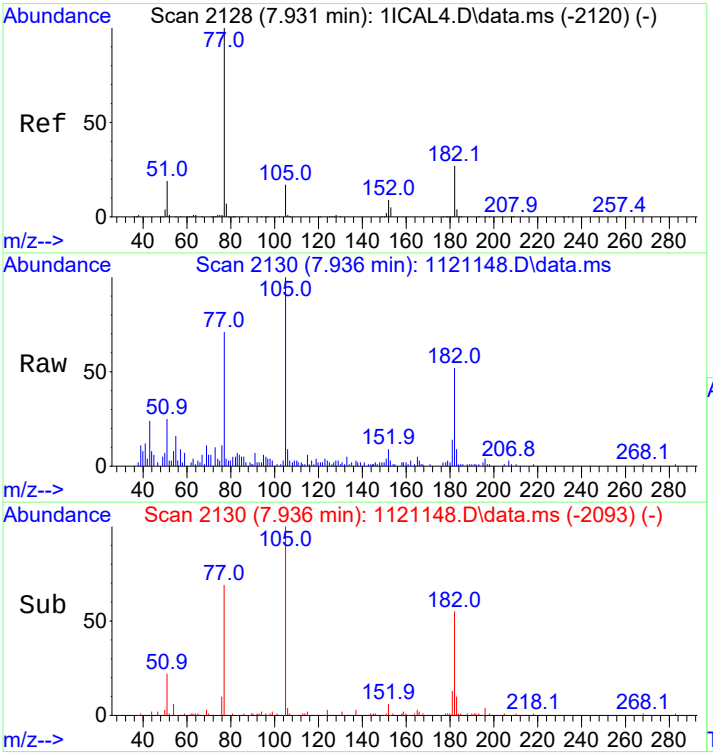


#61
4Nitroaniline
Concen: 0.99 ug/mL
RT: 7.950 min Scan# 2135
Delta R.T. 0.124 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:138 Resp: 4369

Ion	Ratio	Lower	Upper
138	100		
92	15.4	18.4	78.4#
108	26.2	36.9	96.9#
65	56.0	70.8	130.8#

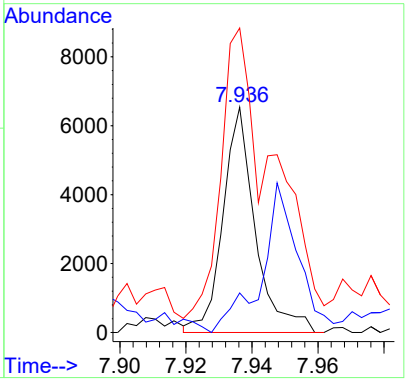


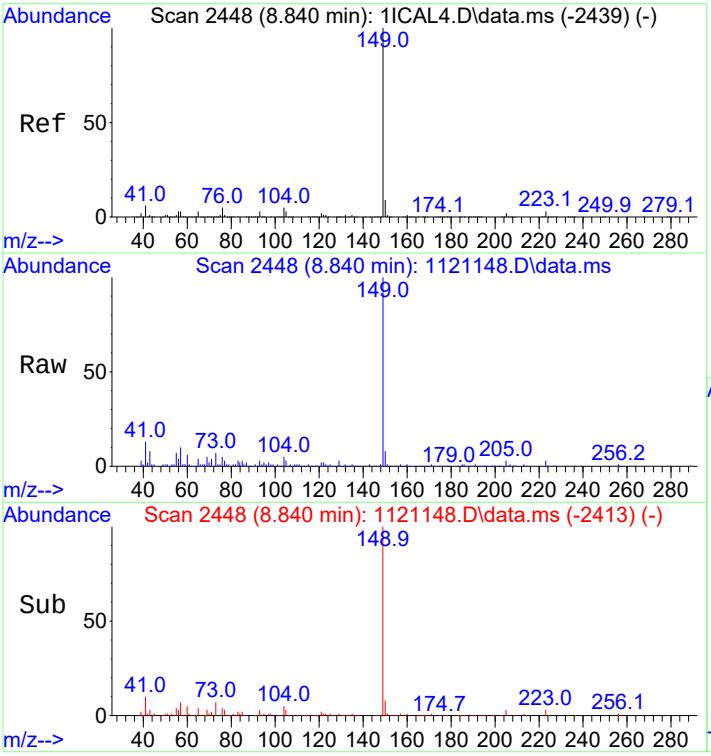


#66
Azobenz&12Diphlhyd
Concen: 0.28 ug/mL
RT: 7.936 min Scan# 2130
Delta R.T. 0.005 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:182 Resp: 4452

Ion	Ratio	Lower	Upper
182	100		
152	11.6	3.8	63.8
77	128.9	367.8	427.8#

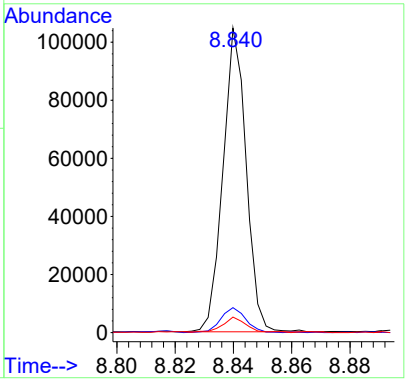


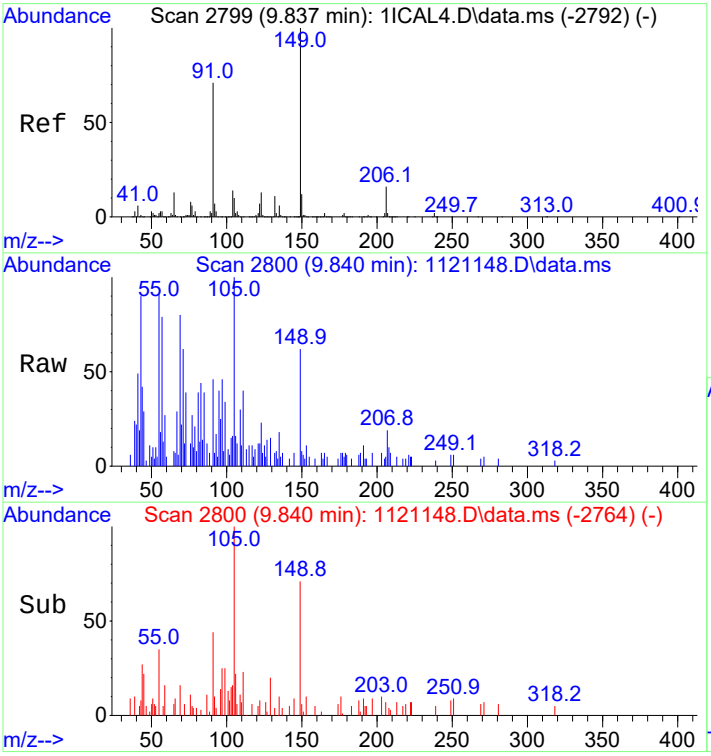


#73
Dinbtylphthal
Concen: 1.46 ug/mL
RT: 8.840 min Scan# 2448
Delta R.T. -0.000 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:149 Resp: 57758

Ion	Ratio	Lower	Upper
149	100		
150	8.2	0.0	39.1
104	4.9	0.0	35.0

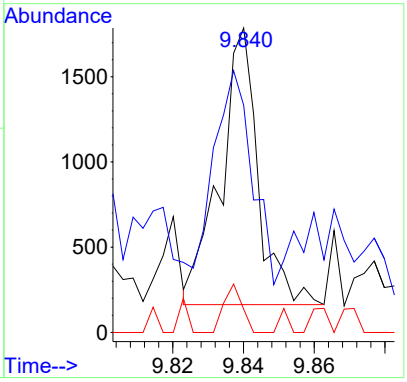


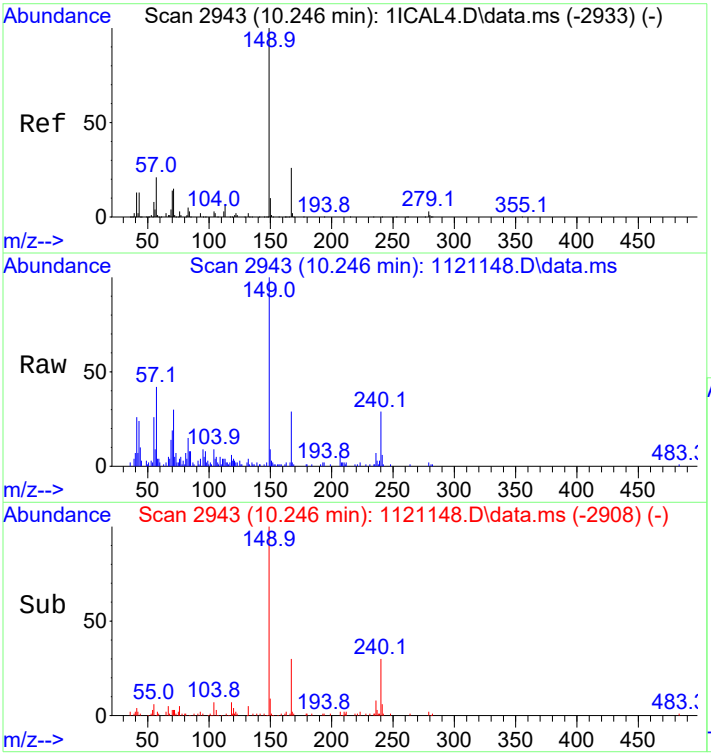


#79
Btylbzylphth
Concen: 0.55 ug/mL
RT: 9.840 min Scan# 2800
Delta R.T. 0.003 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:149 Resp: 1202

Ion	Ratio	Lower	Upper
149	100		
91	56.8	41.2	101.2
206	33.4	0.0	45.9

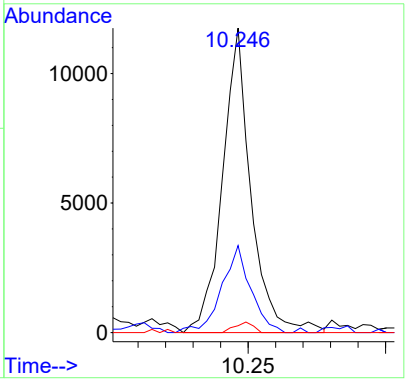


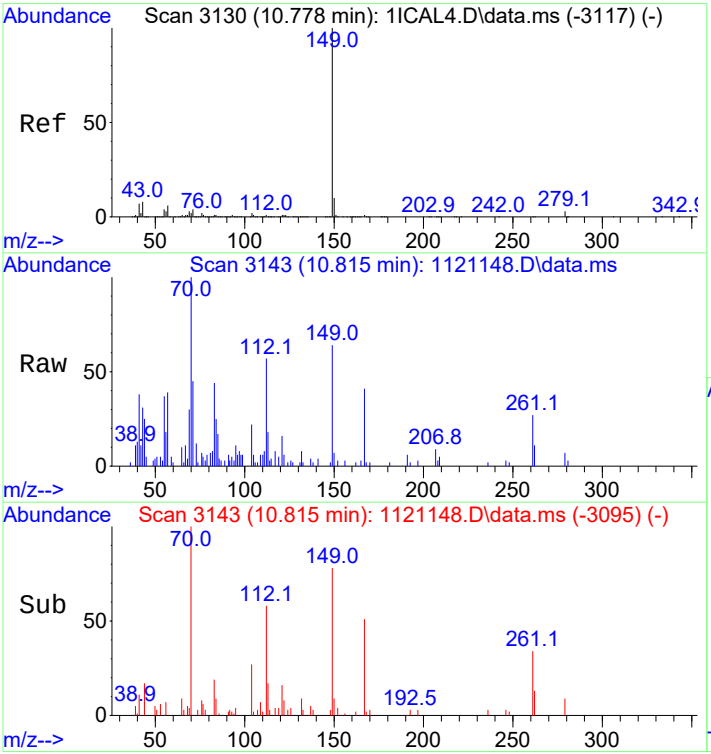


#84
bis2Ethlhxlph
Concen: 0.80 ug/mL
RT: 10.246 min Scan# 2943
Delta R.T. 0.000 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:149 Resp: 8459

Ion	Ratio	Lower	Upper
149	100		
167	27.2	0.0	56.0
279	2.3	0.0	33.2

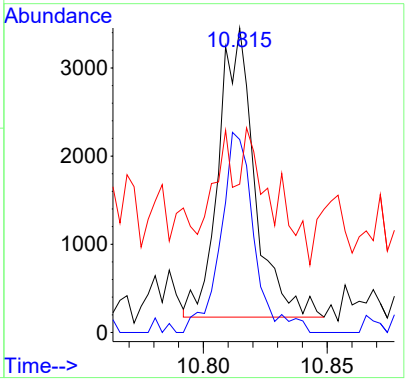




#85
Dinoctylphthl
Concen: 0.72 ug/mL
RT: 10.815 min Scan# 3143
Delta R.T. 0.037 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:149 Resp: 3333

Ion	Ratio	Lower	Upper
149	100		
167	66.8	0.0	31.3#
43	8.7	0.0	37.8



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121148.D Vial: 9
Acq On : 23 Mar 2022 13:24 Operator: JJY
Sample : 210458,1121148, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:42:14 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

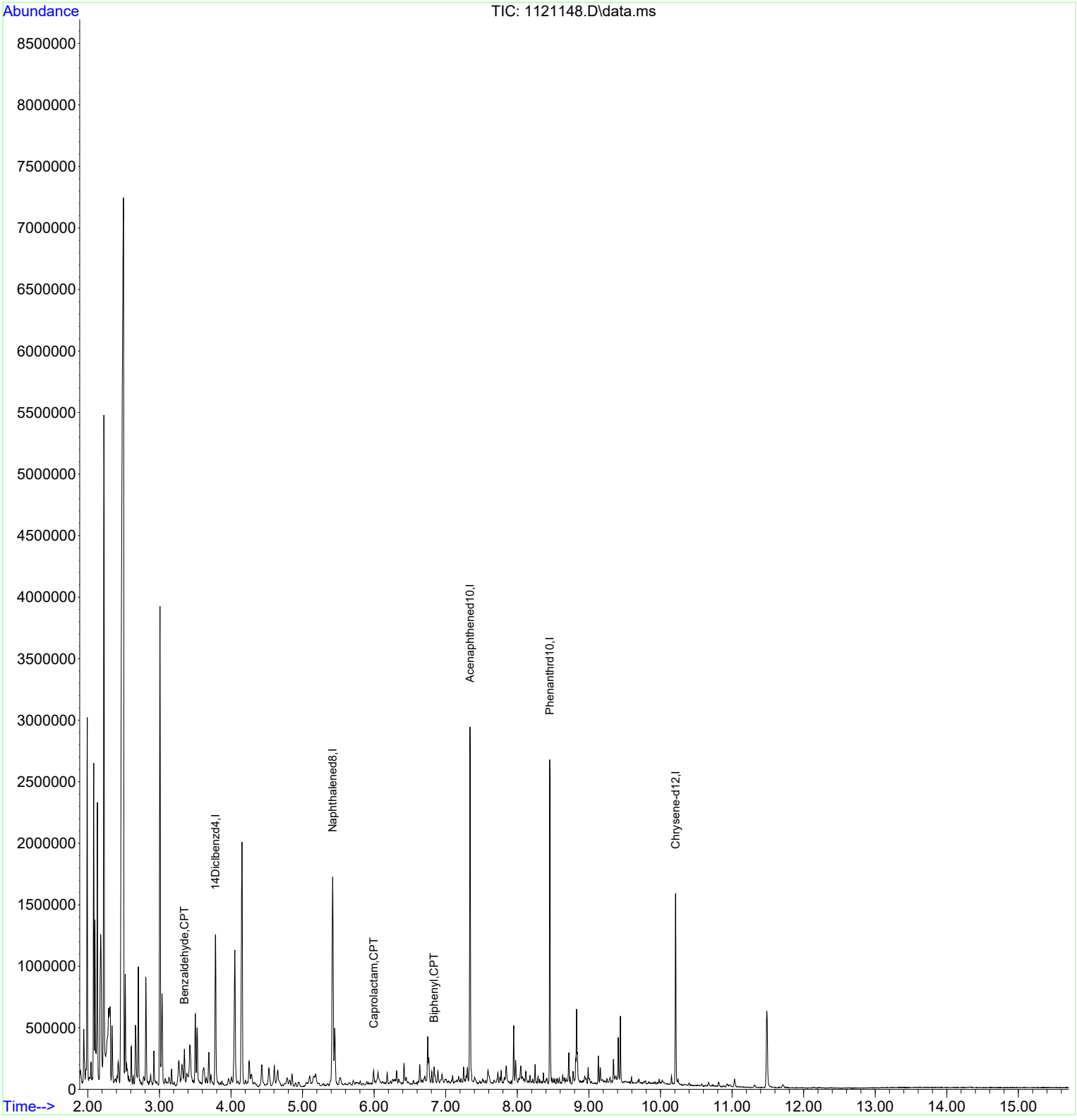
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	187161	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	970825	20.00	ug/mL	0.00
5) Acenaphthened10	7.340	164	517254	20.00	ug/mL	0.00
7) Phenanthrd10	8.453	188	641748	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	378259	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.350	77	47202	4.3436	ug/mL	84
4) Caprolactam	5.996	55	13613	3.4683	ug/mL#	70
6) Biphenyl	6.837	154	30447	0.8124	ug/mL	96

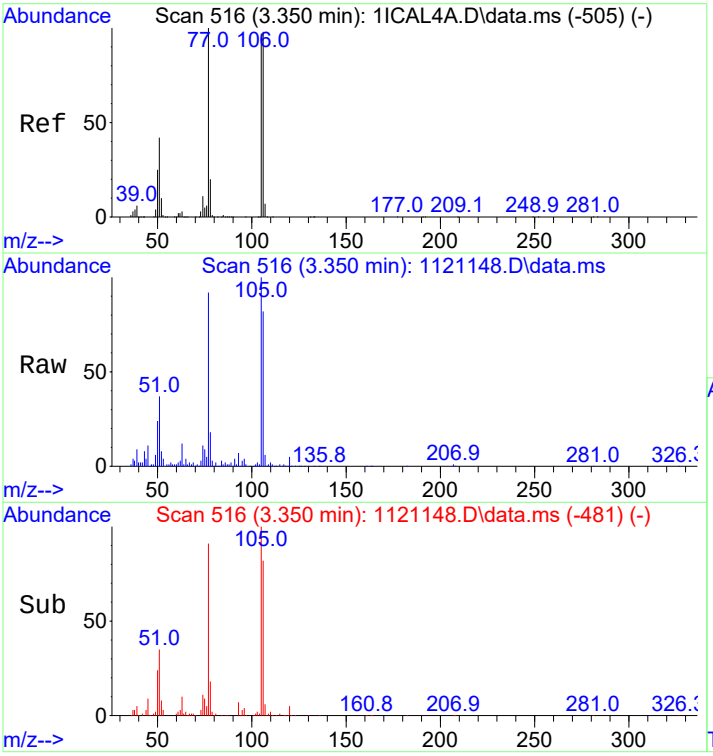
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121148.D Vial: 9
Acq On : 23 Mar 2022 13:24 Operator: JJY
Sample : 210458,1121148, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 13:42:14 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

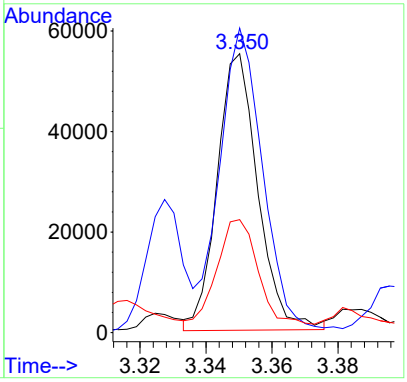


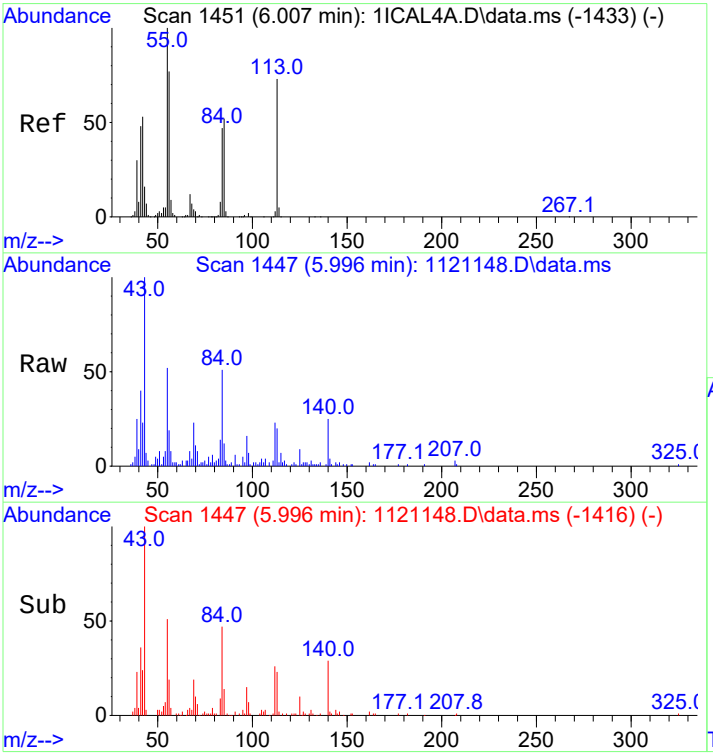


#2
Benzaldehyde
Concen: 4.34 ug/mL
RT: 3.350 min Scan# 516
Delta R.T. 0.000 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 77 Resp: 47202

Ion	Ratio	Lower	Upper
77	100		
105	116.6	65.0	125.0
51	41.0	12.5	72.5

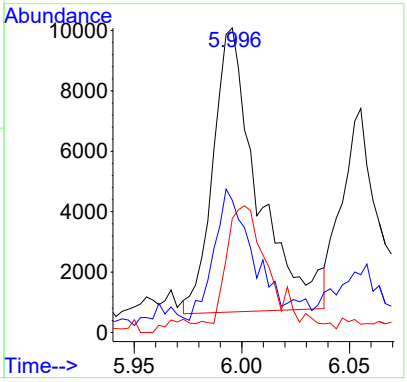


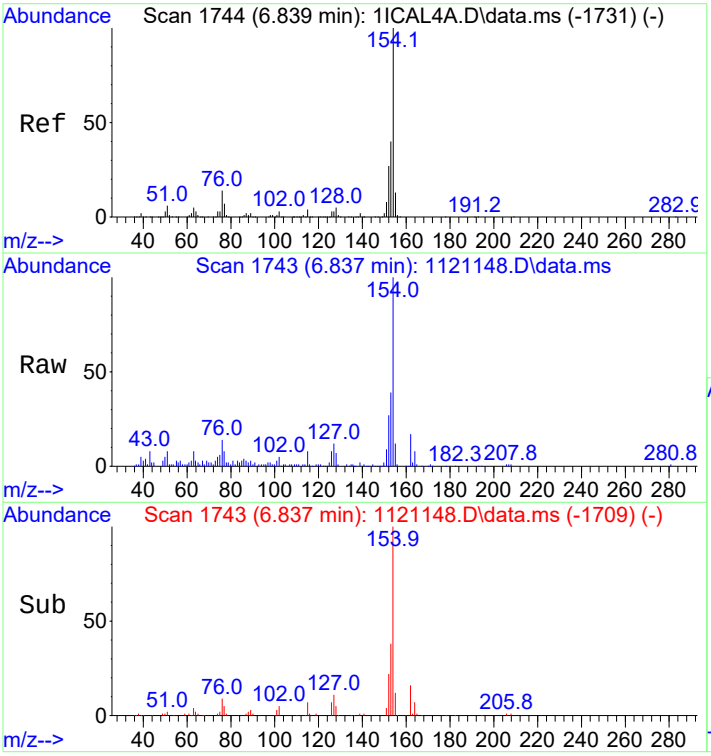


#4
Caprolactam
Concen: 3.47 ug/mL
RT: 5.996 min Scan# 1447
Delta R.T. -0.011 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion: 55 Resp: 13613

Ion	Ratio	Lower	Upper
55	100		
42	40.9	23.1	83.1
113	39.7	43.3	103.3#

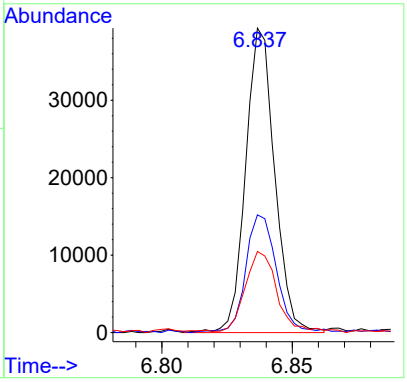




#6
Biphenyl
Concen: 0.81 ug/mL
RT: 6.837 min Scan# 1743
Delta R.T. -0.002 min
Lab File: 1121148.D
Acq: 23 Mar 2022 13:24

Tgt Ion:154 Resp: 30447

Ion	Ratio	Lower	Upper
154	100		
153	41.4	9.4	69.4
152	29.6	0.0	57.3



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121149.D Vial: 10
Acq On : 23 Mar 2022 13:47 Operator: JJY
Sample : 210458,1121149, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 14:04:20 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

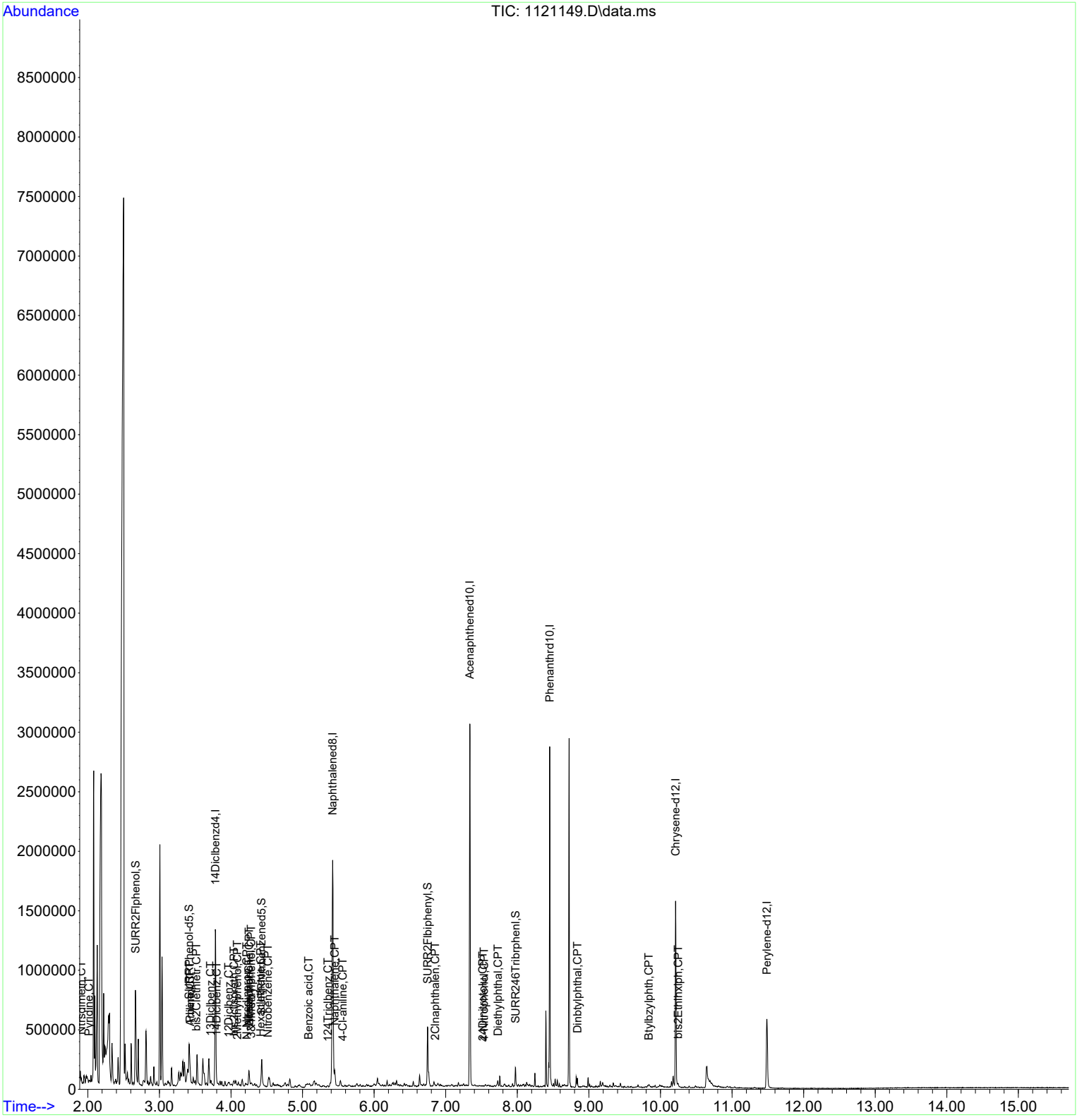
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	206818	20.00	ug/mL	0.00
21) Naphthalened8	5.422	136	1057810	20.00	ug/mL	0.00
39) Acenaphthened10	7.337	164	575742	20.00	ug/mL	0.00
63) Phenanthrd10	8.453	188	687969	20.00	ug/mL	0.00
75) Chrysene-d12	10.212	240	392584	20.00	ug/mL	0.00
86) Perylene-d12	11.485	264	222846	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.668	112	80414	14.31	%REC	0.01
Spiked Amount 100.000			Recovery = 14.31%			
7) SURRPhenol-d5	3.416	99	108051	16.03	%REC	0.00
Spiked Amount 100.000			Recovery = 16.03%			
22) SURRNitrbenzened5	4.430	82	78026	25.88	%REC	0.00
Spiked Amount 100.000			Recovery = 25.88%			
44) SURR2Flbiphenyl	6.749	172	132092	15.42	%REC	0.00
Spiked Amount 100.000			Recovery = 15.42%			
62) SURR246Tribrphenl	7.976	330	10826	7.81	%REC	0.00
Spiked Amount 100.000			Recovery = 7.81%			
78) SURRTerphenyl-d14	0.000	244	0	0.00	%REC	
Spiked Amount 100.000			Recovery = 0.00%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.912	74	2202	0.2378	ug/mL#	25
3) Pyridine	2.015	79	2186	0.1422	ug/mL	64
5) Aniline	3.433	93	1126	0.0553	ug/mL#	1
6) bis2Clethletr	3.518	93	660	0.0482	ug/mL	86
8) Phenol	3.430	94	33920	1.7630	ug/mL	95
10) 13Diclbenz	3.717	146	5693	0.3514	ug/mL	88
11) 14Diclbenz	3.802	146	4452	0.2806	ug/mL	91
12) 12Diclbenz	3.967	146	4187	0.2781	ug/mL	85
14) bis2clispreth	4.043	45	1174	0.0732	ug/mL	56
15) 2Methylphenol	4.089	107	1997	0.1873	ug/mL	76
16) Ntrspyrrol	4.251	100	432	0.0679	ug/mL#	37
17) Acetophenone	4.254	105	37582	2.0101	ug/mL	92
18) Hexaclethane	4.416	117	3245	0.5089	ug/mL#	14
19) N-Ntrsdinprop	4.220	70	2616	0.2686	ug/mL#	56
20) 3&4Methylphenol	4.282	107	3907	0.2998	ug/mL#	74
23) Nitrobenzene	4.518	77	2212	0.1495	ug/mL#	42
29) 124Triclbenz	5.353	180	994	0.0570	ug/mL#	61
30) Benzoic acid	5.083	122	8995	5.3165	ug/mL	88
31) Naphthalene	5.450	128	58905	1.0901	ug/mL	97
32) 4-Cl-aniline	5.561	127	595	0.0286	ug/mL#	56
45) 2Clnaphthalen	6.854	162	2681	0.0069	ug/mL	90
47) Acnaphthylene	7.212	152	2198	Below Cal		97
54) 24Dinitrotolu	7.516	165	1210	0.3969	ug/mL	88
55) 4-Nitrophenol	7.536	65	1622	2.0920	ug/mL#	34
60) Diethylphthal	7.729	149	5958	0.1512	ug/mL	96
73) Dinbtylphthal	8.840	149	21019	0.5868	ug/mL	94
79) Btylbzylphth	9.837	149	5152	0.7813	ug/mL#	35
84) bis2Ethlhxlph	10.246	149	5888	0.6656	ug/mL	90

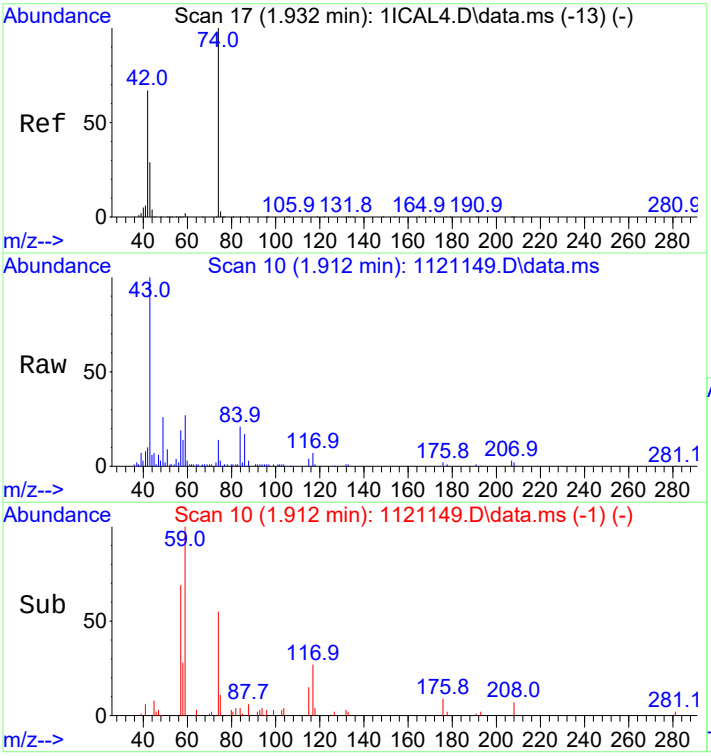
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121149.D Vial: 10
Acq On : 23 Mar 2022 13:47 Operator: JJY
Sample : 210458,1121149, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 14:04:20 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

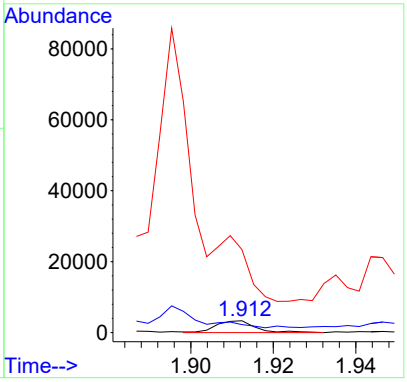


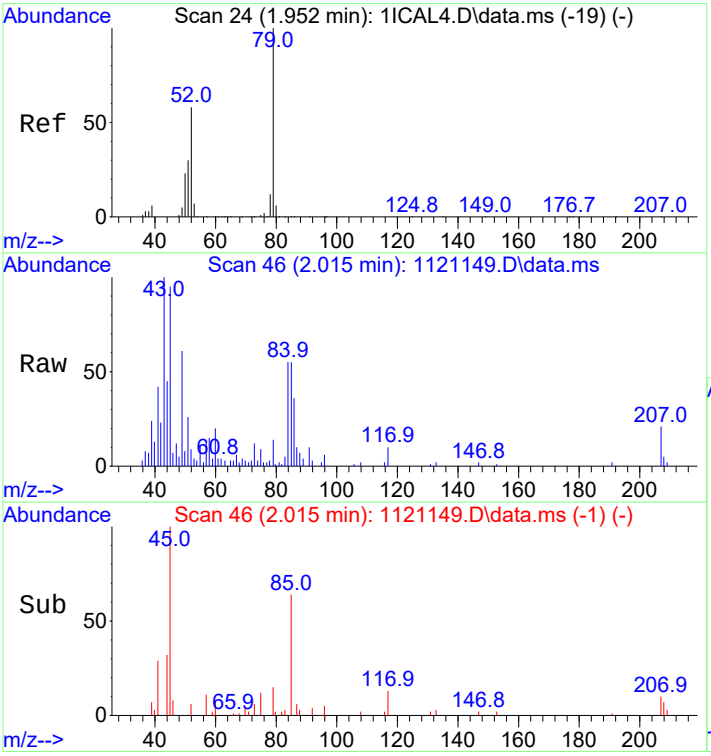


#2
Ntrsdimeth
Concen: 0.24 ug/mL
RT: 1.912 min Scan# 10
Delta R.T. -0.020 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 74 Resp: 2202

Ion	Ratio	Lower	Upper
74	100		
42	0.0	36.9	96.9#
43	0.0	0.0	58.9

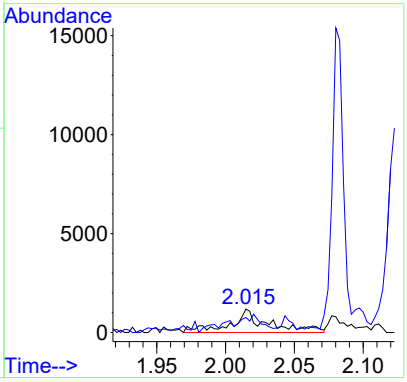


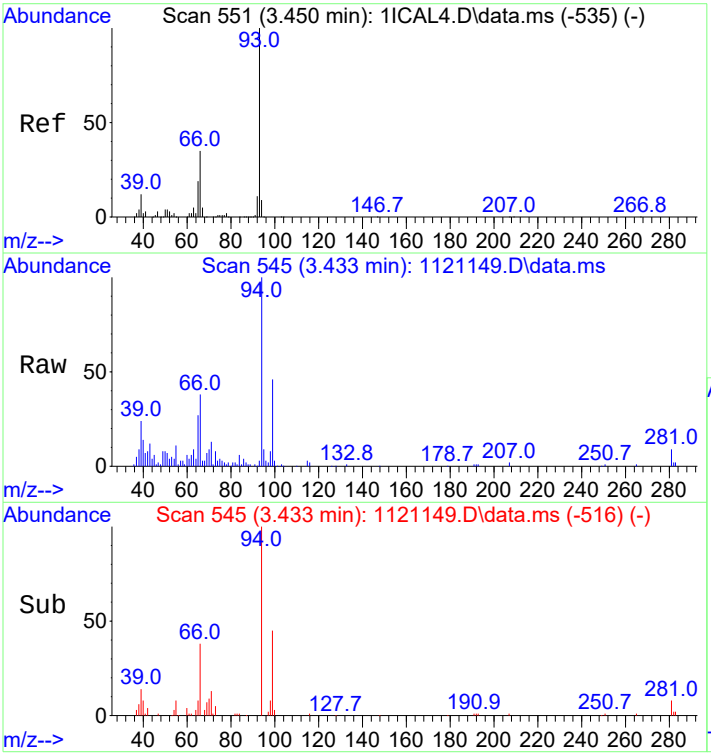


#3
Pyridine
Concen: 0.14 ug/mL
RT: 2.015 min Scan# 46
Delta R.T. 0.063 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 79 Resp: 2186

Ion	Ratio	Lower	Upper
79	100		
52	31.3	27.7	87.7

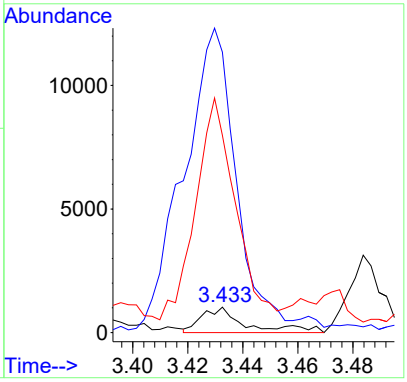


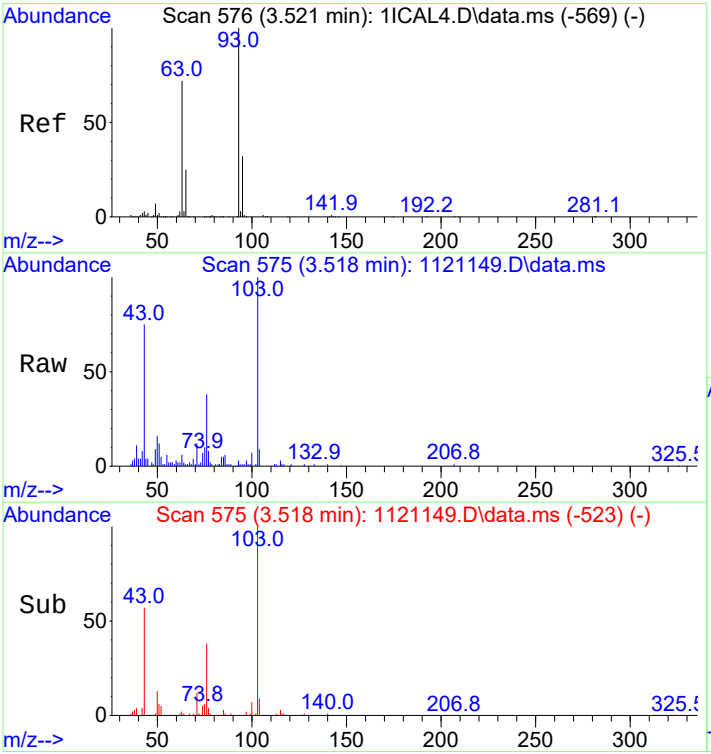


#5
Aniline
Concen: 0.06 ug/mL
RT: 3.433 min Scan# 545
Delta R.T. -0.017 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 93 Resp: 1126

Ion	Ratio	Lower	Upper
93	100		
66	1539.3	5.7	65.7#
65	1024.0	0.0	48.1#

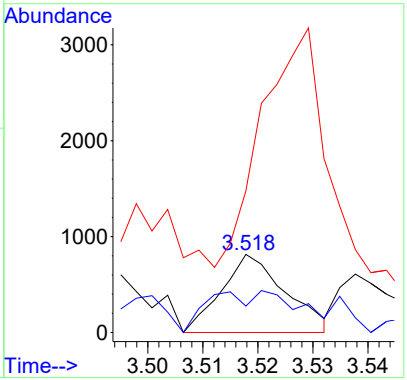


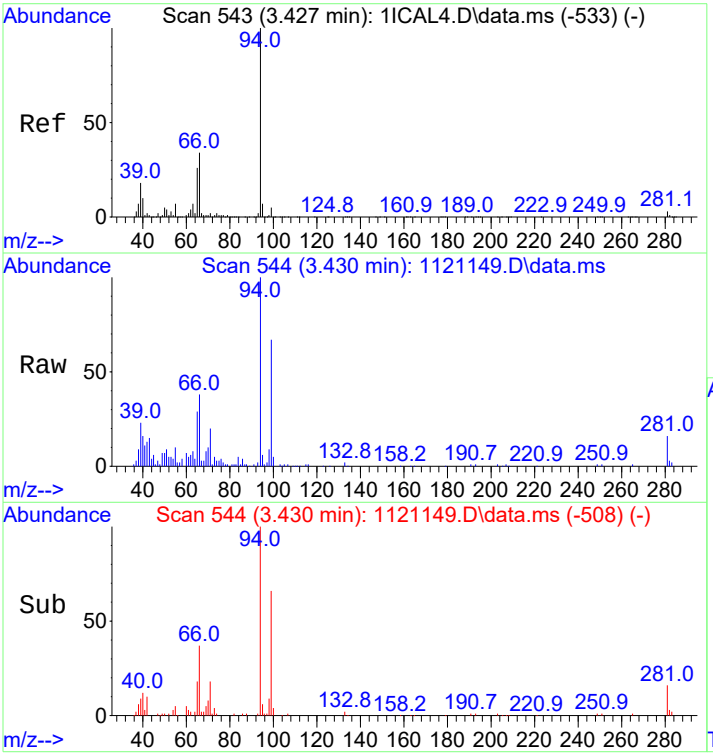


#6
bis2Clethletr
Concen: 0.05 ug/mL
RT: 3.518 min Scan# 575
Delta R.T. -0.003 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 93 Resp: 660

Ion	Ratio	Lower	Upper
93	100		
95	33.8	1.7	61.7
63	85.9	41.1	101.1

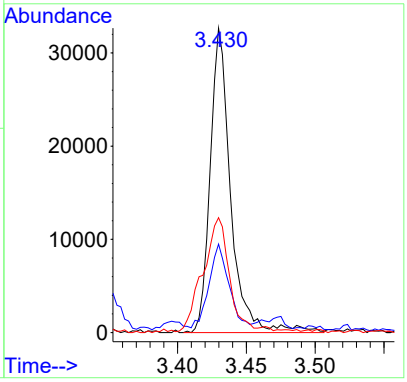


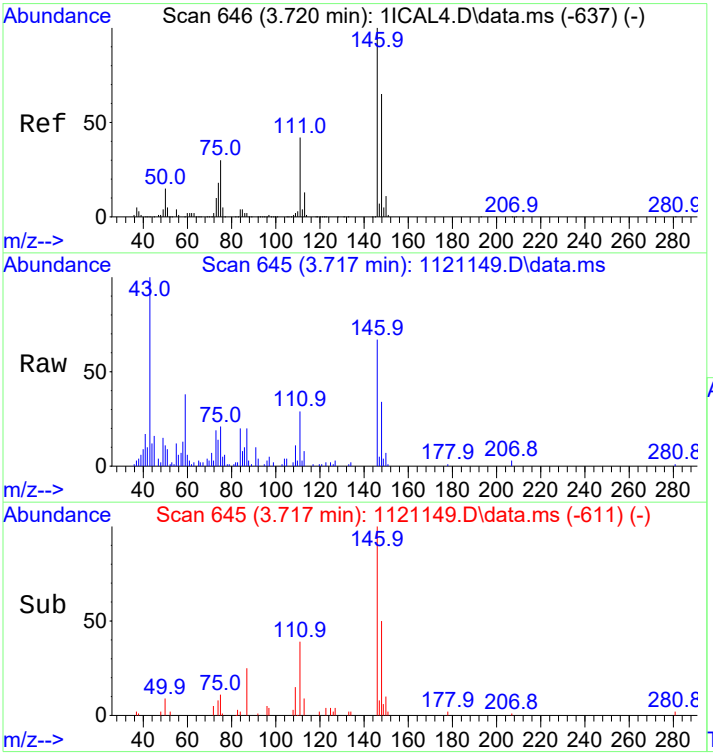


#8
Phenol
Concen: 1.76 ug/mL
RT: 3.430 min Scan# 544
Delta R.T. 0.003 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 94 Resp: 33920

Ion	Ratio	Lower	Upper
94	100		
65	28.0	0.0	56.1
66	37.1	4.1	64.1

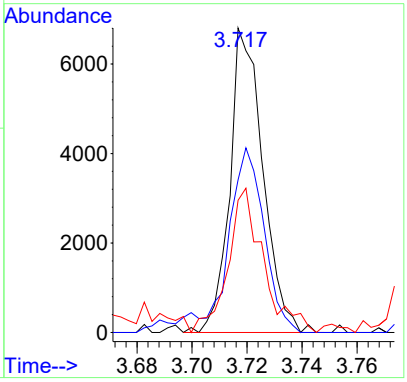


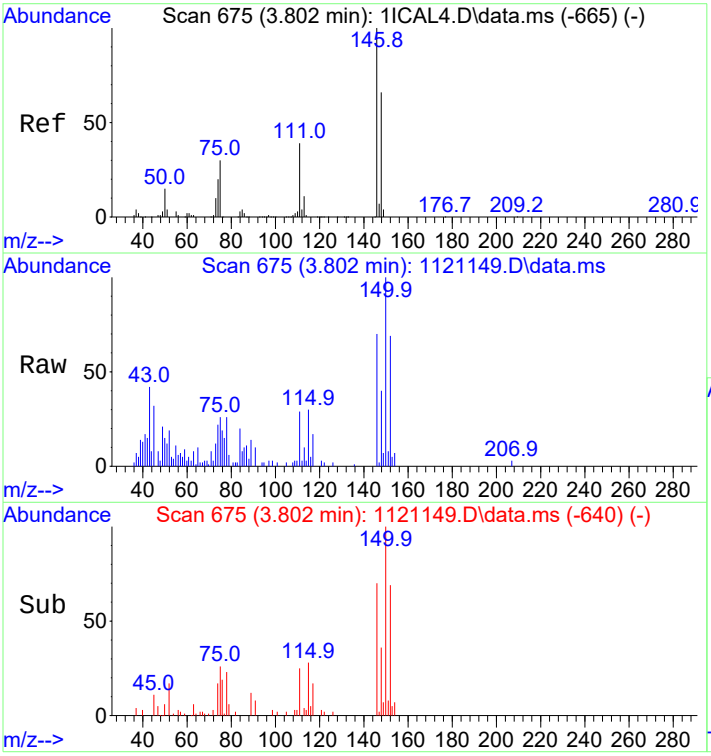


#10
13Diclbenz
Concen: 0.35 ug/mL
RT: 3.717 min Scan# 645
Delta R.T. -0.003 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:146 Resp: 5693

Ion	Ratio	Lower	Upper
146	100		
148	50.1	35.4	95.4
111	41.3	11.7	71.7

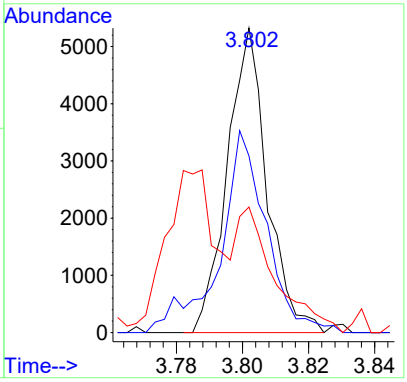


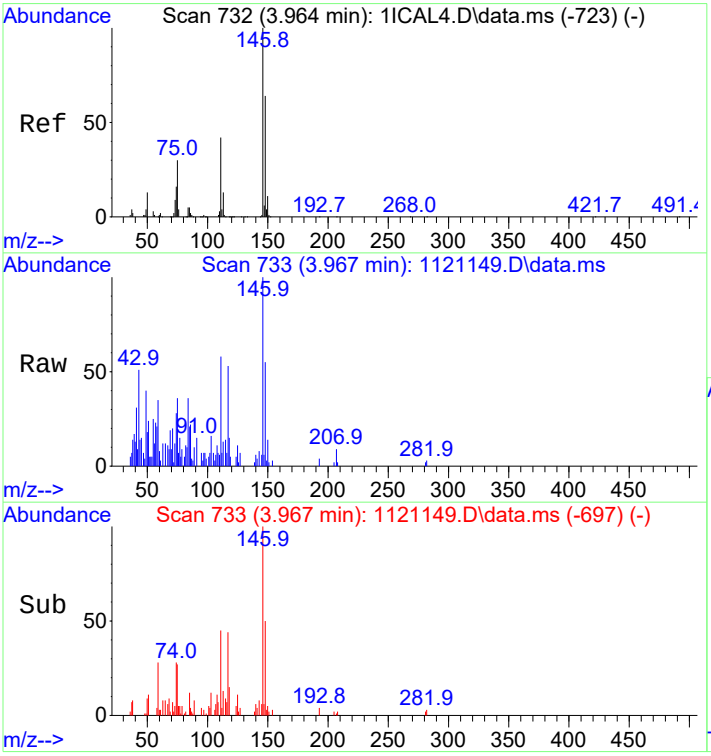


#11
14Diclbenz
Concen: 0.28 ug/mL
RT: 3.802 min Scan# 675
Delta R.T. -0.000 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:146 Resp: 4452

Ion	Ratio	Lower	Upper
146	100		
148	55.9	35.6	95.6
111	36.8	9.1	69.1

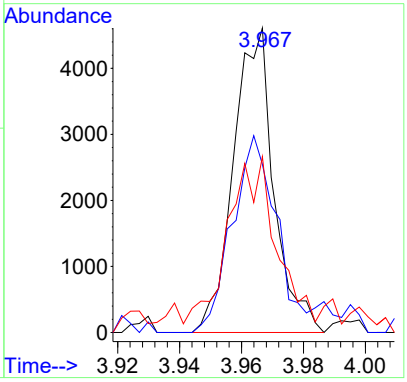


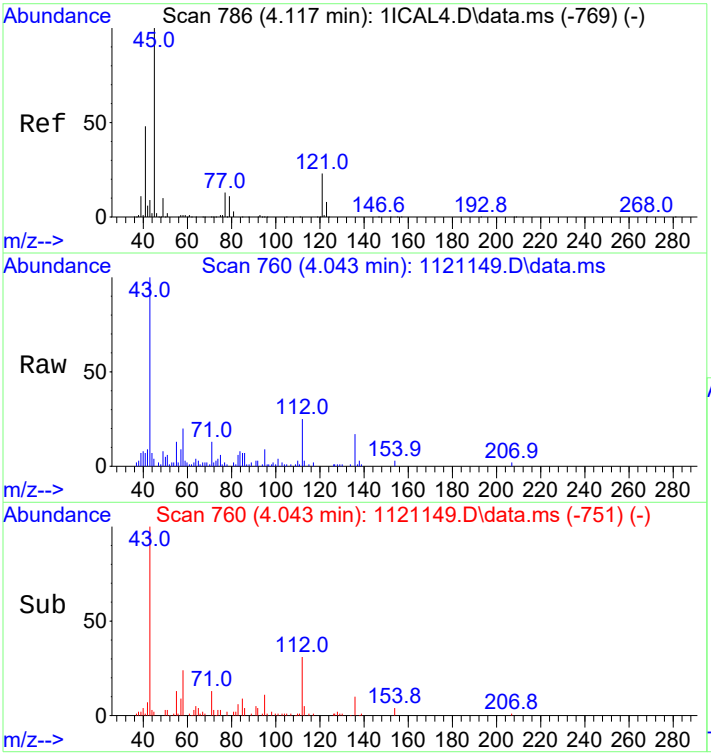


#12
12Diclbenz
Concen: 0.28 ug/mL
RT: 3.967 min Scan# 733
Delta R.T. 0.003 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:146 Resp: 4187

Ion	Ratio	Lower	Upper
146	100		
148	55.2	33.9	93.9
111	54.9	11.9	71.9

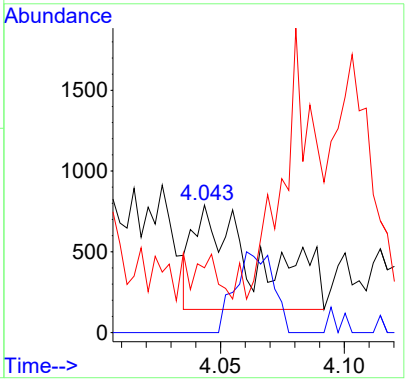


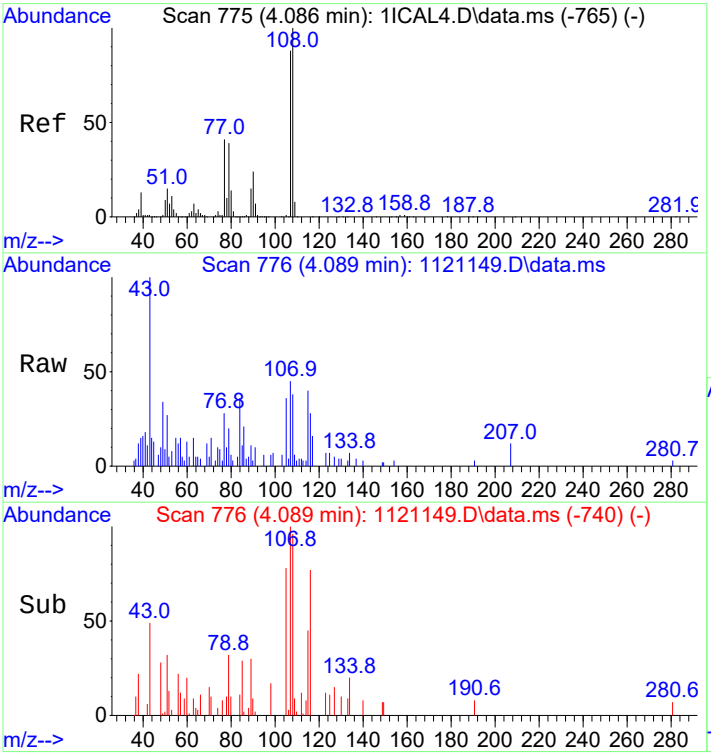


#14
bis2clispreth
Concen: 0.07 ug/mL
RT: 4.043 min Scan# 760
Delta R.T. -0.074 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 45 Resp: 1174

Ion	Ratio	Lower	Upper
45	100		
121	0.0	0.0	53.5
77	0.0	0.0	45.7

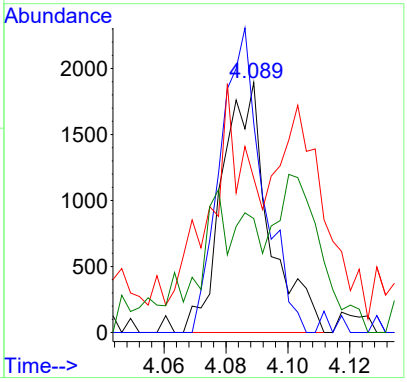


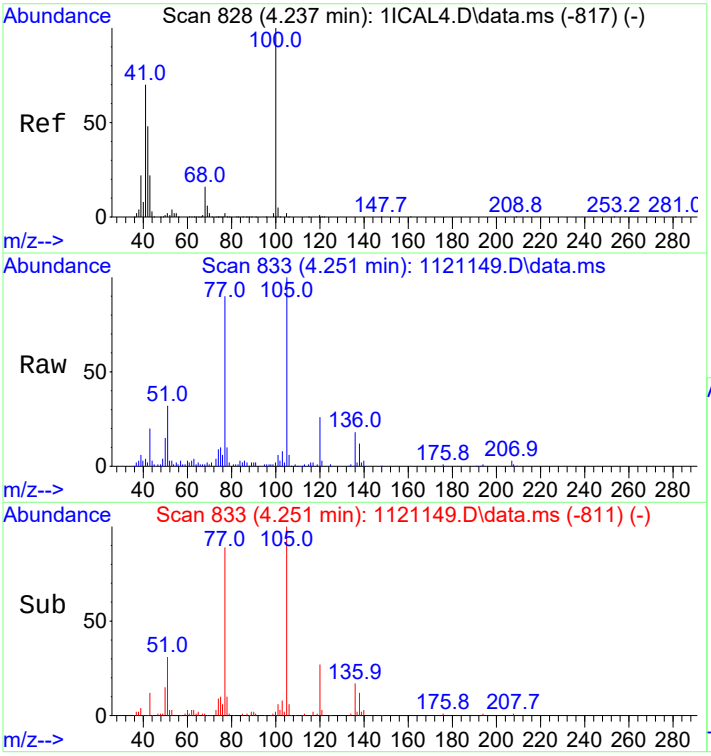


#15
2Methylphenol
Concen: 0.19 ug/mL
RT: 4.089 min Scan# 776
Delta R.T. 0.003 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:107 Resp: 1997

Ion	Ratio	Lower	Upper
107	100		
108	83.7	83.3	143.3
77	31.2	16.9	76.9
79	33.4	14.5	74.5

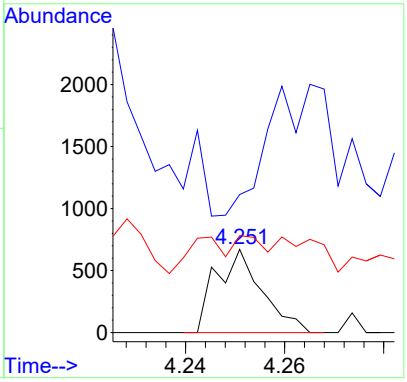


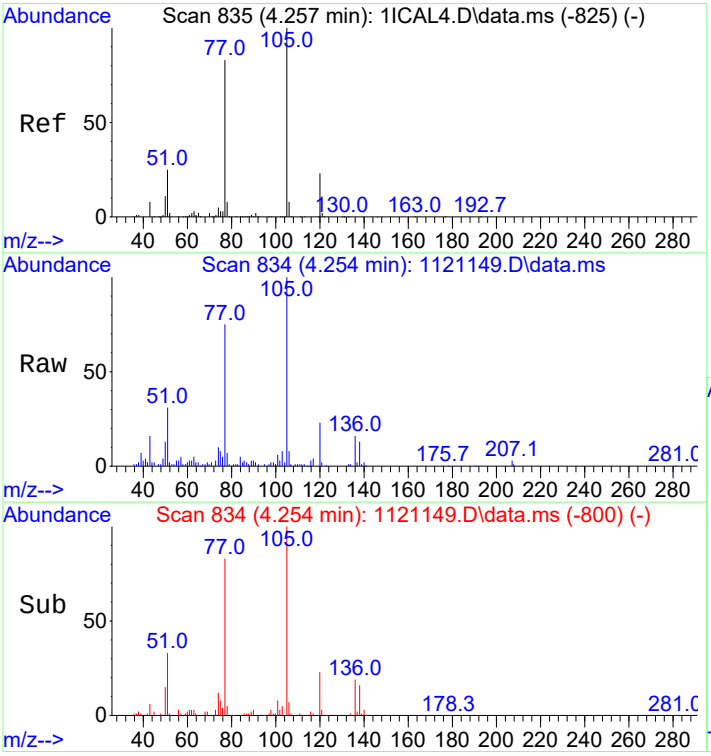


#16
Ntrspyrrol
Concen: 0.07 ug/mL
RT: 4.251 min Scan# 833
Delta R.T. 0.014 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:100 Resp: 432

Ion	Ratio	Lower	Upper
100	100		
41	0.0	39.9	99.9#
42	26.7	18.4	78.4

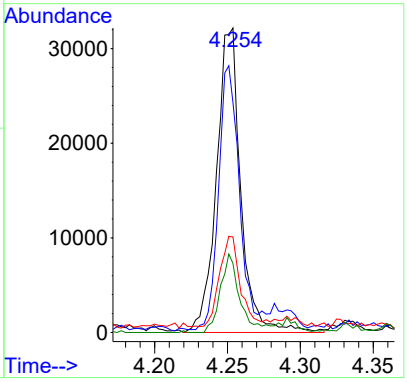


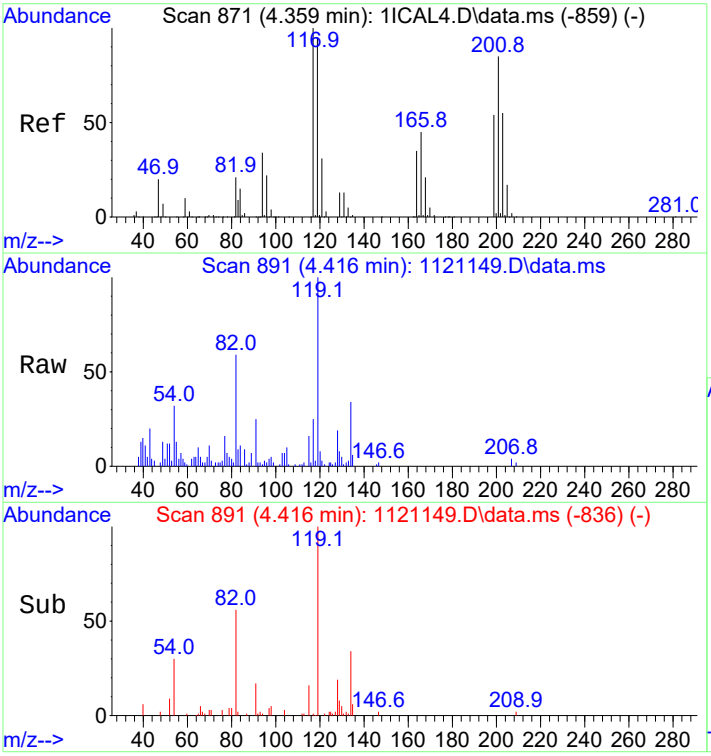


#17
Acetophenone
Concen: 2.01 ug/mL
RT: 4.254 min Scan# 834
Delta R.T. -0.003 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:105 Resp: 37582

Ion	Ratio	Lower	Upper
105	100		
77	74.3	53.4	113.4
51	28.4	0.0	55.3
120	22.1	0.0	52.9

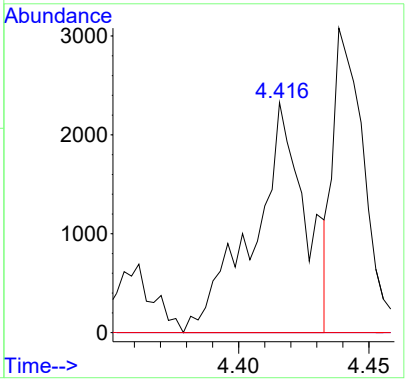


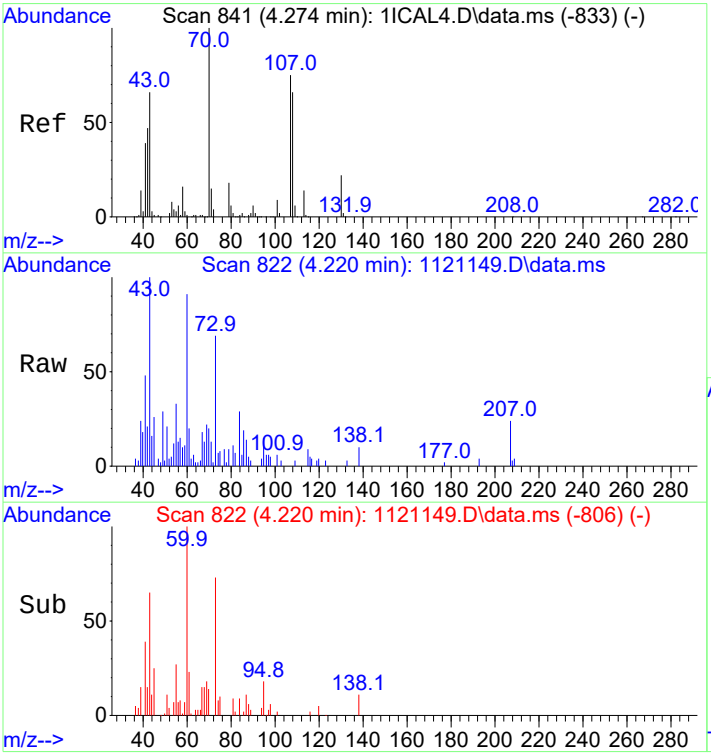


#18
Hexaclethane
Concen: 0.51 ug/mL
RT: 4.416 min Scan# 891
Delta R.T. 0.057 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:117 Resp: 3245

Ion	Ratio	Lower	Upper
117	100		
201	0.0	55.1	115.1#
199	0.0	24.2	84.2#

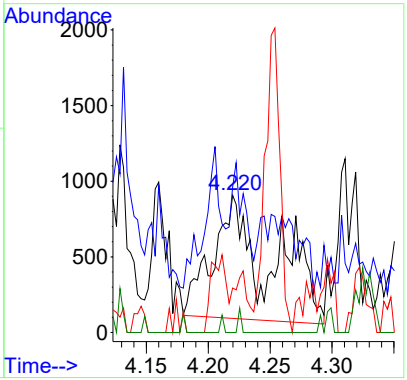


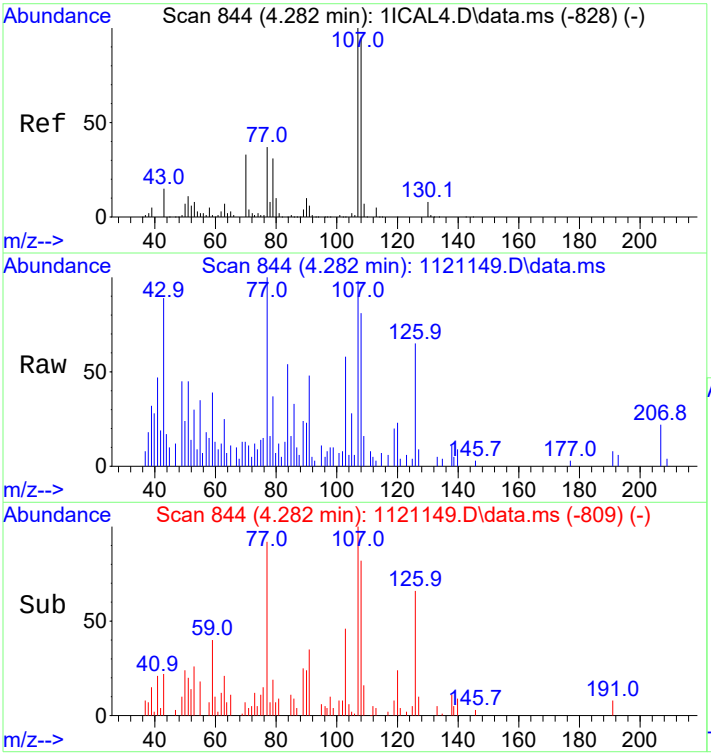


#19
N-Ntrsdinprop
Concen: 0.27 ug/mL
RT: 4.220 min Scan# 822
Delta R.T. -0.054 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 70 Resp: 2616

Ion	Ratio	Lower	Upper
70	100		
42	84.3	21.6	81.6#
101	19.1	0.0	39.8
130	0.0	0.0	51.9

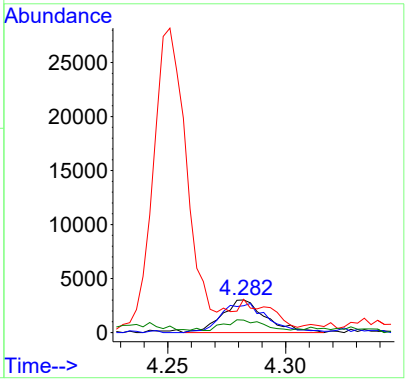


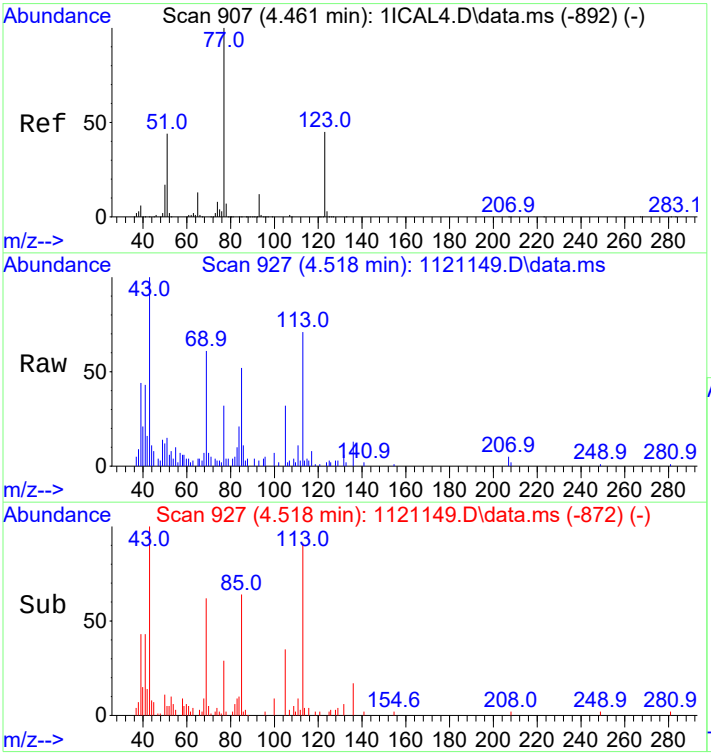


#20
3&4Methylphenol
Concen: 0.30 ug/mL
RT: 4.282 min Scan# 844
Delta R.T. 0.000 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:107 Resp: 3907

Ion	Ratio	Lower	Upper
107	100		
108	82.1	65.4	125.4
77	83.1	8.0	68.0#
79	28.9	1.0	61.0

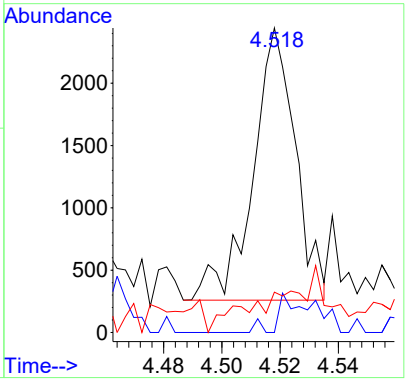


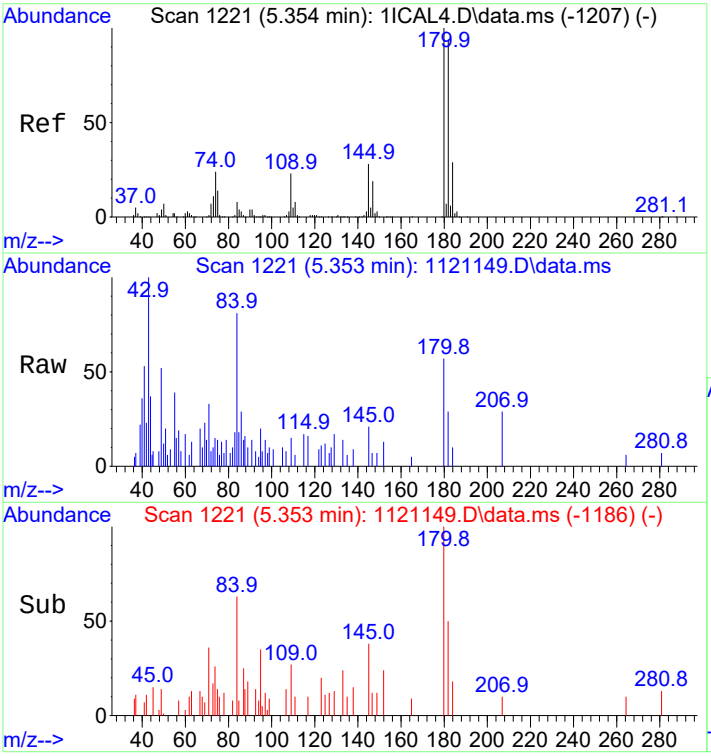


#23
Nitrobenzene
Concen: 0.15 ug/mL
RT: 4.518 min Scan# 927
Delta R.T. 0.057 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 77 Resp: 2212

Ion	Ratio	Lower	Upper
77	100		
123	0.0	14.7	74.7#
65	21.2	0.0	42.8

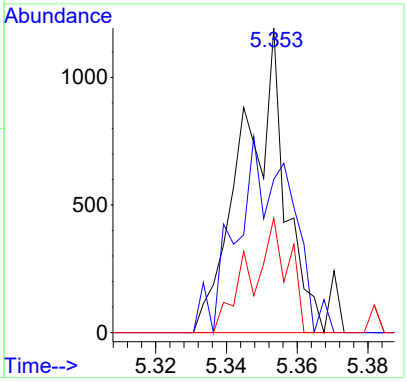


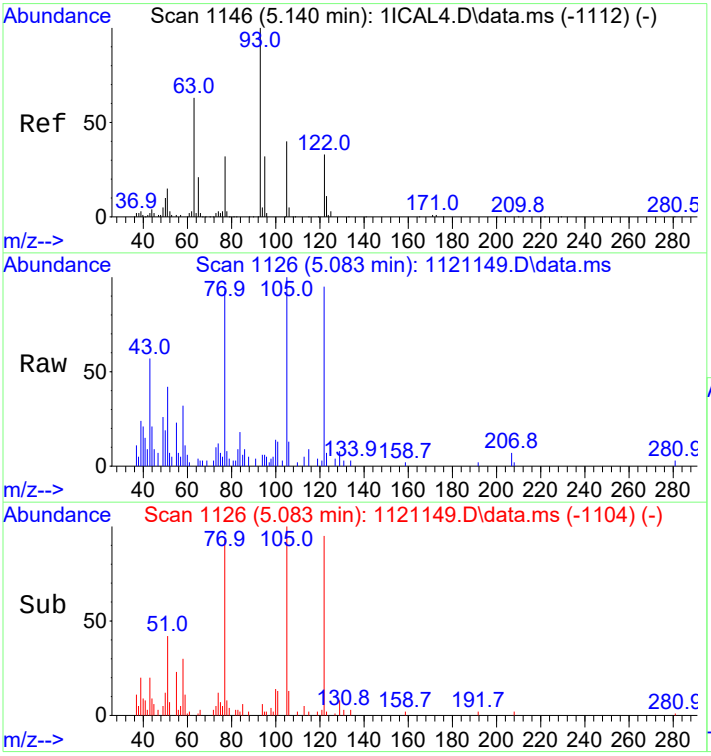


#29
124Triclbenz
Concen: 0.06 ug/mL
RT: 5.353 min Scan# 1221
Delta R.T. -0.001 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:180 Resp: 994

Ion	Ratio	Lower	Upper
180	100		
182	50.3	64.3	124.3#
145	37.6	0.0	58.1

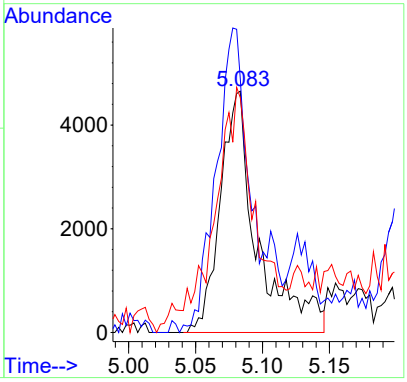


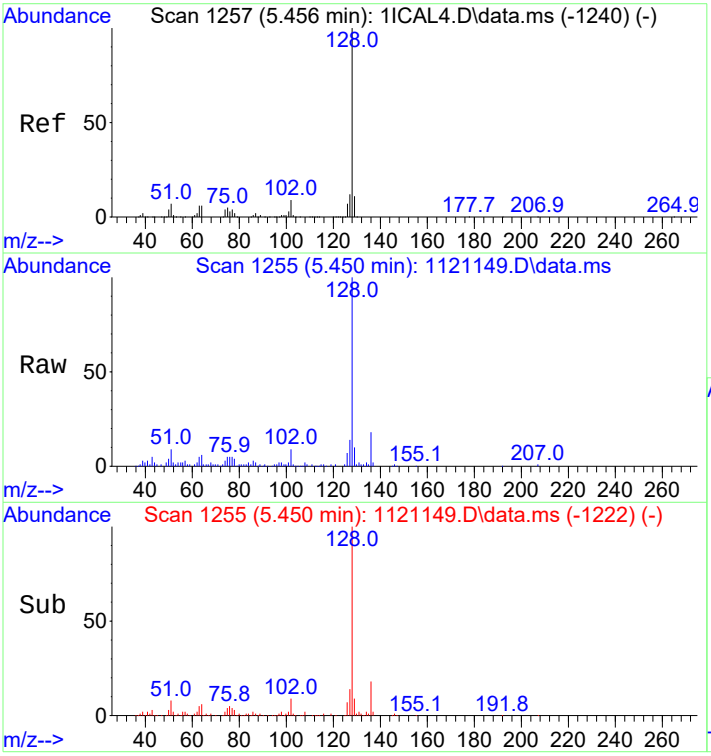


#30
Benzoic acid
Concen: 5.32 ug/mL
RT: 5.083 min Scan# 1126
Delta R.T. -0.057 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:122 Resp: 8995

Ion	Ratio	Lower	Upper
122	100		
105	101.9	90.4	150.4
77	88.2	64.5	124.5

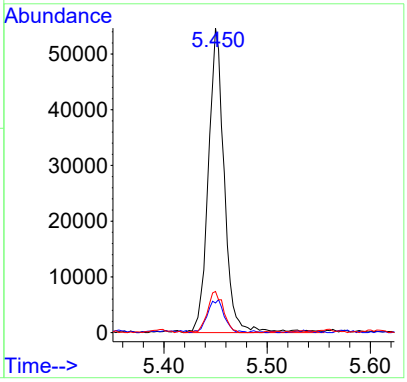


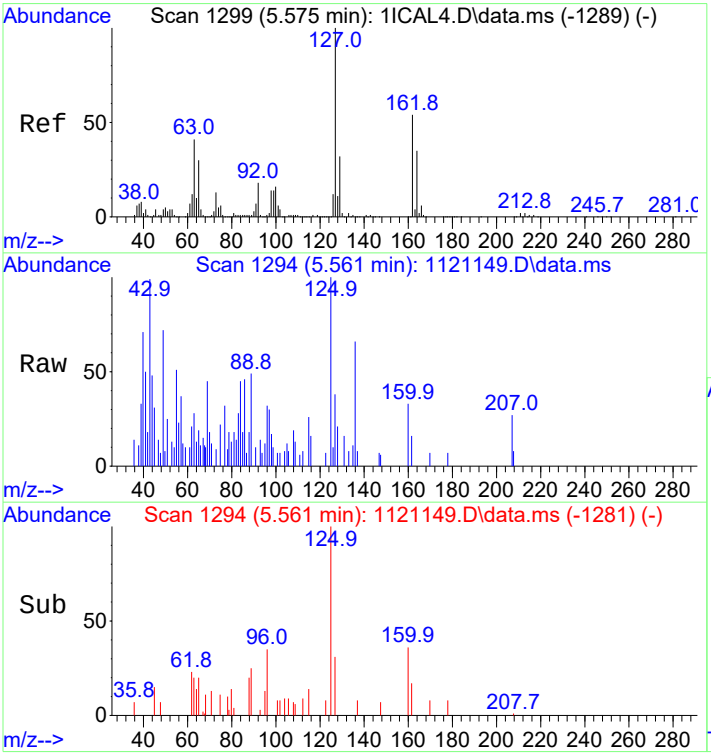


#31
Naphthalene
Concen: 1.09 ug/mL
RT: 5.450 min Scan# 1255
Delta R.T. -0.006 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:128 Resp: 58905

Ion	Ratio	Lower	Upper
128	100		
129	9.4	0.0	40.7
127	13.5	0.0	42.5

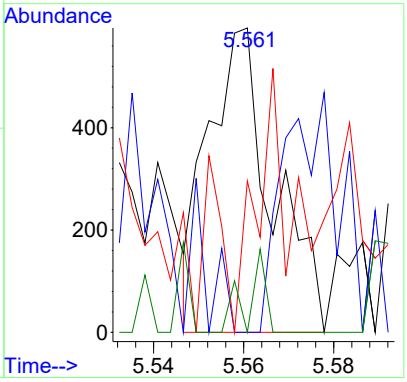


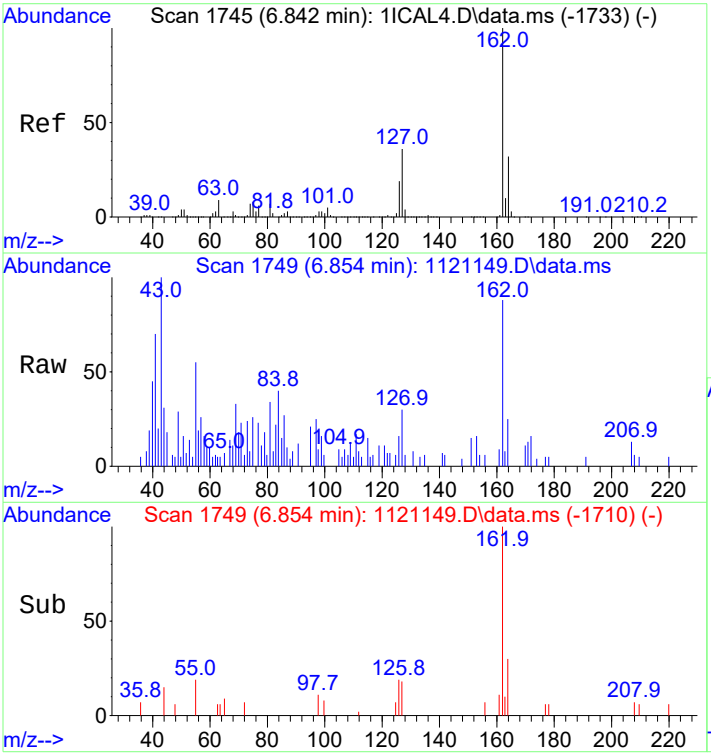


#32
4-Cl-aniline
Concen: 0.03 ug/mL
RT: 5.561 min Scan# 1294
Delta R.T. -0.014 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:127 Resp: 595

Ion	Ratio	Lower	Upper
127	100		
129	0.0	2.2	62.2#
65	12.4	0.0	59.8
92	0.0	0.0	48.1

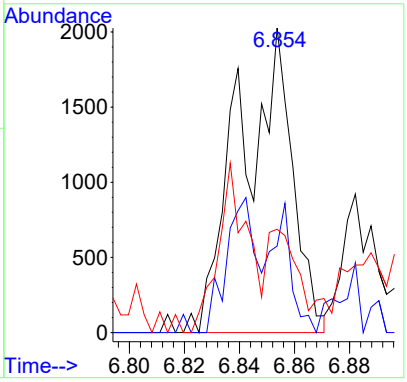


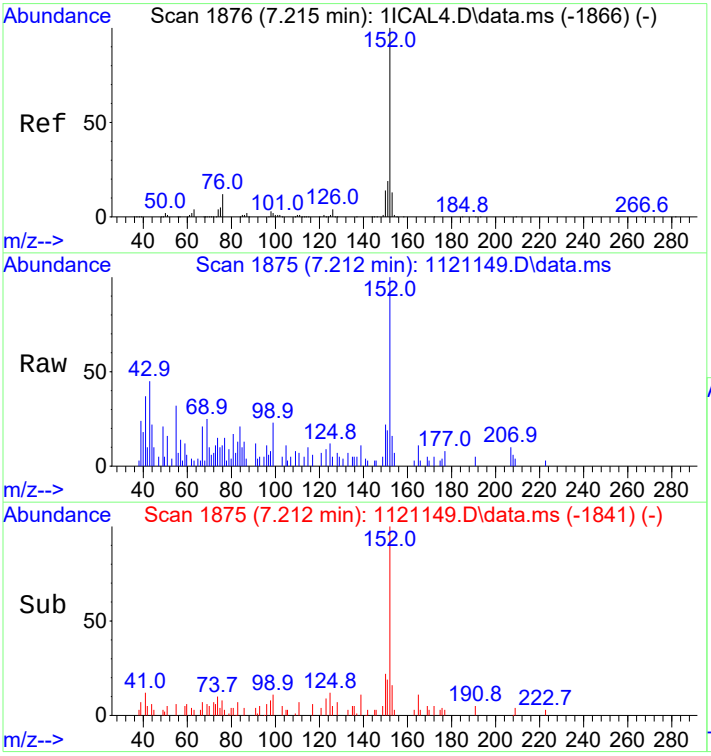


#45
2Clnaphthalen
Concen: 0.01 ug/mL
RT: 6.854 min Scan# 1749
Delta R.T. 0.012 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:162 Resp: 2681

Ion	Ratio	Lower	Upper
162	100		
164	22.5	2.0	62.0
127	34.0	6.3	66.3

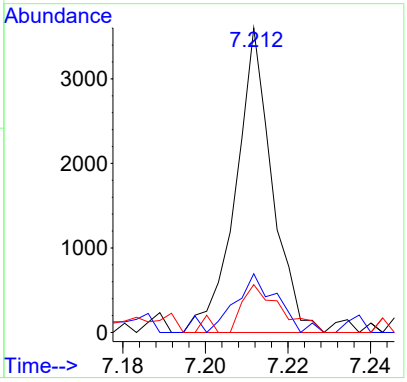


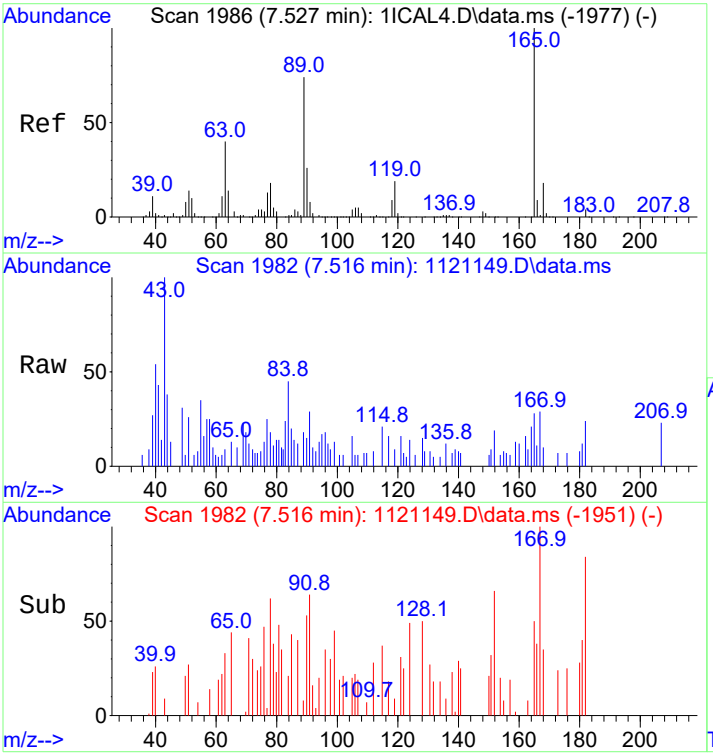


#47
Acnaphthylene
Concen: Below Cal
RT: 7.212 min Scan# 1875
Delta R.T. -0.003 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:152 Resp: 2198

Ion	Ratio	Lower	Upper
152	100		
151	19.3	0.0	49.3
153	15.7	0.0	43.3

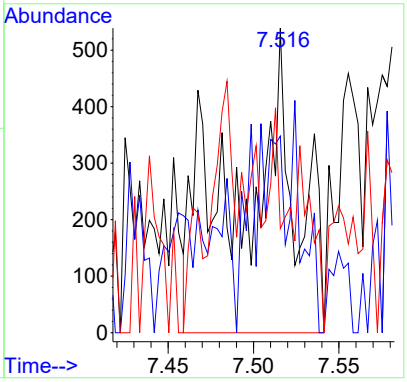


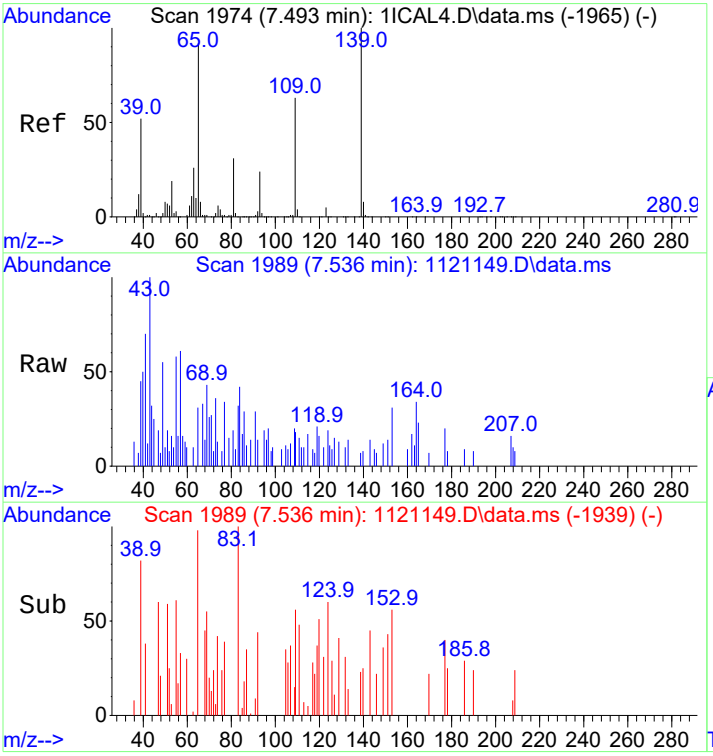


#54
24Dinitrotolu
Concen: 0.40 ug/mL
RT: 7.516 min Scan# 1982
Delta R.T. -0.011 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:165 Resp: 1210

Ion	Ratio	Lower	Upper
165	100		
89	64.6	43.8	103.8
63	34.1	12.8	72.8

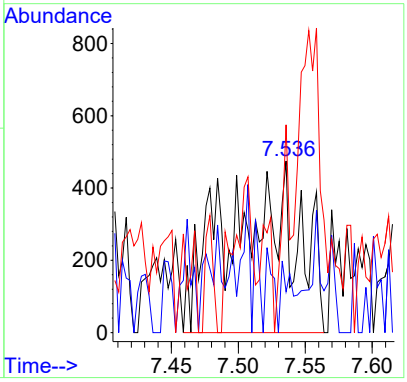


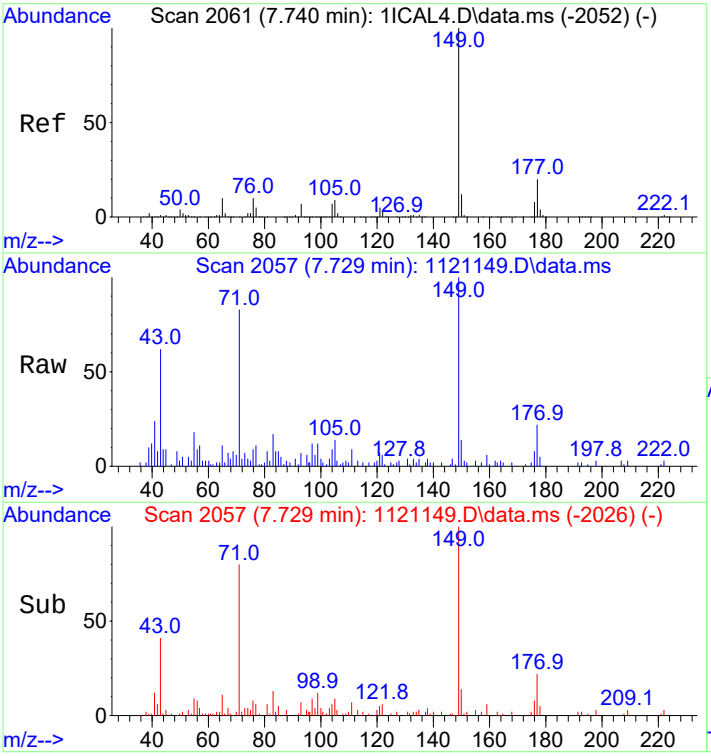


#55
4-Nitrophenol
Concen: 2.09 ug/mL
RT: 7.536 min Scan# 1989
Delta R.T. 0.043 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 65 Resp: 1622

Ion	Ratio	Lower	Upper
65	100		
139	0.0	78.2	138.2#
109	63.6	37.7	97.7

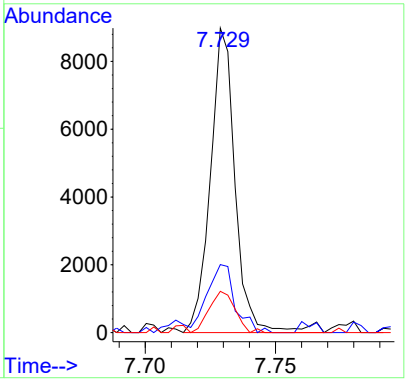


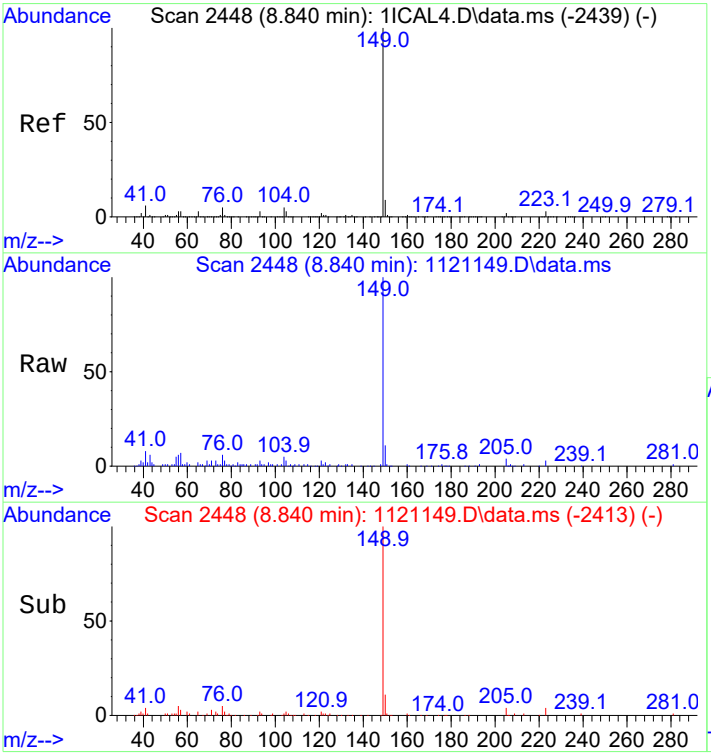


#60
Diethylphthal
Concen: 0.15 ug/mL
RT: 7.729 min Scan# 2057
Delta R.T. -0.011 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:149 Resp: 5958

Ion	Ratio	Lower	Upper
149	100		
177	22.4	0.0	50.4
150	13.5	0.0	42.3

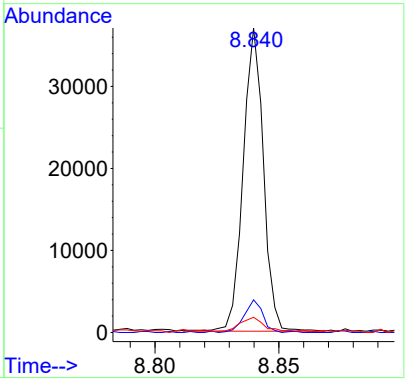


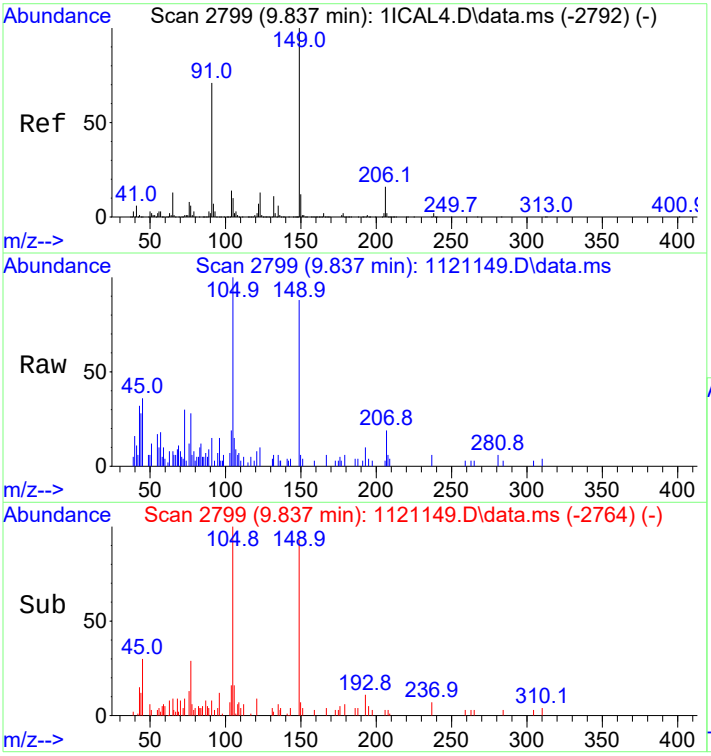


#73
Dinbtylphthal
Concen: 0.59 ug/mL
RT: 8.840 min Scan# 2448
Delta R.T. -0.000 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:149 Resp: 21019

Ion	Ratio	Lower	Upper
149	100		
150	11.8	0.0	39.1
104	4.3	0.0	35.0

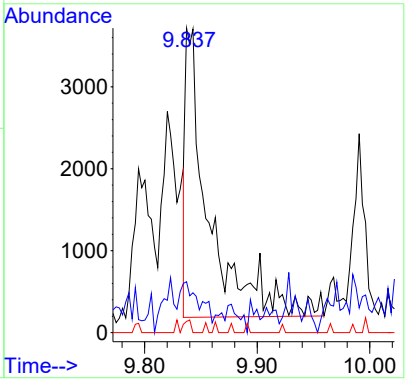


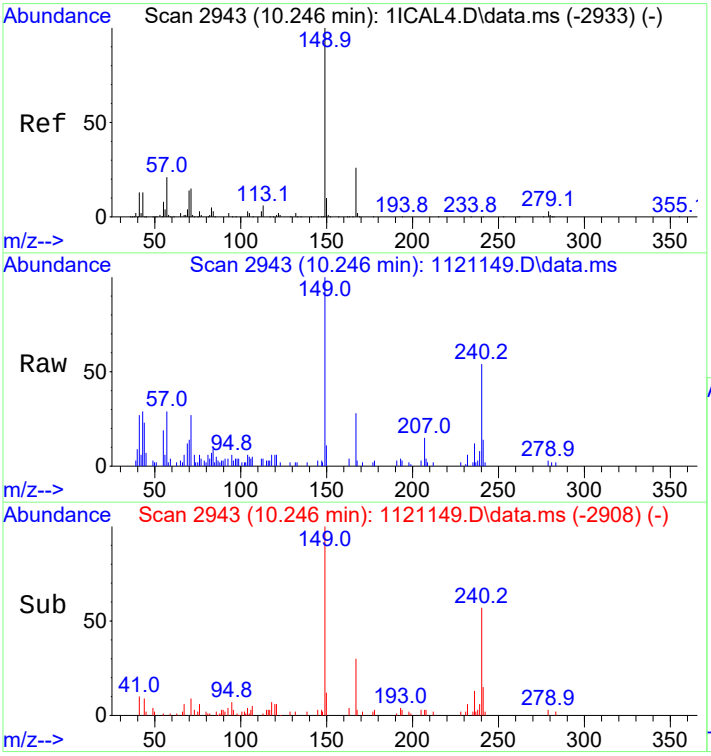


#79
Btylbzylphth
Concen: 0.78 ug/mL
RT: 9.837 min Scan# 2799
Delta R.T. 0.000 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:149 Resp: 5152

Ion	Ratio	Lower	Upper
149	100		
91	8.9	41.2	101.2#
206	24.3	0.0	45.9

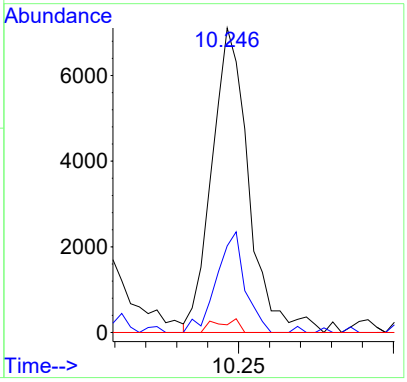




#84
bis2Ethlhxlph
Concen: 0.67 ug/mL
RT: 10.246 min Scan# 2943
Delta R.T. 0.000 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:149 Resp: 5888

Ion	Ratio	Lower	Upper
149	100		
167	31.6	0.0	56.0
279	2.5	0.0	33.2



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121149.D Vial: 10
Acq On : 23 Mar 2022 13:47 Operator: JJY
Sample : 210458,1121149, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 14:09:45 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

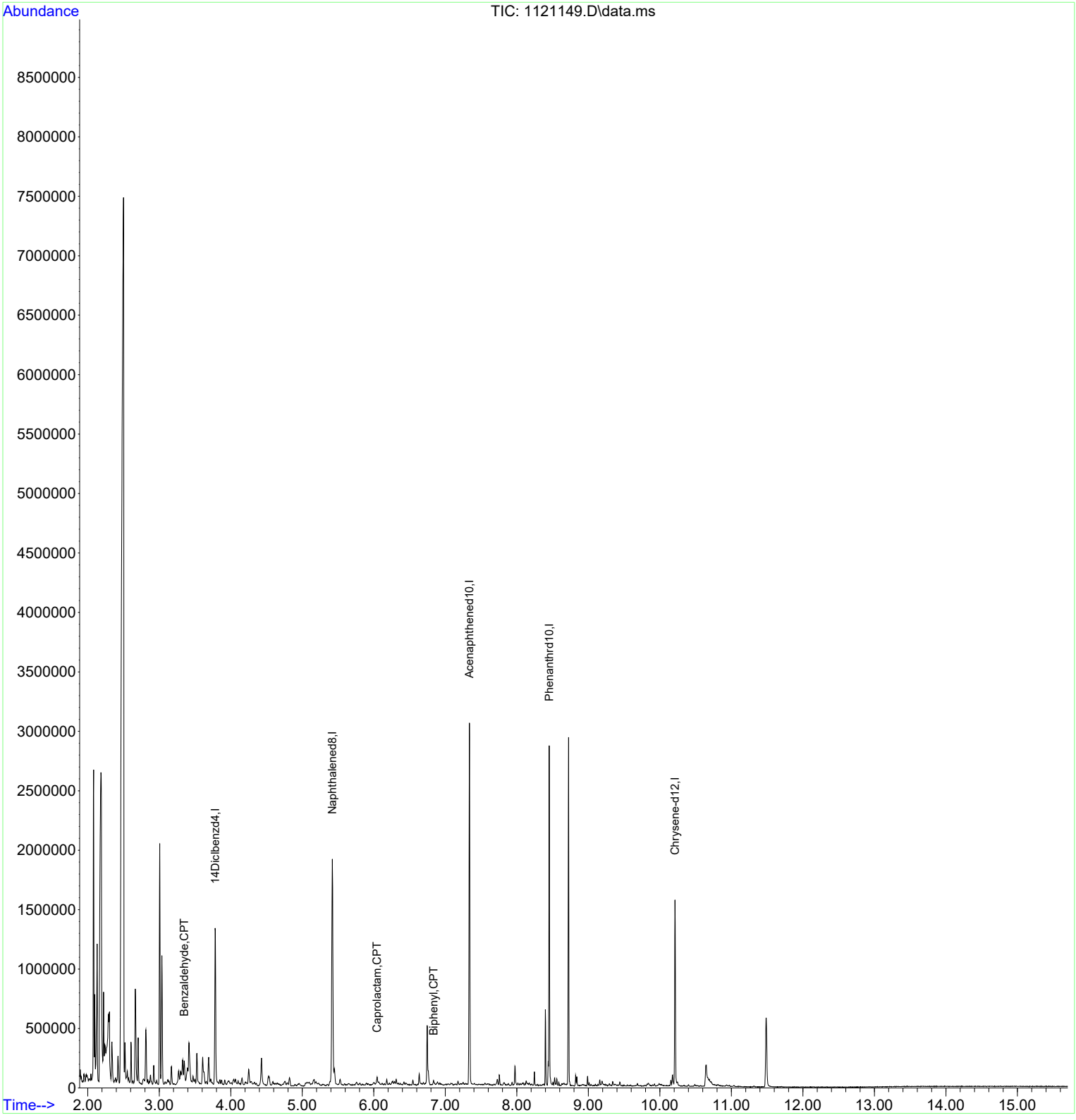
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	206231	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	1065605	20.00	ug/mL	0.00
5) Acenaphthened10	7.337	164	576117	20.00	ug/mL	0.00
7) Phenanthrd10	8.453	188	688549	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	391078	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.350	77	21741	1.8156	ug/mL#	38
4) Caprolactam	6.047	55	6513	1.9318	ug/mL#	43
6) Biphenyl	6.837	154	8318	0.1993	ug/mL	98

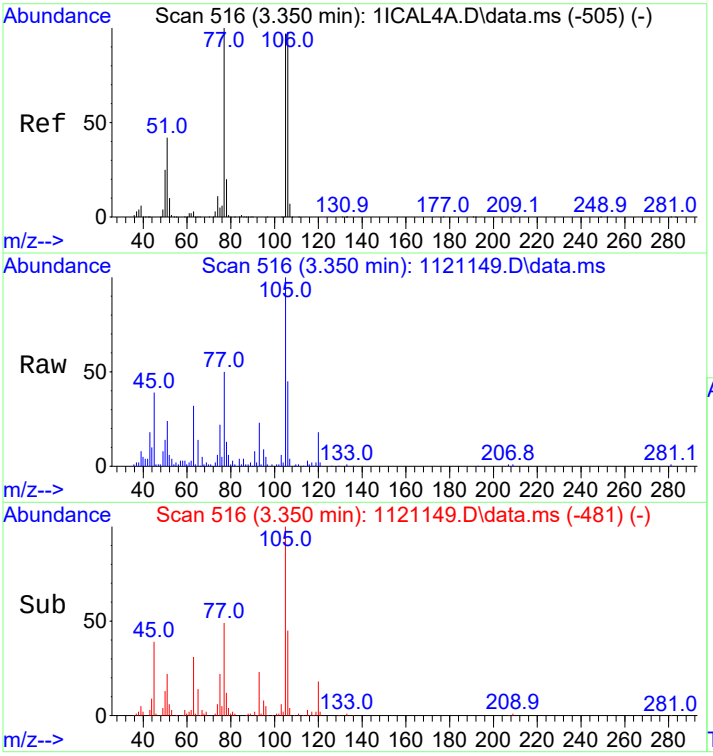
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1121149.D Vial: 10
Acq On : 23 Mar 2022 13:47 Operator: JJY
Sample : 210458,1121149, Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 14:09:45 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

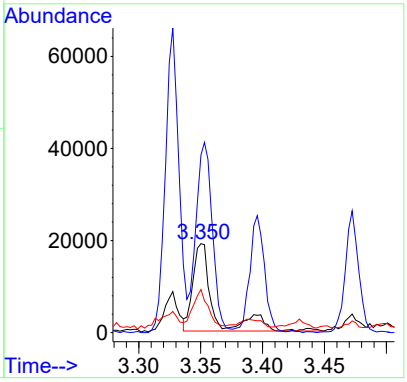


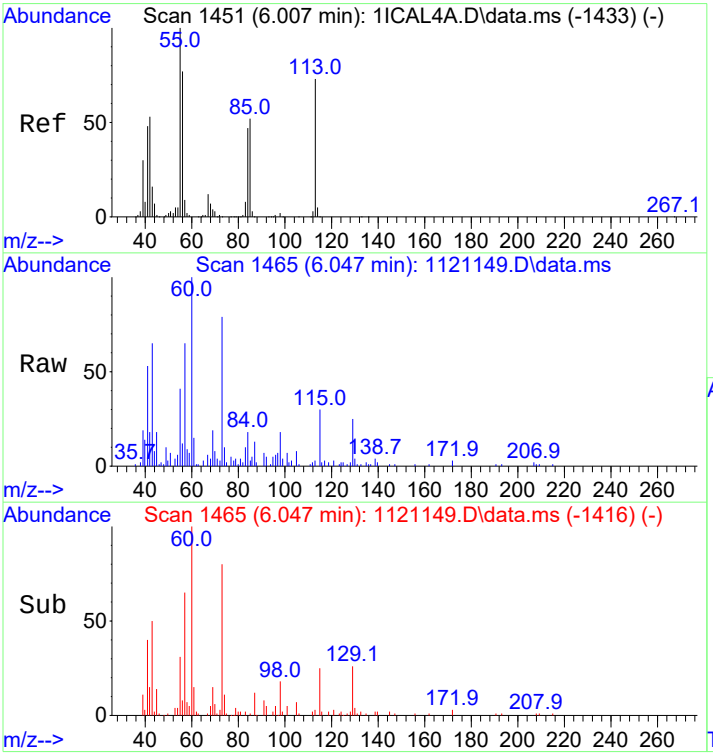


#2
Benzaldehyde
Concen: 1.82 ug/mL
RT: 3.350 min Scan# 516
Delta R.T. 0.000 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 77 Resp: 21741

Ion	Ratio	Lower	Upper
77	100		
105	173.9	65.0	125.0#
51	53.6	12.5	72.5

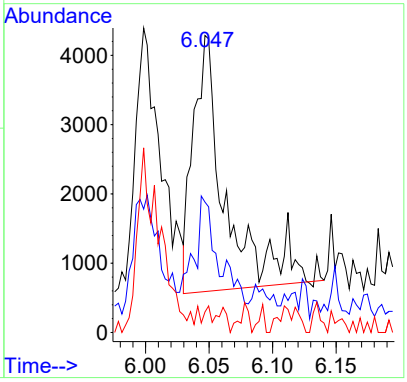


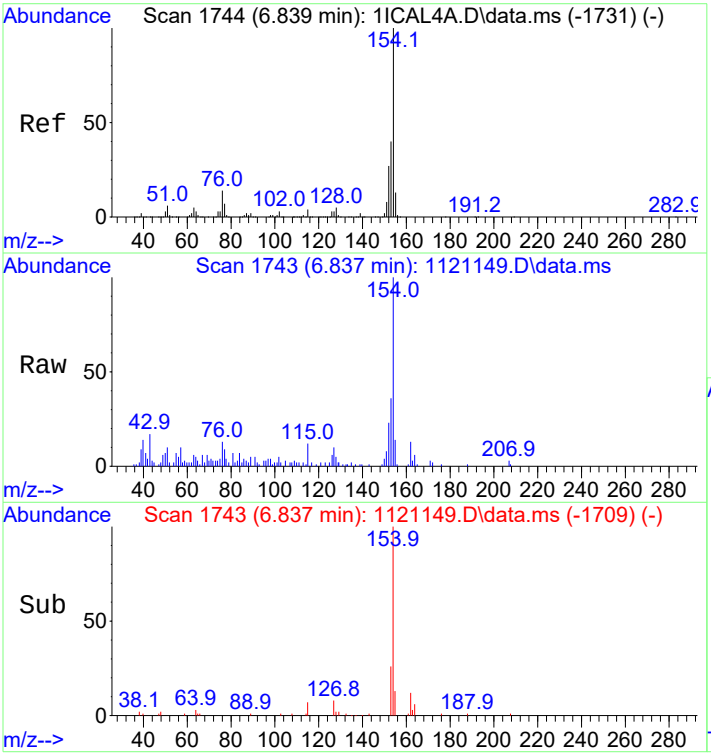


#4
Caprolactam
Concen: 1.93 ug/mL
RT: 6.047 min Scan# 1465
Delta R.T. 0.040 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion: 55 Resp: 6513

Ion	Ratio	Lower	Upper
55	100		
42	38.4	23.1	83.1
113	3.1	43.3	103.3#

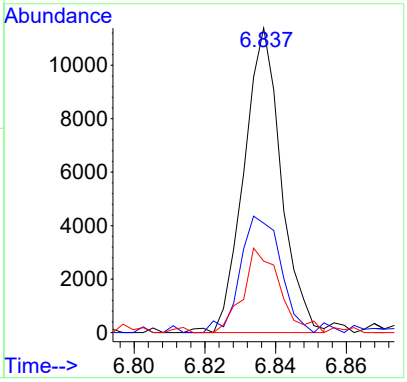




#6
Biphenyl
Concen: 0.20 ug/mL
RT: 6.837 min Scan# 1743
Delta R.T. -0.002 min
Lab File: 1121149.D
Acq: 23 Mar 2022 13:47

Tgt Ion:154 Resp: 8318

Ion	Ratio	Lower	Upper
154	100		
153	41.3	9.4	69.4
152	27.9	0.0	57.3

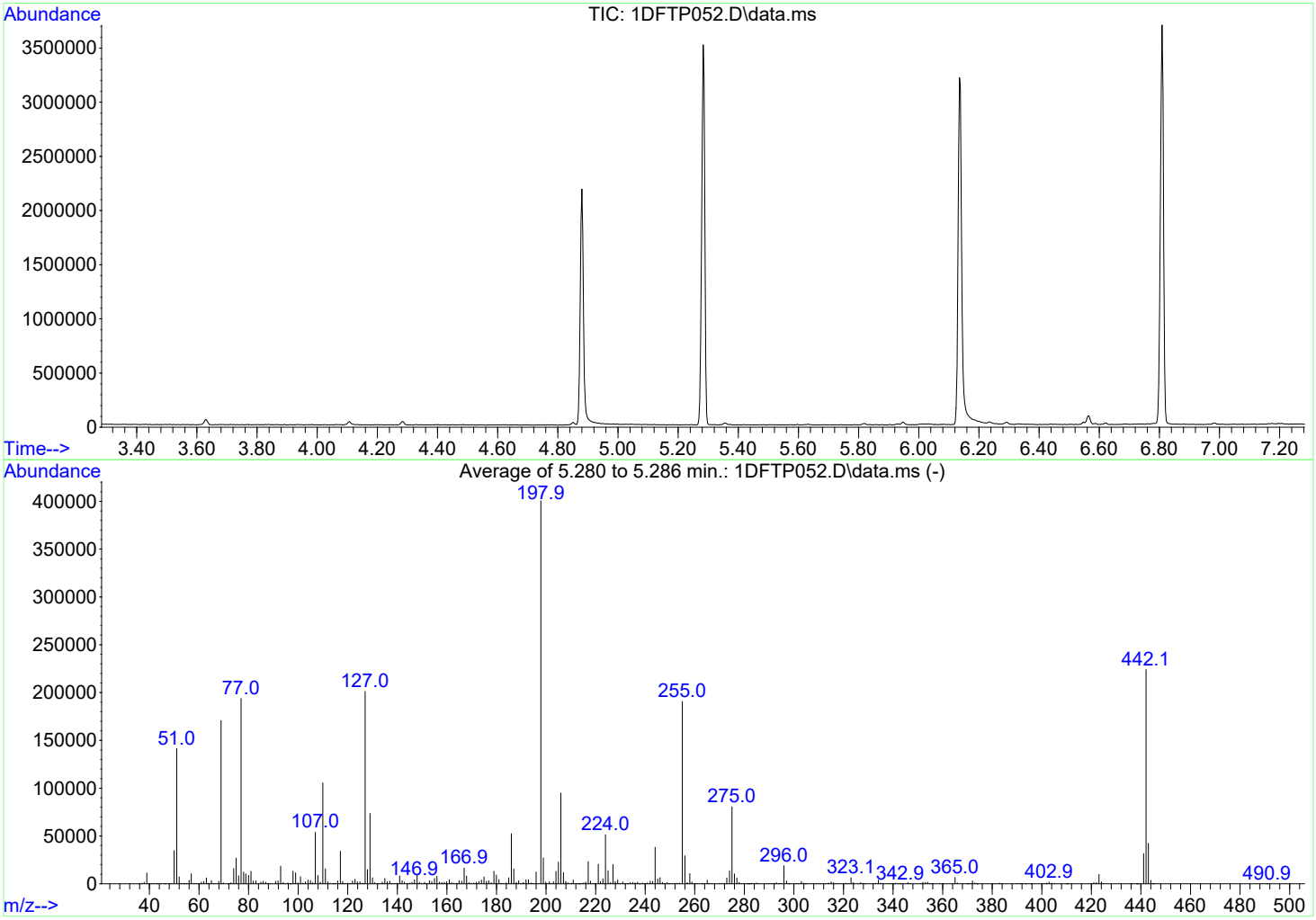


SEMI - VOLATILE ORGANIC ANALYSIS
INITIAL CALIBRATION
DOCUMENTS

Data Path : C:\INSTARCH\DATA\1S031722\
Data File : 1DFTP052.D
Acq On : 17 Mar 2022 12:36
Operator : JJY
Sample : DFTPP TUNE SVMS9169
Misc : SVMS1,25ng DFTPP
ALS Vial : 1 Sample Multiplier: 1

Integration File: DDD.p

Method : C:\INSTARCH\METHOD\1DFTPP.M
Title : DFTPP TUNE
Last Update : Thu Mar 17 12:48:04 2022



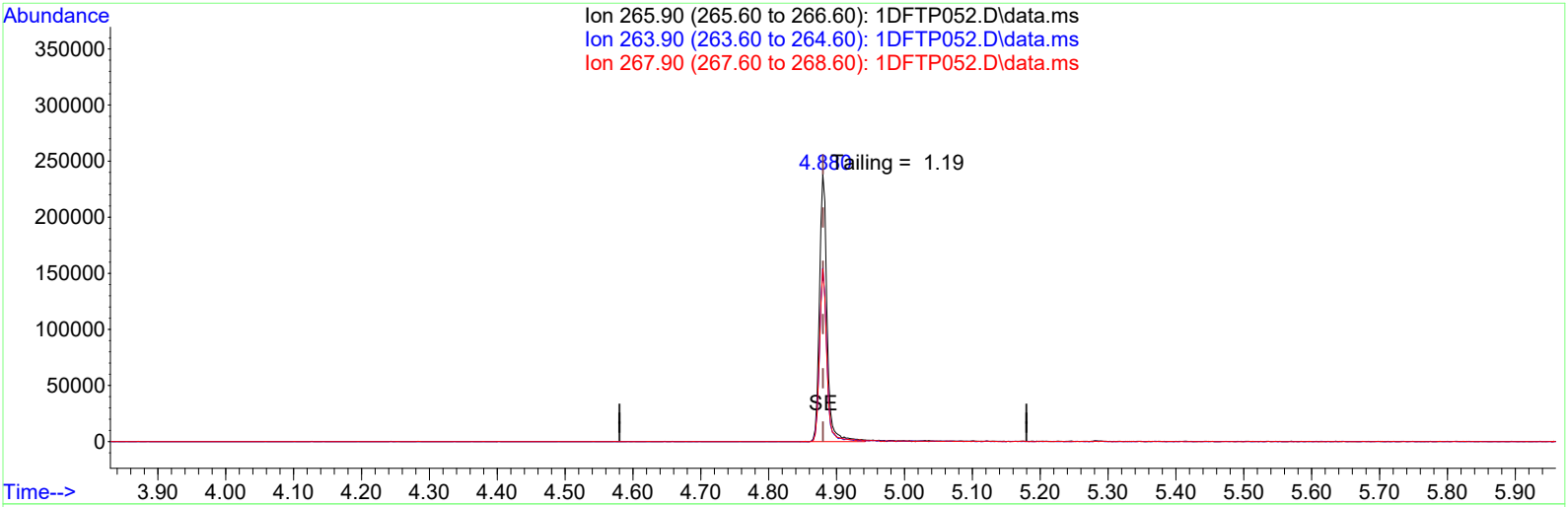
AutoFind: Scans 773, 774, 775; Background Corrected with Scan 764

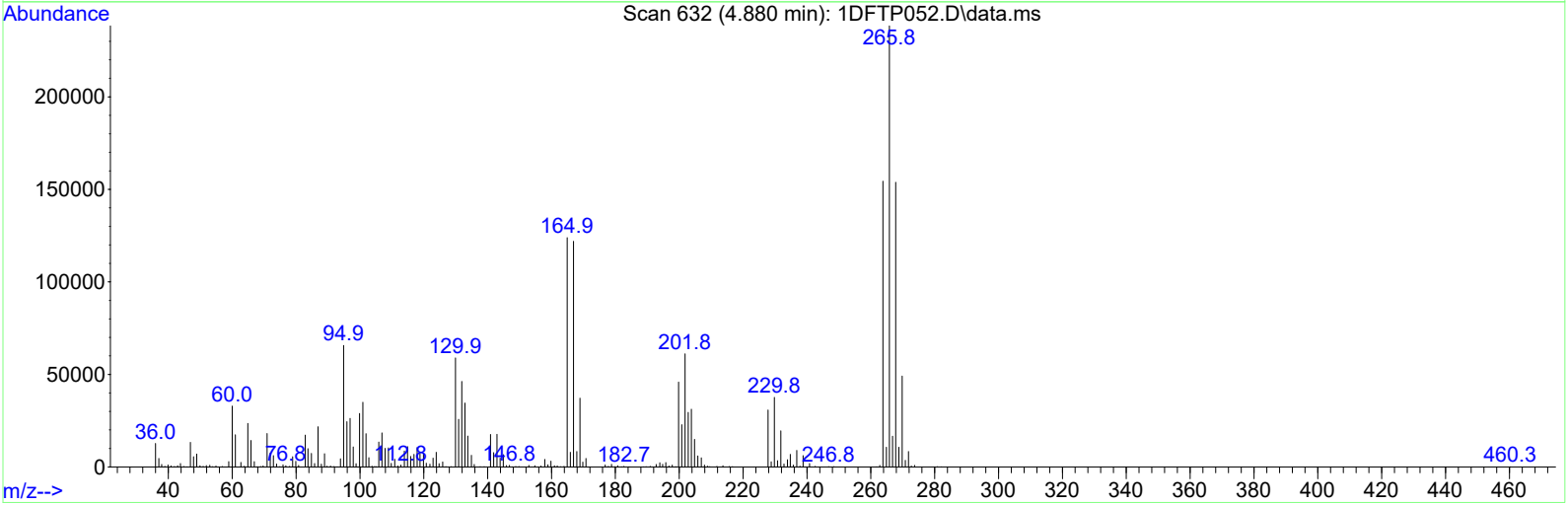
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.3	141443	PASS
68	69	0.00	2	1.5	2628	PASS
70	69	0.00	2	0.5	903	PASS
127	198	10	80	50.2	201259	PASS
197	198	0.00	2	0.0	0	PASS
198	198	50	100	100.0	400619	PASS
199	198	5	9	6.8	27072	PASS
275	198	10	60	20.1	80552	PASS
365	198	1	100	1.7	6619	PASS
441	442	0.01	24	14.1	31549	PASS
442	198	50	100	55.9	224107	PASS
443	442	15	24	18.9	42315	PASS

Quantitation Report (Qedit)

Data File : C:\INSTARCH\DATA\1S031722\1DFTP052.D Vial: 1
Acq On : 17 Mar 2022 12:36 Operator: JJY
Sample : DFTPP TUNE SVMS9169 Inst : SVMS1
Misc : SVMS1,25ng DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 12:48:12 2022

Quant Method : C:\INSTARCH\METHOD\1DFTPP.M
Quant Title : DFTPP TUNE
QLast Update : Thu Mar 17 12:48:04 2022
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M





TIC: 1DFTP052.D\data.ms

(1) Pentachlorophenol

4.880min (-0.000) 26.49 ng

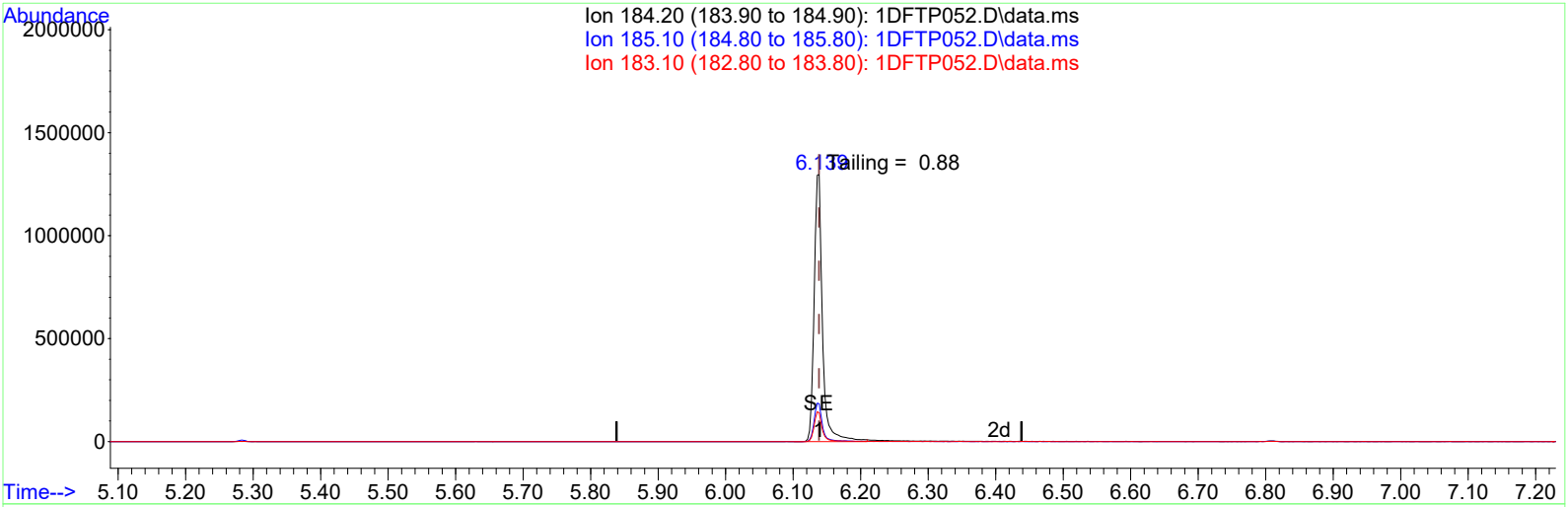
response 186422

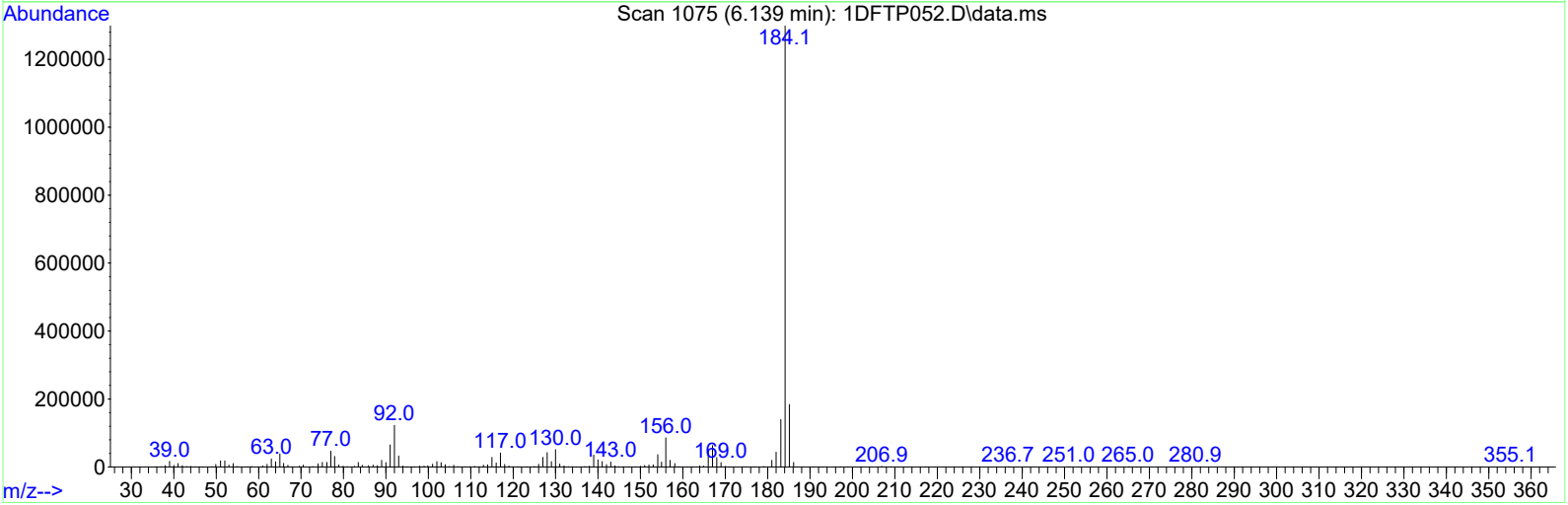
Ion	Exp%	Act%
265.90	100.00	100.00
263.90	64.60	61.33
267.90	65.00	62.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\INSTARCH\DATA\1S031722\1DFTP052.D Vial: 1
Acq On : 17 Mar 2022 12:36 Operator: JJY
Sample : DFTPP TUNE SVMS9169 Inst : SVMS1
Misc : SVMS1,25ng DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 12:48:12 2022

Quant Method : C:\INSTARCH\METHOD\1DFTPP.M
Quant Title : DFTPP TUNE
QLast Update : Thu Mar 17 12:48:04 2022
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M





TIC: 1DFTP052.D\data.ms

(3) Benzidine

6.139min (0.000) 24.65 ng

response 1125711

Ion	Exp%	Act%
184.20	100.00	100.00
185.10	15.90	14.35
183.10	12.20	10.68
0.00	0.00	0.00

Data File Name	1DFTP052.D
Vial Number	1
Data File Path	C:\INSTARCH\DATA\1S031722\
Operator	JJY
Date Acquired	3/17/2022 12:36
Instrument Name	SVMS1
Sample Name	DFTPP TUNE SVMS9169
Sample Multiplier	1
Misc Info	SVMS1,25ng DFTPP
Calibration Title	DFTPP TUNE
Last Calibration Update	Thu Mar 17 12:48:04 2022

#	Name	Ret Time	Target Response
1)	Pentachlorophenol	4.88	186422
2)	DFTPP	5.28	313891
3)	Benzidine	6.14	1125711
4)	DDE	6.29	1598
5)	DDD	6.56	12137
6)	DDT	6.81	517758

DDT % Degradation

$$\frac{DDD+DDEx100}{DDD+DDE+DDT} \quad 2.58\ \%$$

Response Factor Report SVMS1

Method Path : C:\INSTARCH\METHOD\
Method File : 1S031722.M
Title : Method for 8270 Analysis
Last Update : Thu Mar 17 15:56:50 2022
Response Via : Initial Calibration

Calibration Files
1 =1ICAL1.D 5 =1ICAL2.D 10 =1ICAL3.D 20 =1ICAL4.D 30 =1ICAL5.D 40 =1ICAL6.D 50 =1ICAL7.D

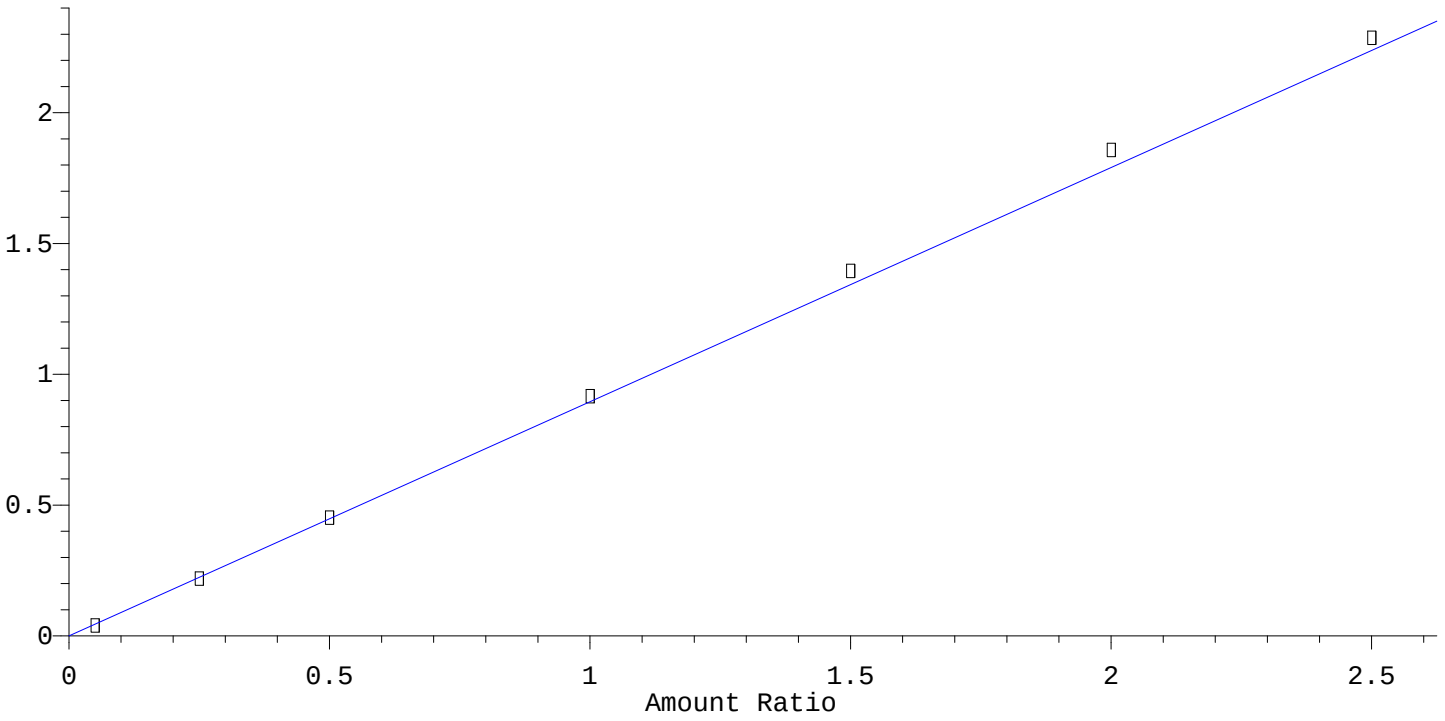
		Compound	1	5	10	20	30	40	50	Avg	%RSD
1)	I	14Diclbenzd4	----------------ISTD--------------------								
2)	CT	Ntrsdimeth	0.797	0.877	0.905	0.916	0.930	0.929	0.914	0.895	5.26
3)	CT	Pyridine	1.374	1.460	1.513	1.502	1.520	1.530	1.505	1.486	3.65
4)	S	SURR2Flphenol	0.482	0.529	0.558	0.571	0.565	0.557	0.544	0.544	5.60
5)	CT	Aniline	1.912	1.893	1.974	2.080	2.007	1.995	1.926	1.969	3.31
6)	CPT	bis2Clethletr	1.321	1.373	1.370	1.331	1.304	1.301	1.267	1.324	2.90
7)	S	SURRPhenol-d5	0.613	0.630	0.653	0.674	0.667	0.668	0.656	0.652	3.45
8)	CPT	Phenol	1.918	1.800	1.879	1.914	1.877	1.852	1.784	1.861	2.80
9)	CPT	2-Cl-phenol	1.239	1.338	1.352	1.357	1.338	1.309	1.277	1.315	3.32
10)	CT	13Diclbenz	1.668	1.621	1.576	1.553	1.542	1.527	1.481	1.567	3.95
11)	CT	14Diclbenz	1.714	1.566	1.535	1.523	1.515	1.464	1.422	1.534	6.03
12)	CT	12Diclbenz	1.658	1.491	1.466	1.452	1.423	1.367	1.334	1.456	7.20
13)	CT	Benzyl alcoho	0.785	0.824	0.879	0.898	0.893	0.877	0.853	0.859	4.80
14)	CPT	bis2clispreth	1.737	1.556	1.594	1.529	1.515	1.477	1.448	1.551	6.14
15)	CPT	2Methylphenol	1.034	1.030	1.074	1.038	1.036	1.024	0.979	1.031	2.72
16)	CT	Ntrspyrrol	0.542	0.604	0.626	0.653	0.624	0.640	0.615	0.615	5.82
17)	CPT	Acetophenone	1.911	1.835	1.867	1.817	1.772	1.758	1.696	1.808	3.99
18)	CPT	Hexaclethane	0.671	0.625	0.614	0.614	0.608	0.599	0.585	0.617	4.41
19)	CPT	N-Ntrsdinprop	1.000	0.973	0.990	0.944	0.919	0.884	0.882	0.942	5.16
20)	CPT	3&4Methylphenol	1.216	1.326	1.292	1.312	1.259	1.221	1.196	1.260	4.03
21)	I	Naphthalened8	----------------ISTD--------------------								
22)	S	SURRNitrbenzened5	0.055	0.056	0.058	0.058	0.058	0.058	0.057	0.057	1.63
23)	CPT	Nitrobenzene	0.271	0.289	0.286	0.282	0.279	0.279	0.271	0.280	2.45
24)	CPT	Isophorone	0.521	0.526	0.544	0.547	0.541	0.536	0.526	0.534	1.88
25)	CPT	2-Nitrophenol	0.074	0.112	0.119	0.133	0.133	0.136	0.135	0.120	18.52
26)	CPT	24Dimthpheno	0.168	0.195	0.201	0.206	0.203	0.202	0.198	0.196#	6.60
27)	CPT	bis2clethoxym	0.349	0.352	0.363	0.357	0.356	0.353	0.351	0.355	1.29
28)	CPT	24Diclphenol	0.221	0.271	0.271	0.281	0.275	0.276	0.266	0.266	7.67
29)	CT	124Triclbenz	0.356	0.336	0.334	0.333	0.324	0.318	0.308	0.330	4.62
30)	CT	Benzoic acid		0.031	0.049	0.064	0.081	0.089	0.097	0.068	36.80#
31)	CPT	Naphthalene	1.128	1.053	1.039	1.019	0.995	0.971	0.945	1.022	5.88
32)	CPT	4-Cl-aniline	0.384	0.407	0.412	0.407	0.396	0.386	0.365	0.394	4.26
33)	CT	26Diclphenol	0.249	0.268	0.277	0.274	0.266	0.263	0.254	0.265	3.81
34)	CT	Hexaclprop	0.145	0.174	0.179	0.184	0.181	0.178	0.171	0.173	7.57
35)	CPT	Hexaclbutdien	0.194	0.187	0.184	0.174	0.172	0.170	0.163	0.178	6.14
36)	CPT	4Cl3methylphe	0.230	0.292	0.309	0.312	0.313	0.309	0.300	0.295	10.05
37)	CPT	2Methylnaphth	0.735	0.710	0.701	0.688	0.661	0.644	0.626	0.681	5.70
38)	CT	1Methylnaphth	0.631	0.611	0.589	0.570	0.551	0.527	0.513	0.570	7.59
39)	I	Acenaphthened10	----------------ISTD--------------------								
40)	CPT	Hxclcycpentdi	0.223	0.290	0.308	0.315	0.322	0.314	0.311	0.298	11.51
41)	CPT	1245Tetrclbenz	0.617	0.572	0.563	0.535	0.526	0.514	0.492	0.546	7.68
42)	CPT	246Triclpheno	0.271	0.352	0.365	0.385	0.390	0.384	0.377	0.361	11.53

Method Path : C:\INSTARCH\METHOD\
Method File : 1S031722.M

43)	CPT	245Triclpheno	0.254	0.372	0.373	0.400	0.407	0.393	0.385	0.369	14.18
44)	S	SURR2Flbiphenyl	0.312	0.298	0.287	0.280	0.273	0.268	0.260	0.282	6.38
45)	CPT	2Clnaphthalen	1.343	1.270	1.245	1.207	1.194	1.173	1.137	1.224	5.58
46)	CPT	2Nitroaniline	0.243	0.312	0.342	0.360	0.361	0.357	0.354	0.332	12.97
47)	CPT	Acnaphthylene	2.144	2.043	1.977	1.895	1.849	1.763	1.740	1.916	7.72
48)	CPT	Dimethylphtha	1.481	1.430	1.392	1.378	1.330	1.304	1.260	1.368	5.53
49)	CPT	26Dinitrotolu	0.279	0.311	0.315	0.315	0.316	0.308	0.307	0.307	4.21
50)	CPT	Acenaphthene	1.128	1.091	1.083	1.082	1.046	1.011	1.003	1.064	4.26
51)	CPT	3Nitroaniline	0.222	0.317	0.315	0.331	0.343	0.338	0.335	0.314	13.36
52)	CPT	24Dinitphenol		0.026	0.041	0.070	0.085	0.099	0.107	0.072	44.96#
53)	CPT	Dibenzofuran	1.811	1.764	1.663	1.642	1.593	1.547	1.505	1.646	6.75
54)	CPT	24Dinitrotolu	0.289	0.365	0.378	0.394	0.389	0.389	0.388	0.370	10.04
55)	CPT	4-Nitrophenol		0.164	0.205	0.234	0.244	0.253	0.252	0.225	15.55
56)	CT	2,3,5,6-Tetrac...	0.168	0.240	0.269	0.282	0.290	0.287	0.291	0.261	17.16
57)	CPT	2,3,4,6-Tetrac...	0.181	0.260	0.260	0.279	0.280	0.279	0.278	0.260	13.85
58)	CPT	Fluorene	1.414	1.354	1.306	1.282	1.262	1.214	1.189	1.289	6.05
59)	CPT	4Clphlphlethr	0.637	0.648	0.611	0.595	0.572	0.559	0.531	0.593	7.11
60)	CPT	Diethylphthal	1.379	1.404	1.381	1.389	1.336	1.356	1.338	1.369	1.90
61)	CPT	4Nitroaniline	0.181	0.265	0.285	0.302	0.302	0.311	0.312	0.280	16.66
62)	S	SURR246Tribrphenl	0.037	0.051	0.051	0.055	0.054	0.056	0.056	0.051	12.80
63)	I	Phenanthrd10	----------ISTD----------								
64)	CPT	46Dinit2mylph		0.051	0.073	0.098	0.112	0.118	0.120	0.095	29.29#
65)	CPT	Ntrsdiphlam&Di...	0.842	0.793	0.754	0.719	0.691	0.642	0.619	0.723	11.09
66)	CT	Azobenz&12Diph...	0.285	0.260	0.242	0.235	0.227	0.214	0.205	0.238	11.54
67)	CPT	4Brphlphlethr	0.278	0.261	0.254	0.243	0.240	0.236	0.223	0.248	7.30
68)	CPT	Hexaclbenzene	0.275	0.244	0.234	0.227	0.221	0.206	0.200	0.230	11.02
69)	CPT	Pentaclphenol		0.068	0.089	0.103	0.114	0.113	0.114	0.100	18.39
70)	CPT	Phenanthrene	1.189	1.069	1.066	1.023	1.002	0.959	0.934	1.035	8.20
71)	CPT	Anthracene	1.119	1.090	1.080	1.037	1.015	0.966	0.930	1.034	6.65
72)	CPT	Carbazole	1.016	1.009	1.011	0.983	0.973	0.932	0.922	0.978	3.94
73)	CPT	Dinbtylphthal	1.180	1.317	1.293	1.301	1.271	1.214	1.197	1.253	4.40
74)	CPT	Fluoranthene	1.093	1.118	1.085	1.049	1.049	0.989	0.976	1.051	5.04
75)	I	Chrysene-d12	----------ISTD----------								
76)	CT	Benzidine	0.115	0.238	0.347	0.473	0.489	0.545	0.499	0.387	41.30#
77)	CPT	Pyrene	1.961	1.854	1.809	1.912	1.864	1.868	1.746	1.859	3.73
78)	S	SURRTerphenyl-d14	0.259	0.253	0.253	0.263	0.258	0.256	0.241	0.255	2.83
79)	CPT	Btylbzylphth	0.518	0.734	0.790	0.877	0.873	0.891	0.857	0.791	16.81
80)	CT	bis2Ethlhxlad	0.386	0.596	0.658	0.700	0.693	0.686	0.678	0.628	17.90
81)	CPT	33Diclbnzidin	0.158	0.285	0.314	0.394	0.422	0.443	0.453	0.353	30.41#
82)	CPT	B[a]anthracen	1.345	1.338	1.324	1.330	1.330	1.333	1.288	1.327	1.40
83)	CPT	Chrysene	1.356	1.283	1.237	1.220	1.195	1.203	1.153	1.235	5.39
84)	CPT	bis2Ethlhxlph	0.685	0.926	0.976	1.011	1.013	1.008	0.982	0.943	12.50
85)	CPT	Dinoctylphthl	0.601	1.180	1.352	1.477	1.534	1.561	1.659	1.338	26.92#
86)	I	Perylene-d12	----------ISTD----------								
87)	CPT	B[b]fluoranth	1.214	1.306	1.355	1.474	1.426	1.428	1.382	1.369	6.40
88)	CPT	B[k]fluoranth	1.339	1.330	1.355	1.430	1.406	1.362	1.303	1.361	3.24
89)	CPT	Benz[a]pyrene	0.990	1.182	1.263	1.290	1.290	1.270	1.250	1.219	8.81
90)	CPT	Indeno-pyrene	0.292	0.549	0.624	0.616	0.690	0.716	0.750	0.605	25.43#
91)	CPT	Dib[ah]anthr	0.407	0.574	0.688	0.677	0.725	0.741	0.785	0.657	19.53
92)	CPT	B[ghi]perylen	0.540	0.672	0.734	0.669	0.726	0.741	0.749	0.690	10.68

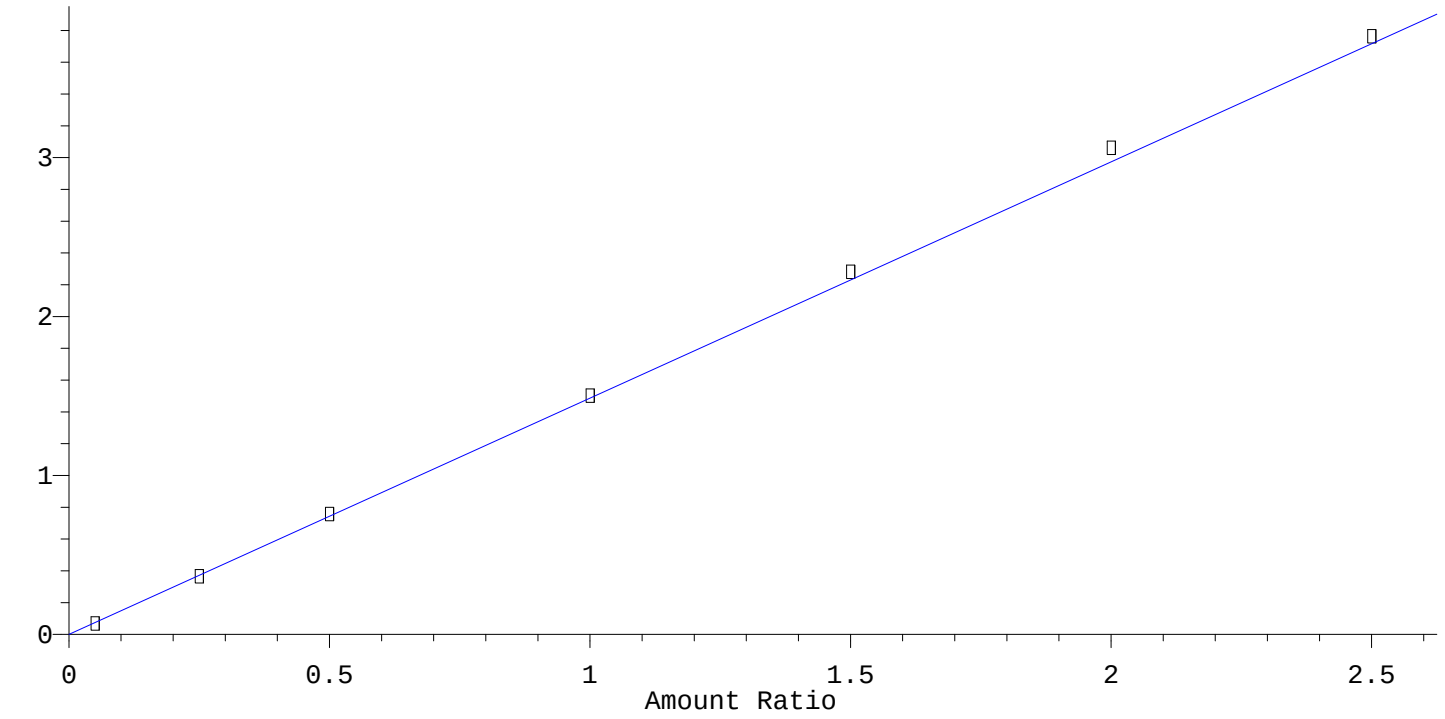
Method Path : C:\INSTARCH\METHOD\
Method File : 1S031722.M
(#) = Out of Range

Ntrsdimeth



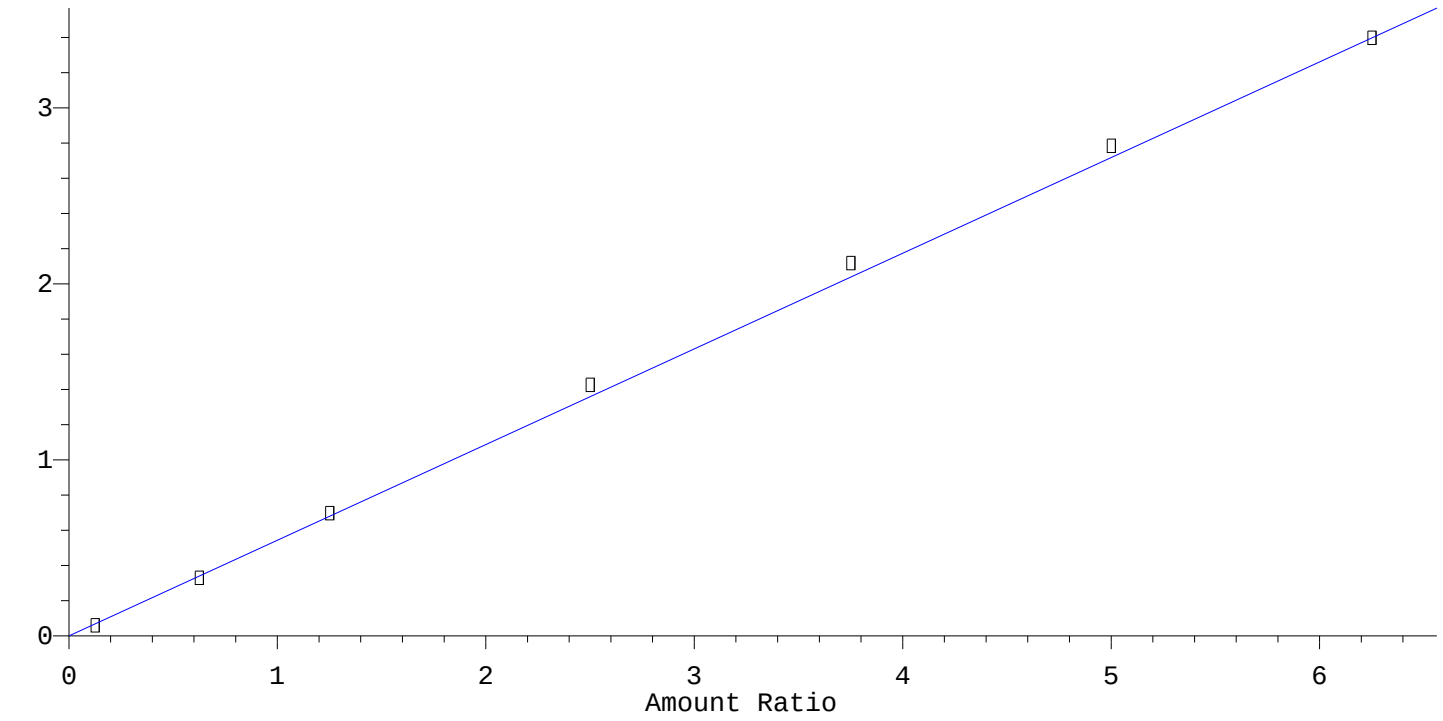
Resp Ratio = 8.954e-001 * Amt
RF Rel Std Dev = 5.255% Curve Fit: Avg RF

Pyridine



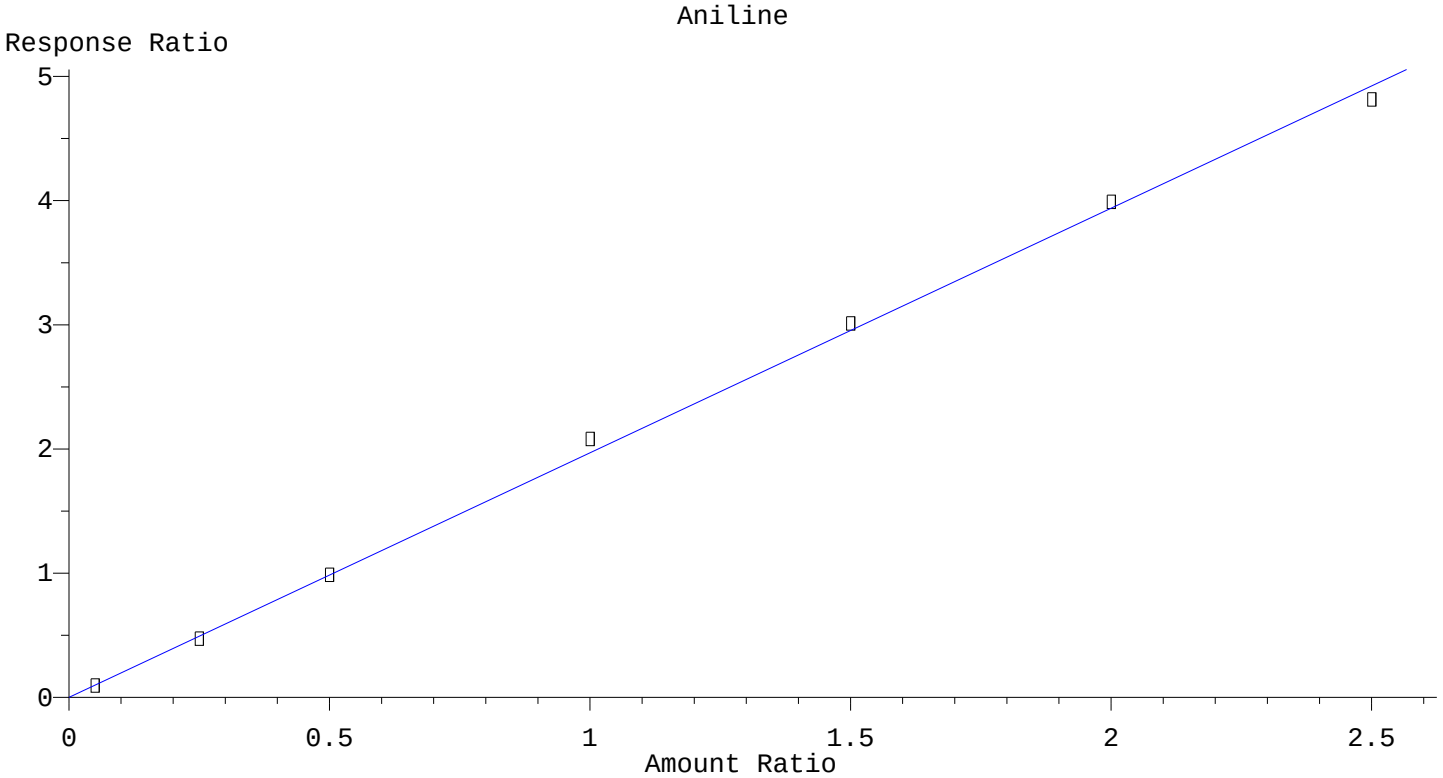
Resp Ratio = 1.486e+000 * Amt
RF Rel Std Dev = 3.653% Curve Fit: Avg RF

SURR2Flphenol

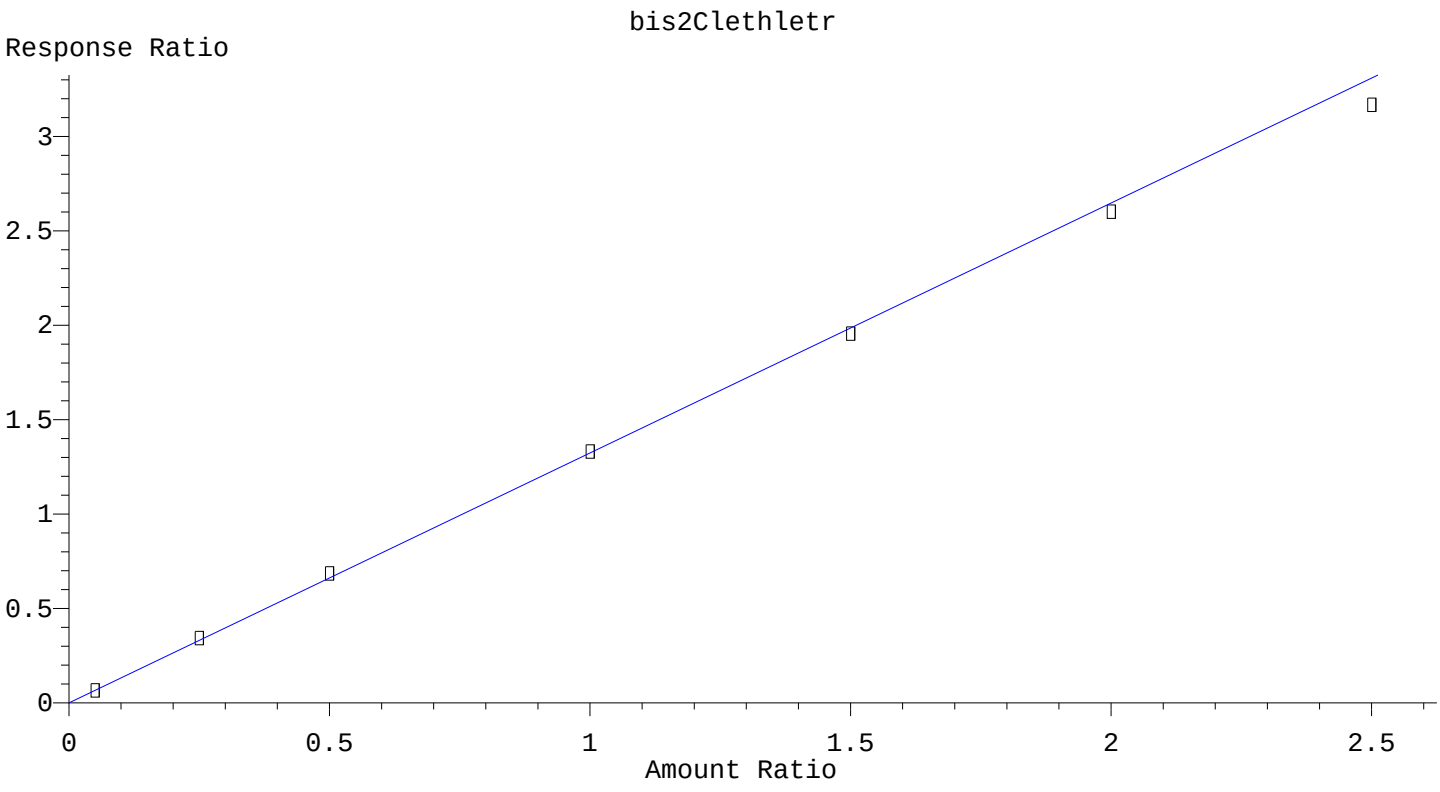


Resp Ratio = 5.435e-001 * Amt
RF Rel Std Dev = 5.597% Curve Fit: Avg RF

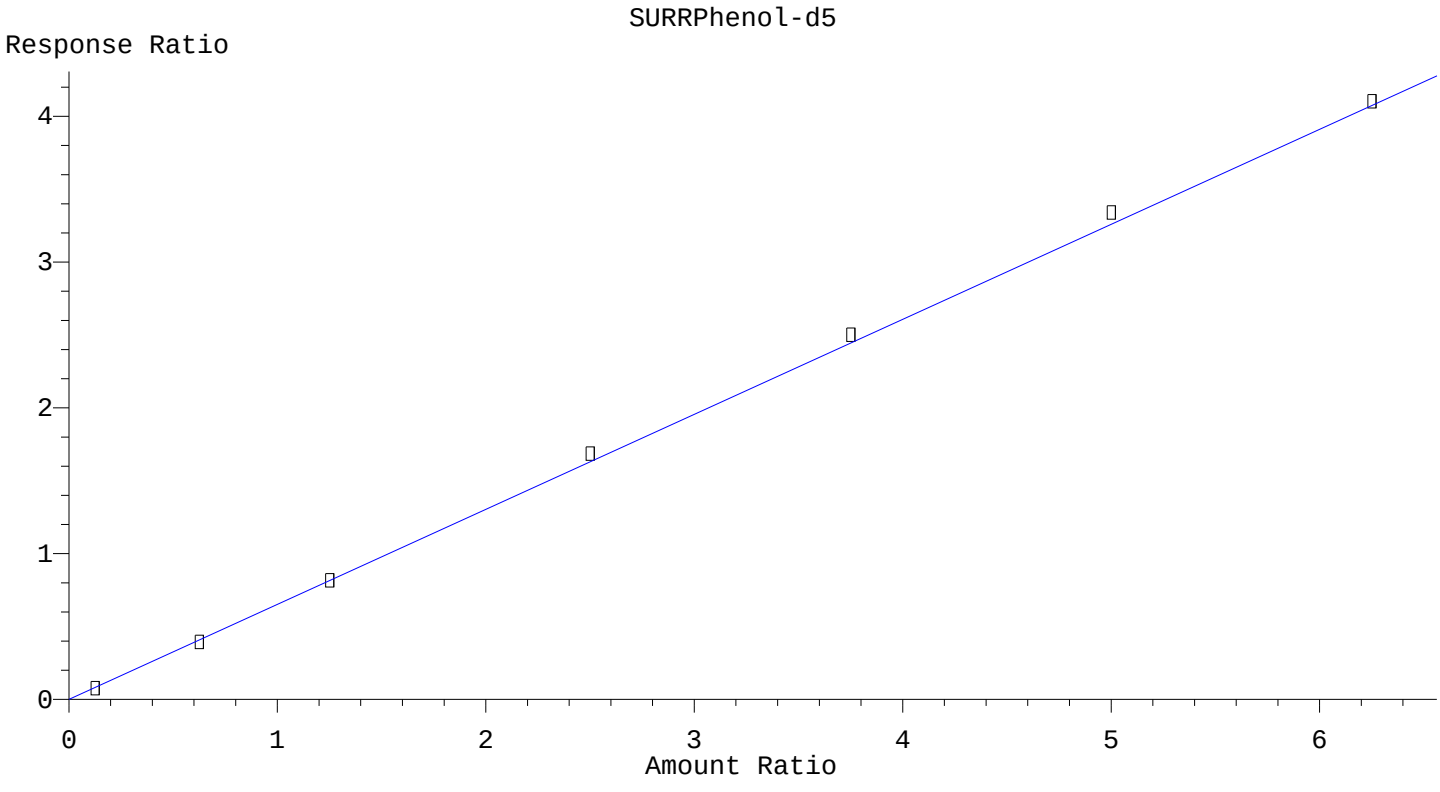
Aniline



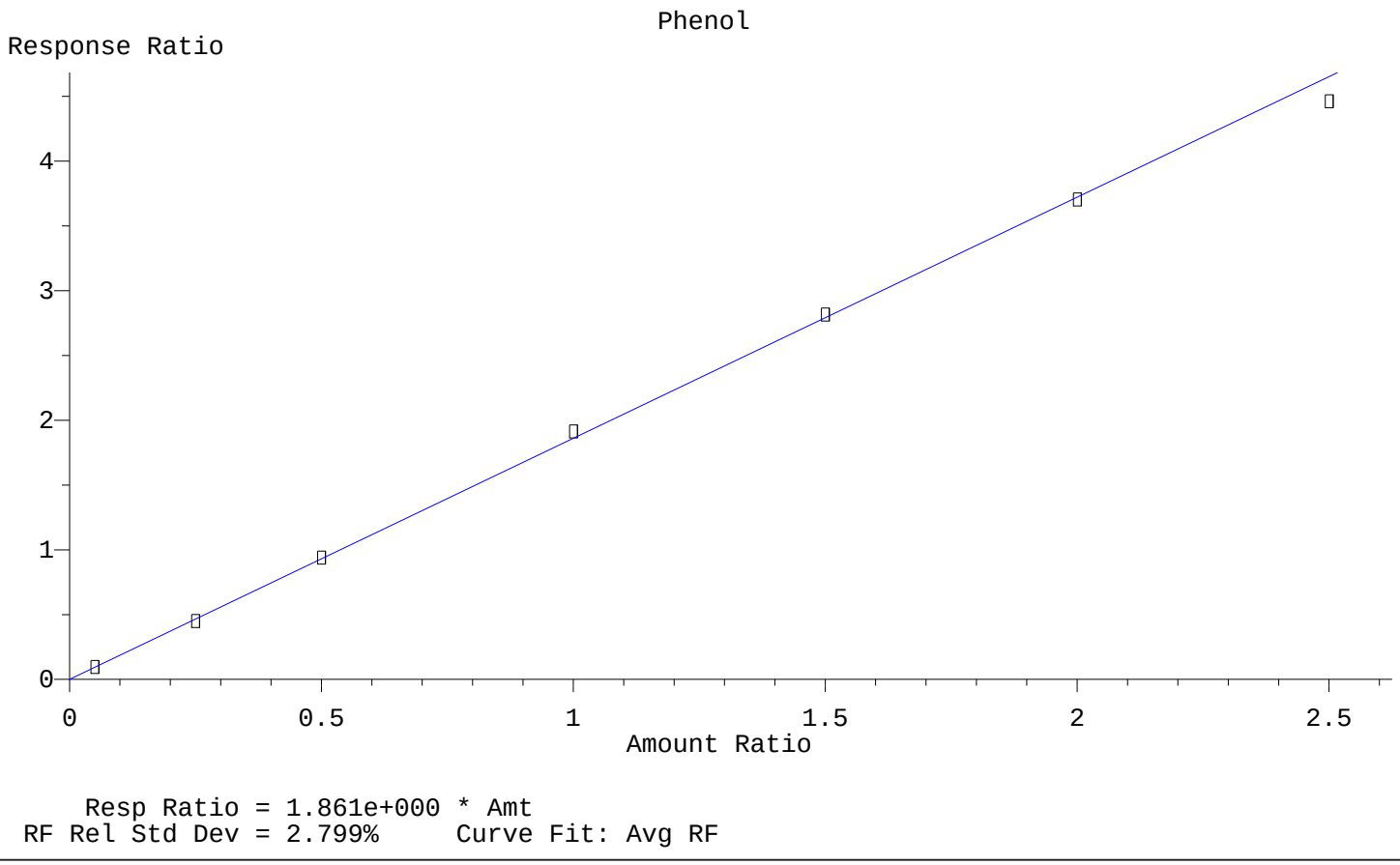
Resp Ratio = 1.969e+000 * Amt
RF Rel Std Dev = 3.312% Curve Fit: Avg RF



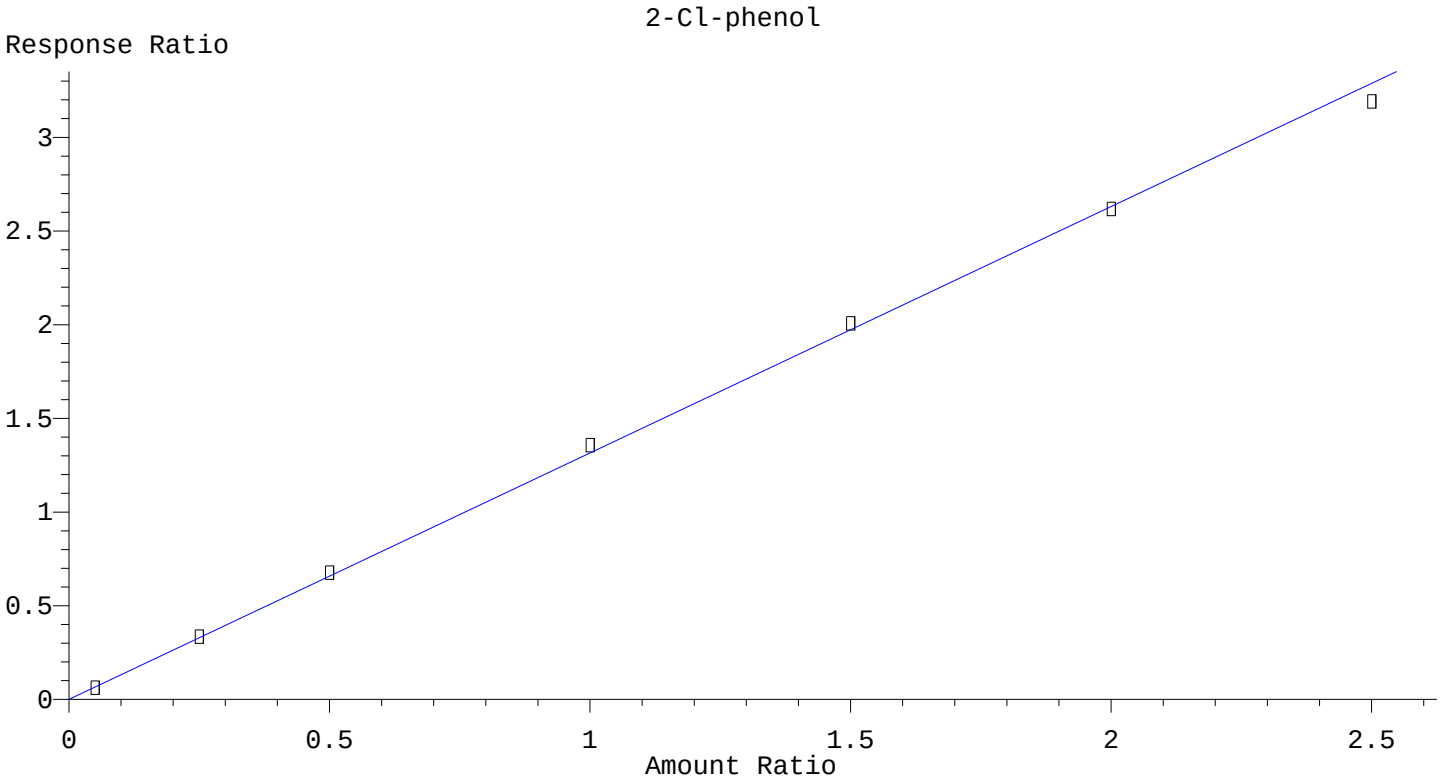
Resp Ratio = 1.324e+000 * Amt
RF Rel Std Dev = 2.902% Curve Fit: Avg RF



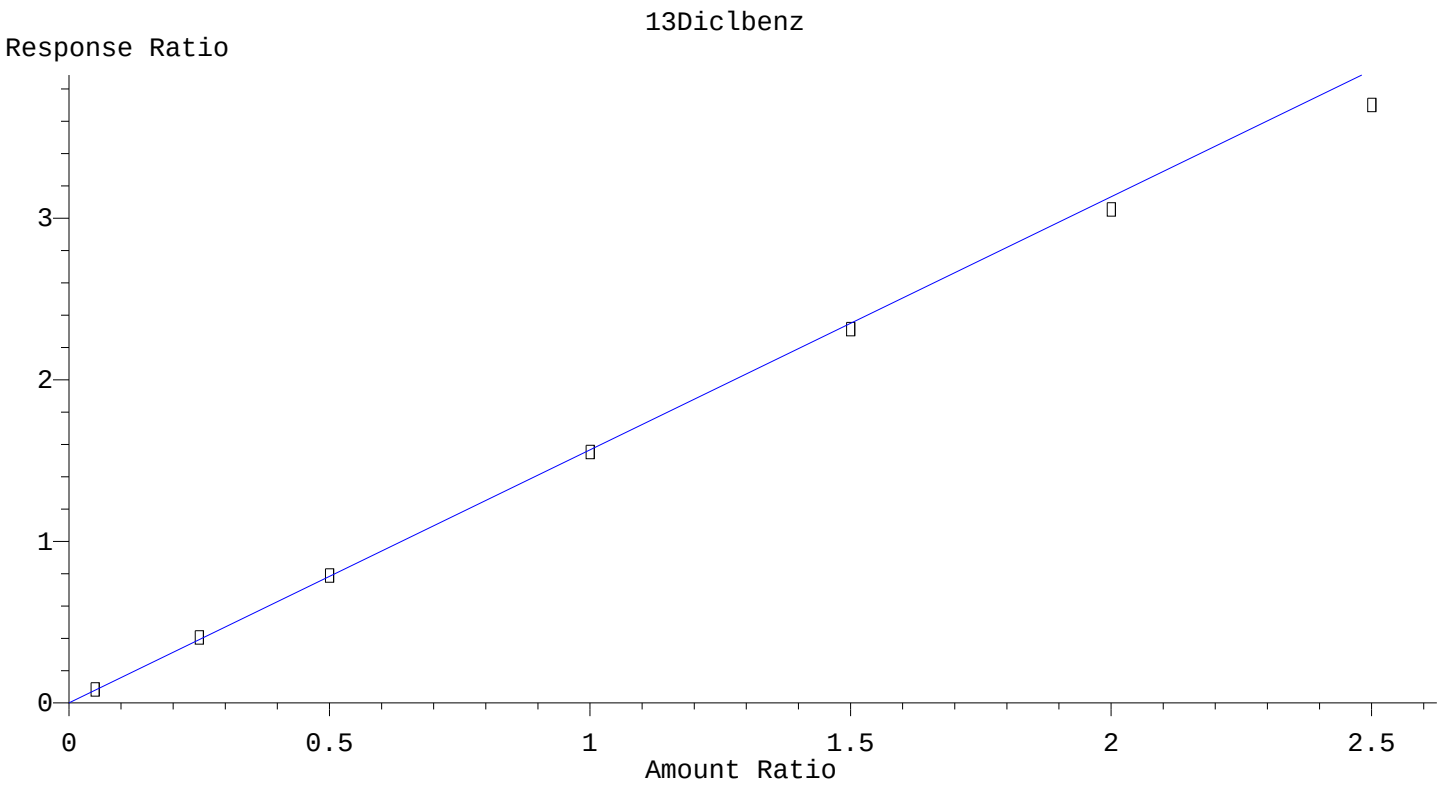
Resp Ratio = 6.517e-001 * Amt
RF Rel Std Dev = 3.447% Curve Fit: Avg RF



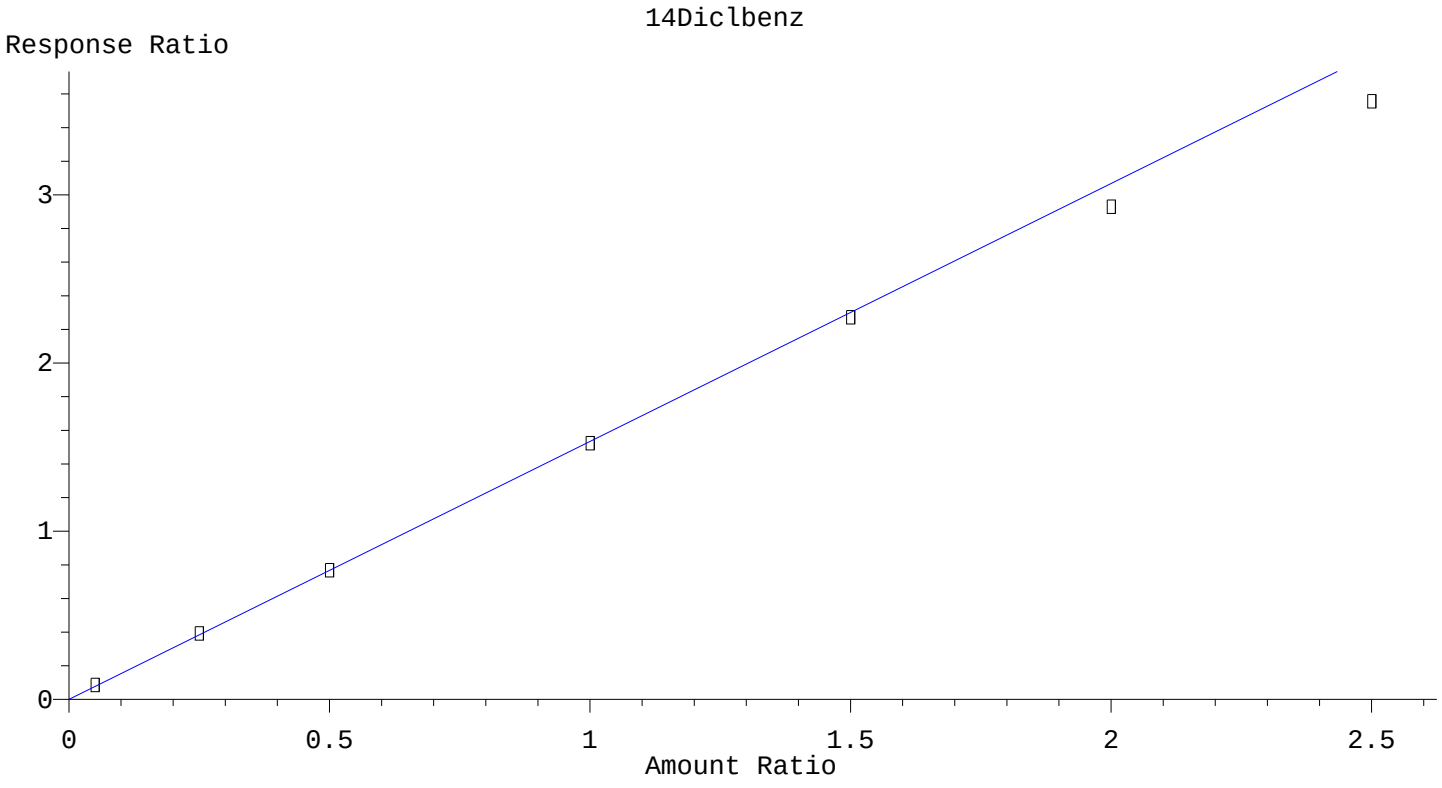
Resp Ratio = 1.861e+000 * Amt
RF Rel Std Dev = 2.799% Curve Fit: Avg RF



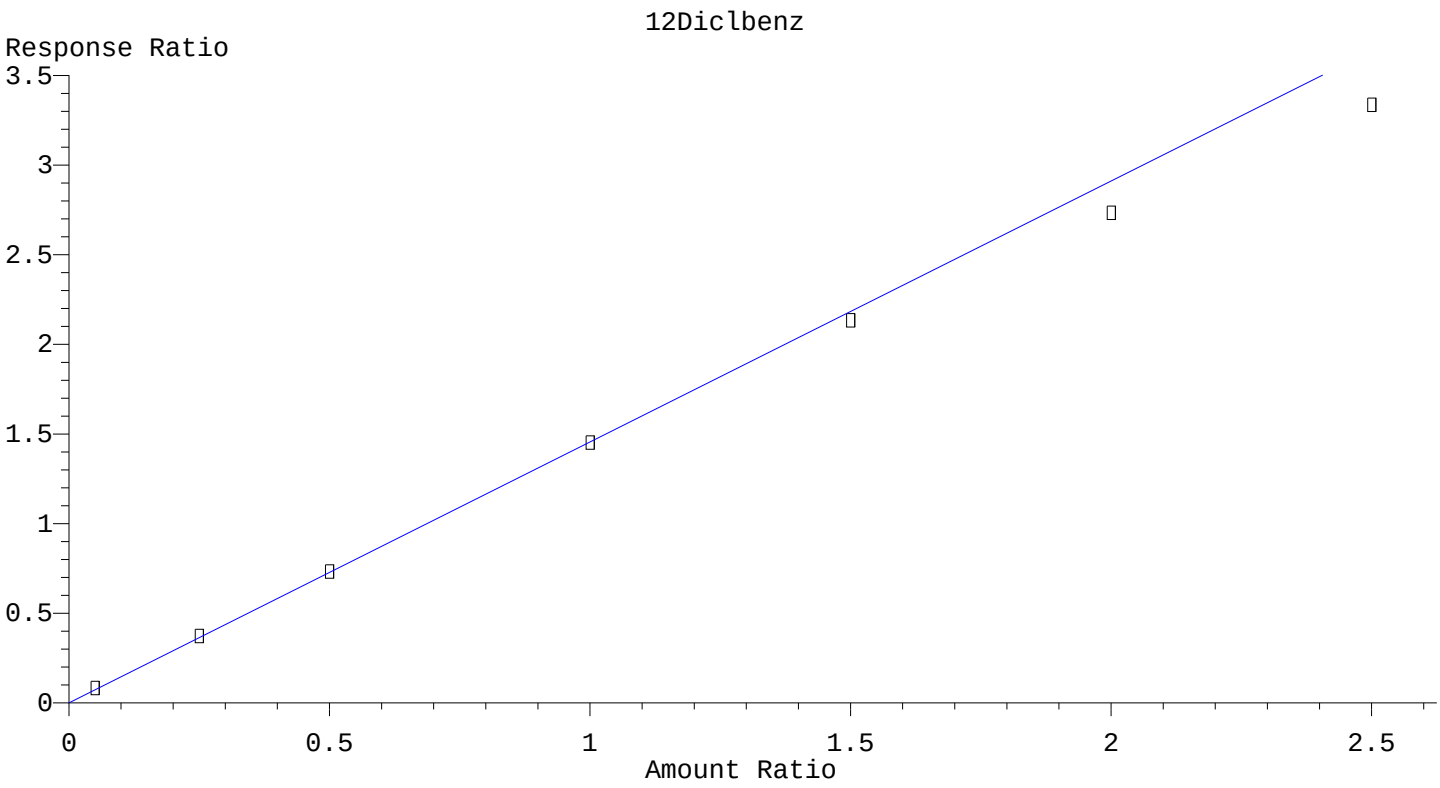
Resp Ratio = 1.315e+000 * Amt
RF Rel Std Dev = 3.317% Curve Fit: Avg RF



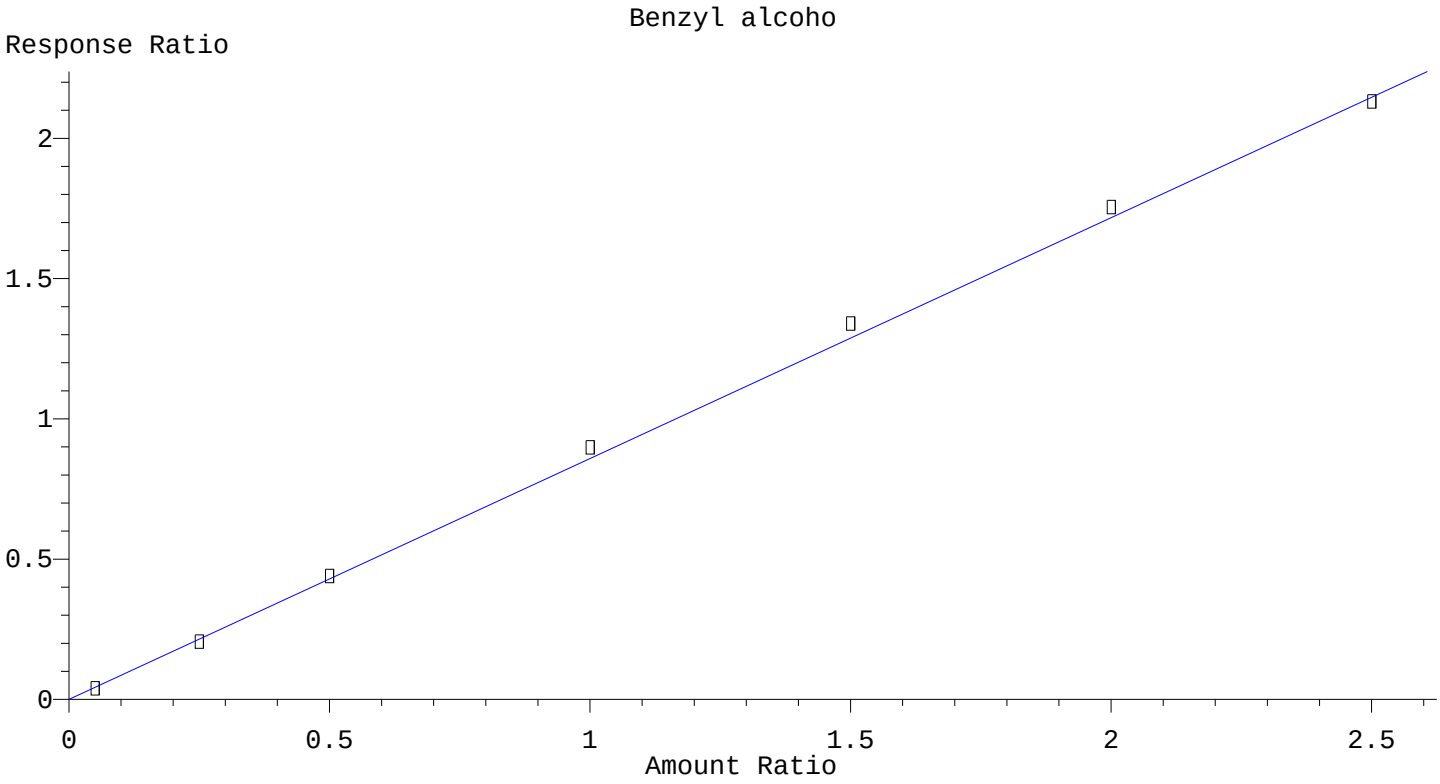
Resp Ratio = 1.567e+000 * Amt
RF Rel Std Dev = 3.954% Curve Fit: Avg RF



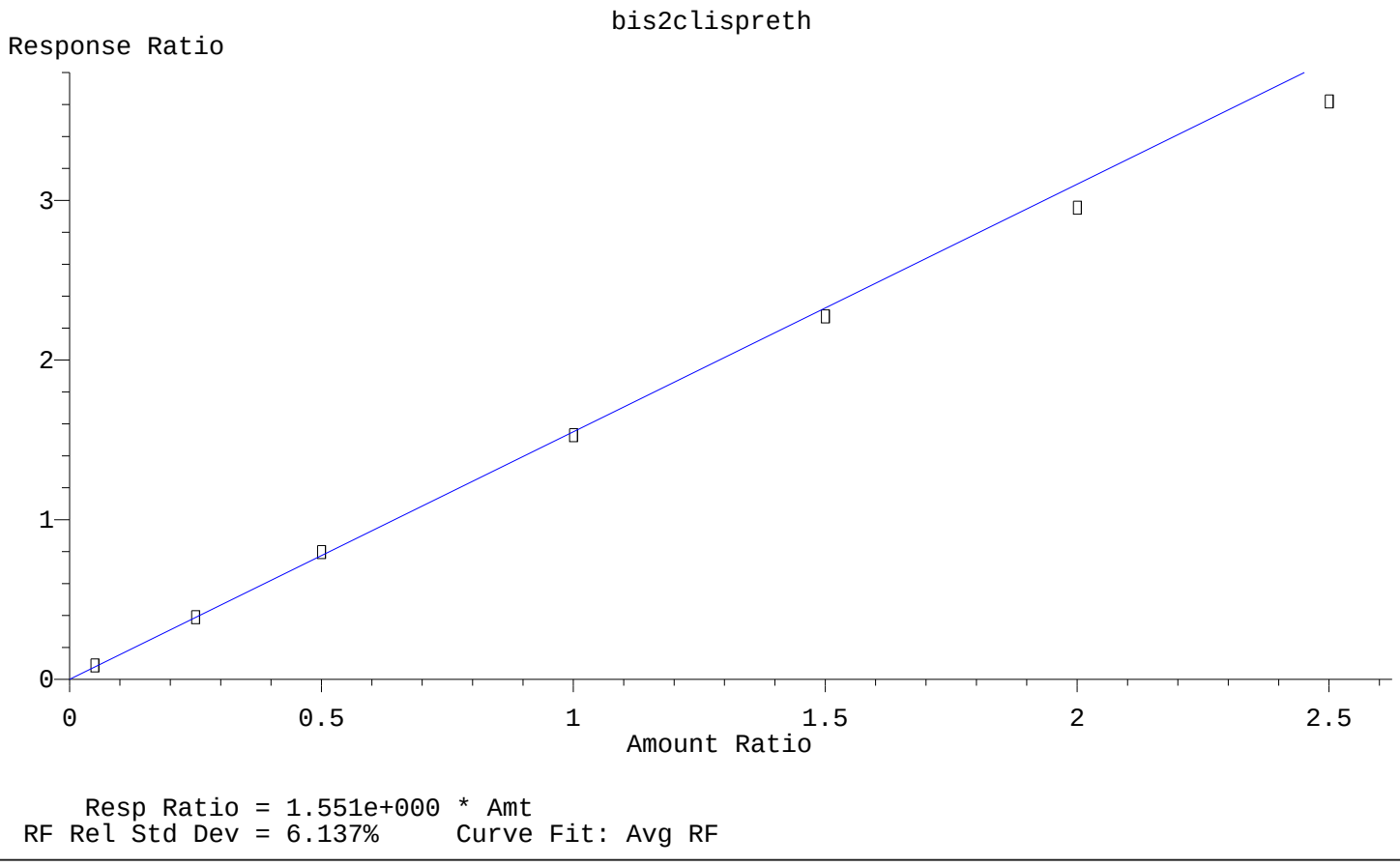
Resp Ratio = 1.534e+000 * Amt
RF Rel Std Dev = 6.029% Curve Fit: Avg RF



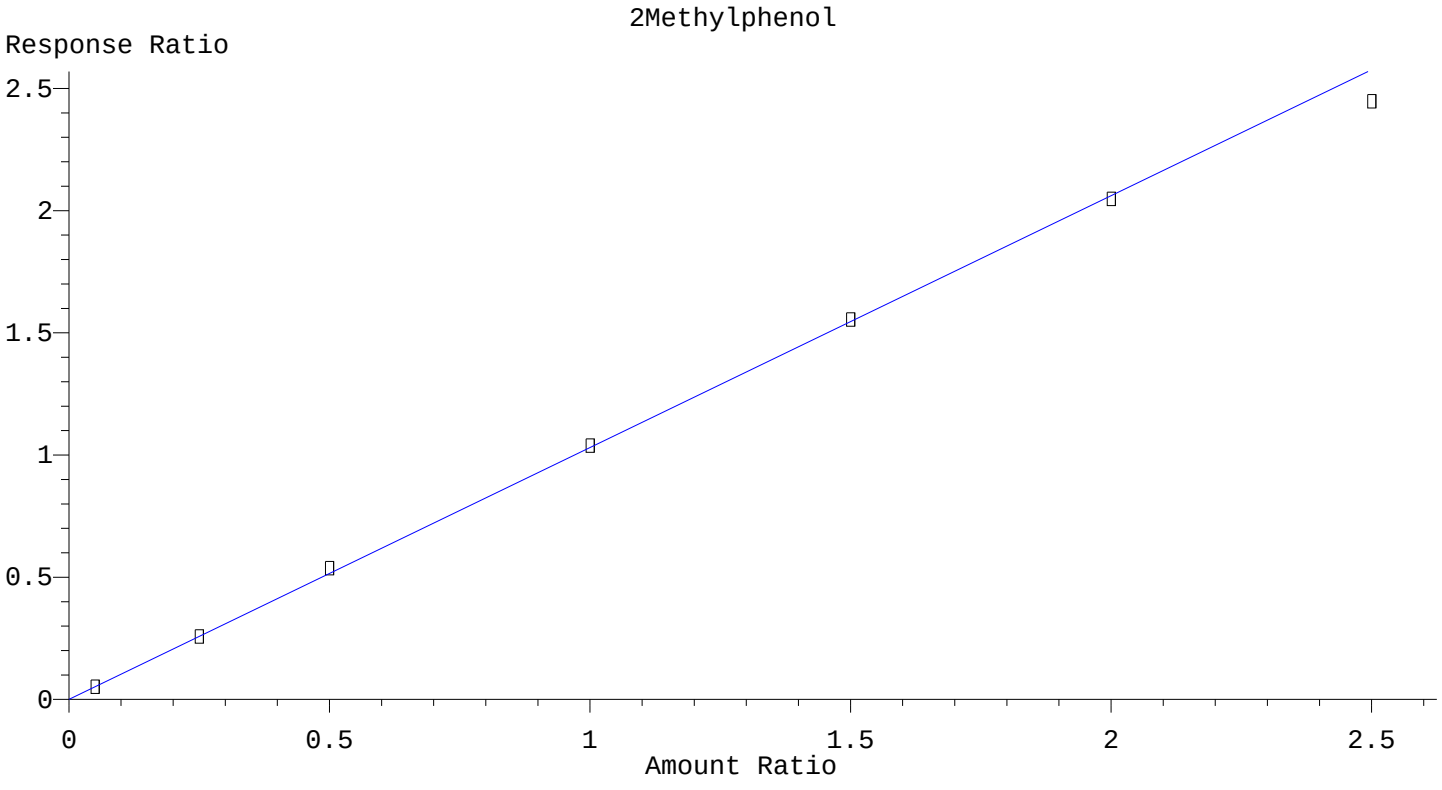
Resp Ratio = 1.456e+000 * Amt
RF Rel Std Dev = 7.204% Curve Fit: Avg RF



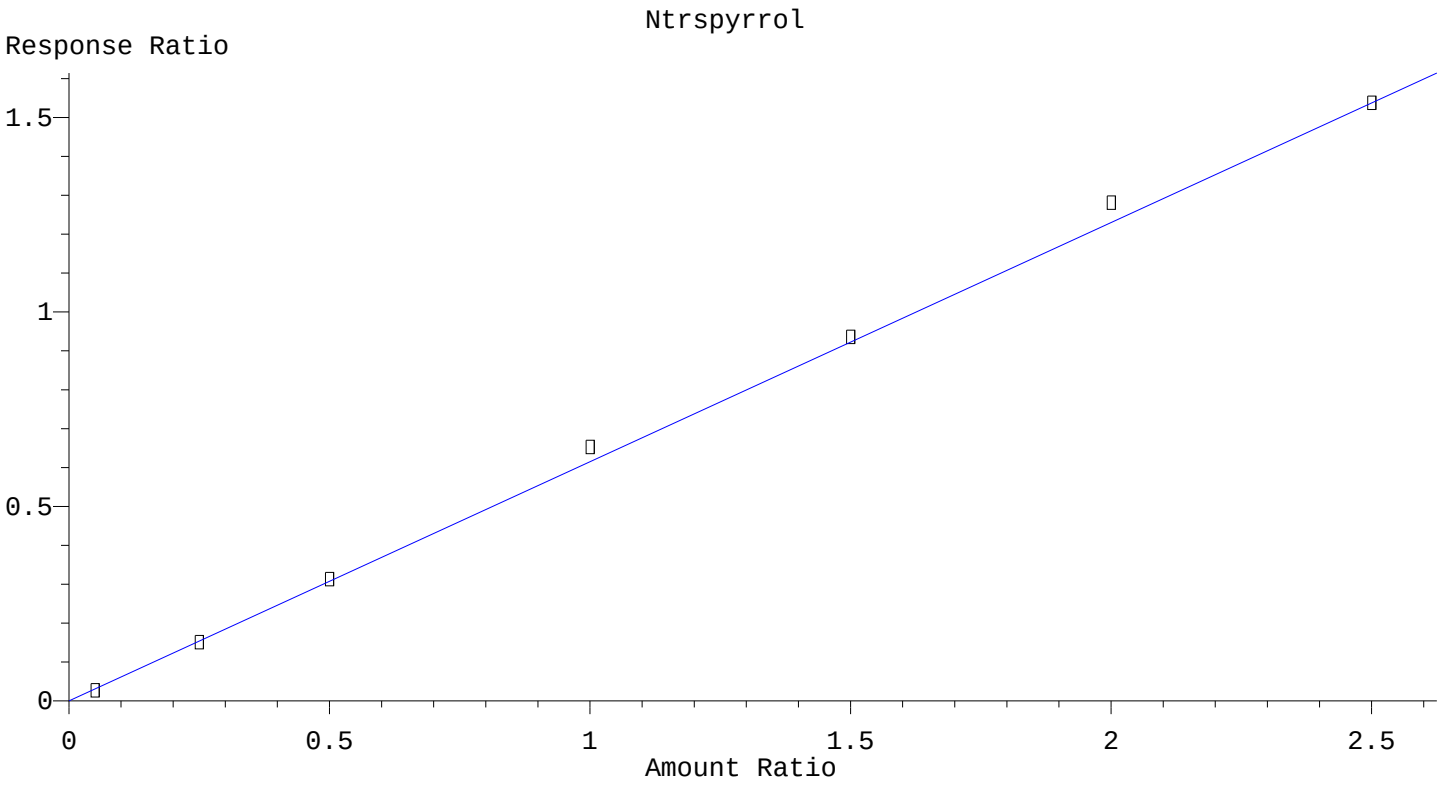
Resp Ratio = 8.585e-001 * Amt
RF Rel Std Dev = 4.799% Curve Fit: Avg RF



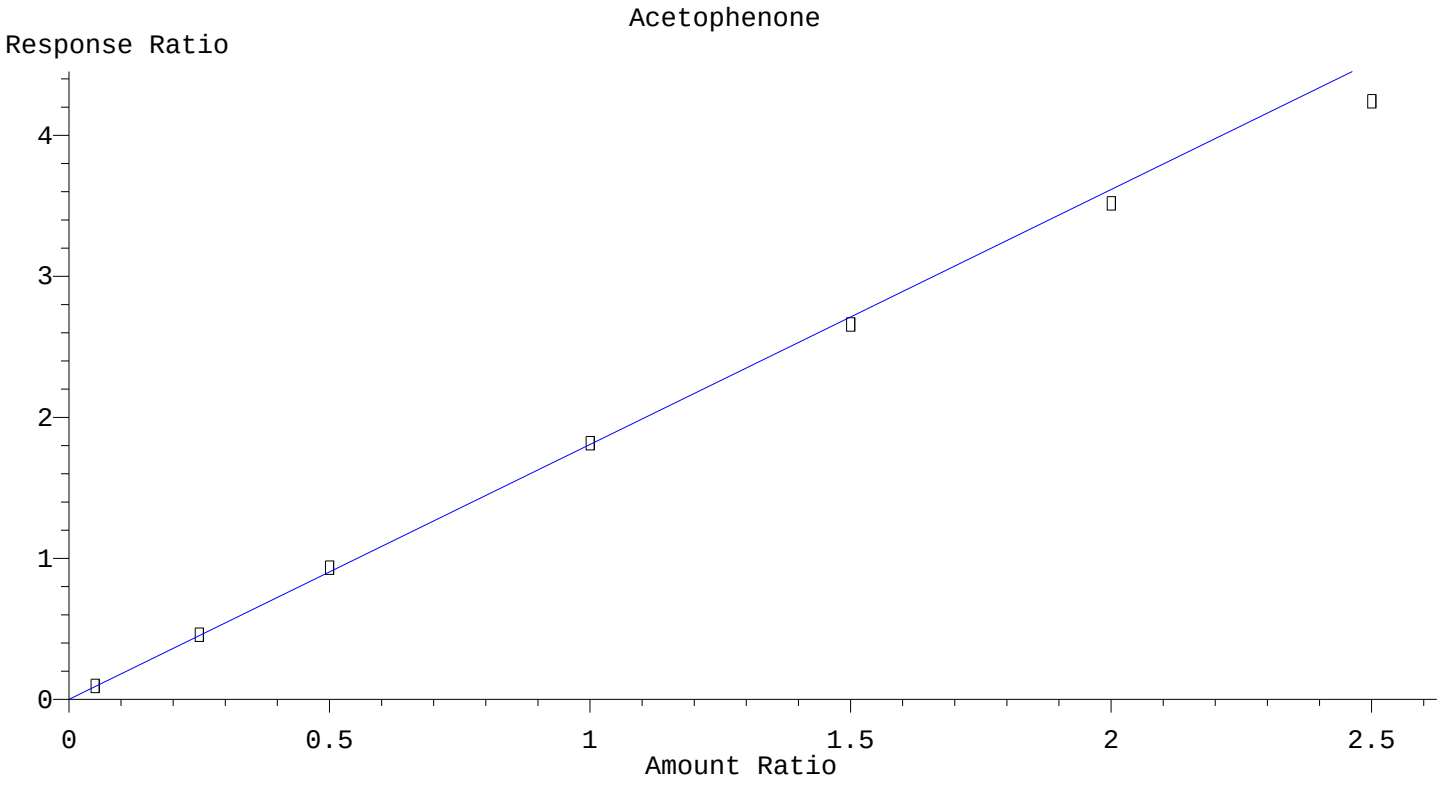
Resp Ratio = 1.551e+000 * Amt
RF Rel Std Dev = 6.137% Curve Fit: Avg RF



Resp Ratio = 1.031e+000 * Amt
RF Rel Std Dev = 2.720% Curve Fit: Avg RF

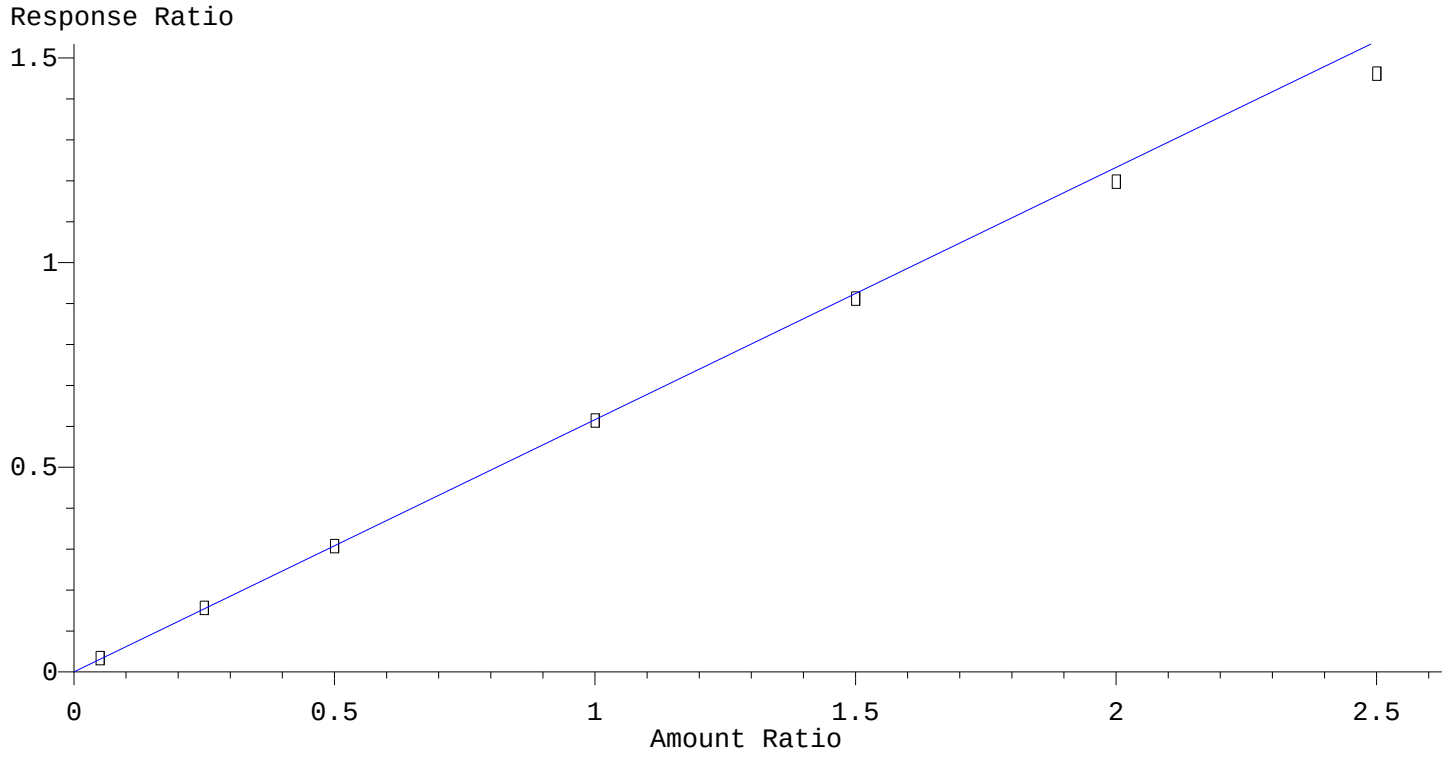


Resp Ratio = 6.149e-001 * Amt
RF Rel Std Dev = 5.819% Curve Fit: Avg RF



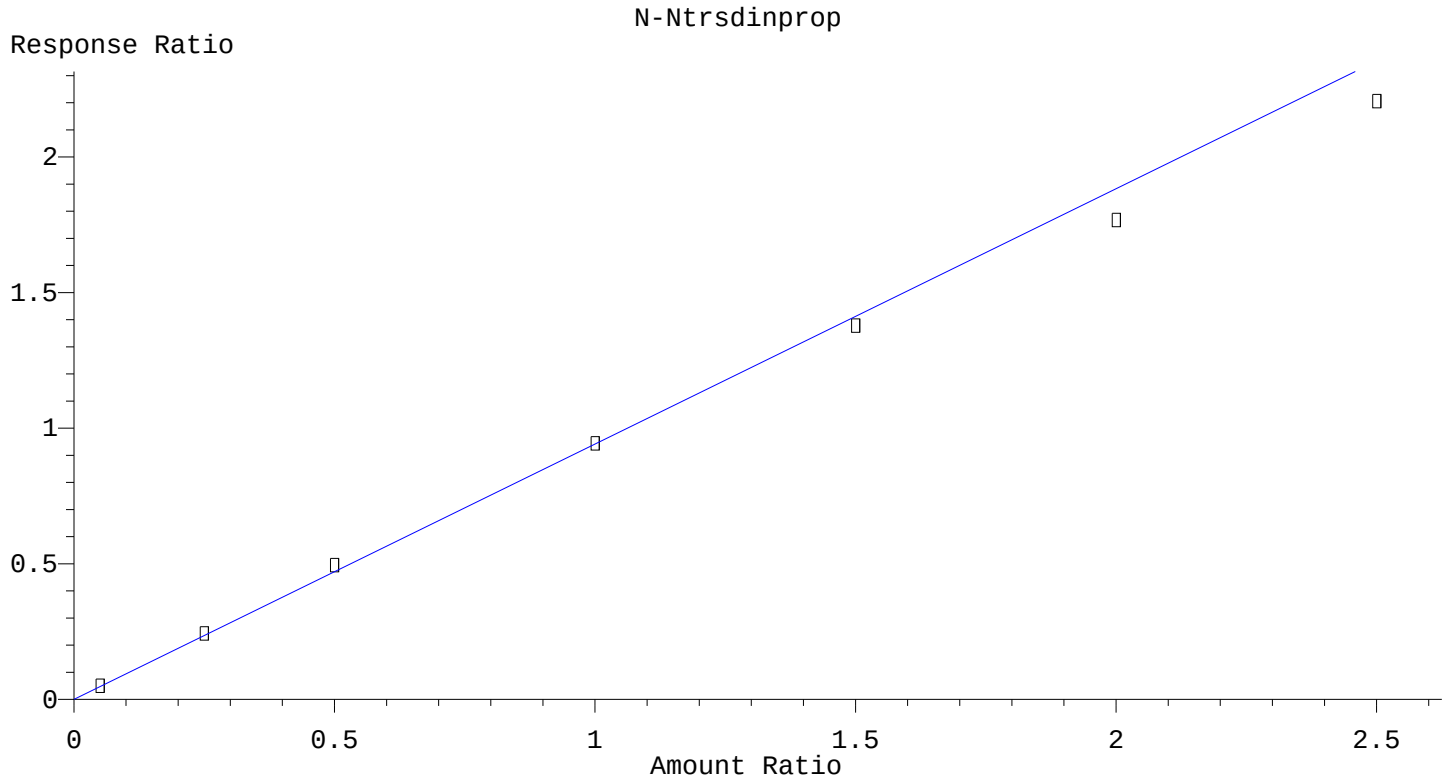
Resp Ratio = 1.808e+000 * Amt
RF Rel Std Dev = 3.986% Curve Fit: Avg RF

Hexaclethane



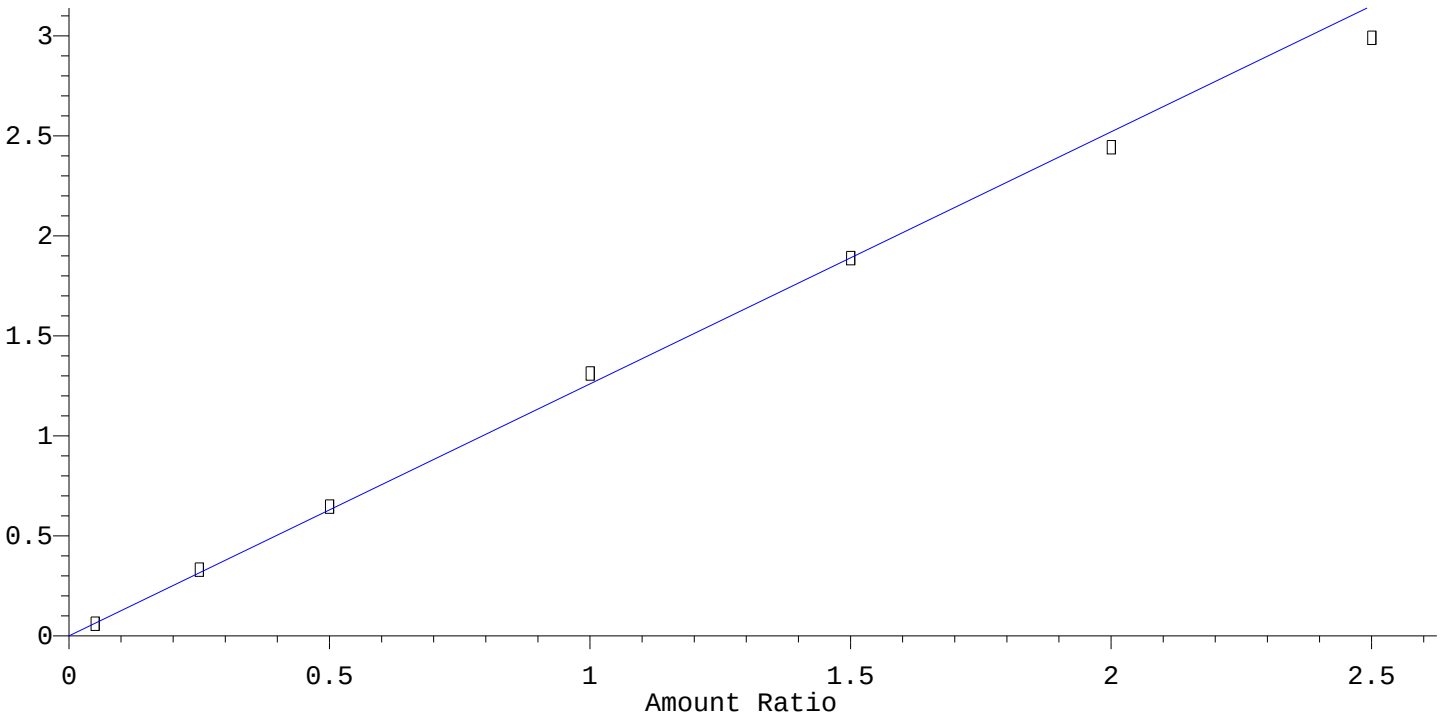
Resp Ratio = 6.166e-001 * Amt
RF Rel Std Dev = 4.407% Curve Fit: Avg RF

N-Ntrsdinprop



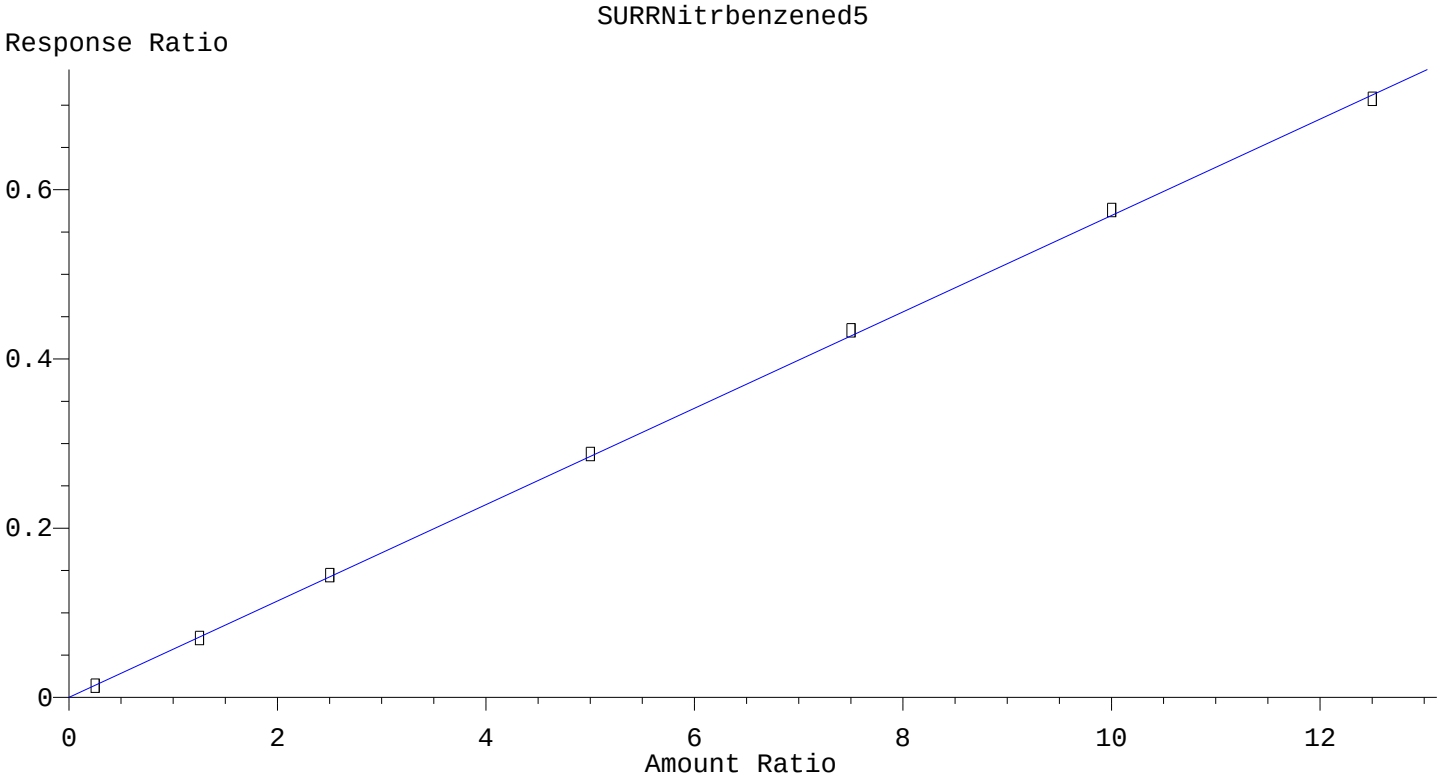
Resp Ratio = 9.417e-001 * Amt
RF Rel Std Dev = 5.156% Curve Fit: Avg RF

3&4Methylphenol



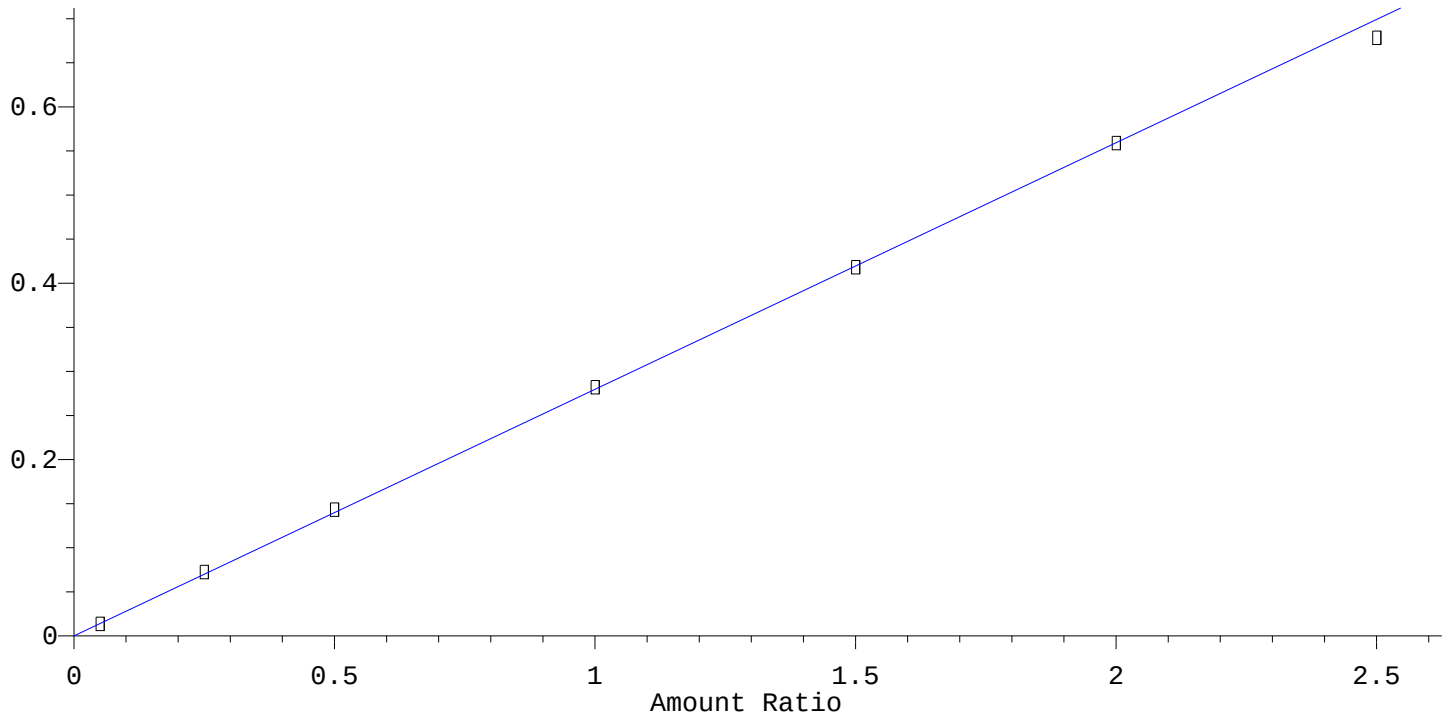
Resp Ratio = 1.260e+000 * Amt
RF Rel Std Dev = 4.034% Curve Fit: Avg RF

SURRNitrbenzened5



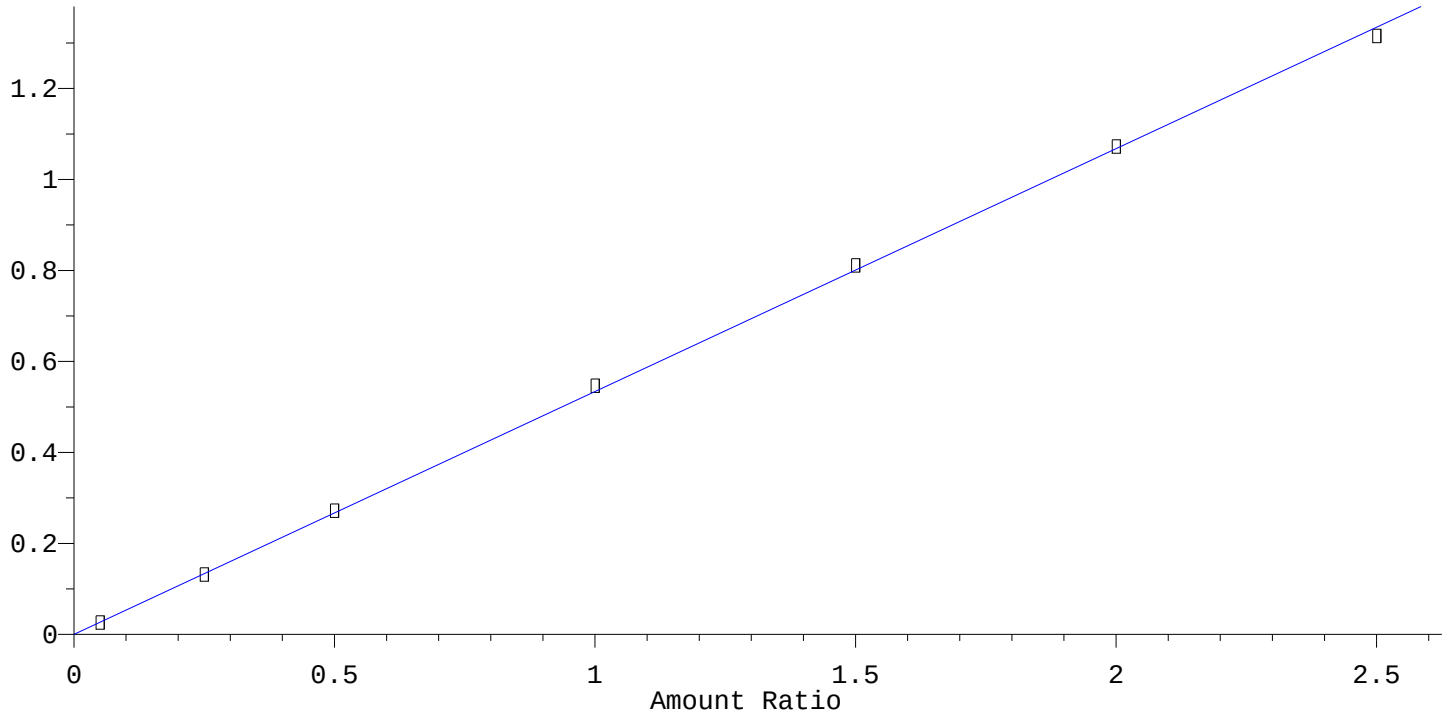
Resp Ratio = 5.700e-002 * Amt
RF Rel Std Dev = 1.632% Curve Fit: Avg RF

Nitrobenzene



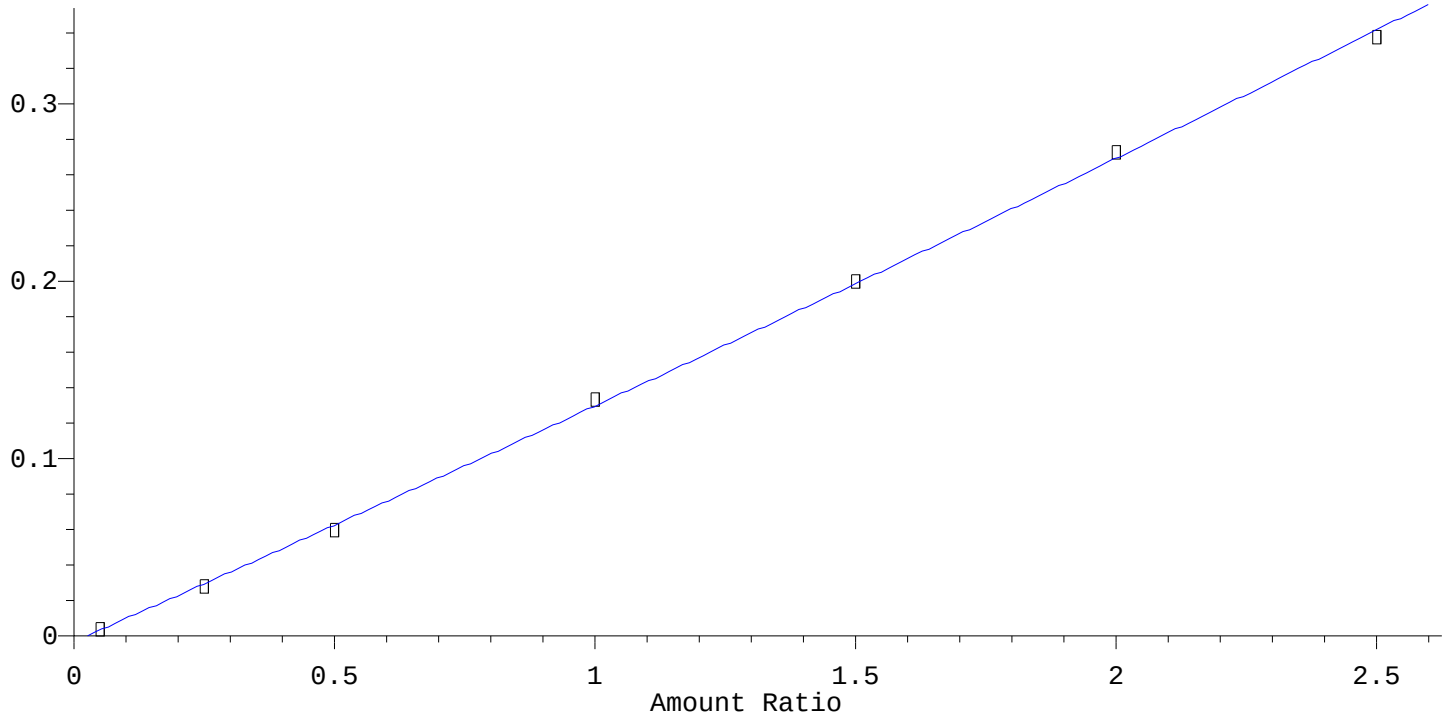
Resp Ratio = 2.797e-001 * Amt
RF Rel Std Dev = 2.454% Curve Fit: Avg RF

Isophorone



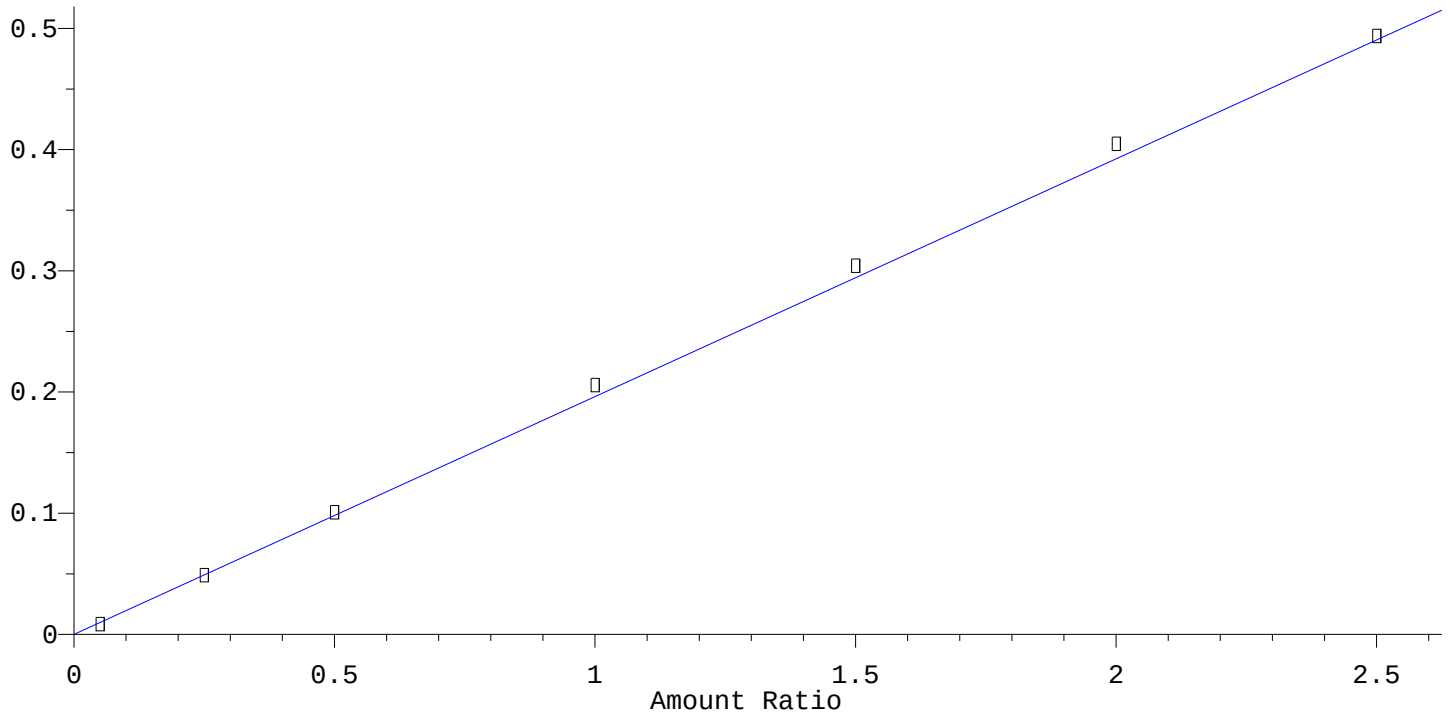
Resp Ratio = 5.343e-001 * Amt
RF Rel Std Dev = 1.883% Curve Fit: Avg RF

2-Nitrophenol

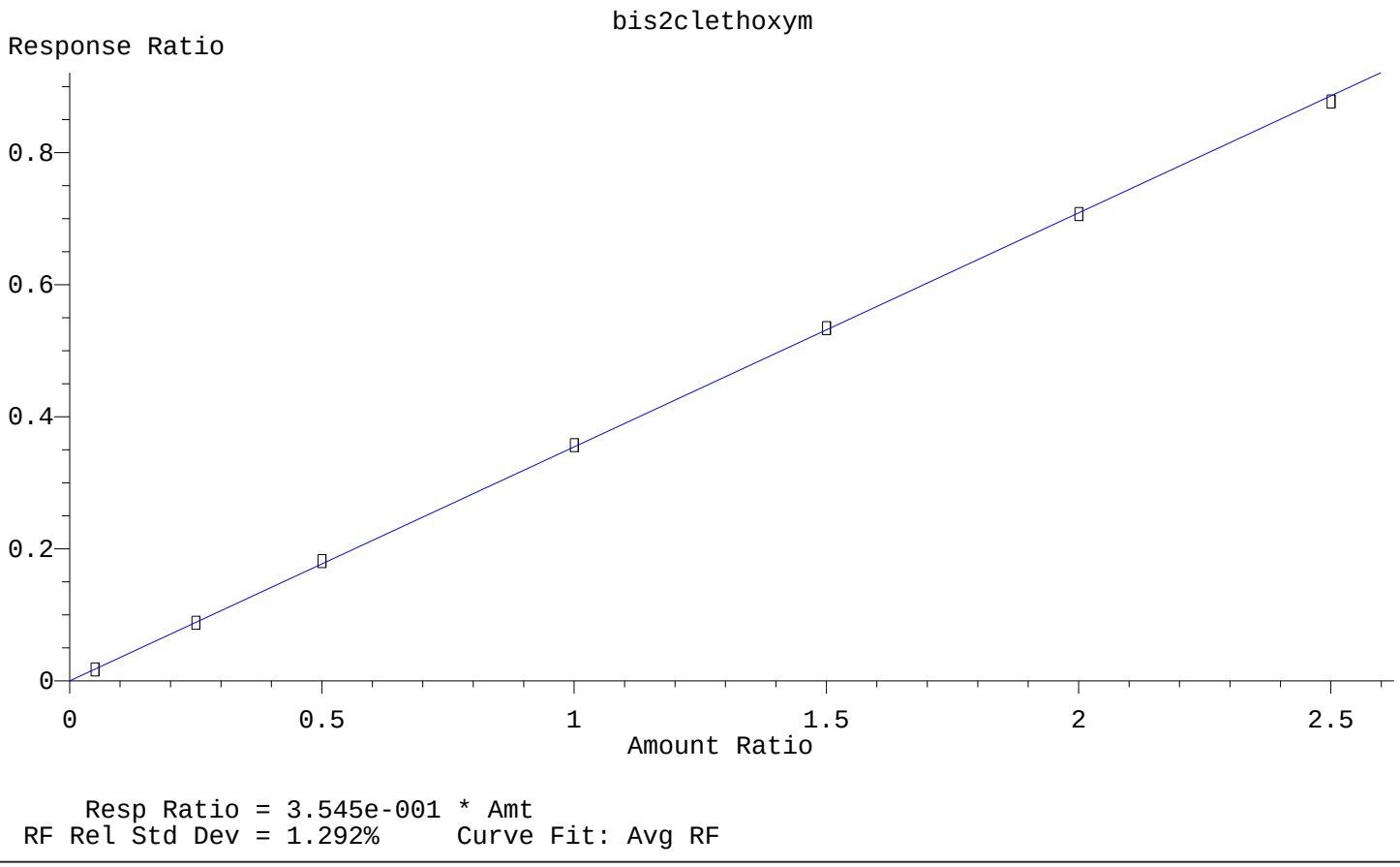


R = 3.396e-003 A*A + 1.294e-001 A - 3.125e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

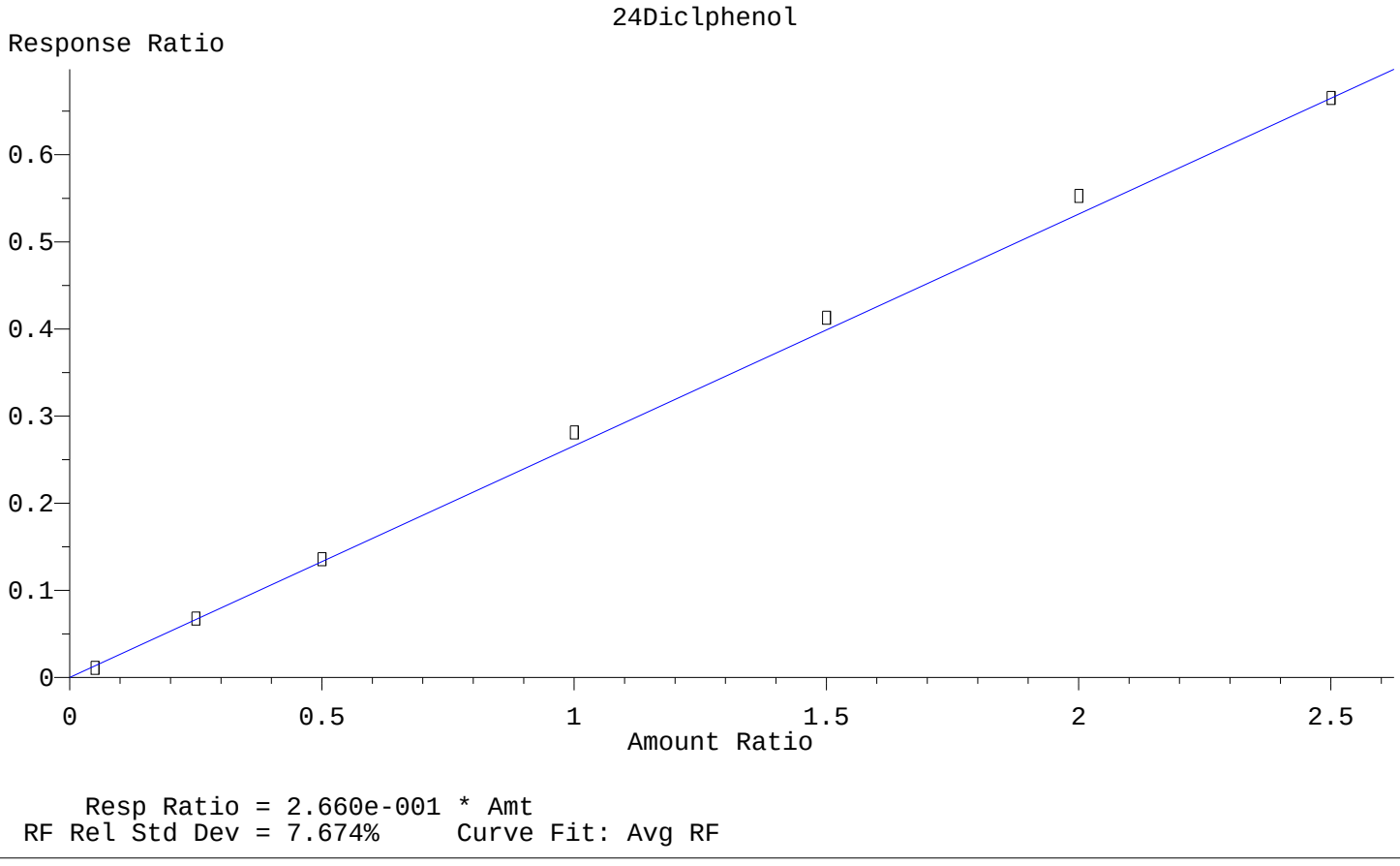
24Dimthpheno



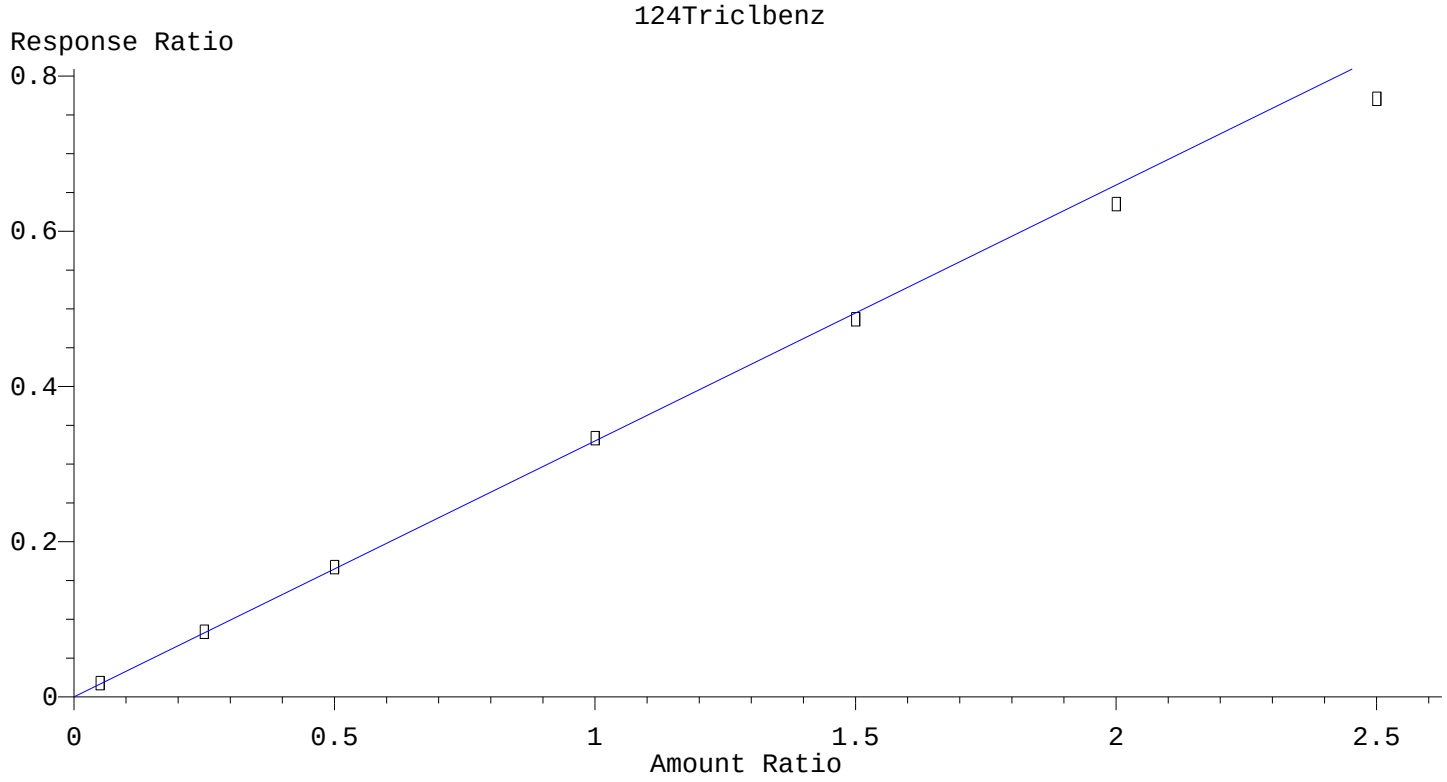
Resp Ratio = 1.961e-001 * Amt
RF Rel Std Dev = 6.596% Curve Fit: Avg RF



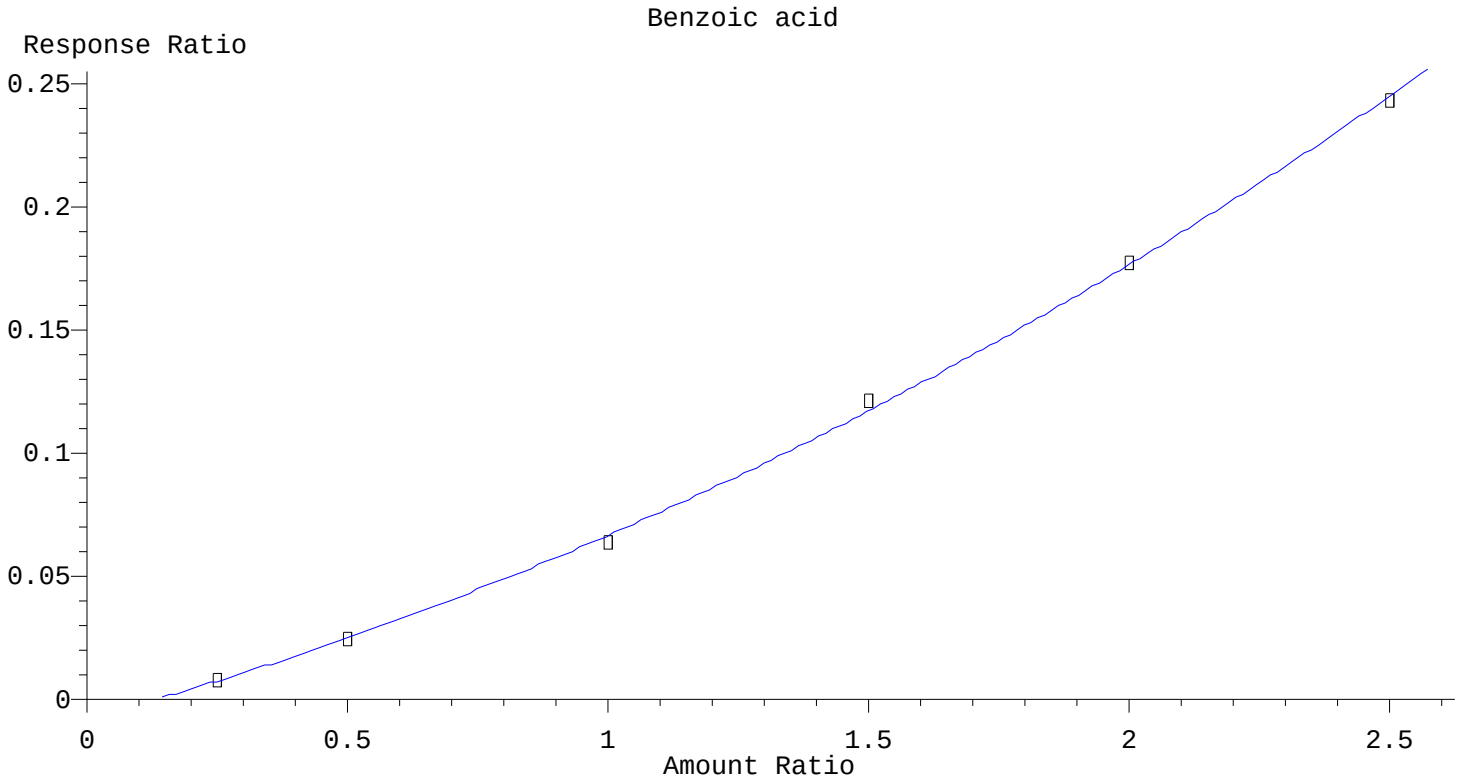
Resp Ratio = 3.545e-001 * Amt
RF Rel Std Dev = 1.292% Curve Fit: Avg RF



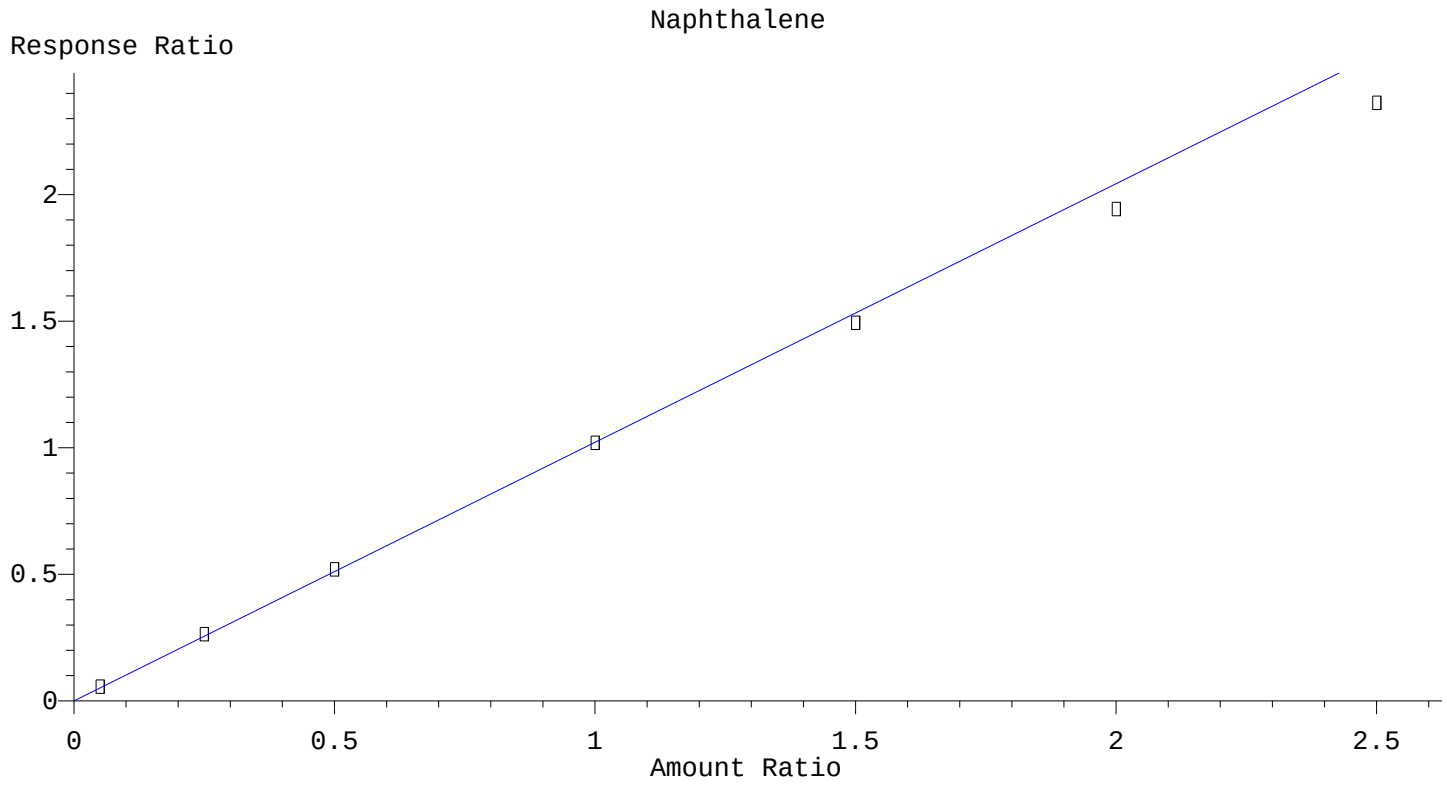
Resp Ratio = 2.660e-001 * Amt
RF Rel Std Dev = 7.674% Curve Fit: Avg RF



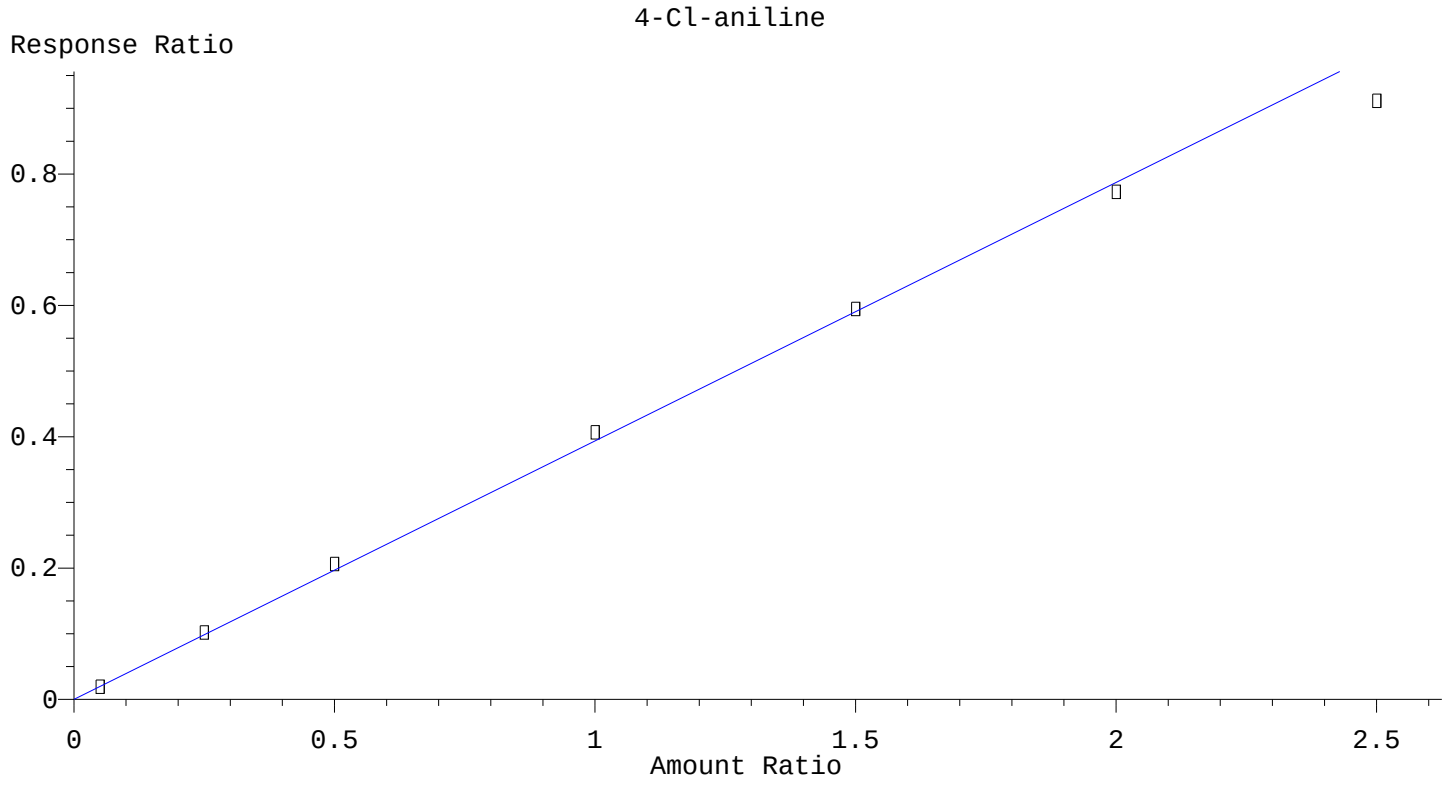
Resp Ratio = 3.299e-001 * Amt
RF Rel Std Dev = 4.624% Curve Fit: Avg RF



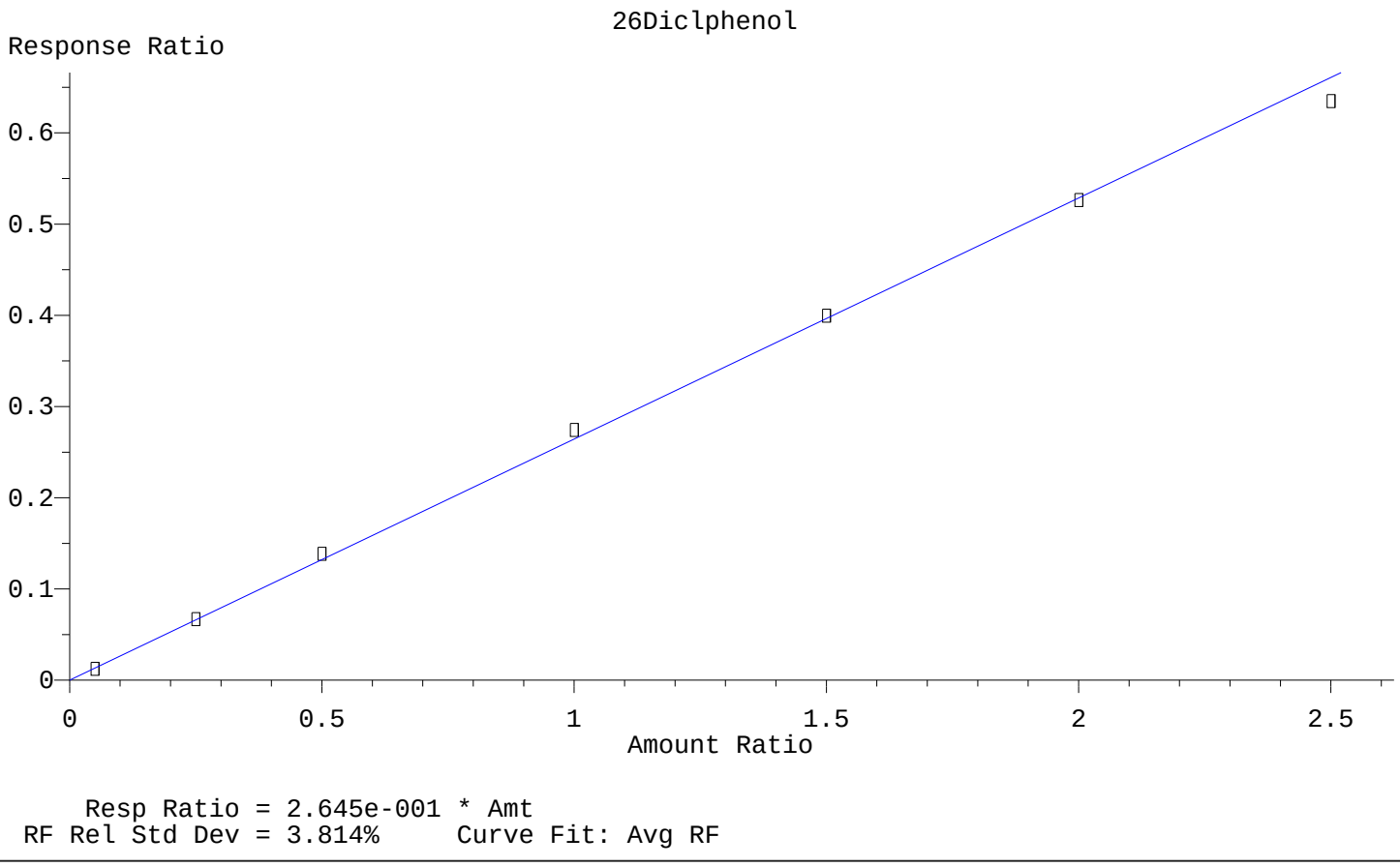
R = 1.780e-002 A*A + 5.662e-002 A - 7.807e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)



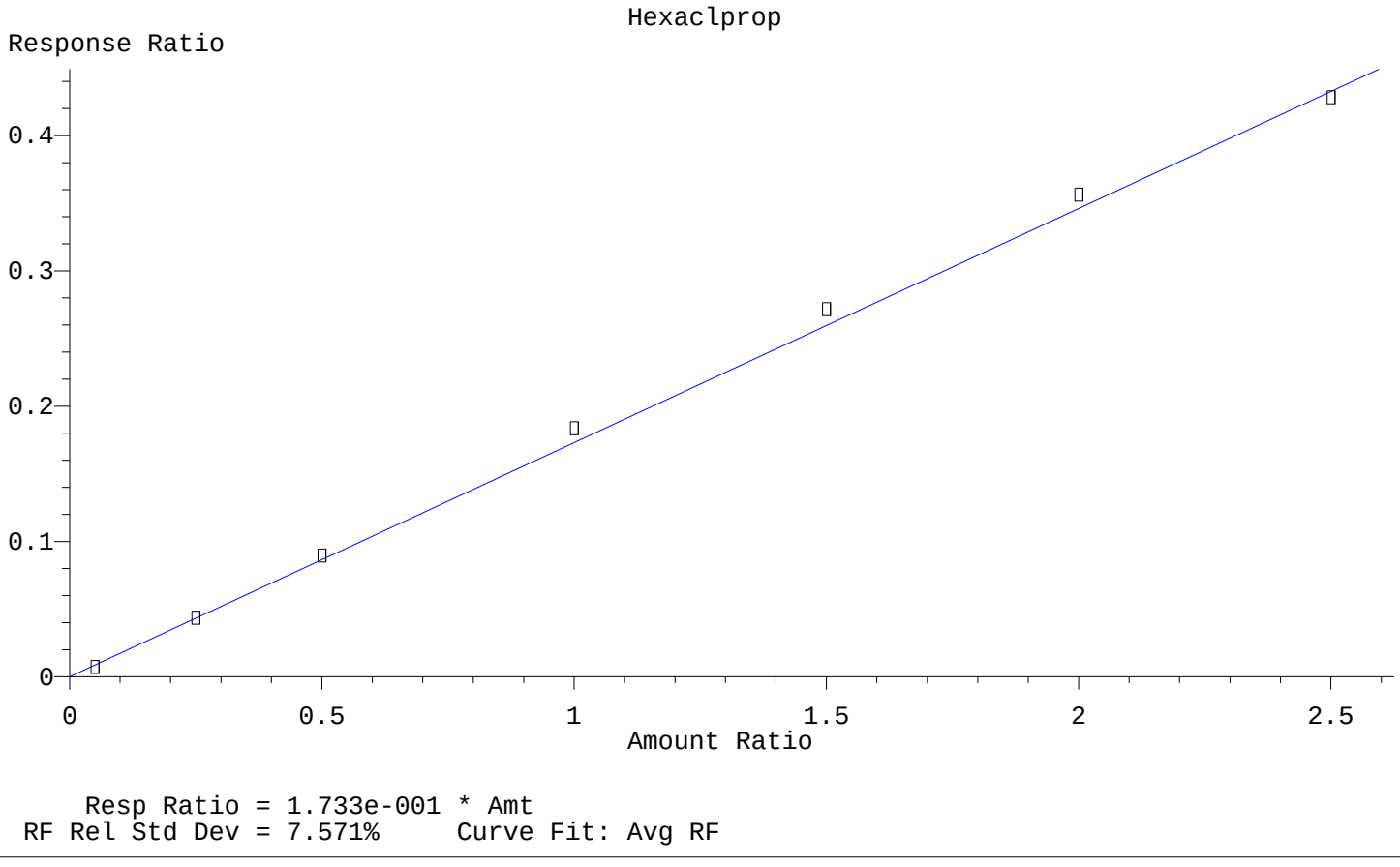
Resp Ratio = 1.022e+000 * Amt
RF Rel Std Dev = 5.884% Curve Fit: Avg RF



Resp Ratio = 3.940e-001 * Amt
RF Rel Std Dev = 4.261% Curve Fit: Avg RF

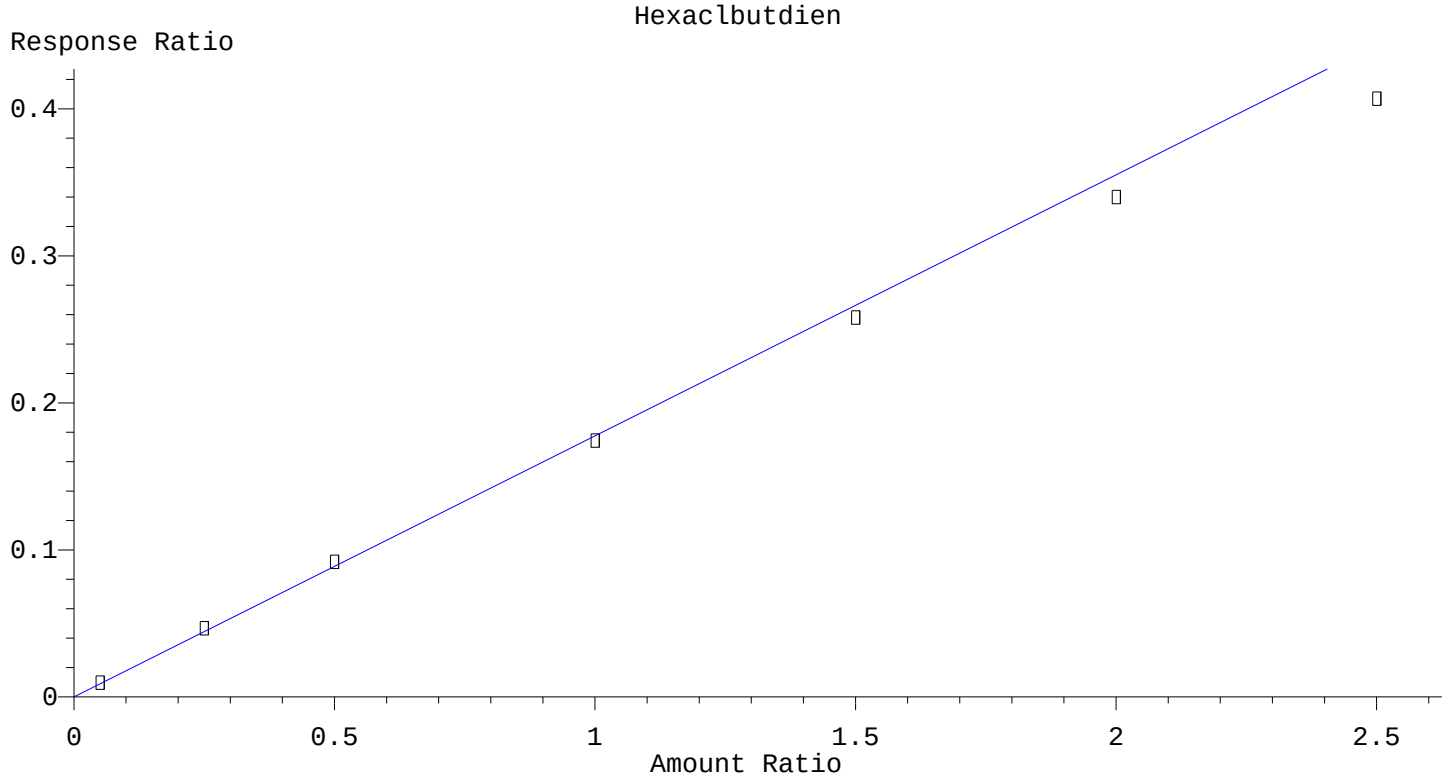


Resp Ratio = 2.645e-001 * Amt
RF Rel Std Dev = 3.814% Curve Fit: Avg RF



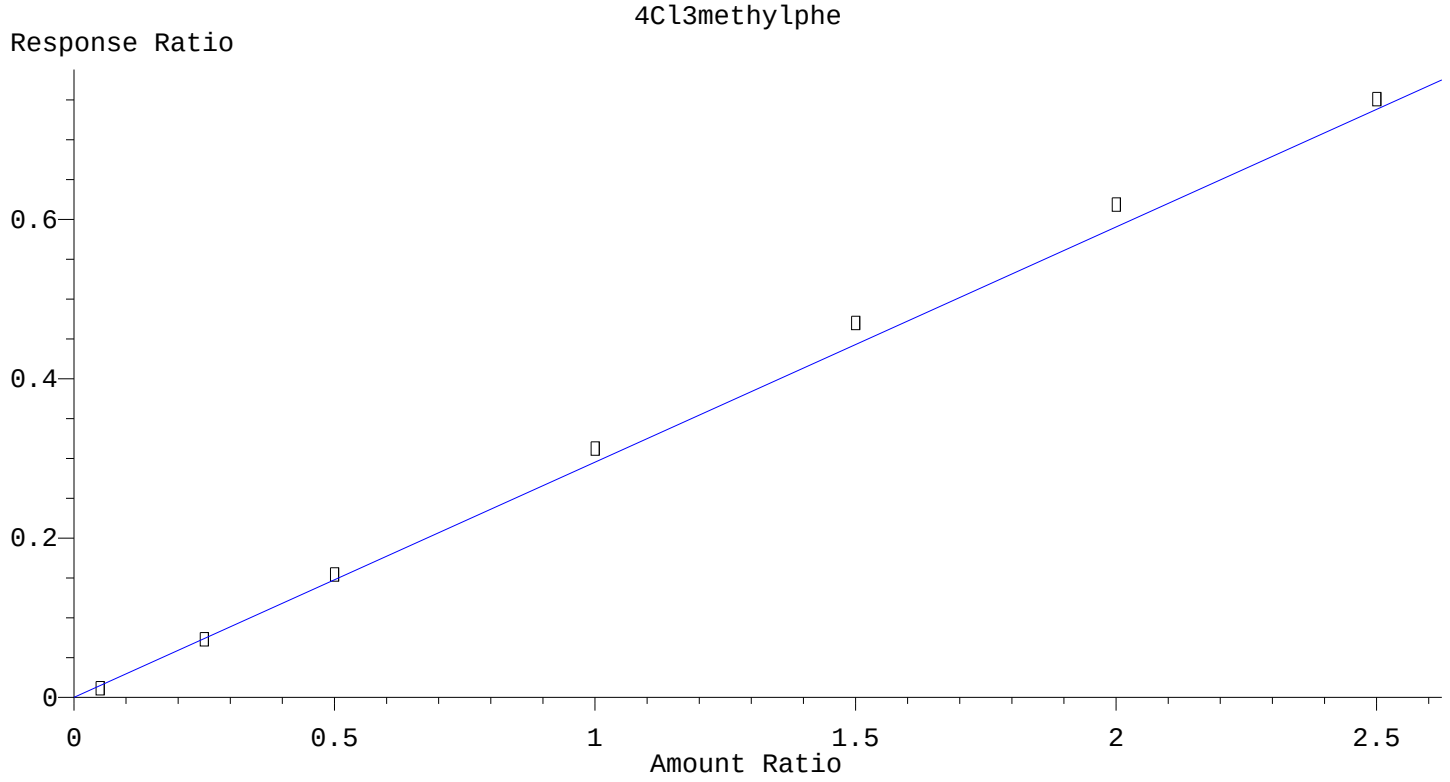
Resp Ratio = 1.733e-001 * Amt
RF Rel Std Dev = 7.571% Curve Fit: Avg RF

Hexaclbutdien

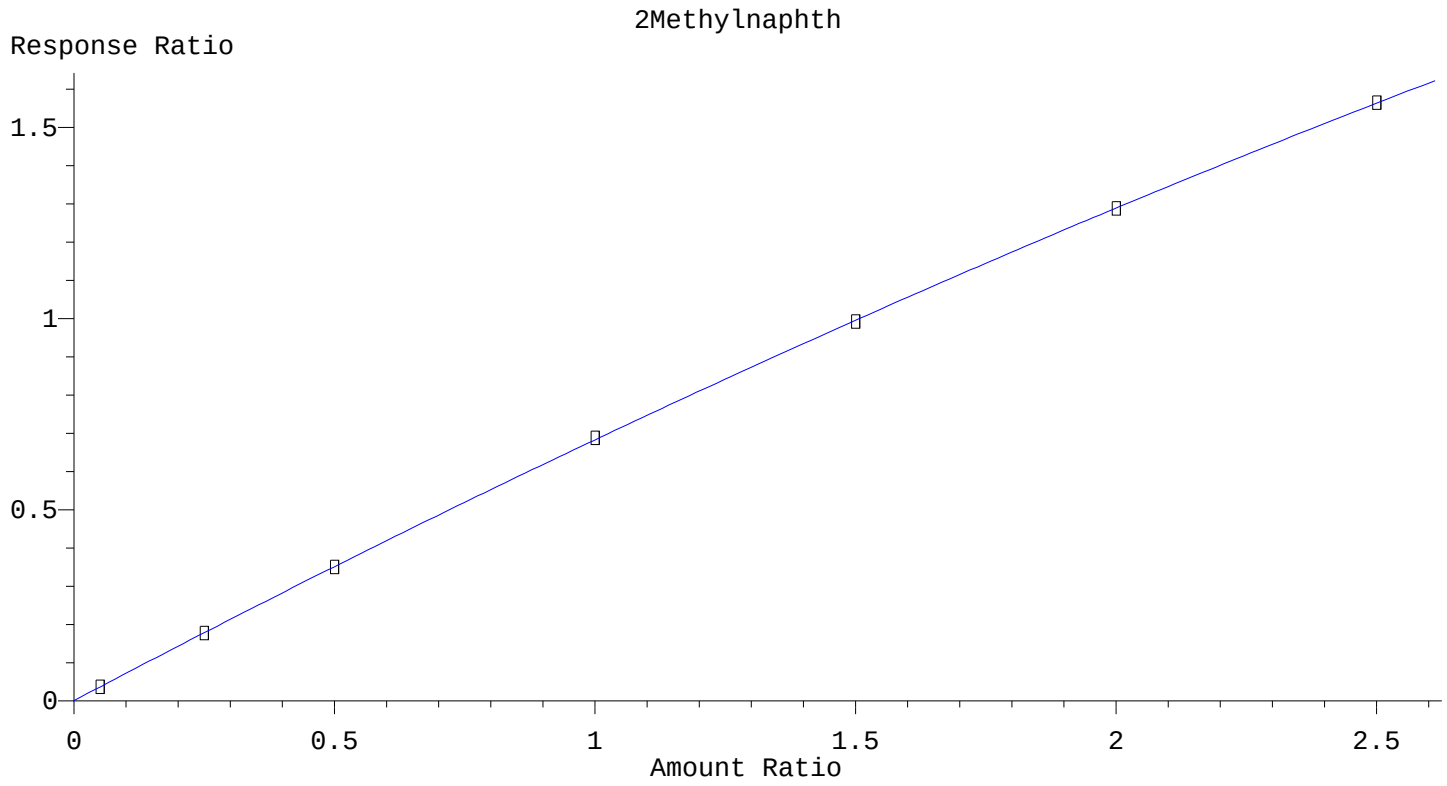


Resp Ratio = 1.776e-001 * Amt
RF Rel Std Dev = 6.136% Curve Fit: Avg RF

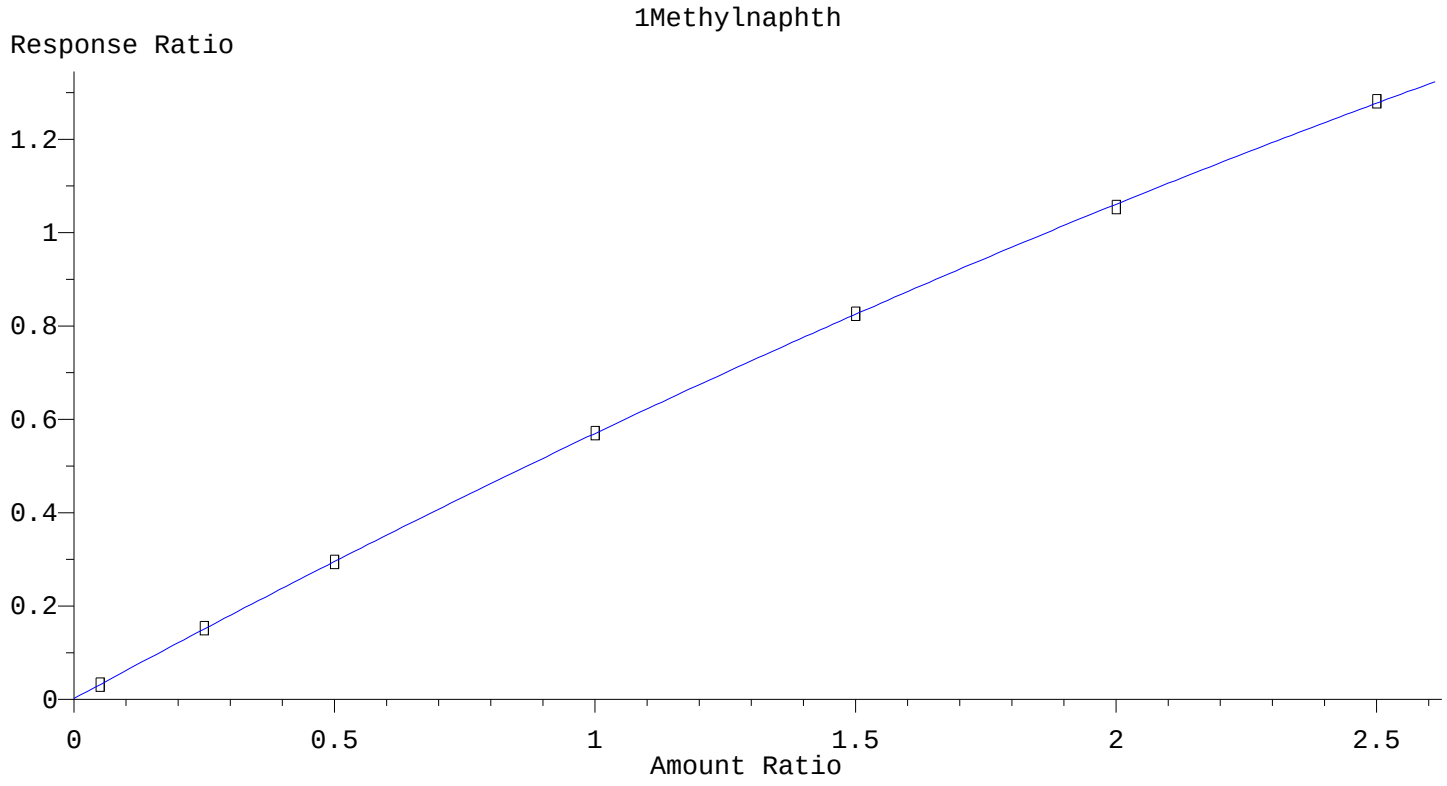
4Cl3methylphe



Resp Ratio = 2.951e-001 * Amt
RF Rel Std Dev = 10.054% Curve Fit: Avg RF

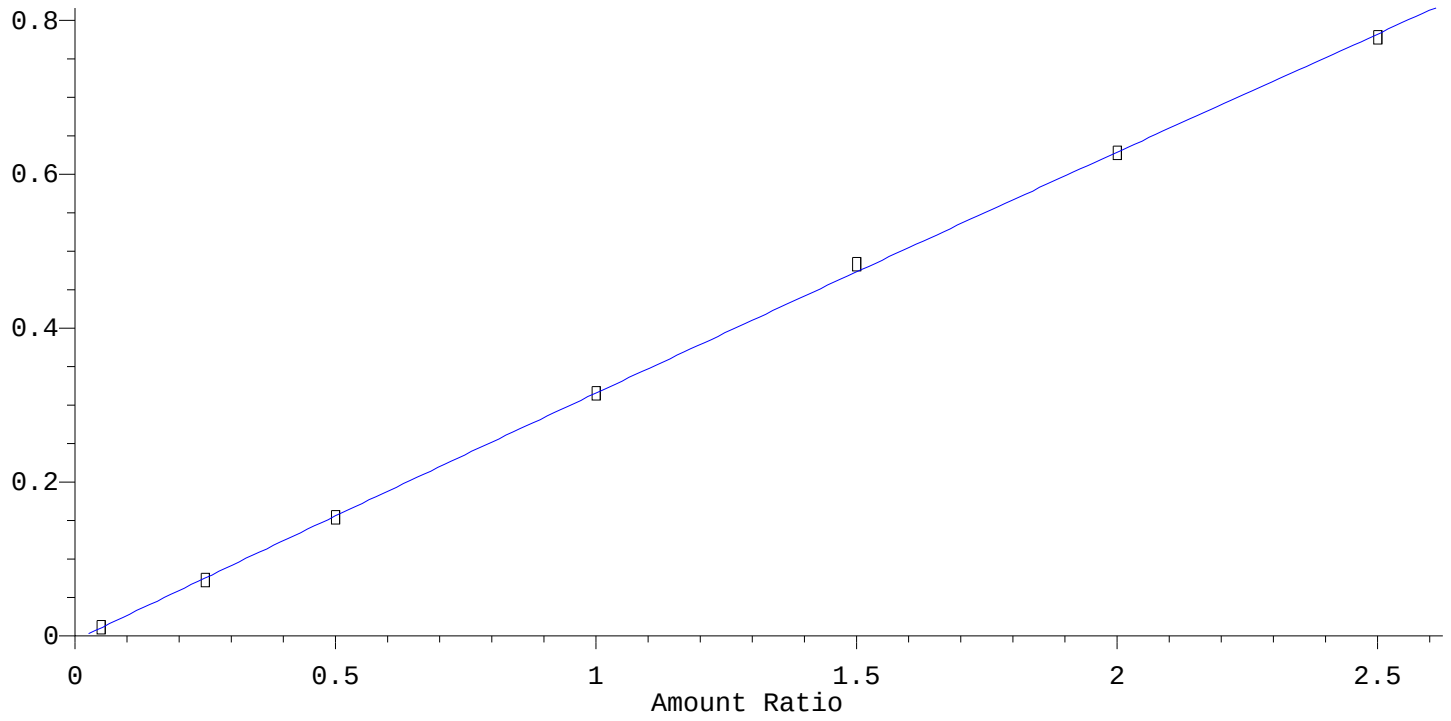


R = -3.813e-002 A*A + 7.204e-001 A + 6.908e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



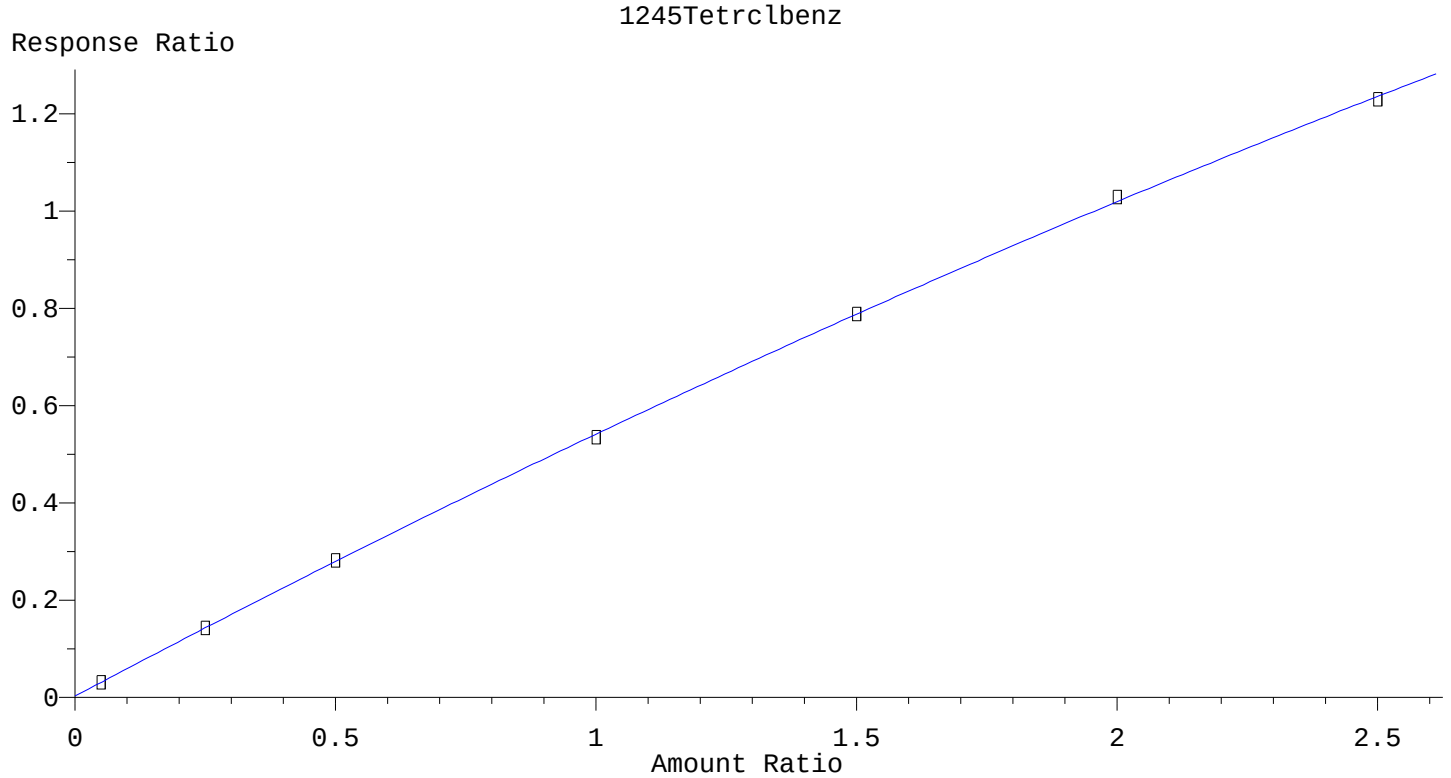
R = -3.865e-002 A*A + 6.069e-001 A + 1.556e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

Hxclcycpentdi

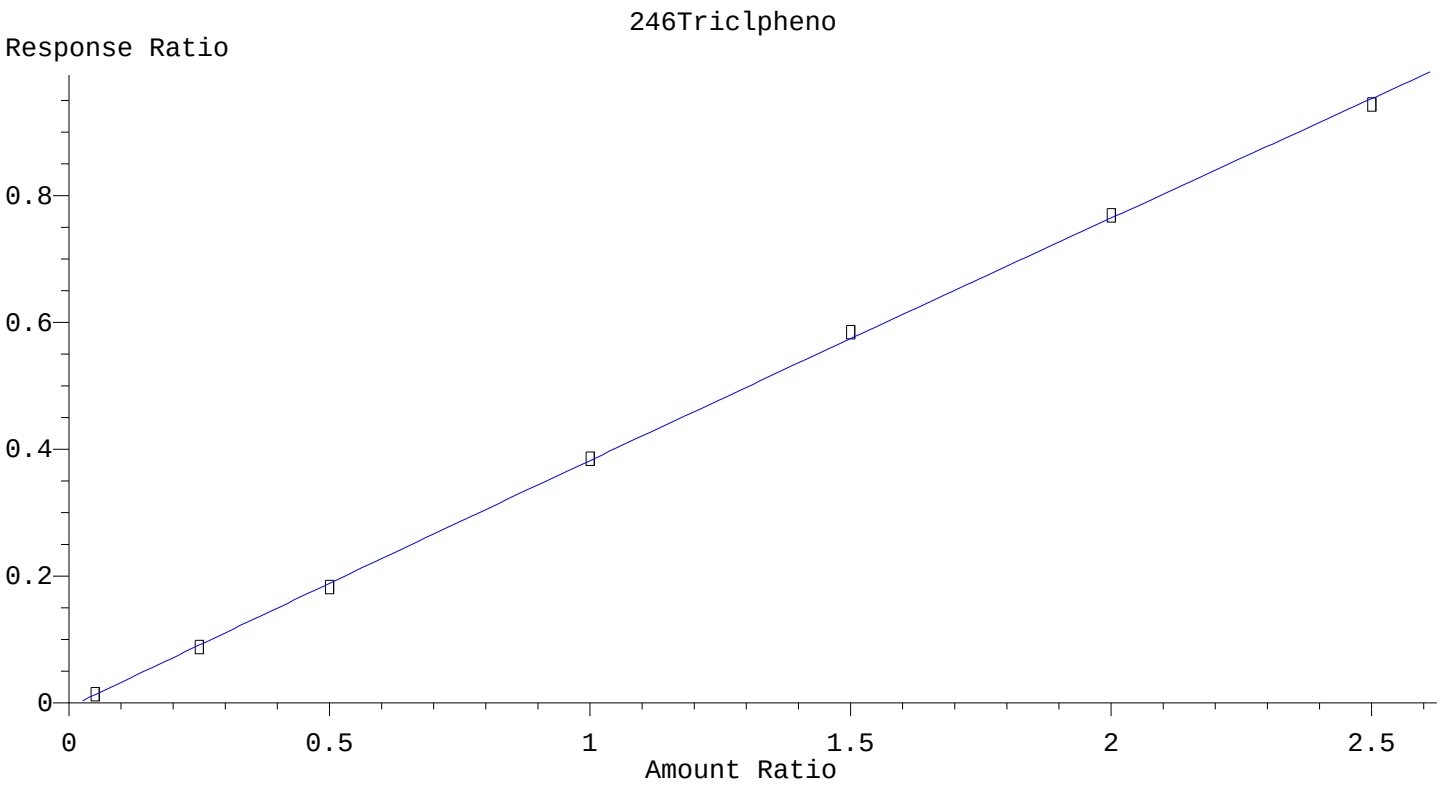


R = -3.995e-003 A*A + 3.252e-001 A - 5.647e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

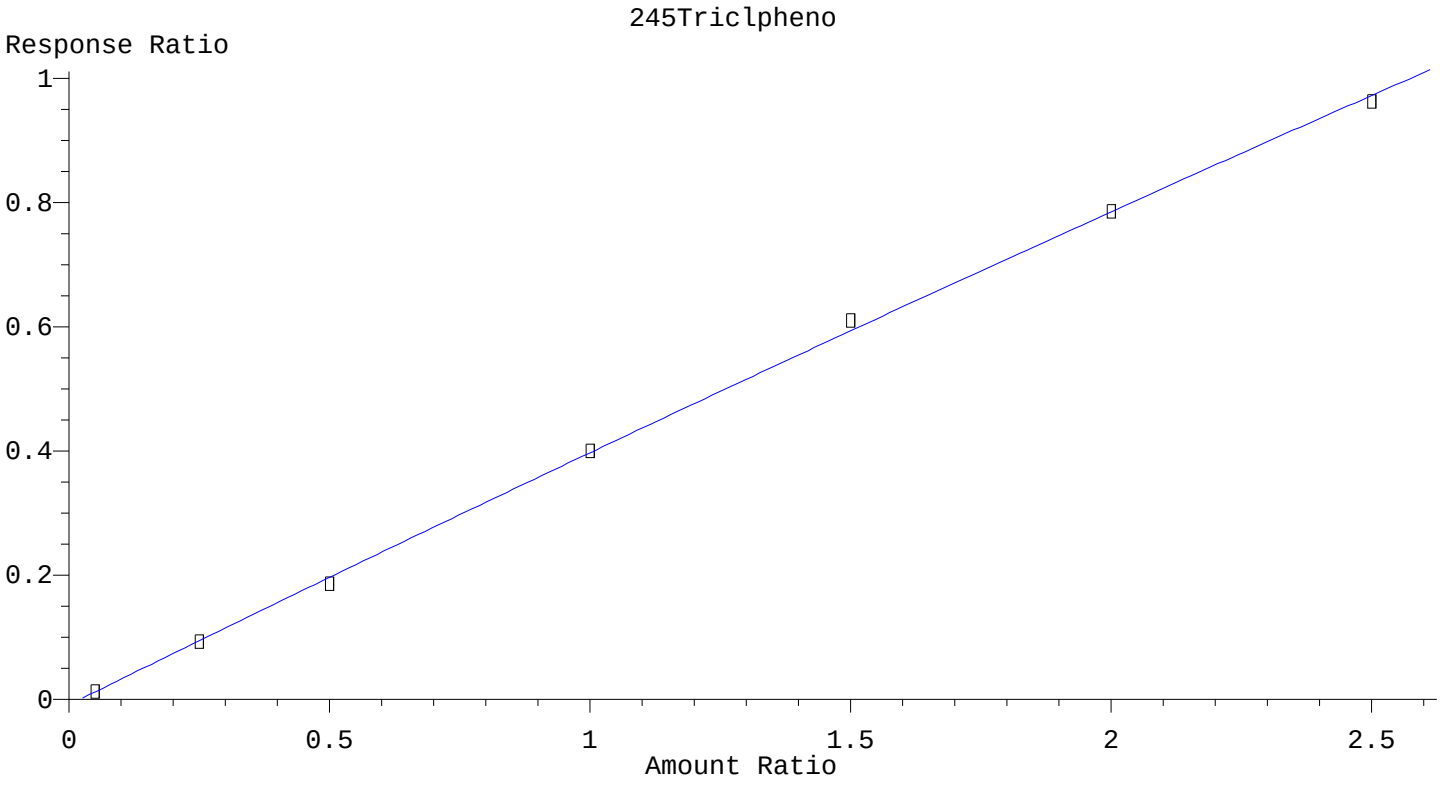
1245Tetrclbenz



R = -3.033e-002 A*A + 5.691e-001 A + 2.537e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

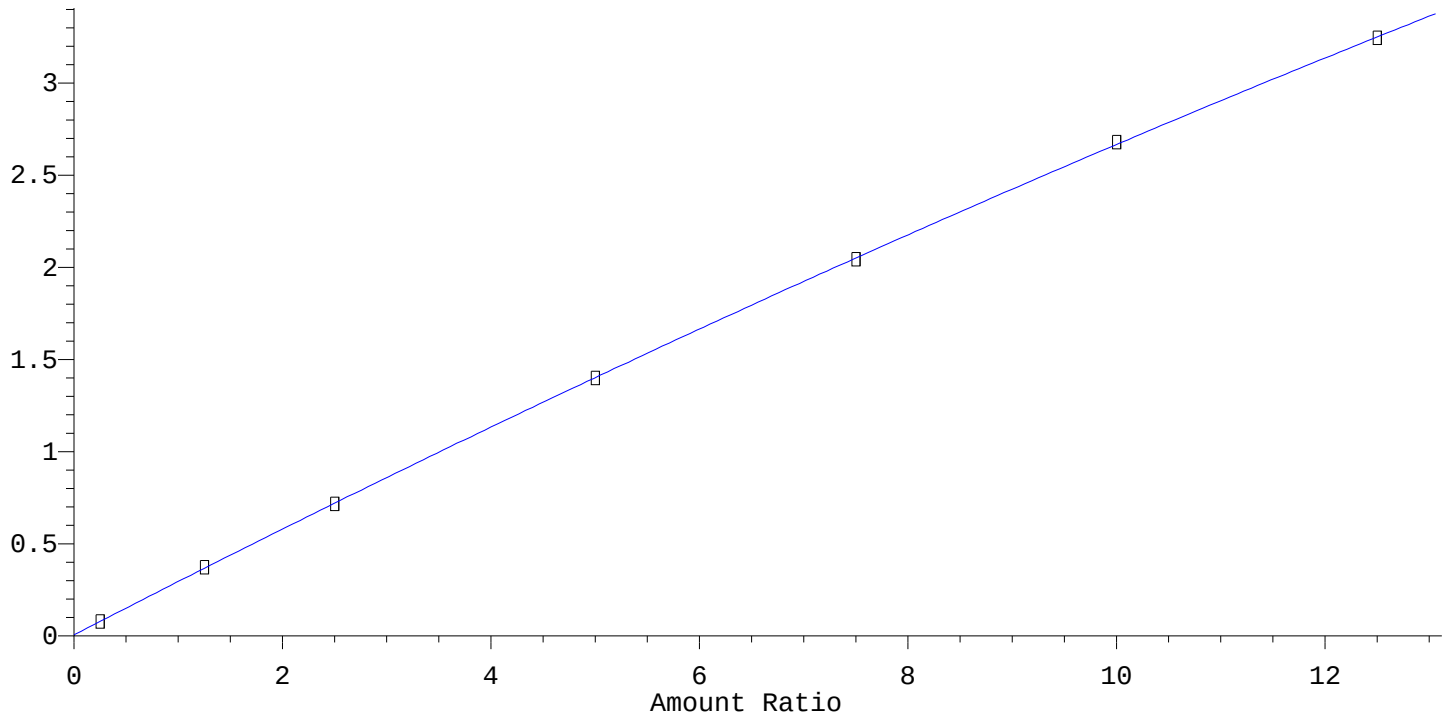


R = -3.497e-003 A*A + 3.926e-001 A - 6.848e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



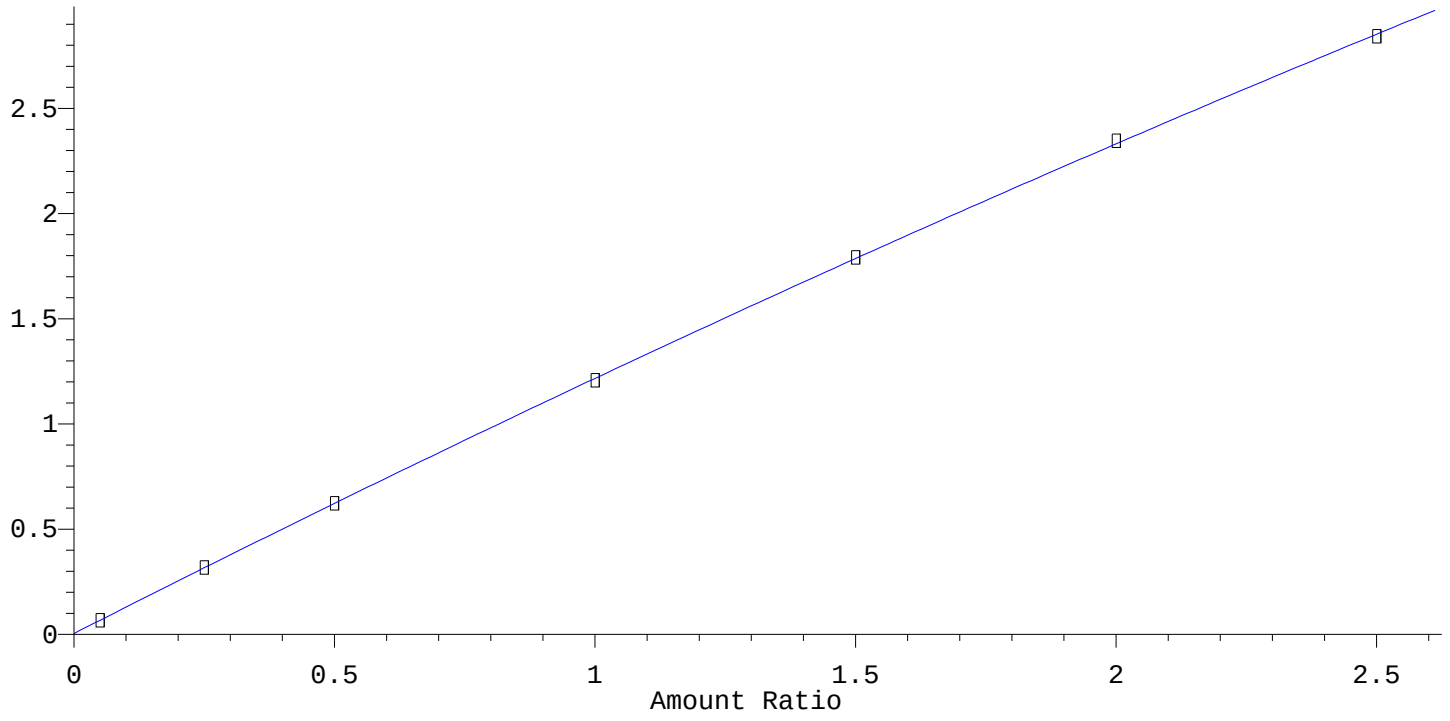
R = -9.017e-003 A*A + 4.150e-001 A - 8.773e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

SURR2Flbiphenyl

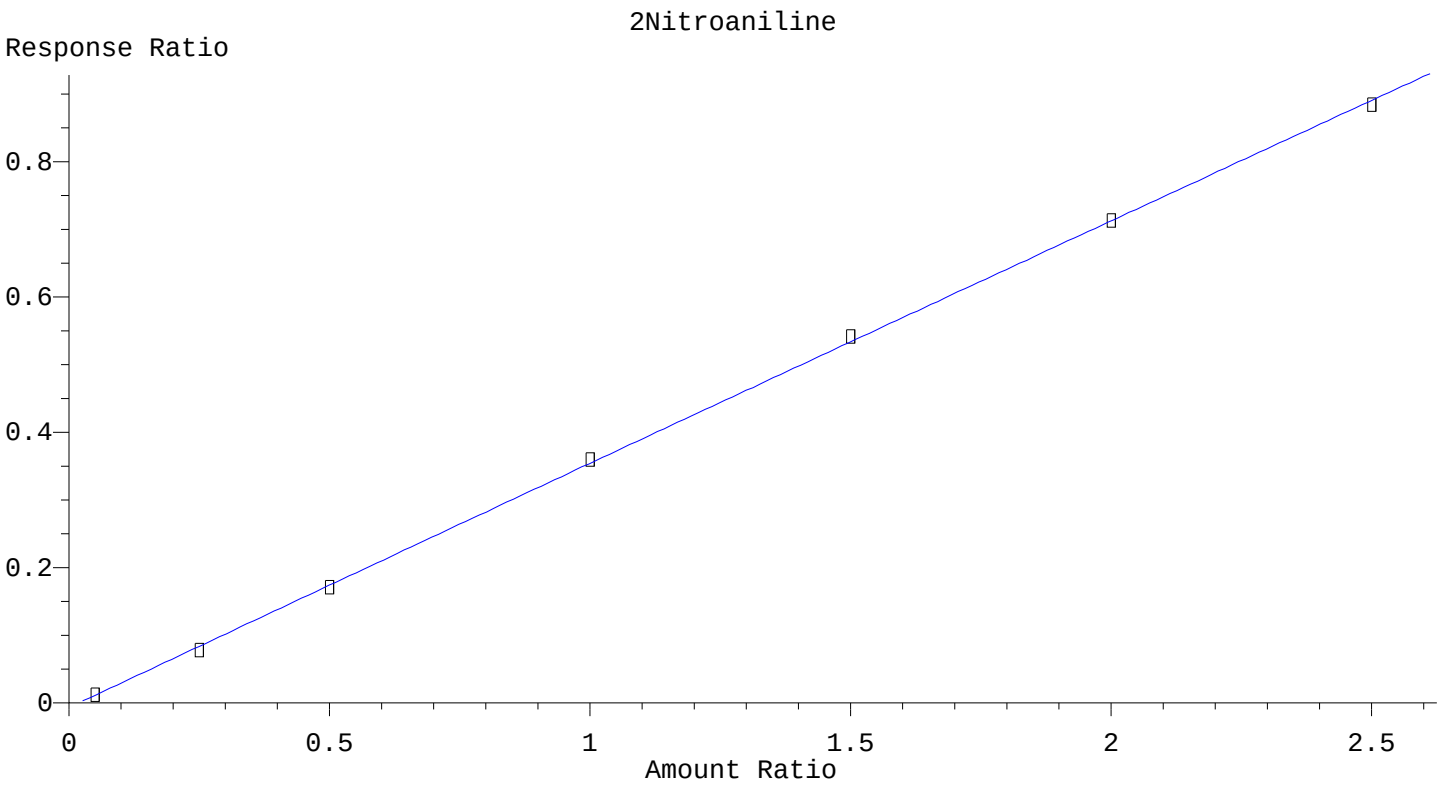


R = -2.619e-003 A*A + 2.923e-001 A + 5.640e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

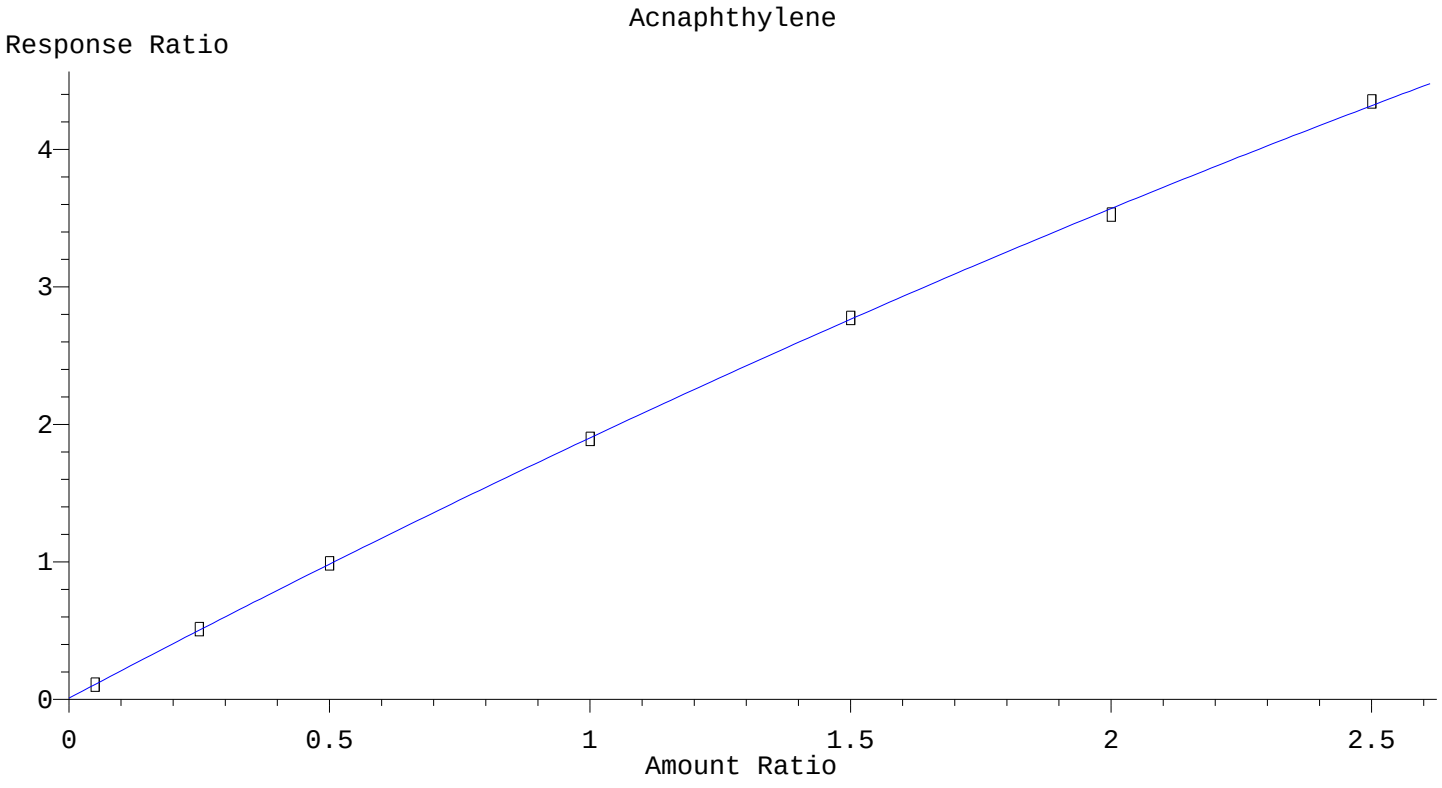
2Clnaphthalen



R = -4.877e-002 A*A + 1.261e+000 A + 4.224e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

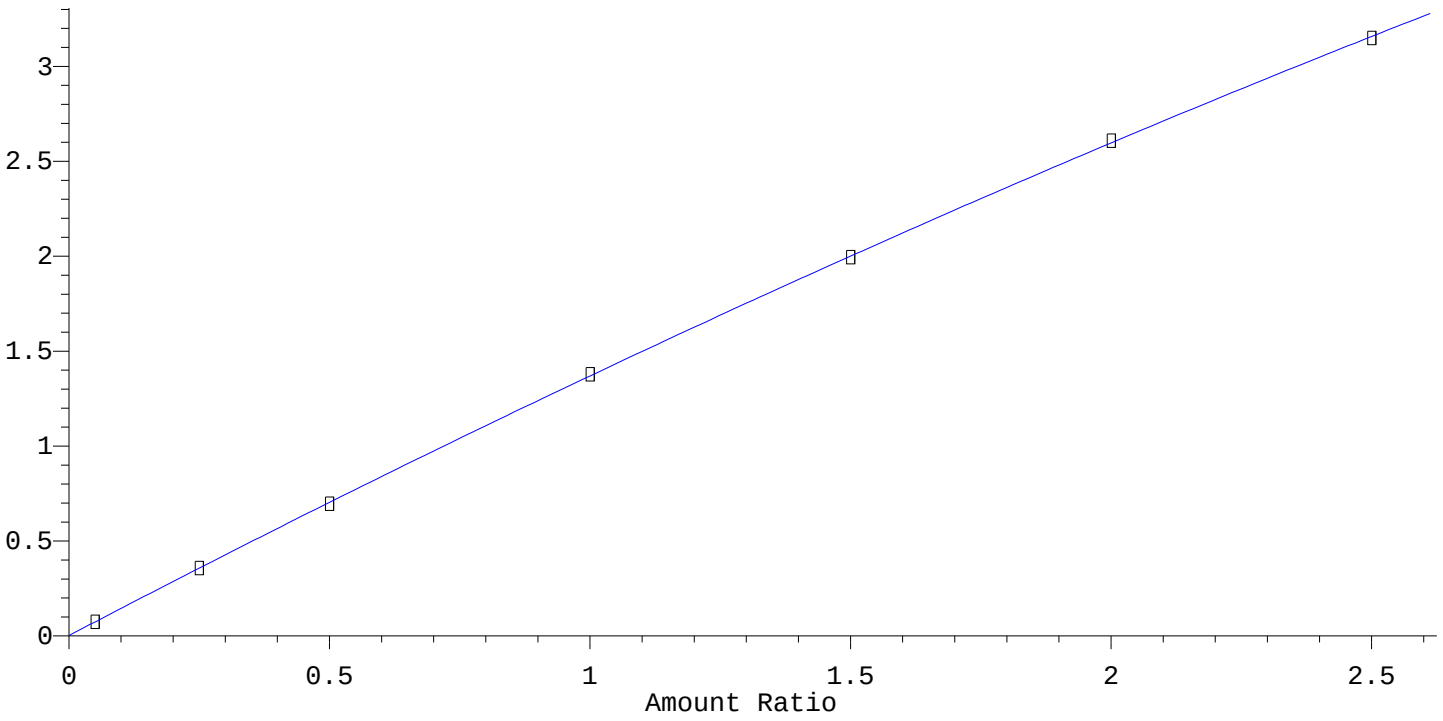


R = -1.494e-003 A*A + 3.627e-001 A - 7.007e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



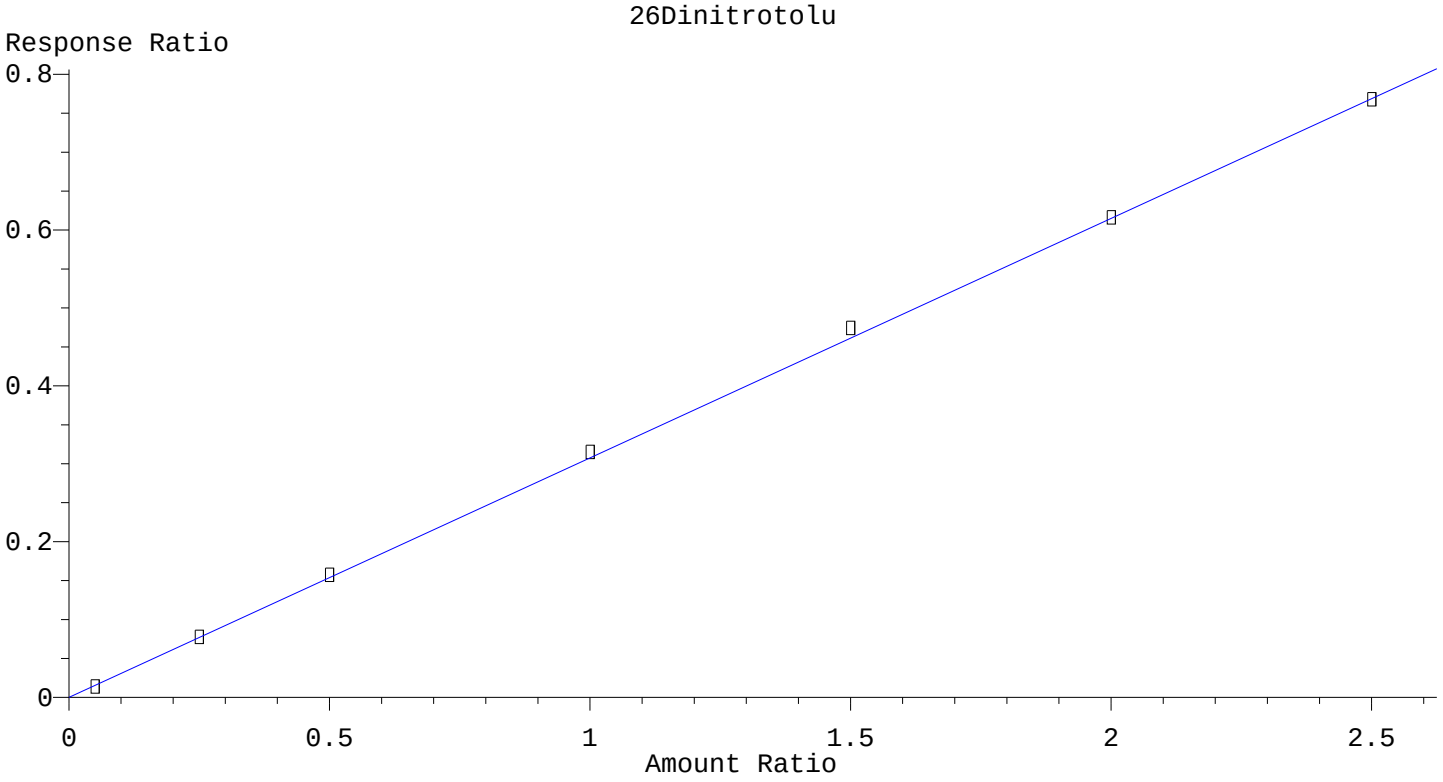
R = -1.131e-001 A*A + 2.007e+000 A + 8.586e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

Dimethylphtha



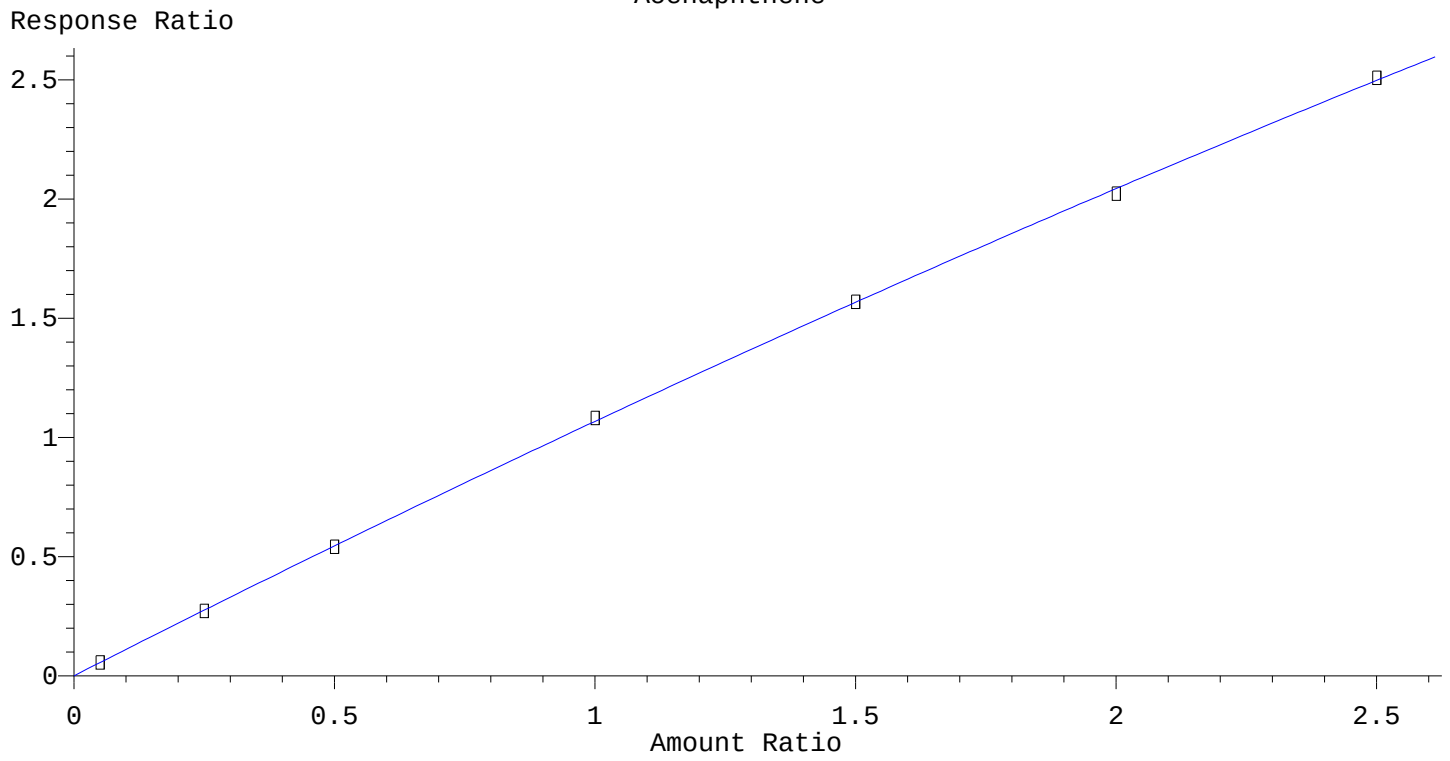
R = -7.023e-002 A*A + 1.438e+000 A + 2.024e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

26Dinitrotolu



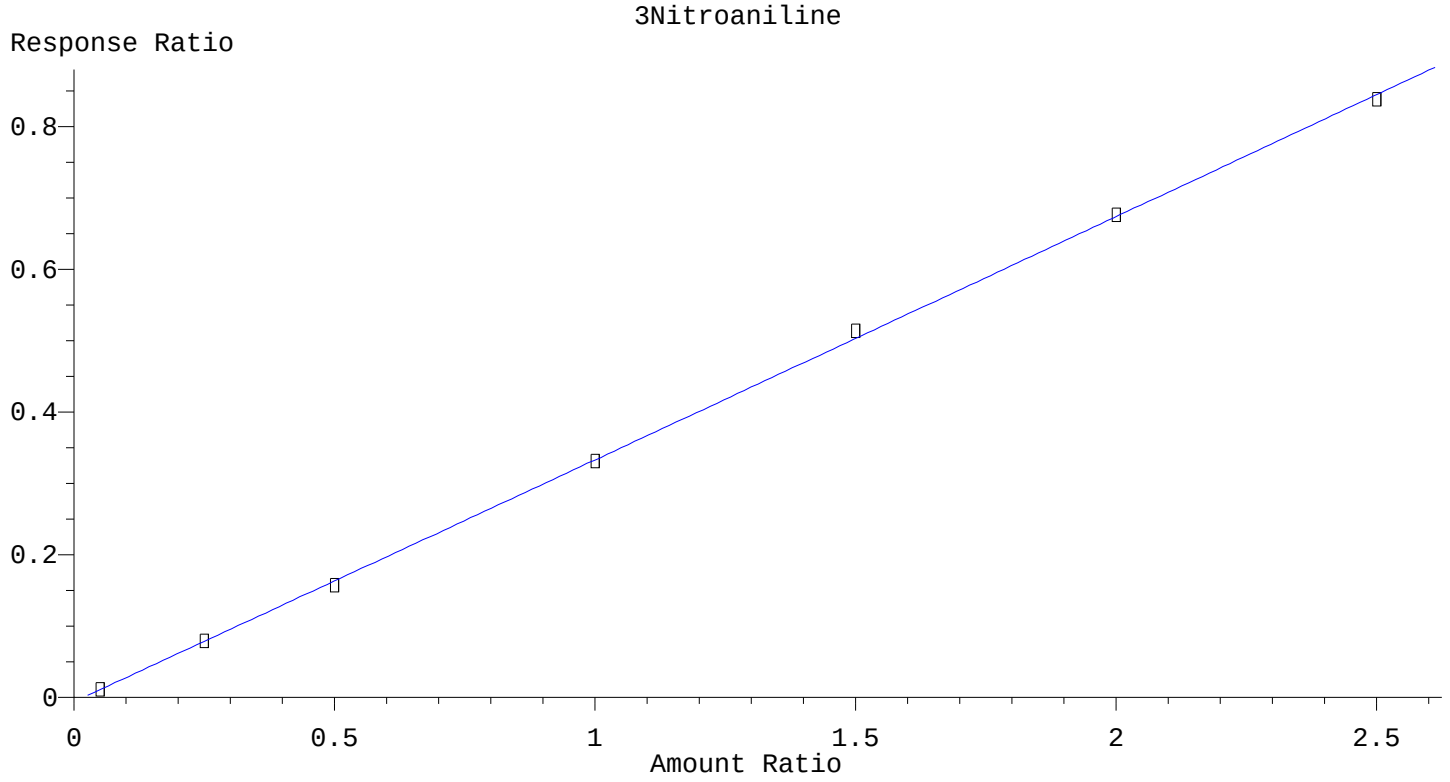
Resp Ratio = 3.073e-001 * Amt
RF Rel Std Dev = 4.208% Curve Fit: Avg RF

Acenaphthene

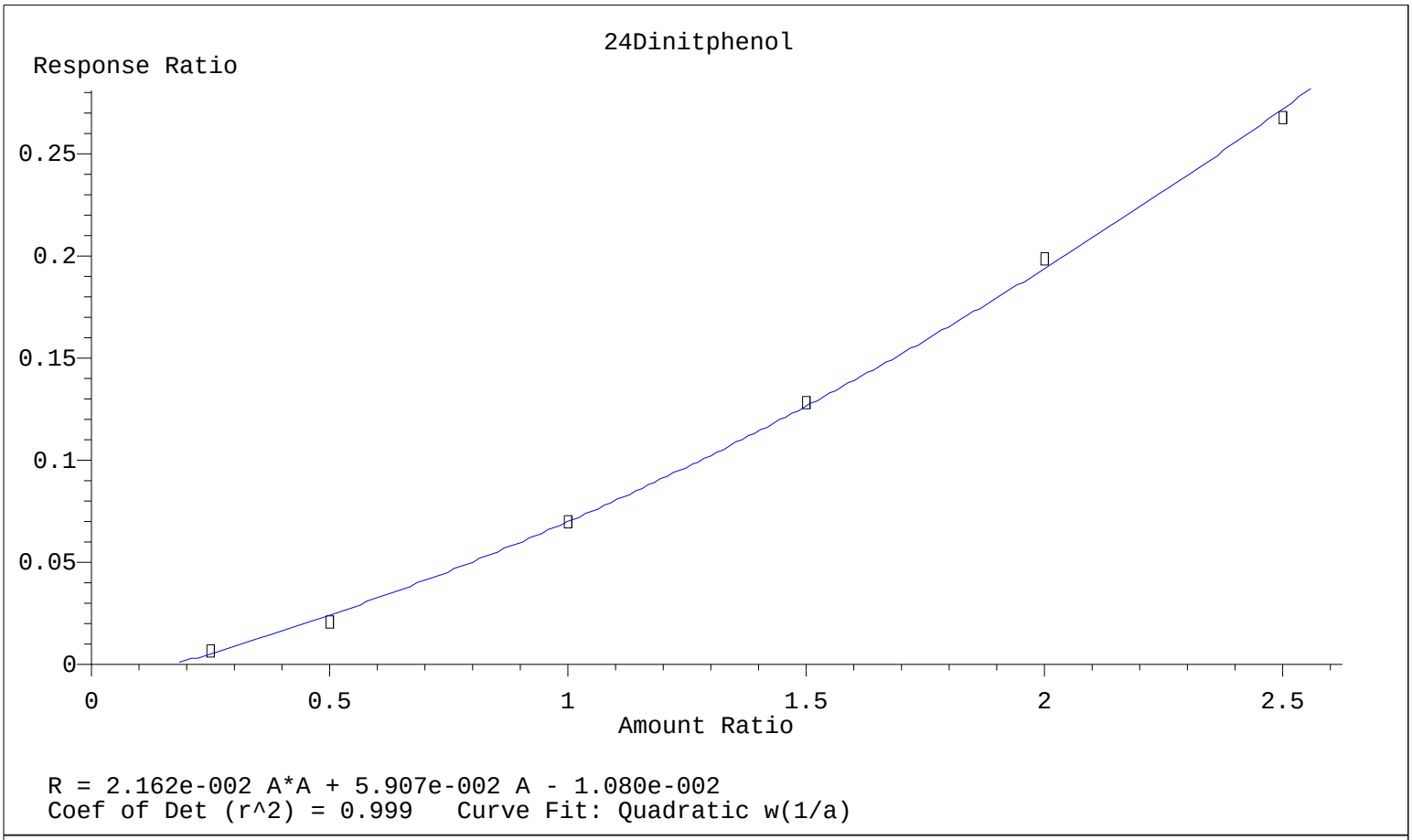


R = -4.550e-002 A*A + 1.113e+000 A + 4.085e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

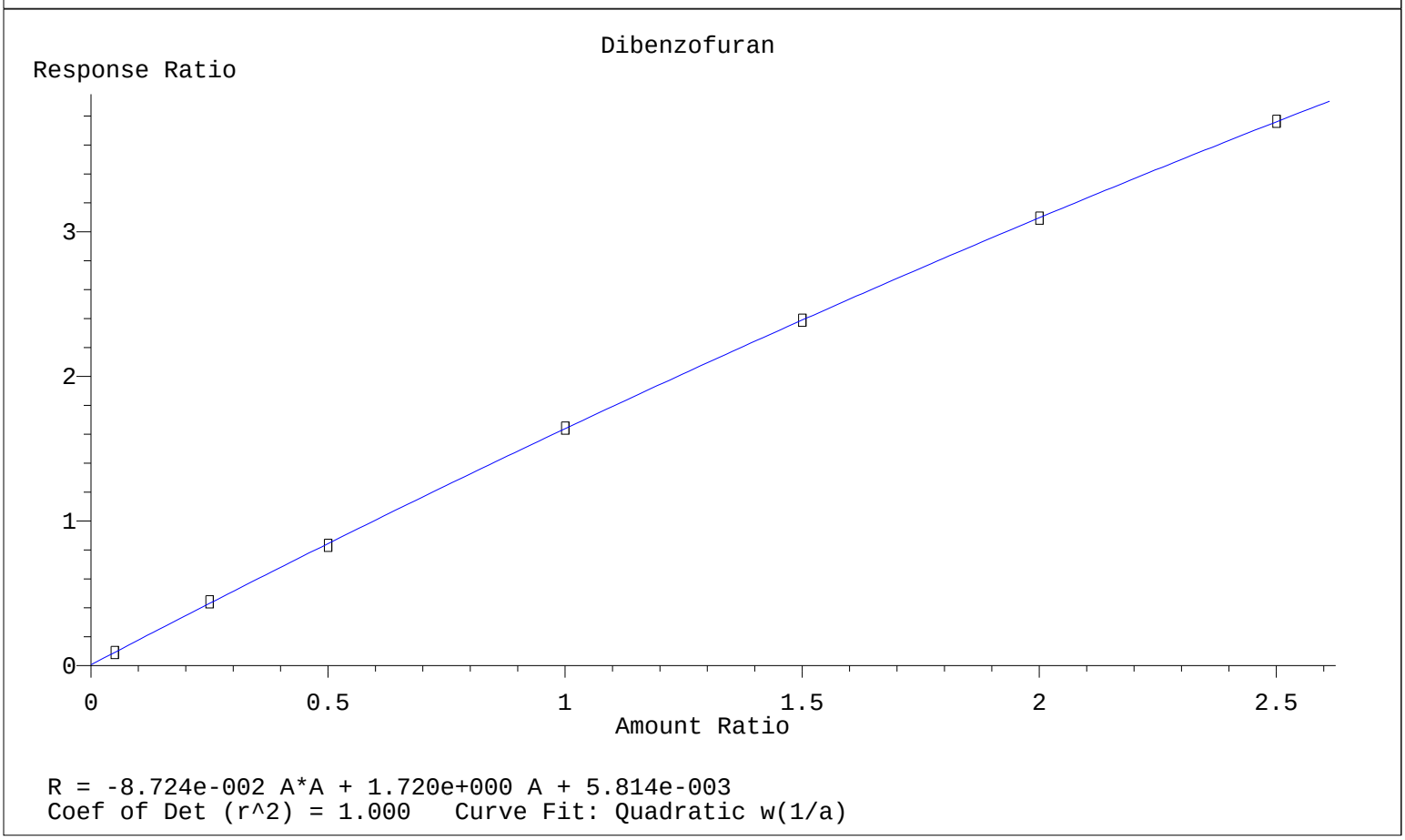
3Nitroaniline



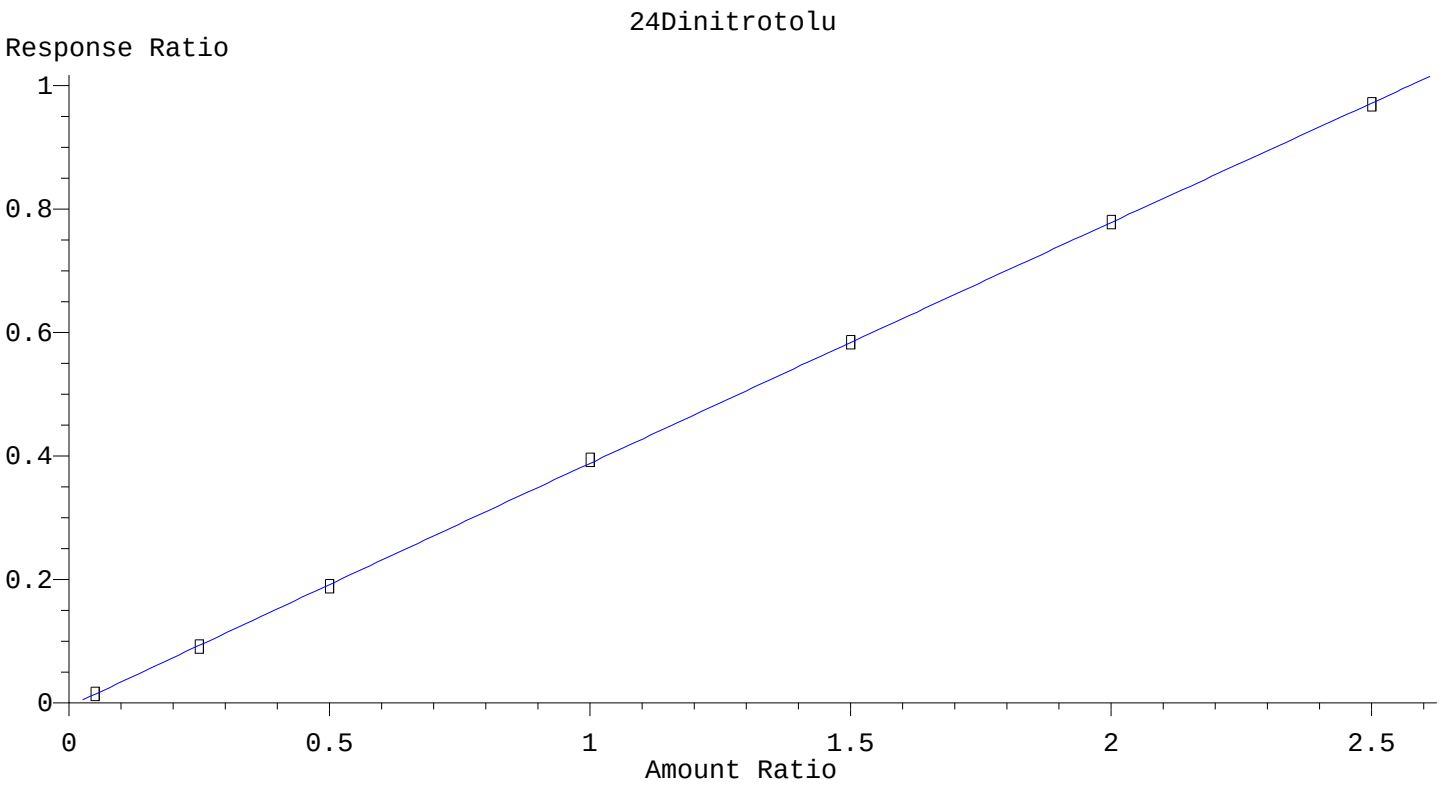
R = 1.024e-003 A*A + 3.378e-001 A - 6.020e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



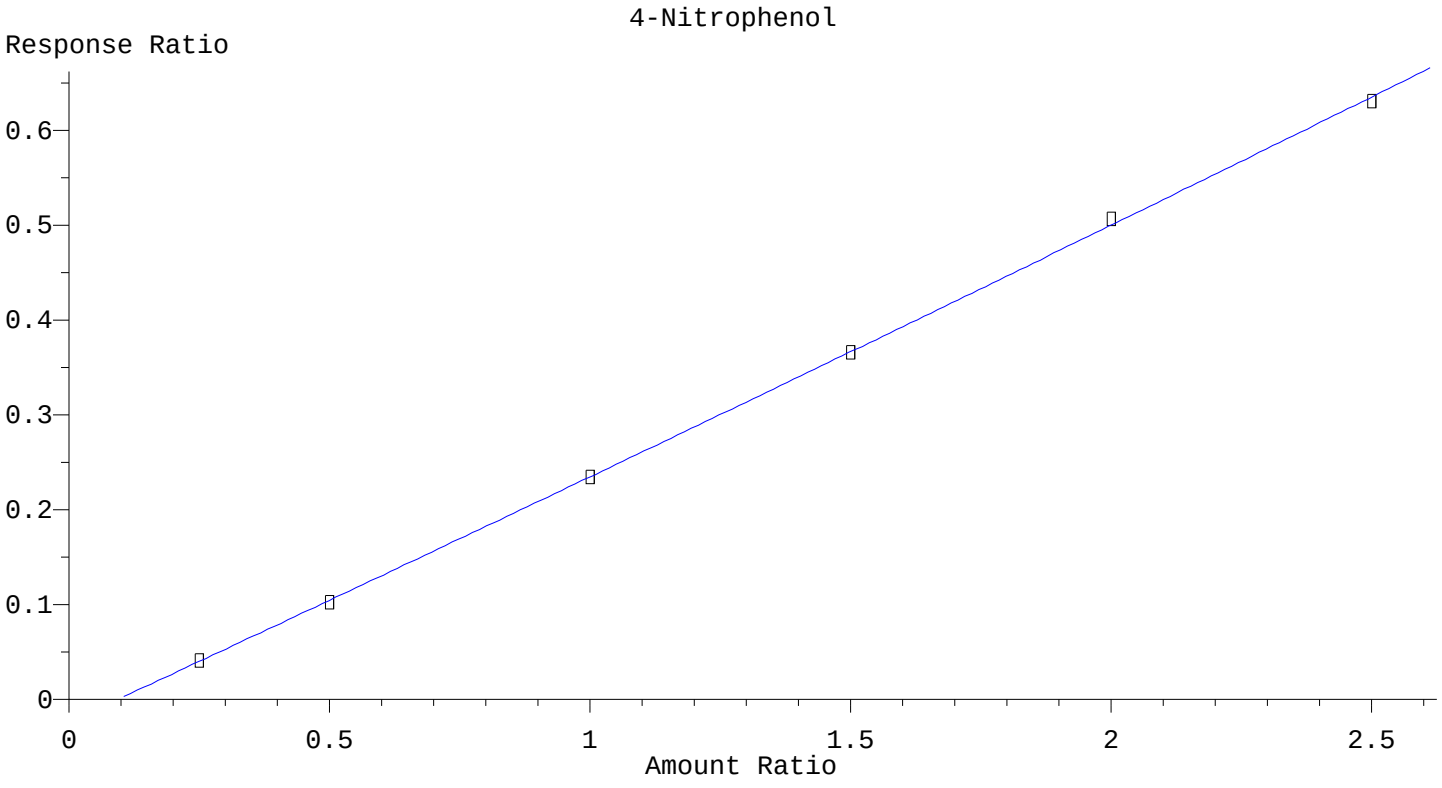
R = 2.162e-002 A*A + 5.907e-002 A - 1.080e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)



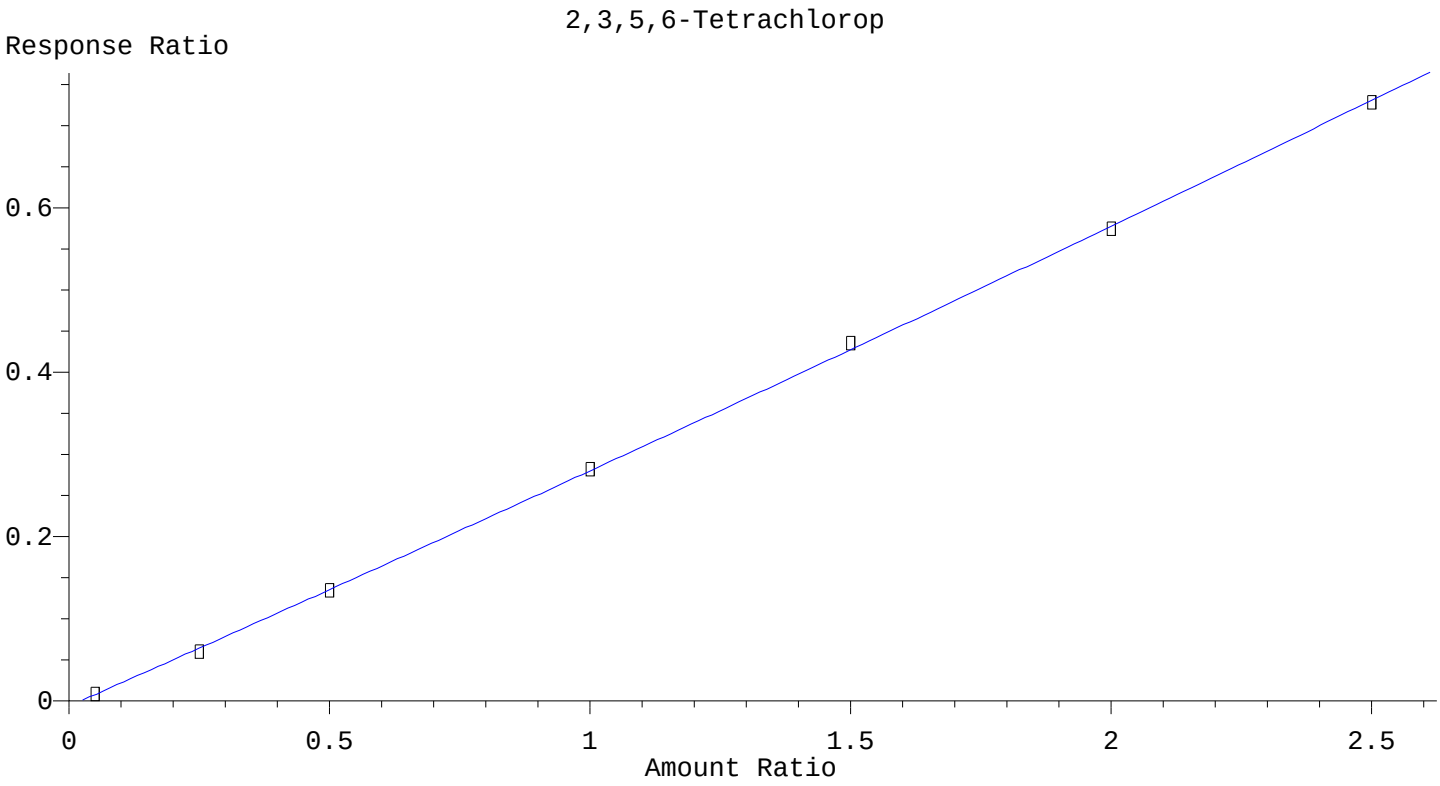
R = -8.724e-002 A*A + 1.720e+000 A + 5.814e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



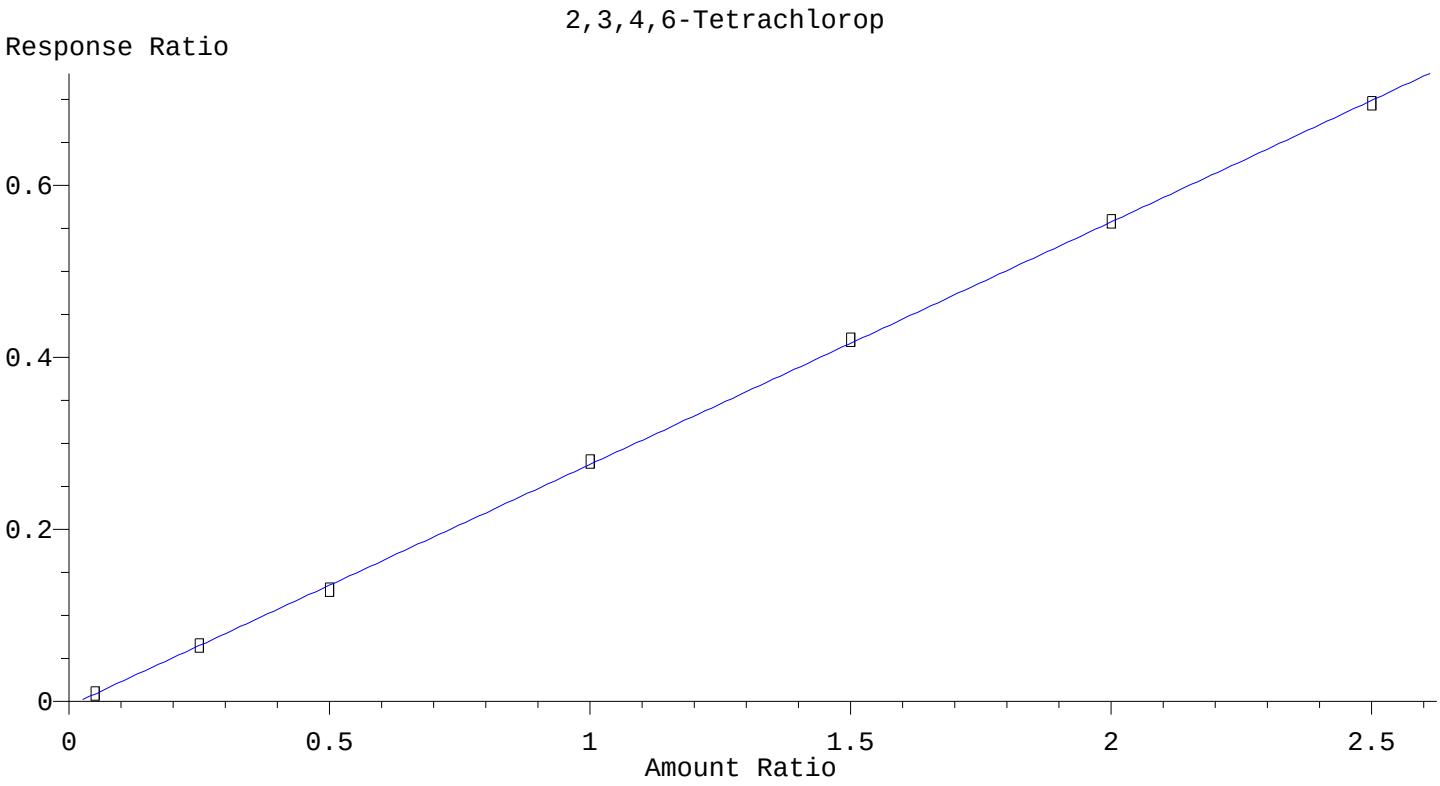
R = -2.092e-003 A*A + 3.962e-001 A - 5.759e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



R = 3.356e-003 A*A + 2.553e-001 A - 2.392e-002
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

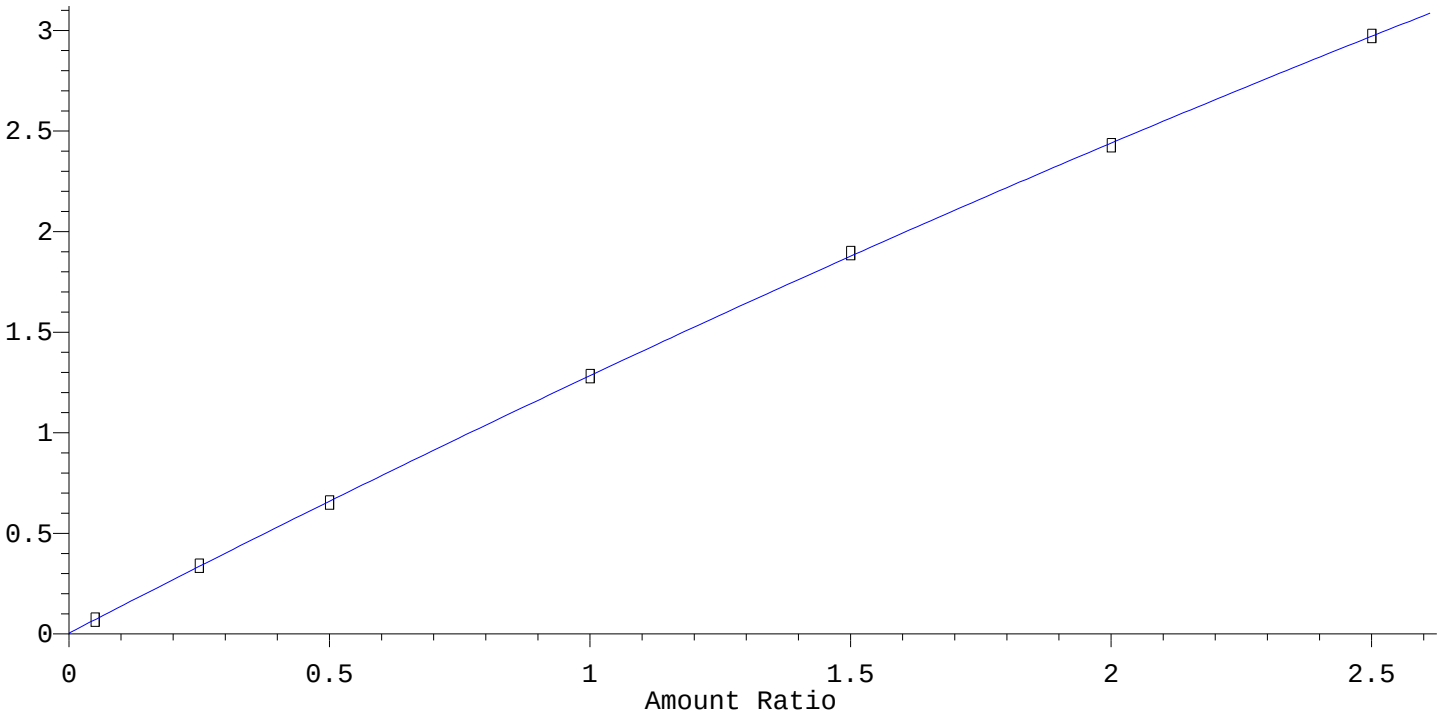


R = 5.745e-003 A*A + 2.805e-001 A - 6.317e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



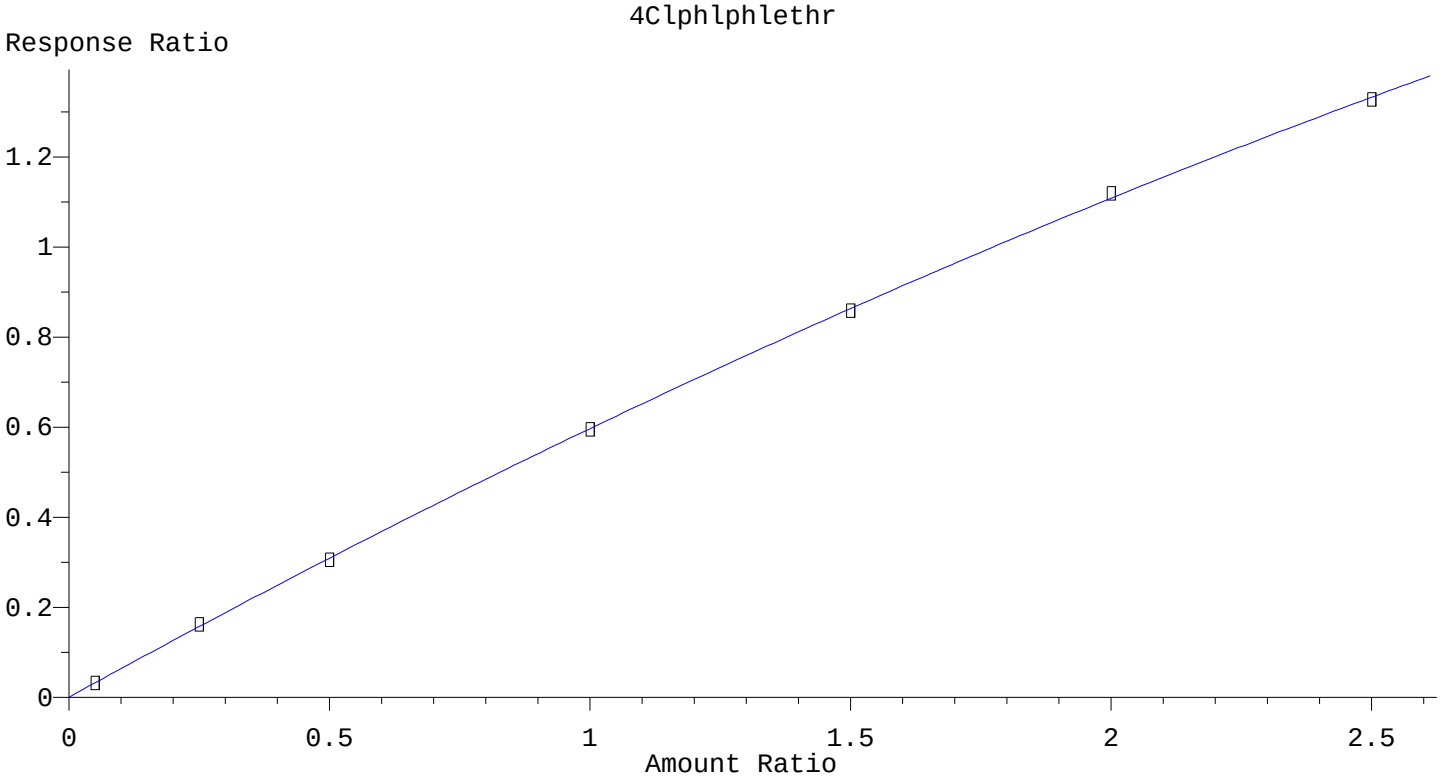
R = 5.504e-004 A*A + 2.802e-001 A - 5.223e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

Fluorene



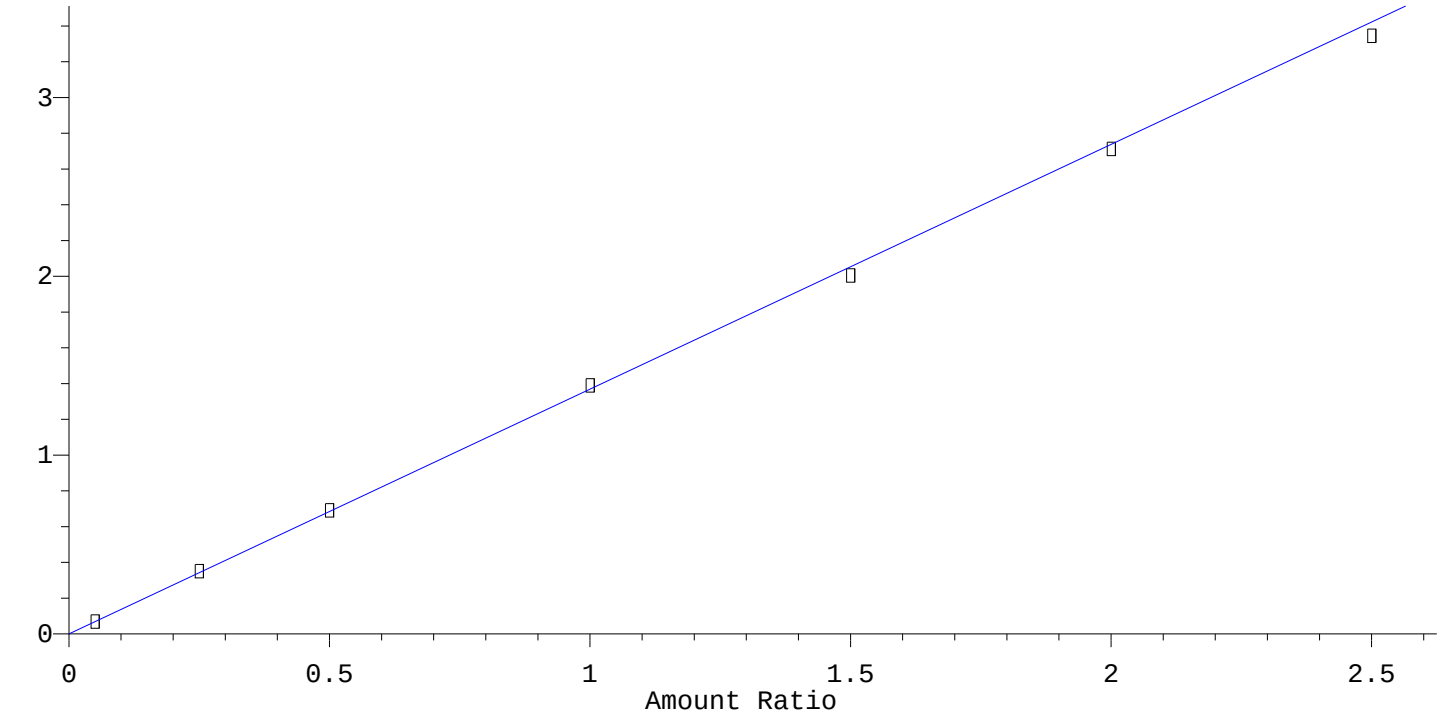
R = -6.218e-002 A*A + 1.342e+000 A + 3.834e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

4Clphlphlethr



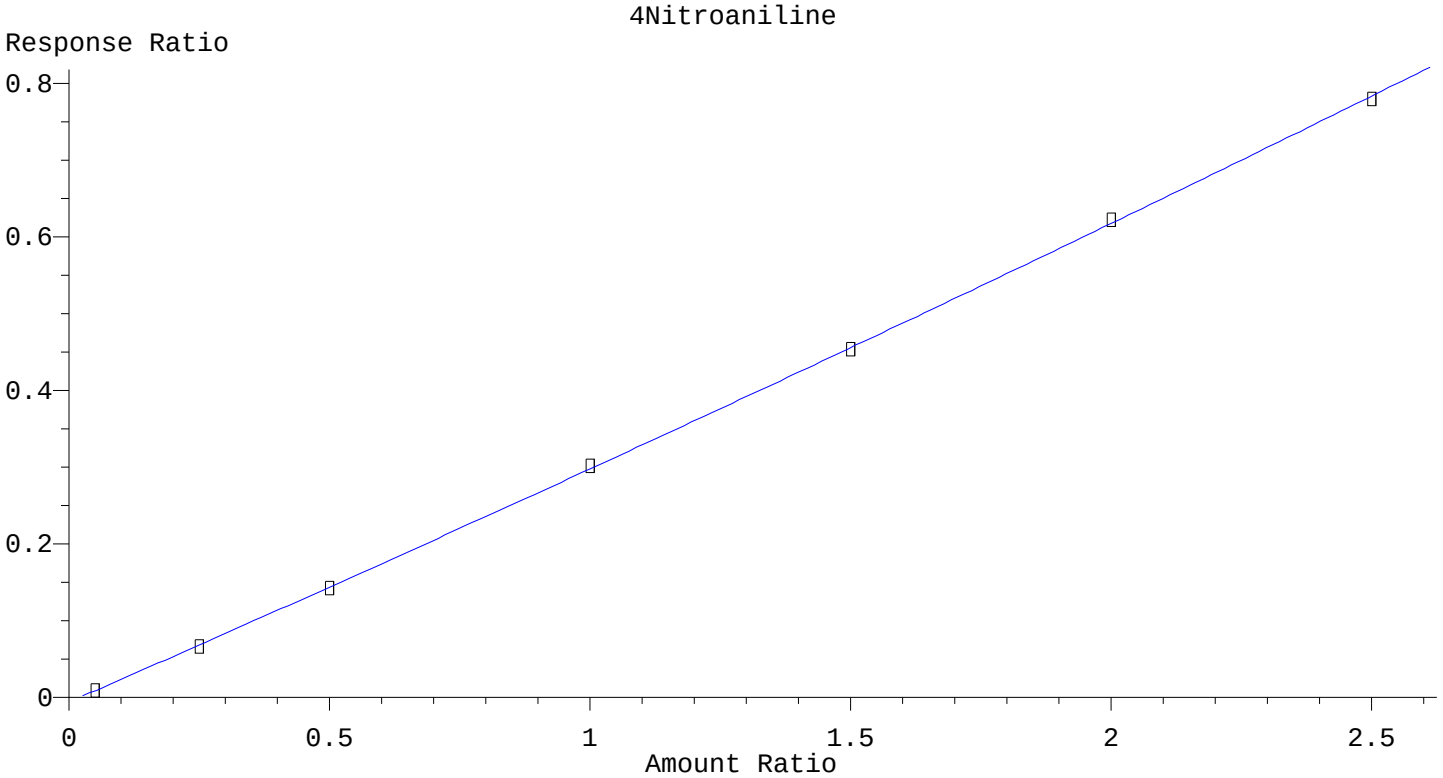
R = -4.237e-002 A*A + 6.387e-001 A + 4.866e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

Diethylphthal

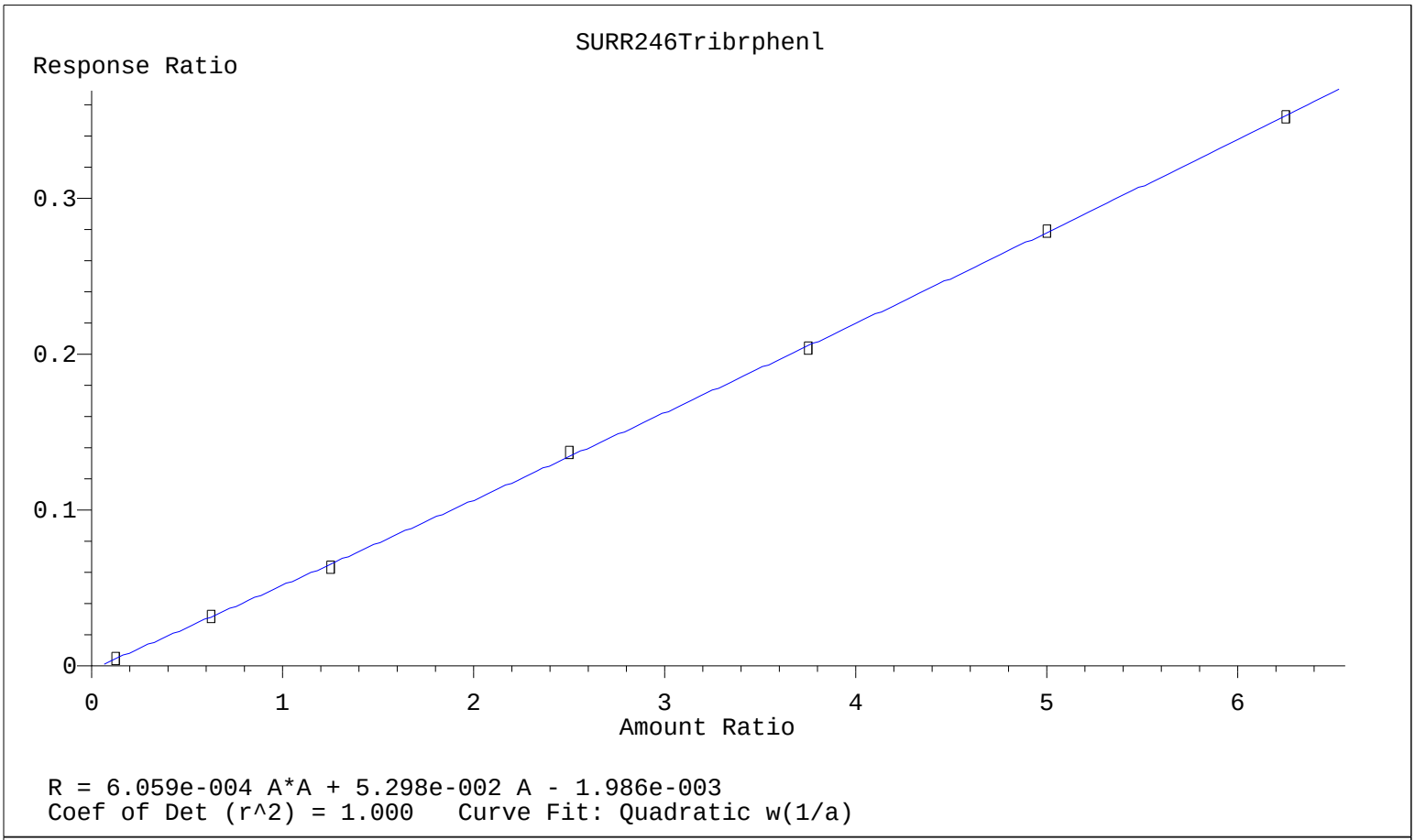


Resp Ratio = 1.369e+000 * Amt
RF Rel Std Dev = 1.901% Curve Fit: Avg RF

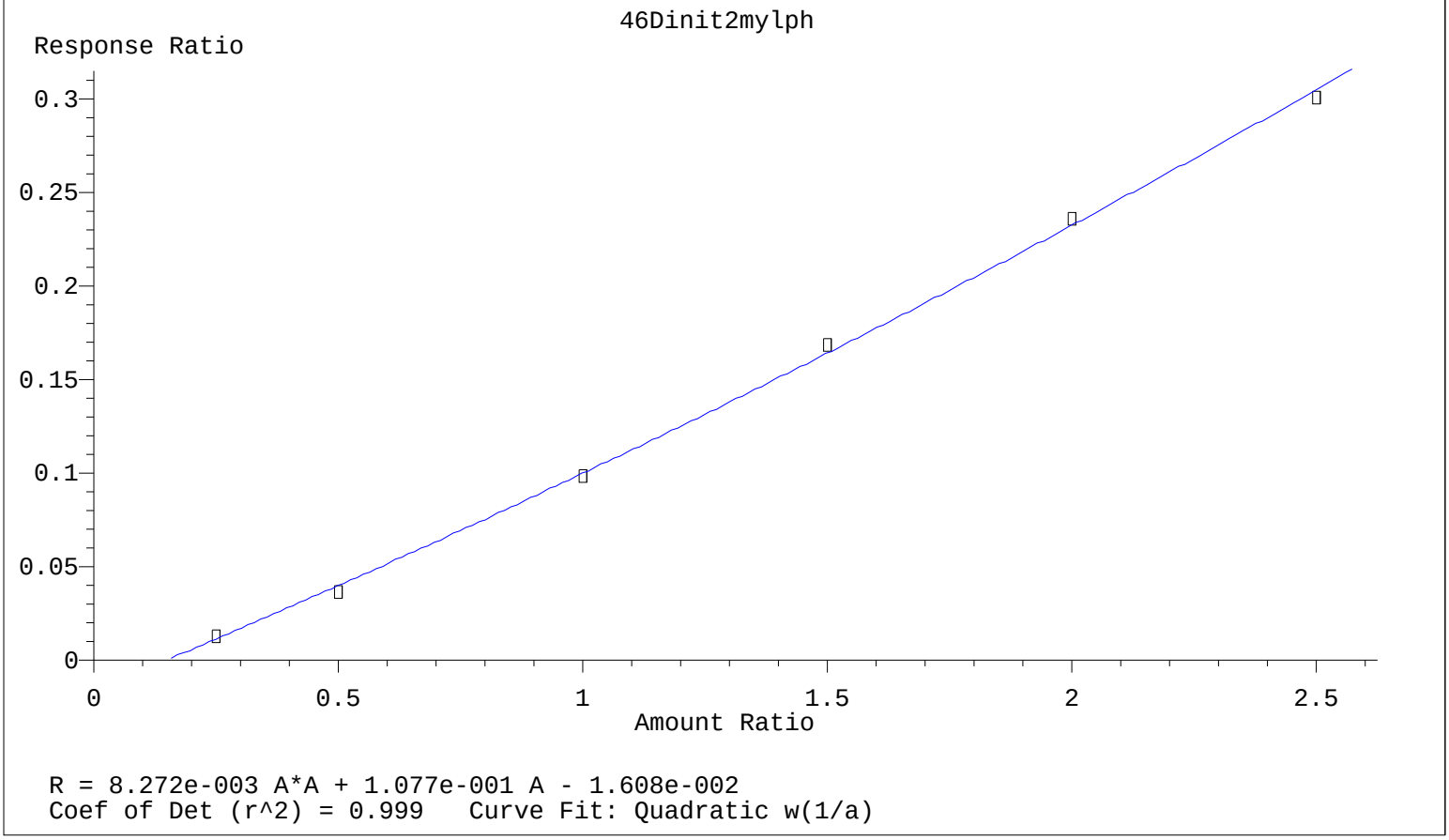
4Nitroaniline



R = 8.049e-003 A*A + 2.957e-001 A - 6.130e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

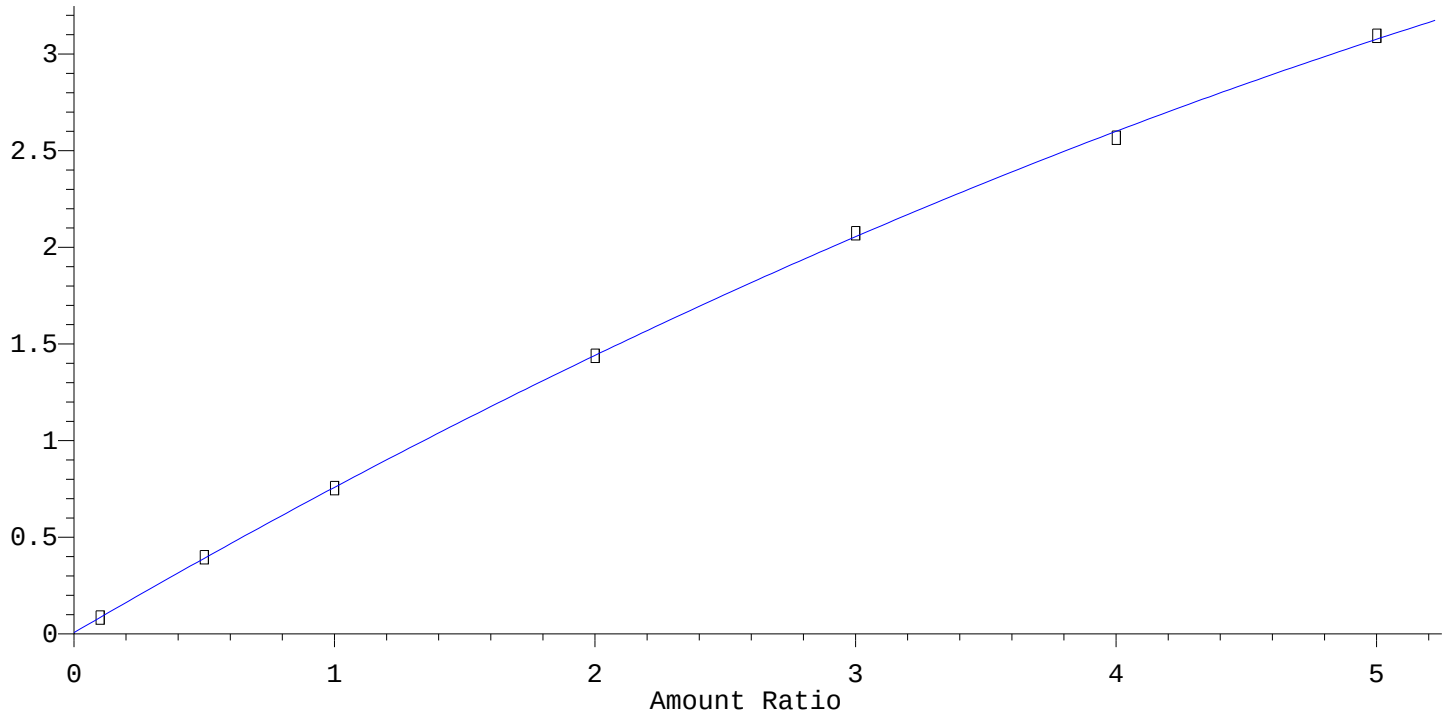


R = 6.059e-004 A*A + 5.298e-002 A - 1.986e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



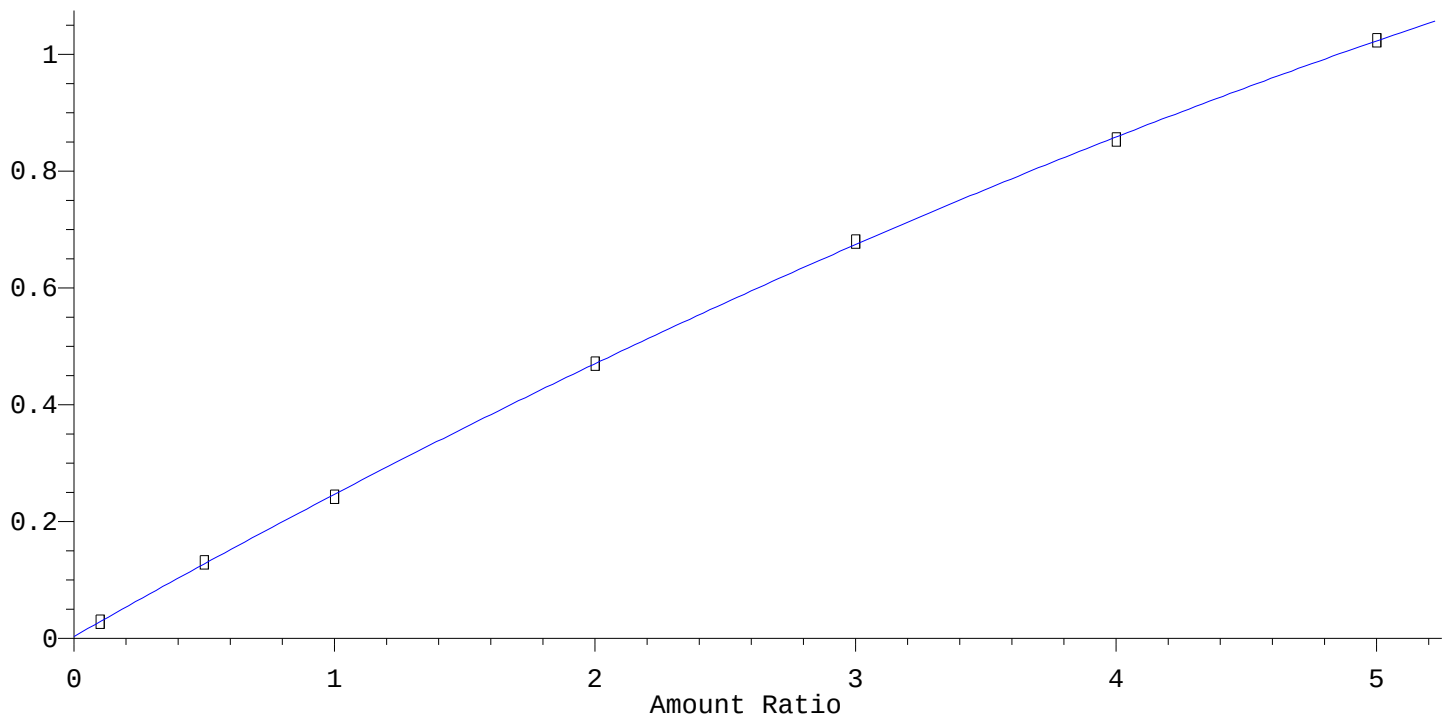
R = 8.272e-003 A*A + 1.077e-001 A - 1.608e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)

Ntrsdiphlam&Diphlam

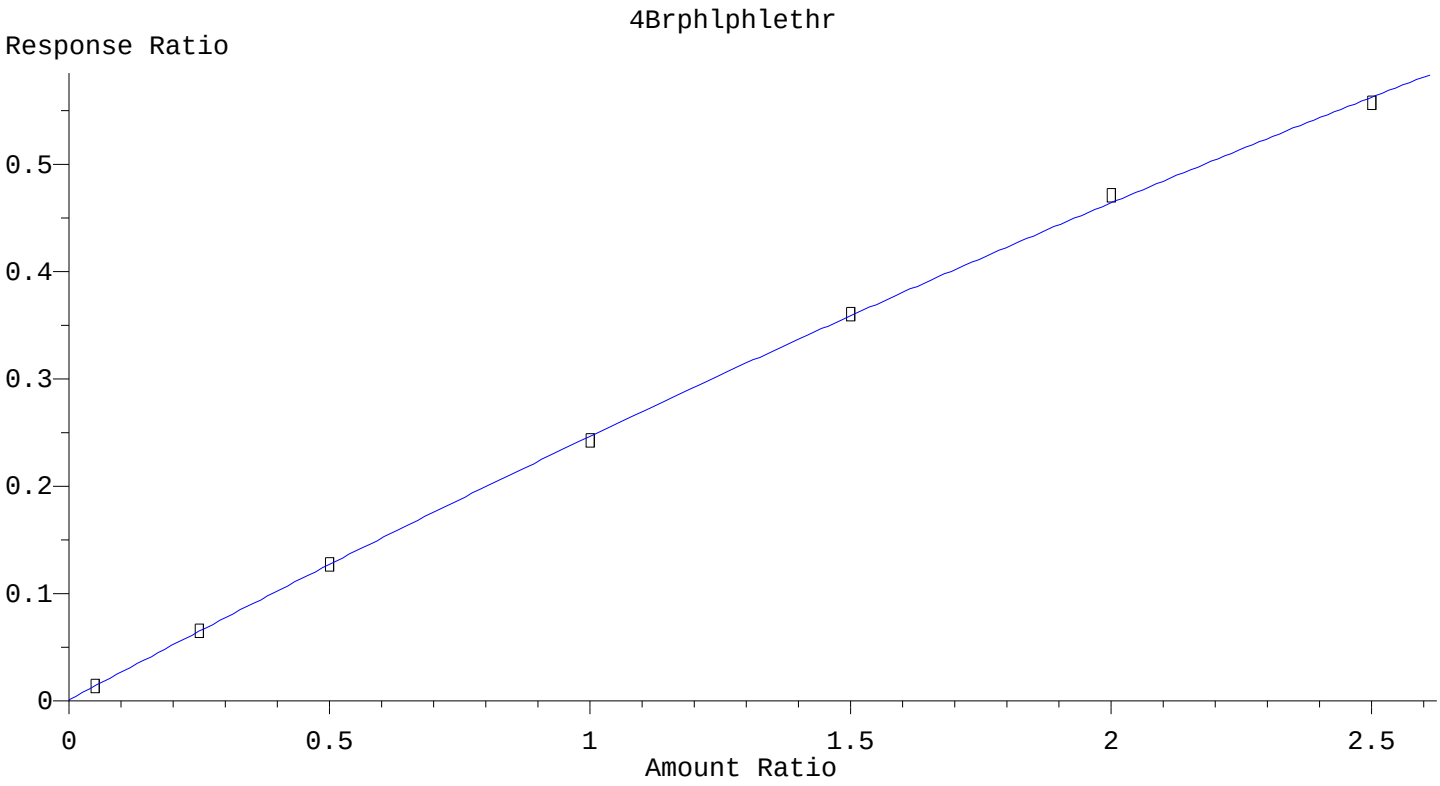


R = -3.441e-002 A*A + 7.860e-001 A + 6.610e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

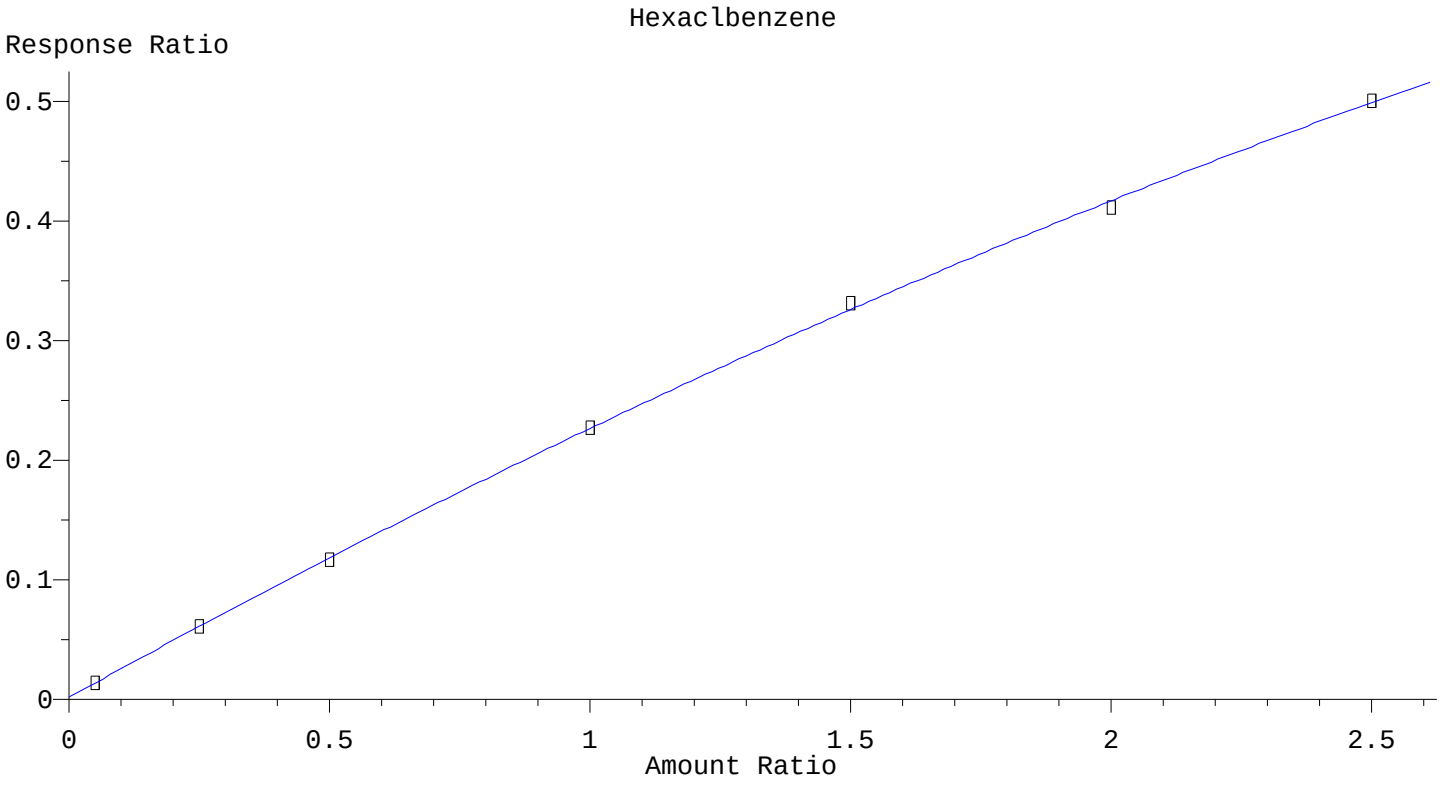
Azobenz&12Diphlhyd



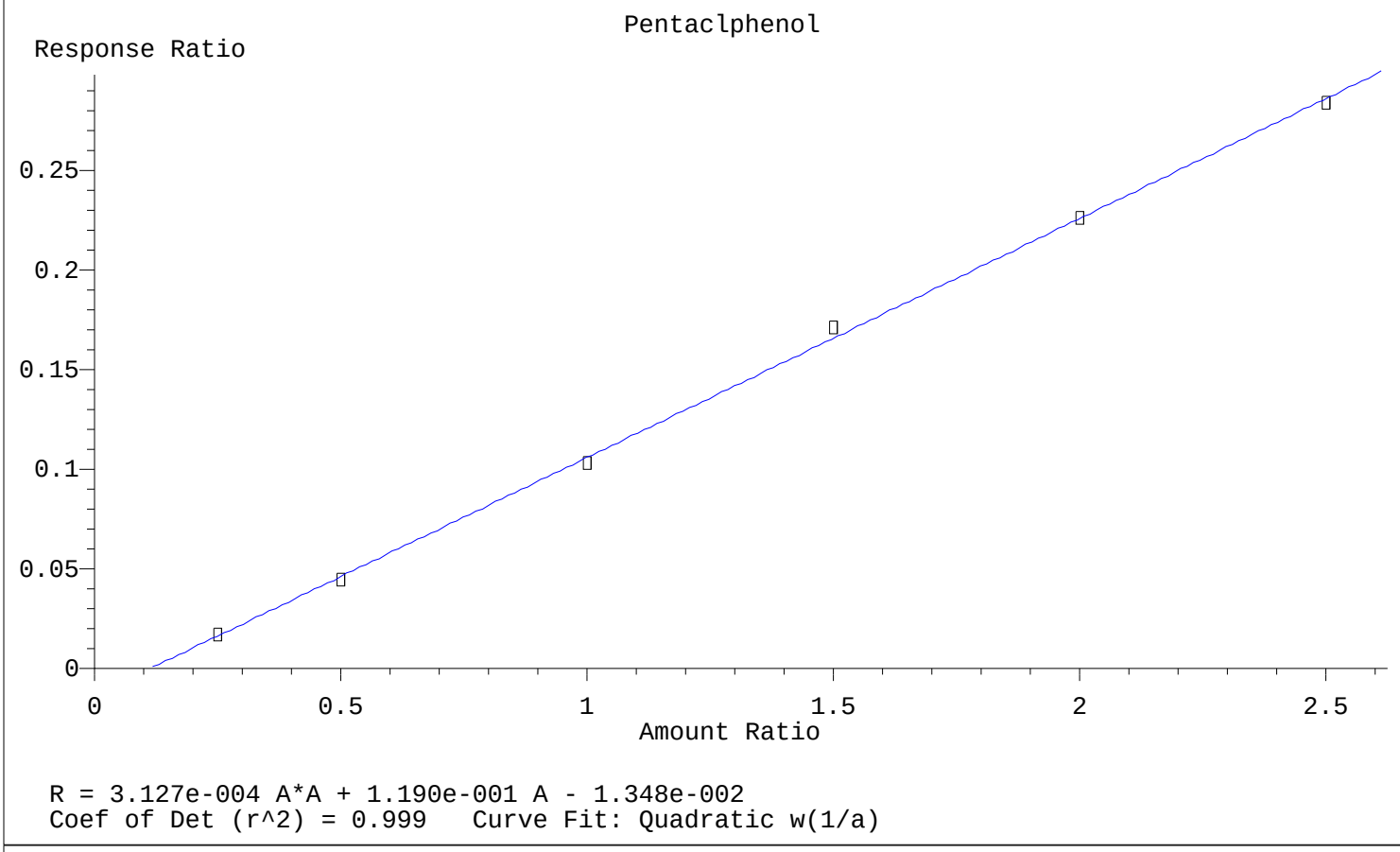
R = -9.830e-003 A*A + 2.531e-001 A + 3.435e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



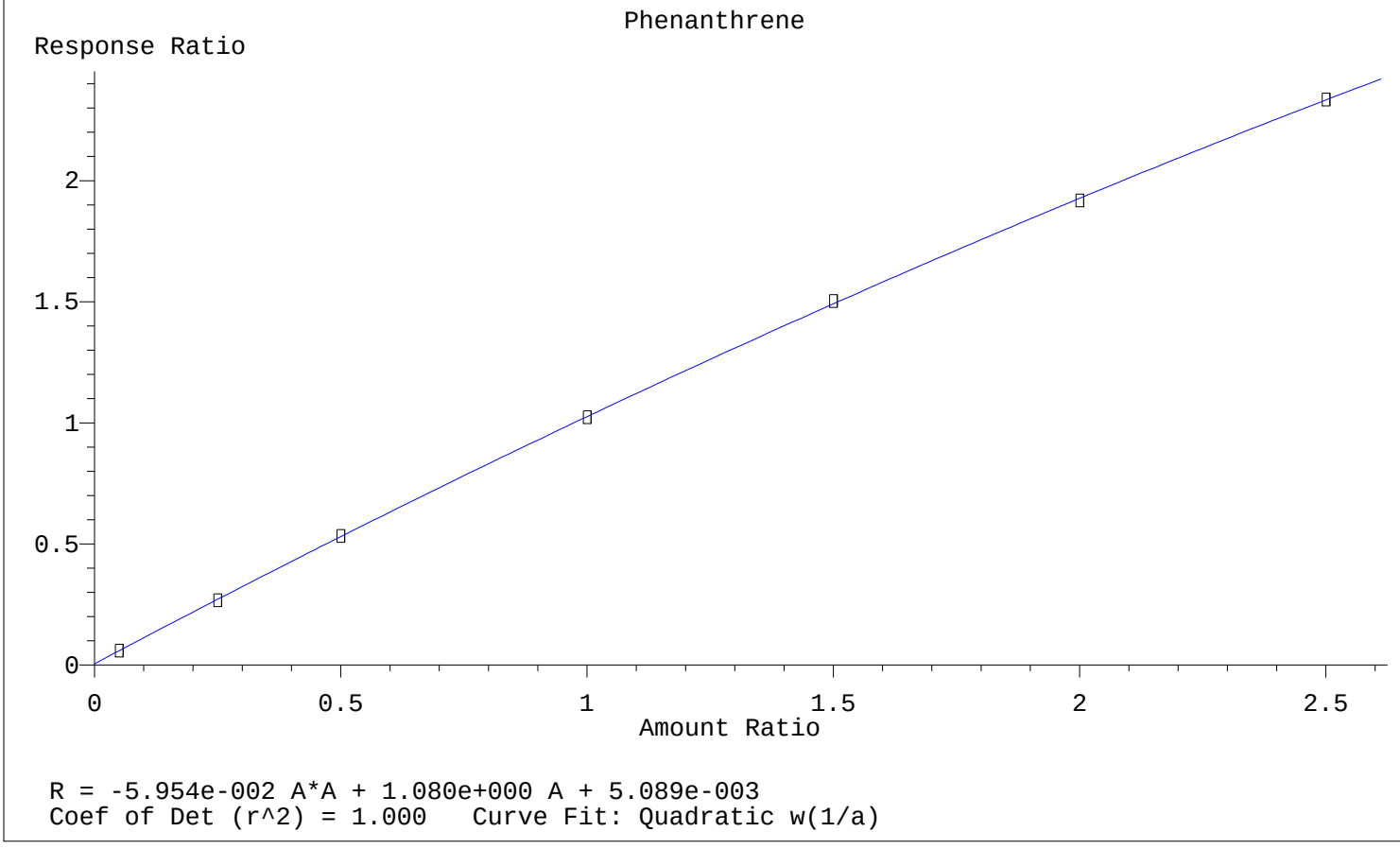
R = -1.400e-002 A*A + 2.596e-001 A + 9.365e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



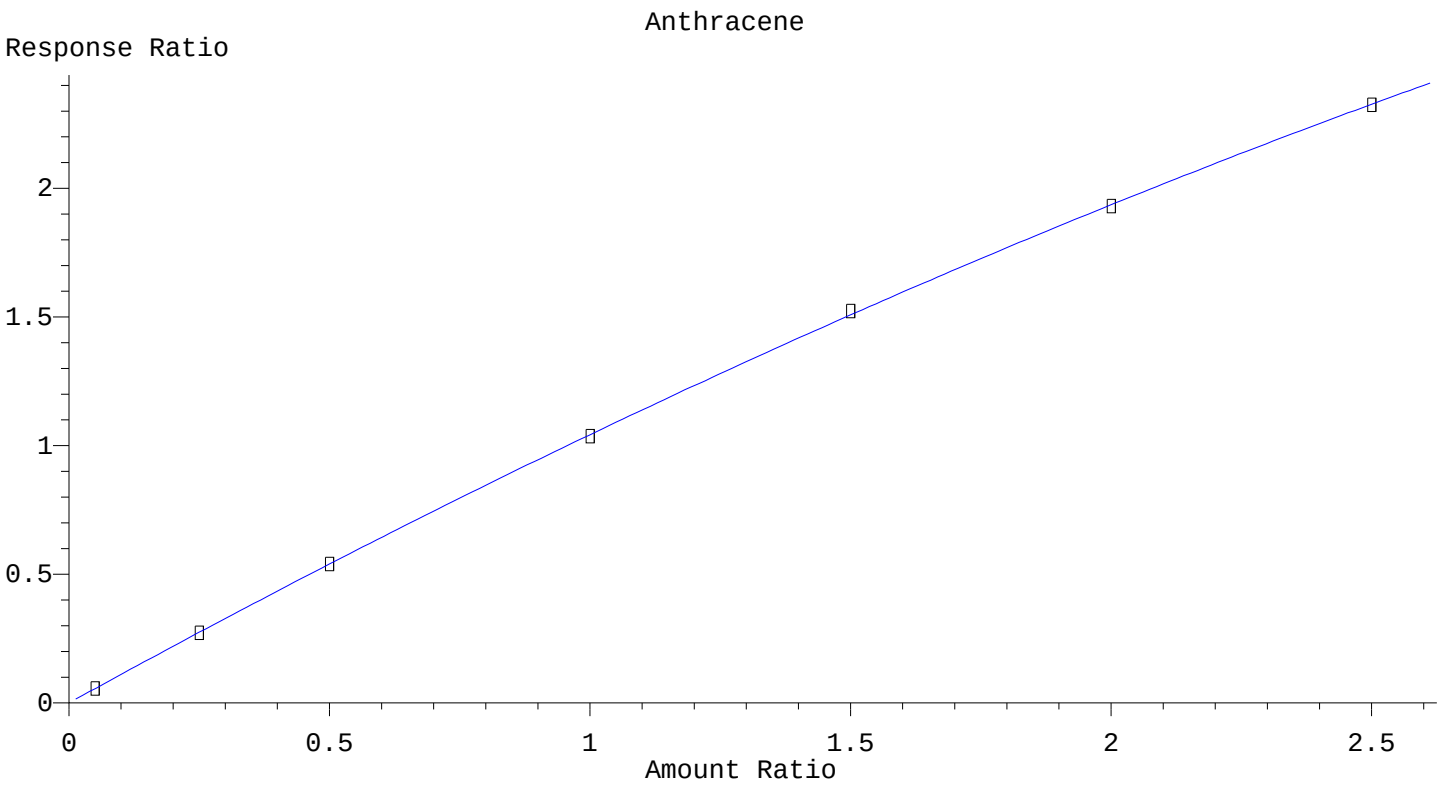
R = -1.734e-002 A*A + 2.423e-001 A + 1.600e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



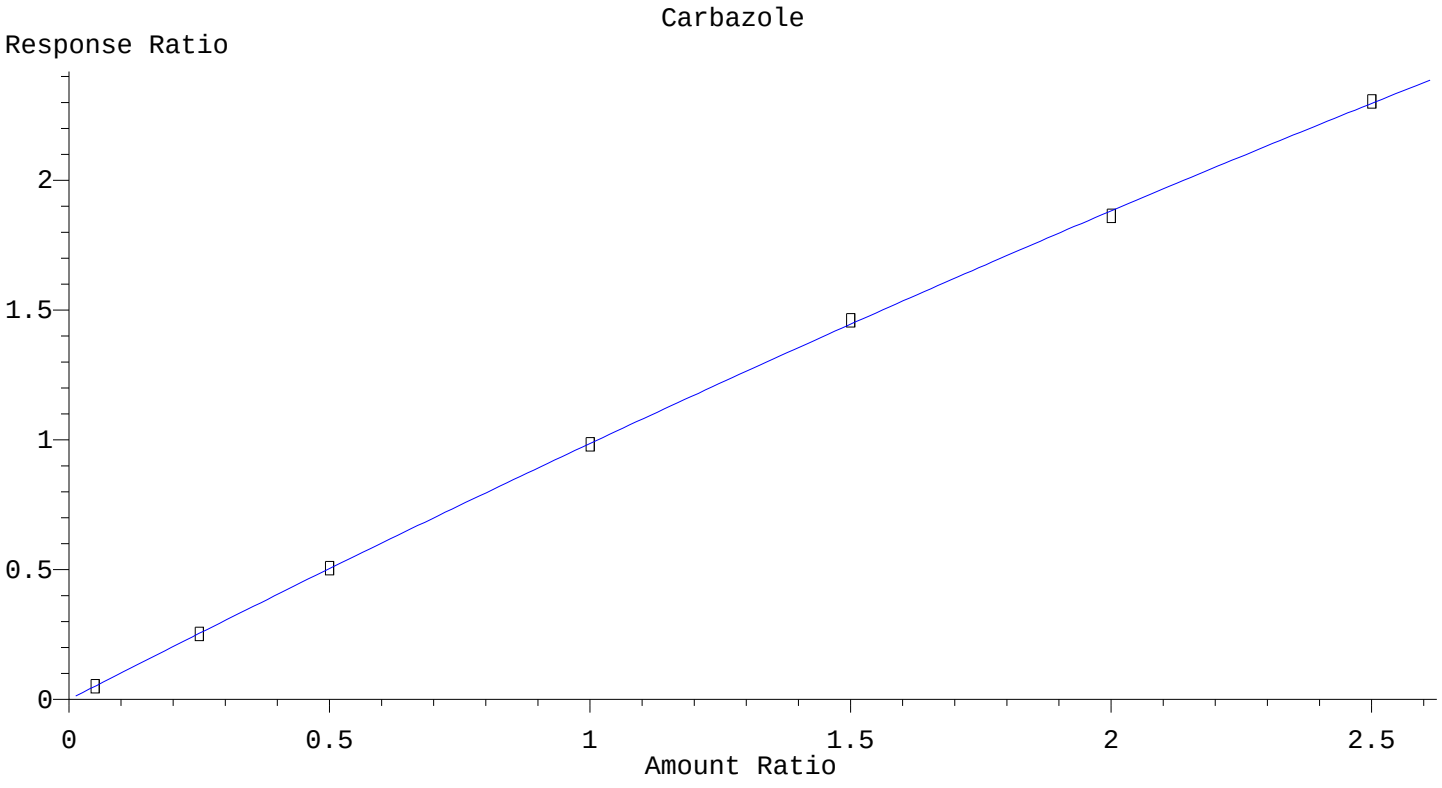
R = 3.127e-004 A*A + 1.190e-001 A - 1.348e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)



R = -5.954e-002 A*A + 1.080e+000 A + 5.089e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

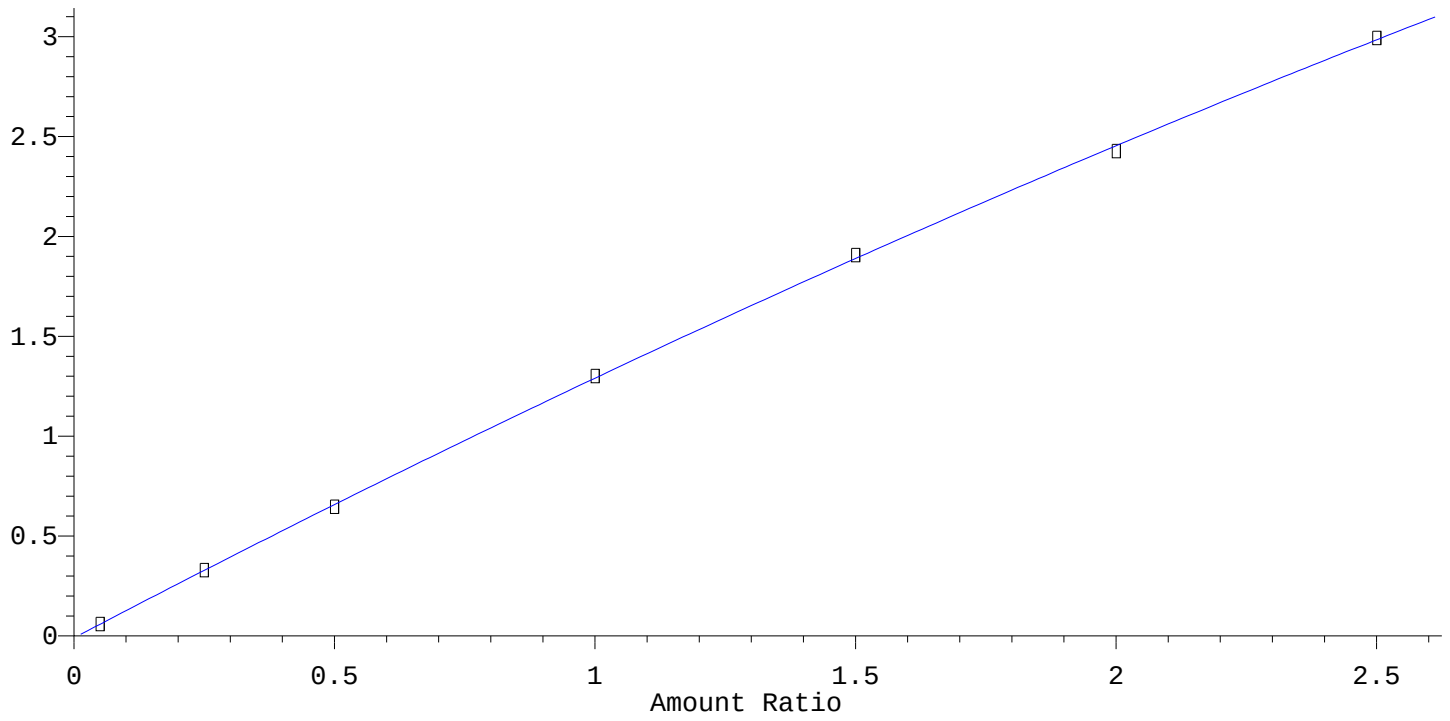


R = -7.460e-002 A*A + 1.117e+000 A - 1.120e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



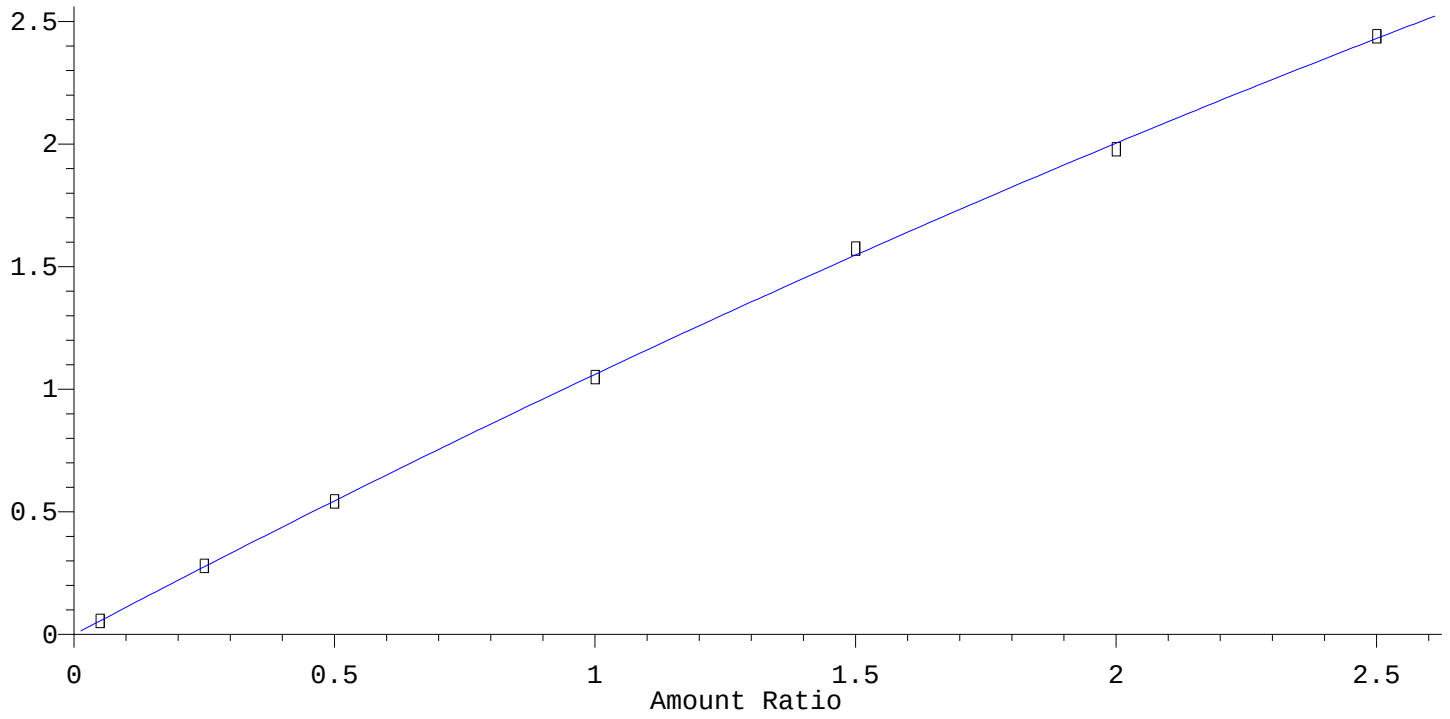
R = -4.533e-002 A*A + 1.032e+000 A - 9.023e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

Dinbtylphthal

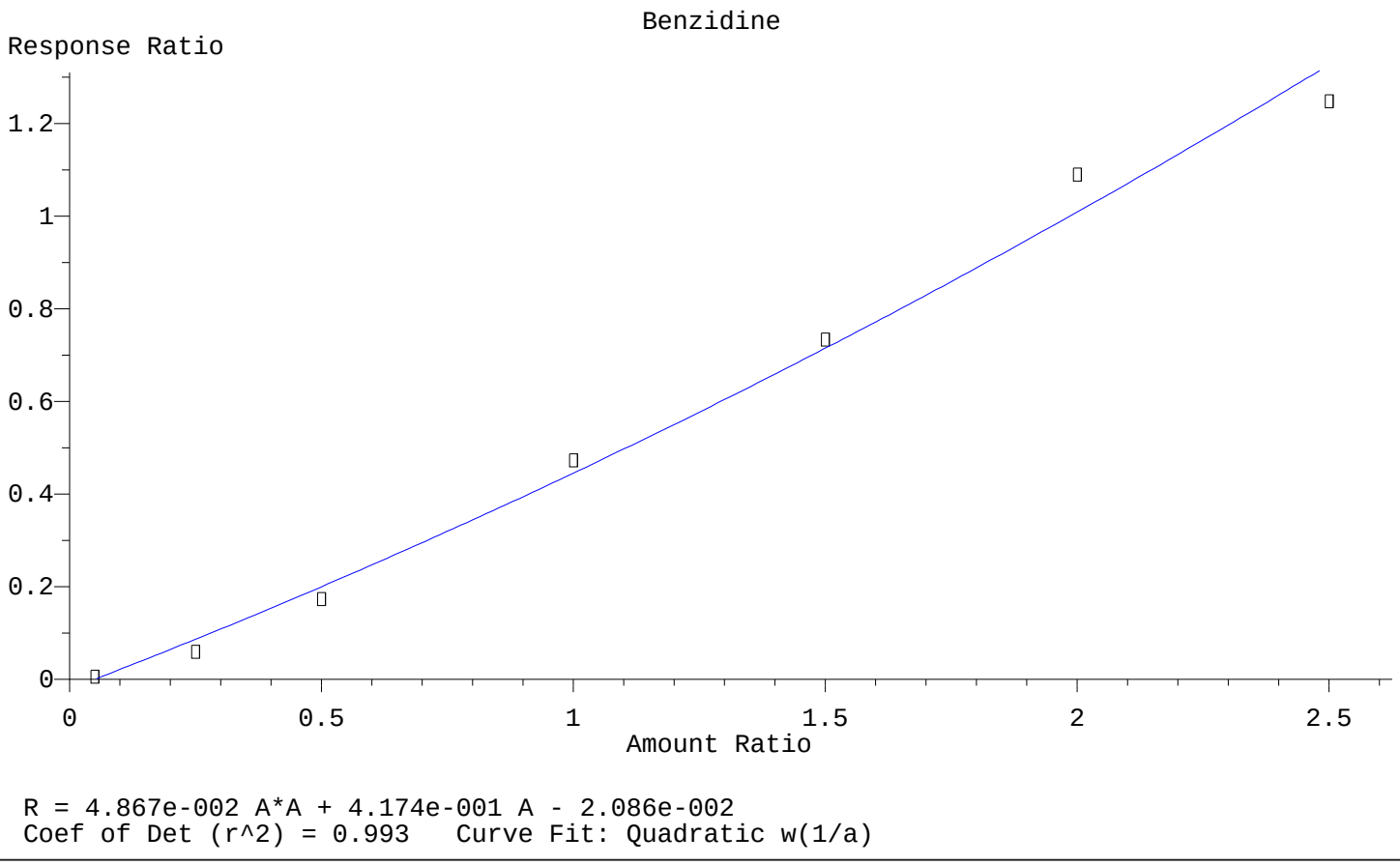


R = -6.825e-002 A*A + 1.368e+000 A - 9.532e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

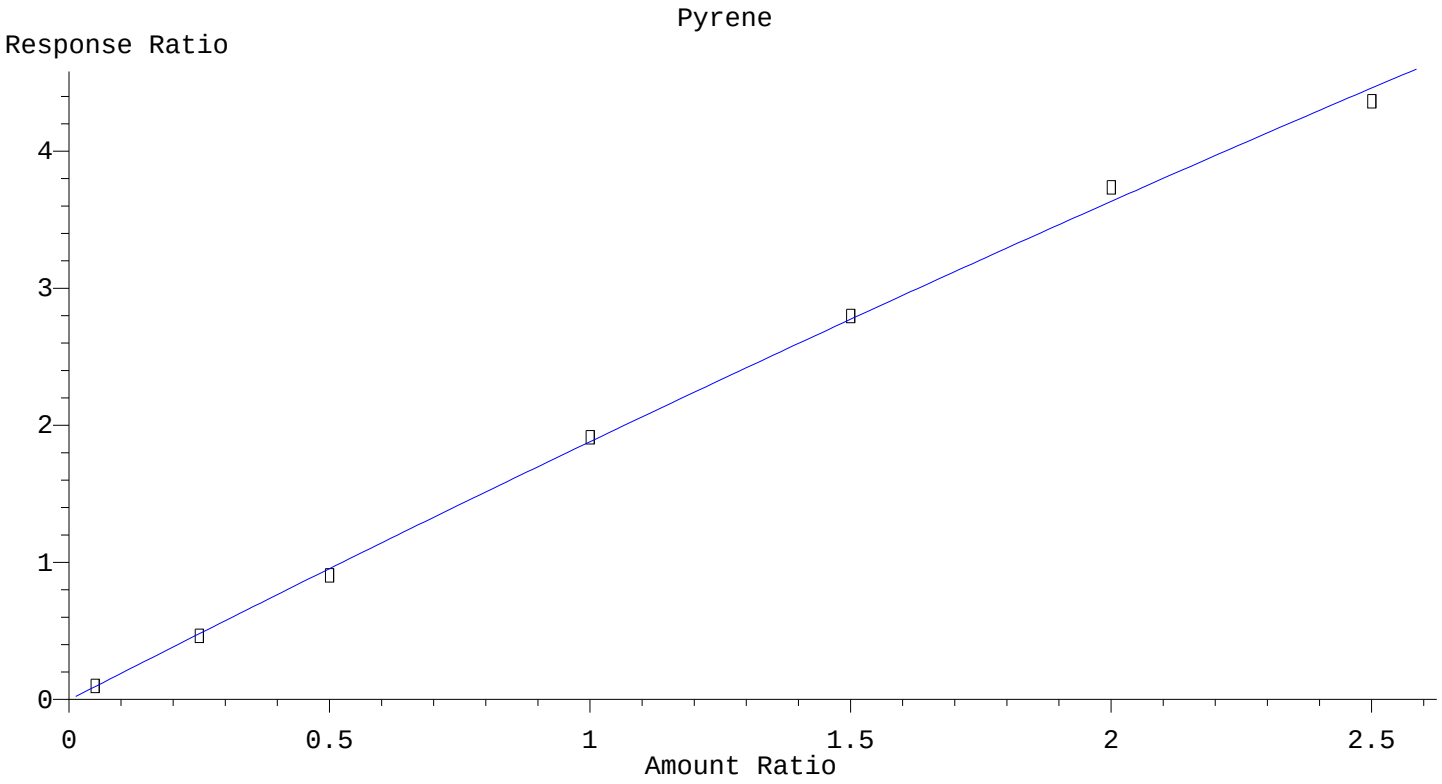
Fluoranthene



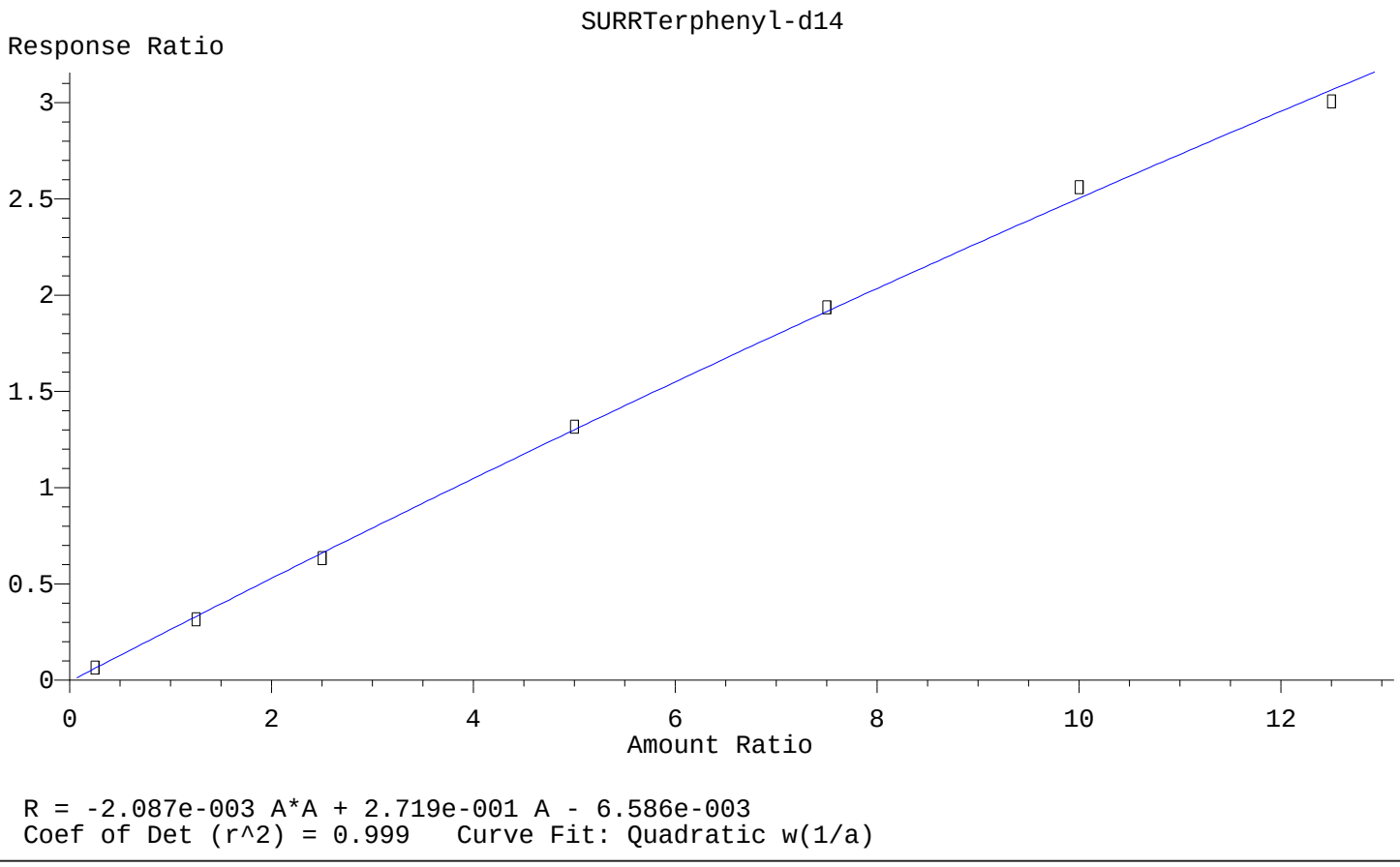
R = -5.926e-002 A*A + 1.121e+000 A - 8.440e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



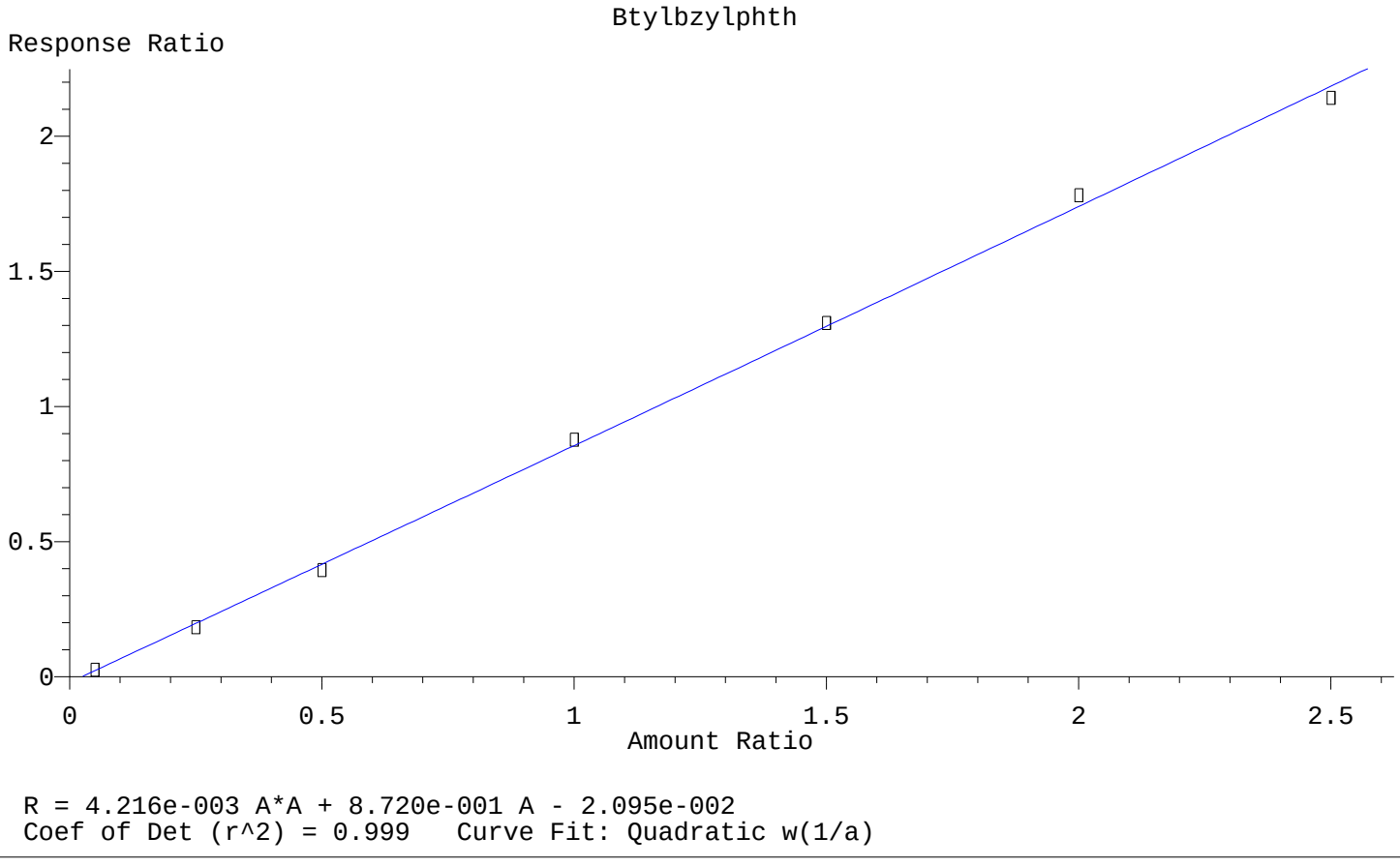
R = 4.867e-002 A*A + 4.174e-001 A - 2.086e-002
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a)



R = -6.560e-002 A*A + 1.950e+000 A - 4.386e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)

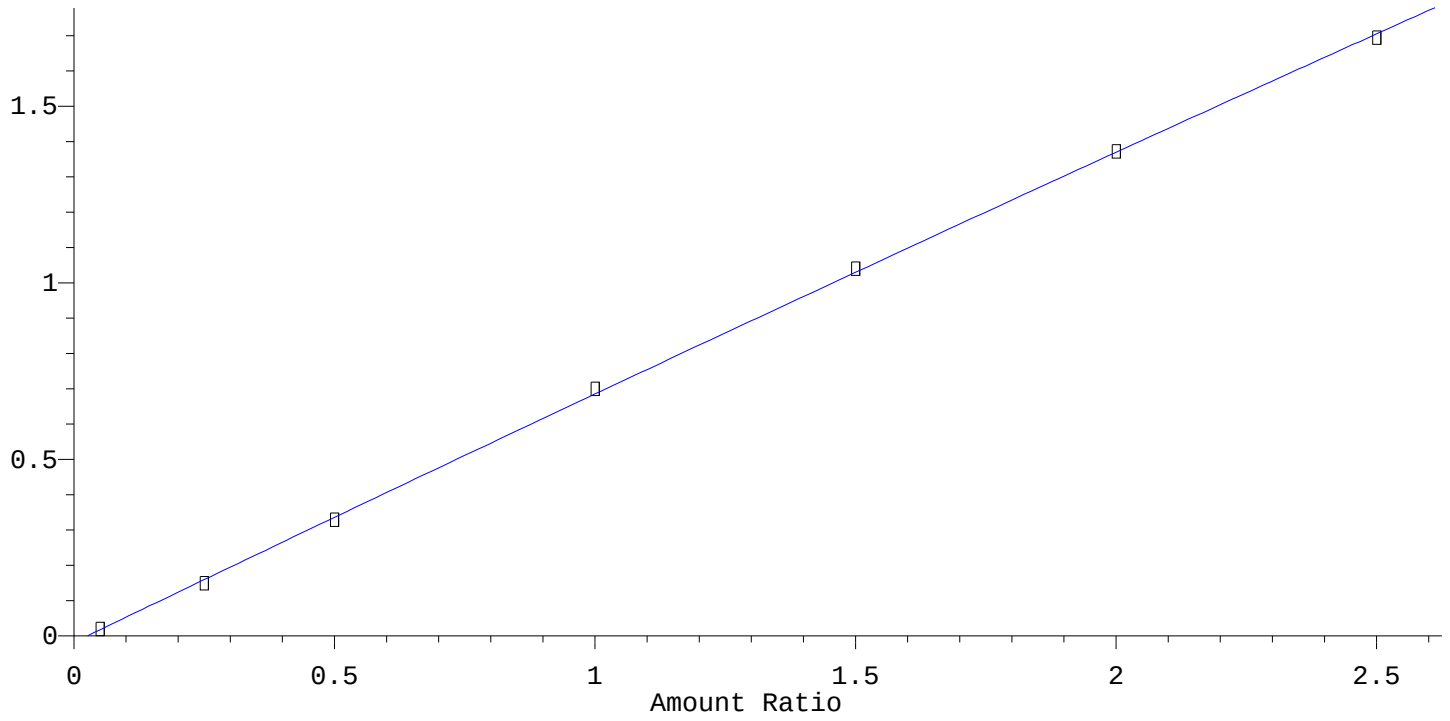


R = -2.087e-003 A*A + 2.719e-001 A - 6.586e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)



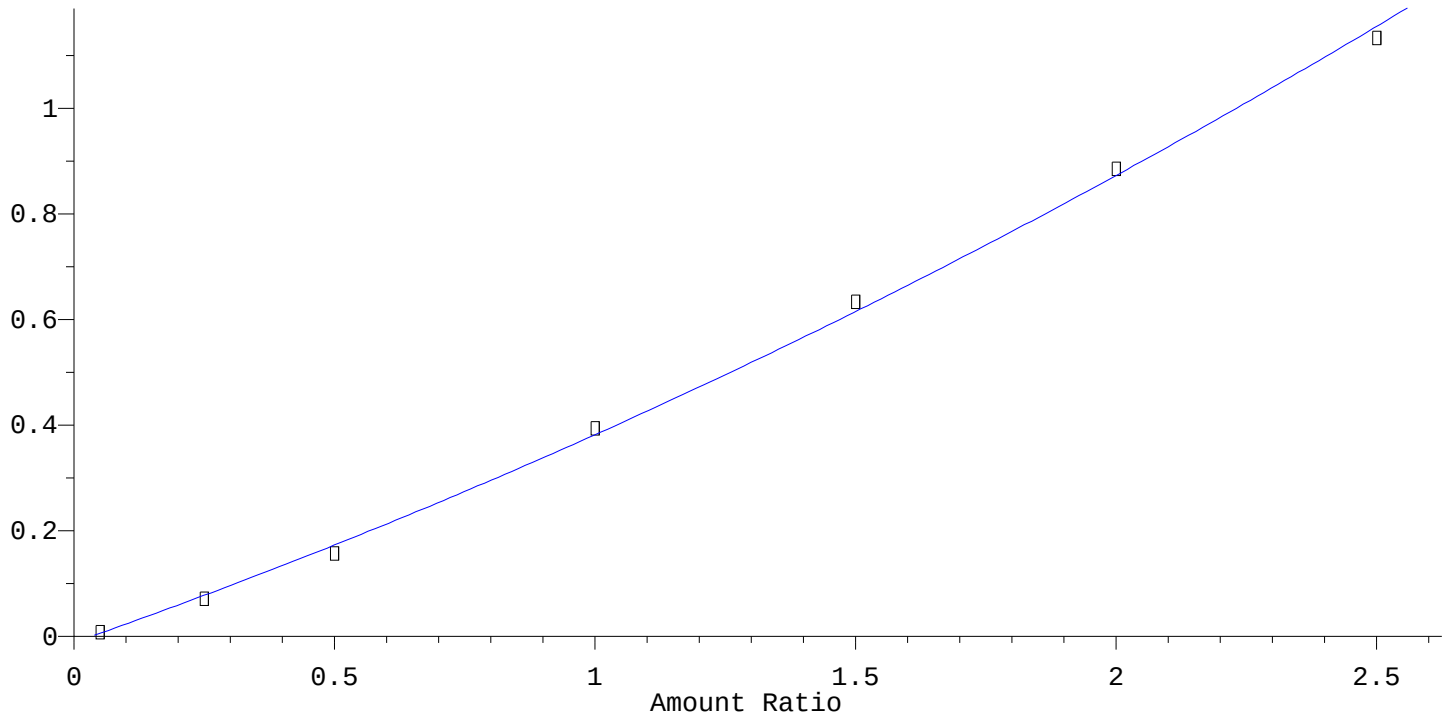
R = 4.216e-003 A*A + 8.720e-001 A - 2.095e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)

bis2Ethlhxlad



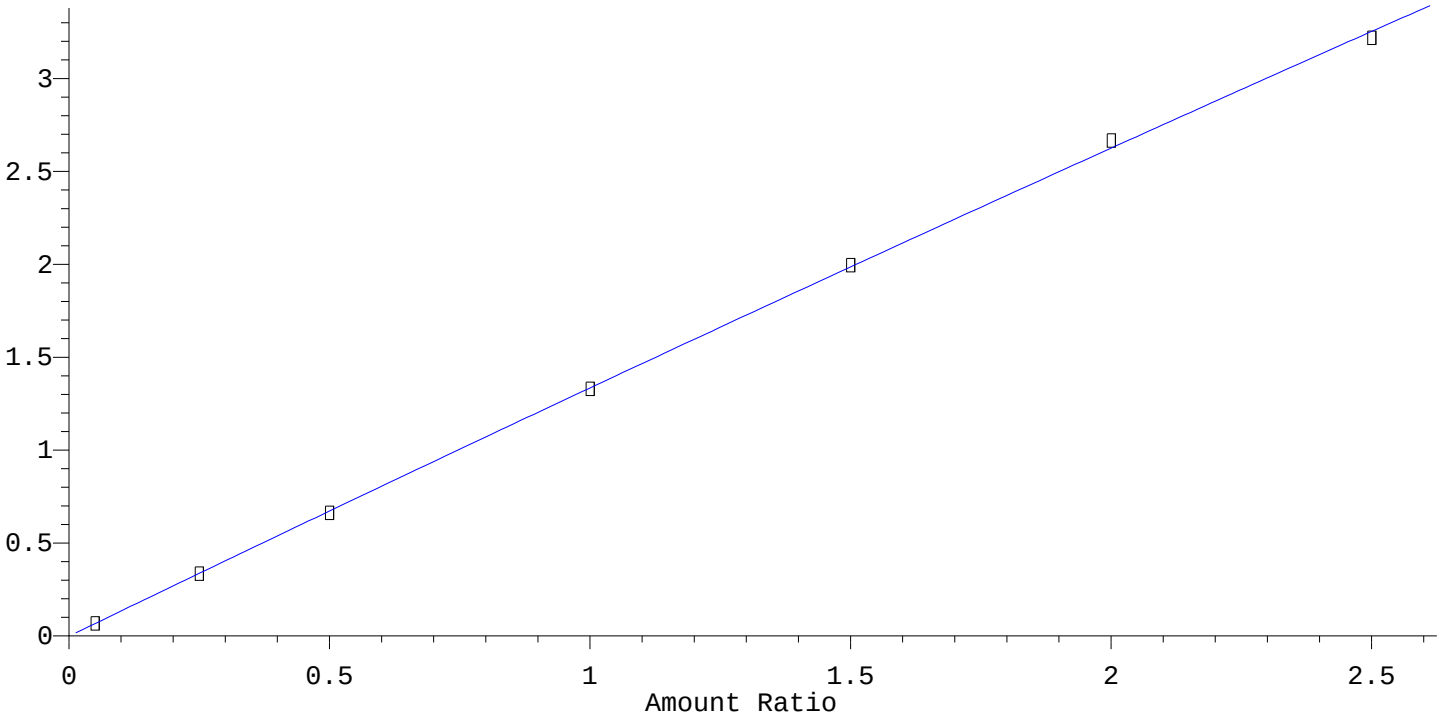
R = -9.440e-003 A*A + 7.129e-001 A - 1.822e-002
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

33Diclbnzidin



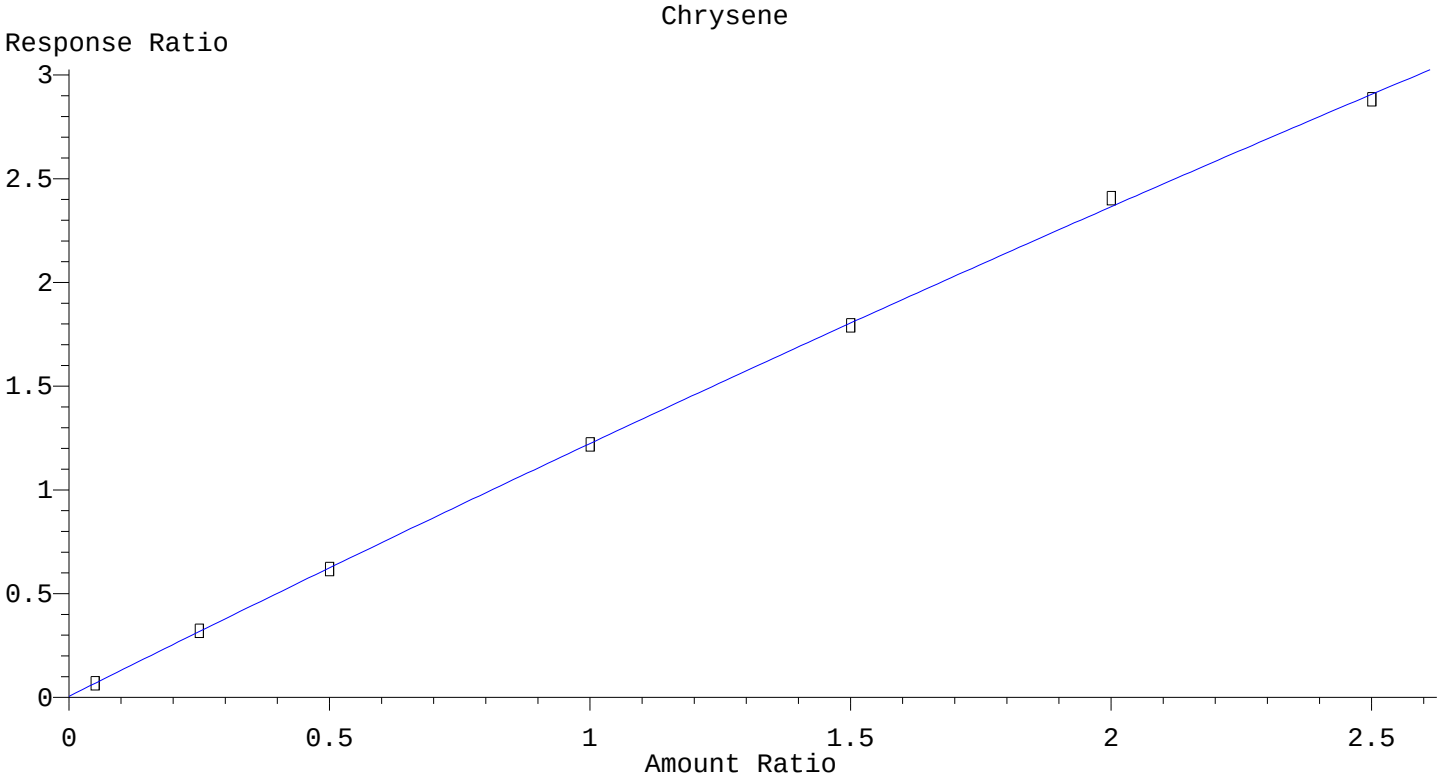
R = 4.894e-002 A*A + 3.443e-001 A - 1.131e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)

B[a]anthracen



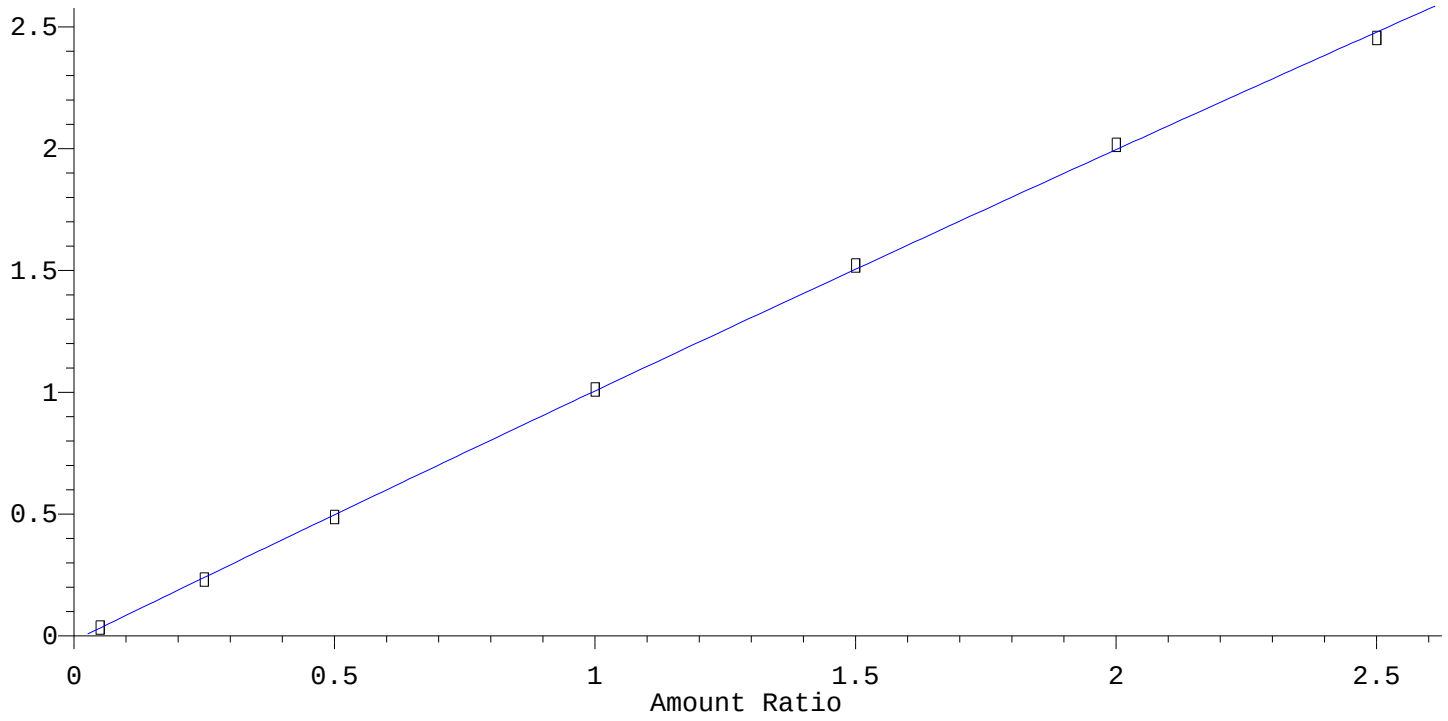
R = -2.292e-002 A*A + 1.359e+000 A - 1.702e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

Chrysene



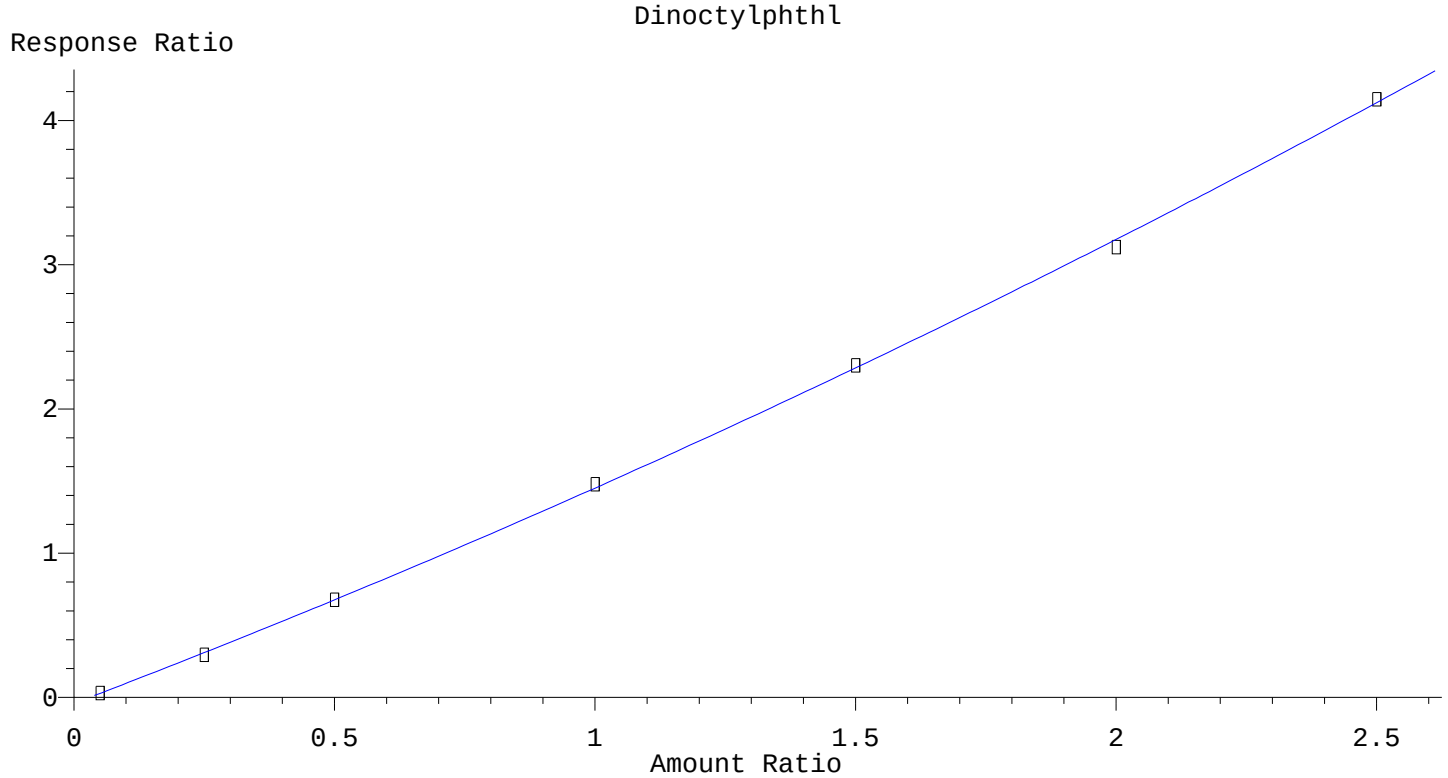
R = -3.870e-002 A*A + 1.257e+000 A + 5.205e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

bis2Ethlhxlph

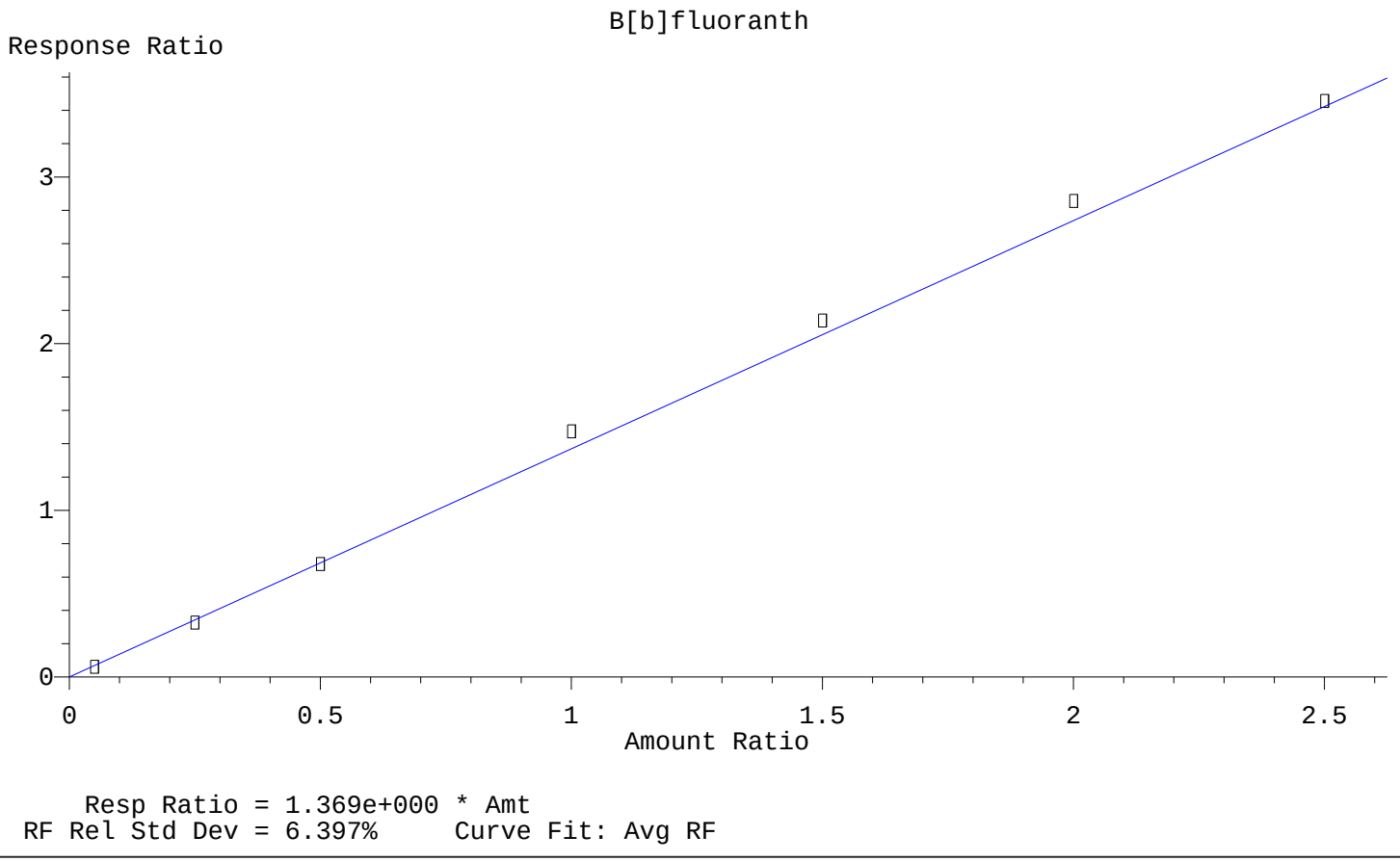


R = -1.738e-002 A*A + 1.043e+000 A - 1.968e-002
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

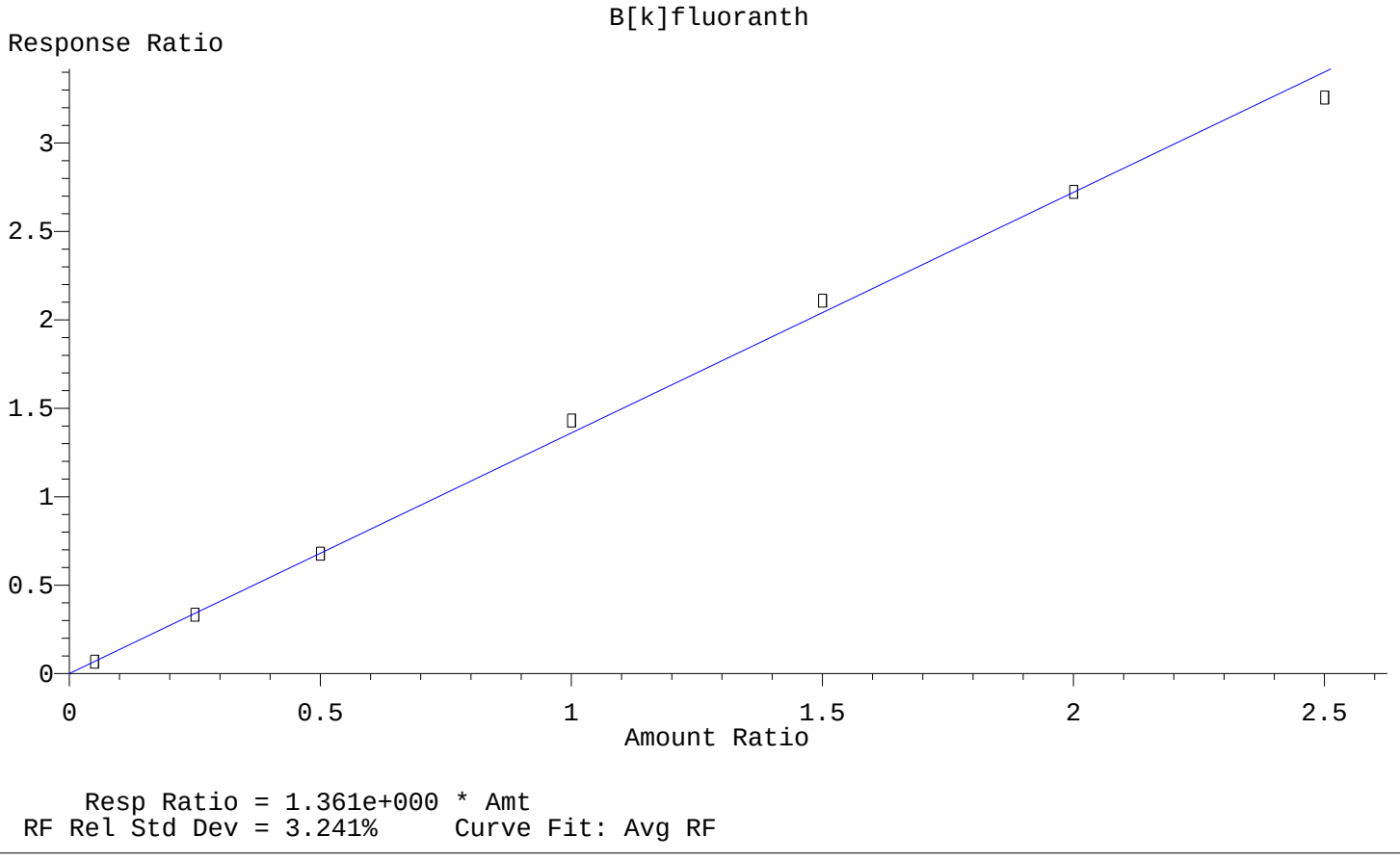
Dinoctylphthl



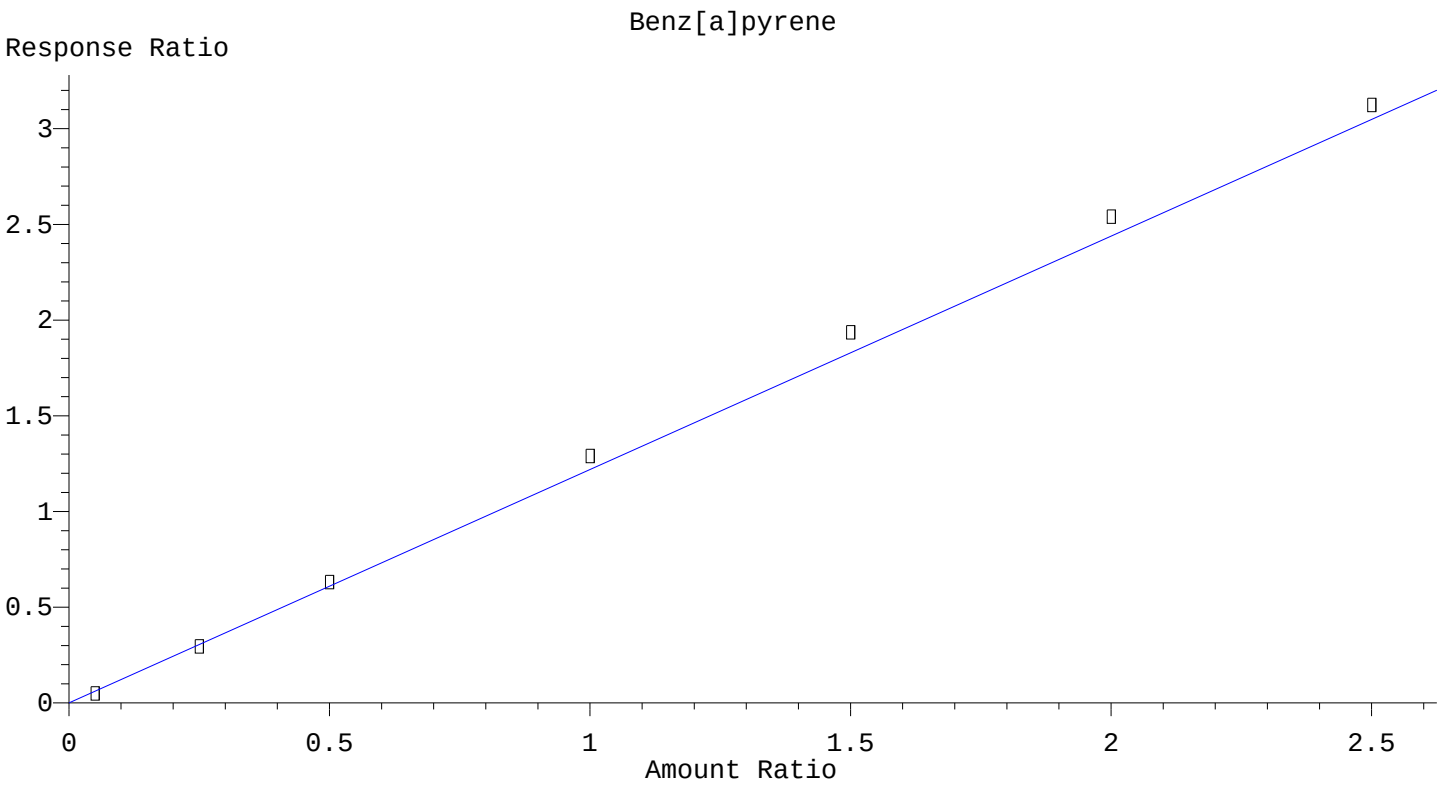
R = 1.155e-001 A*A + 1.377e+000 A - 4.115e-002
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



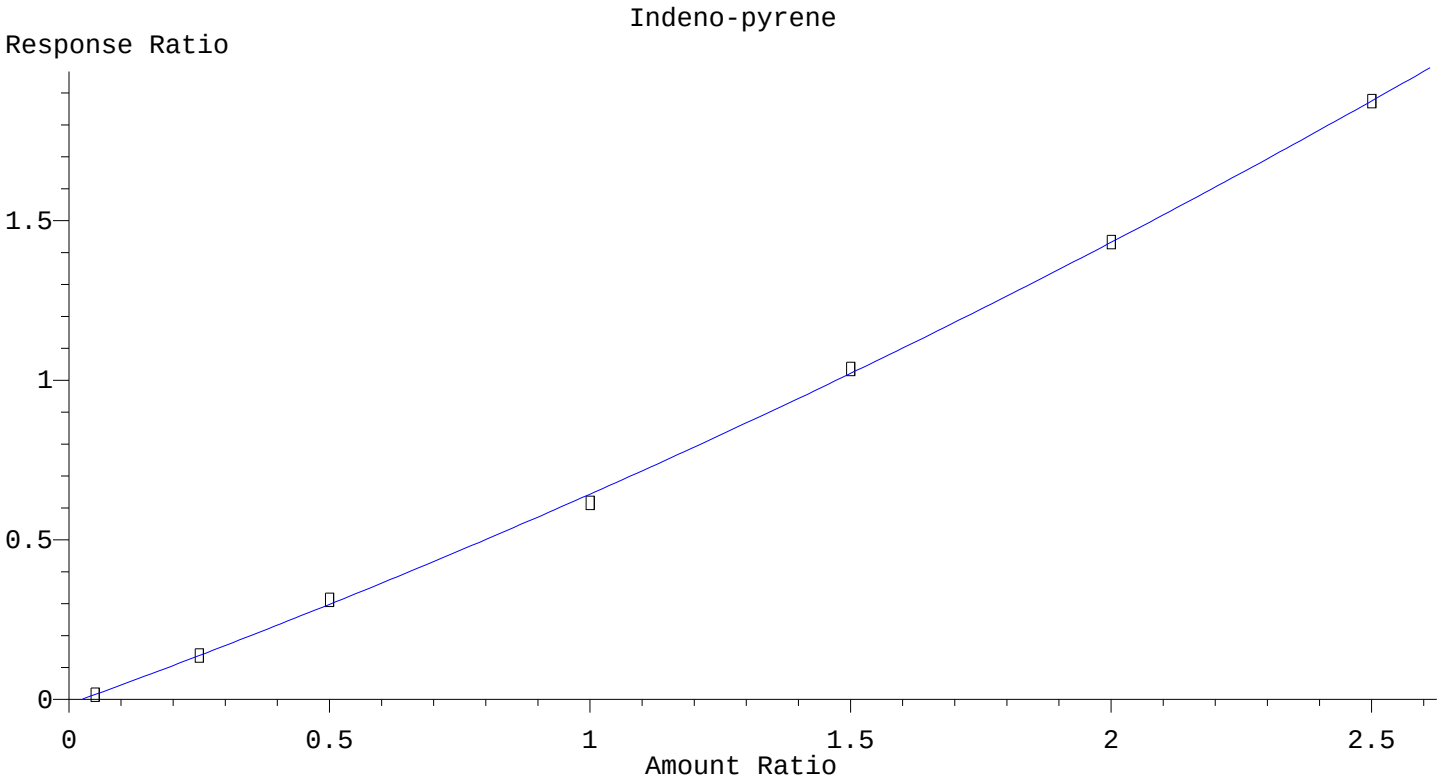
Resp Ratio = 1.369e+000 * Amt
RF Rel Std Dev = 6.397% Curve Fit: Avg RF



Resp Ratio = 1.361e+000 * Amt
RF Rel Std Dev = 3.241% Curve Fit: Avg RF

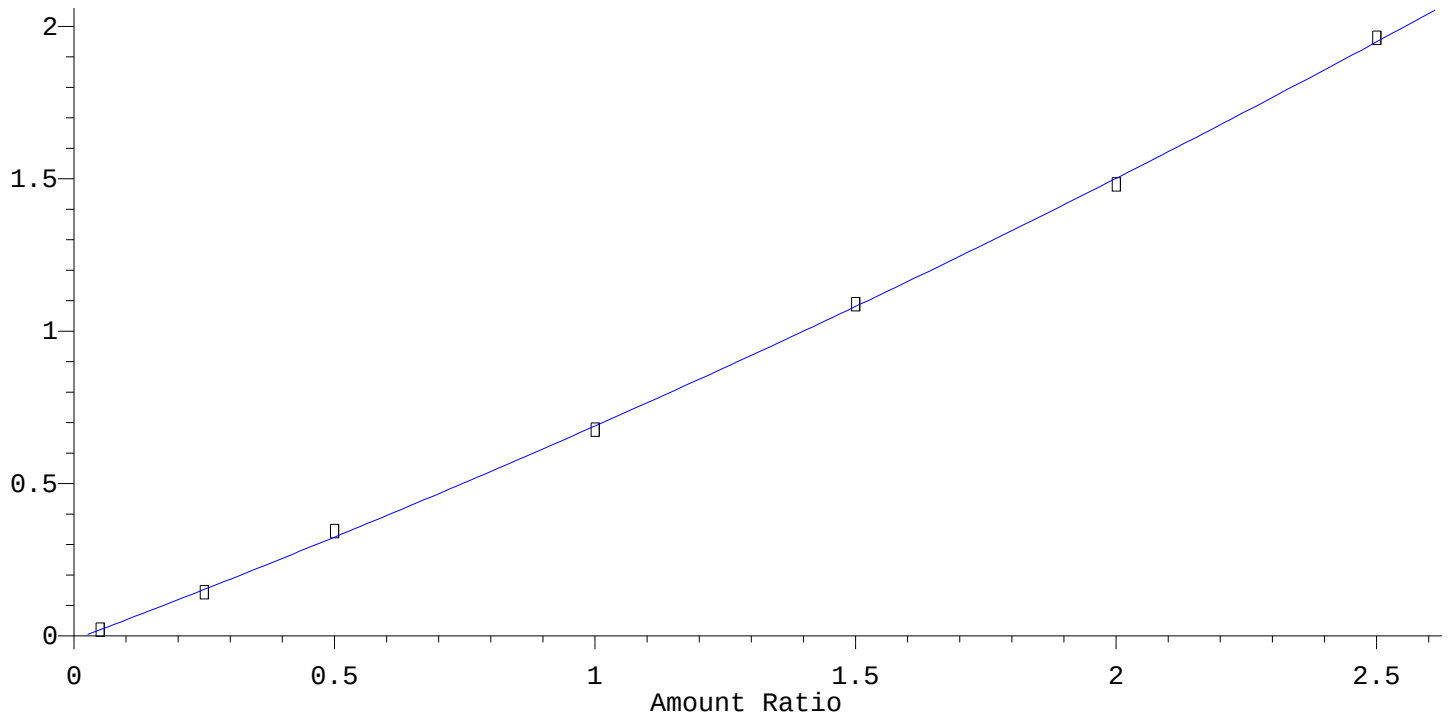


Resp Ratio = 1.219e+000 * Amt
RF Rel Std Dev = 8.811% Curve Fit: Avg RF



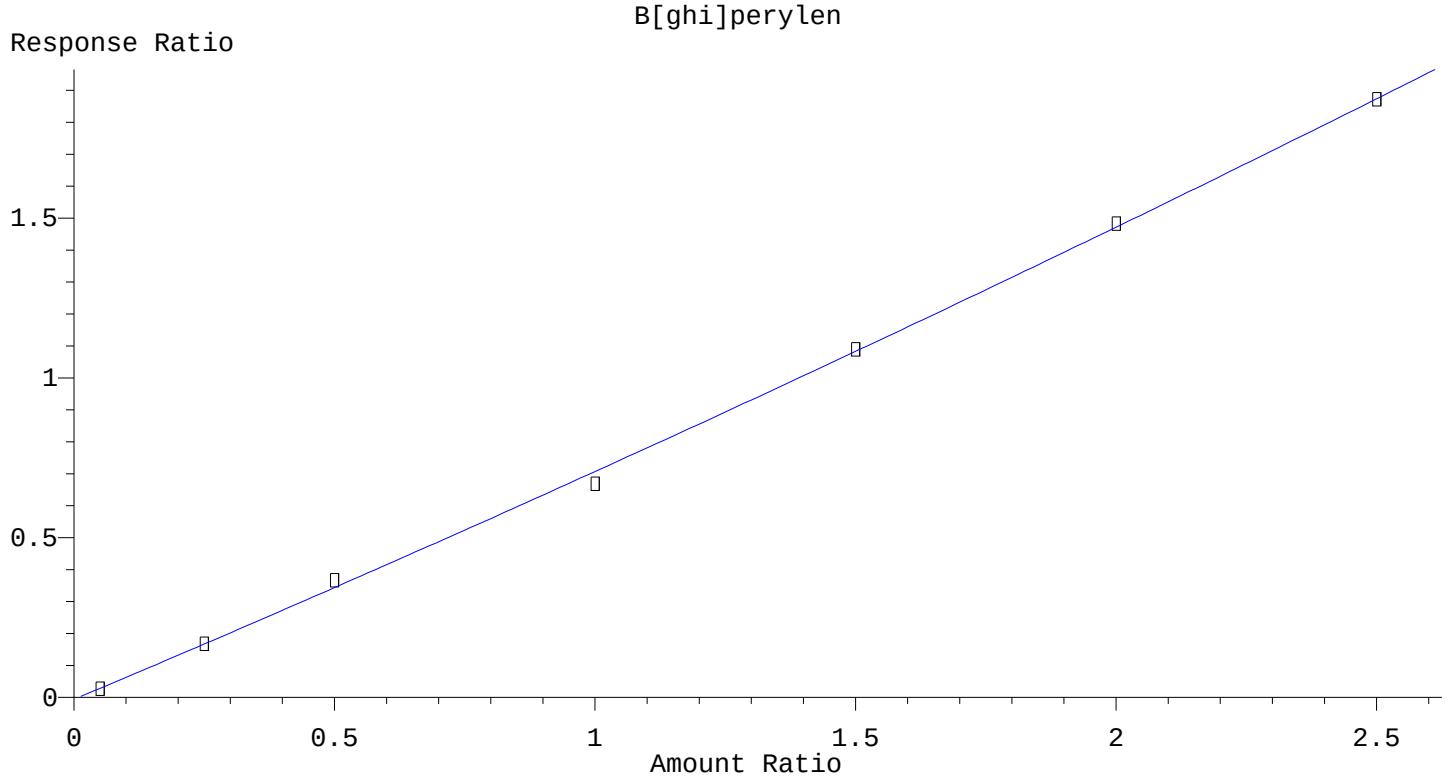
R = 6.542e-002 A*A + 5.924e-001 A - 1.471e-002
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

Dib[ah]anthr



R = 5.571e-002 A*A + 6.454e-001 A - 1.243e-002
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

B[ghi]perylen



R = 2.585e-002 A*A + 6.874e-001 A - 6.423e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1IB01.D Vial: 2
Acq On : 17 Mar 2022 12:52 Operator: JJY
Sample : InstrumentBlank Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:08:32 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

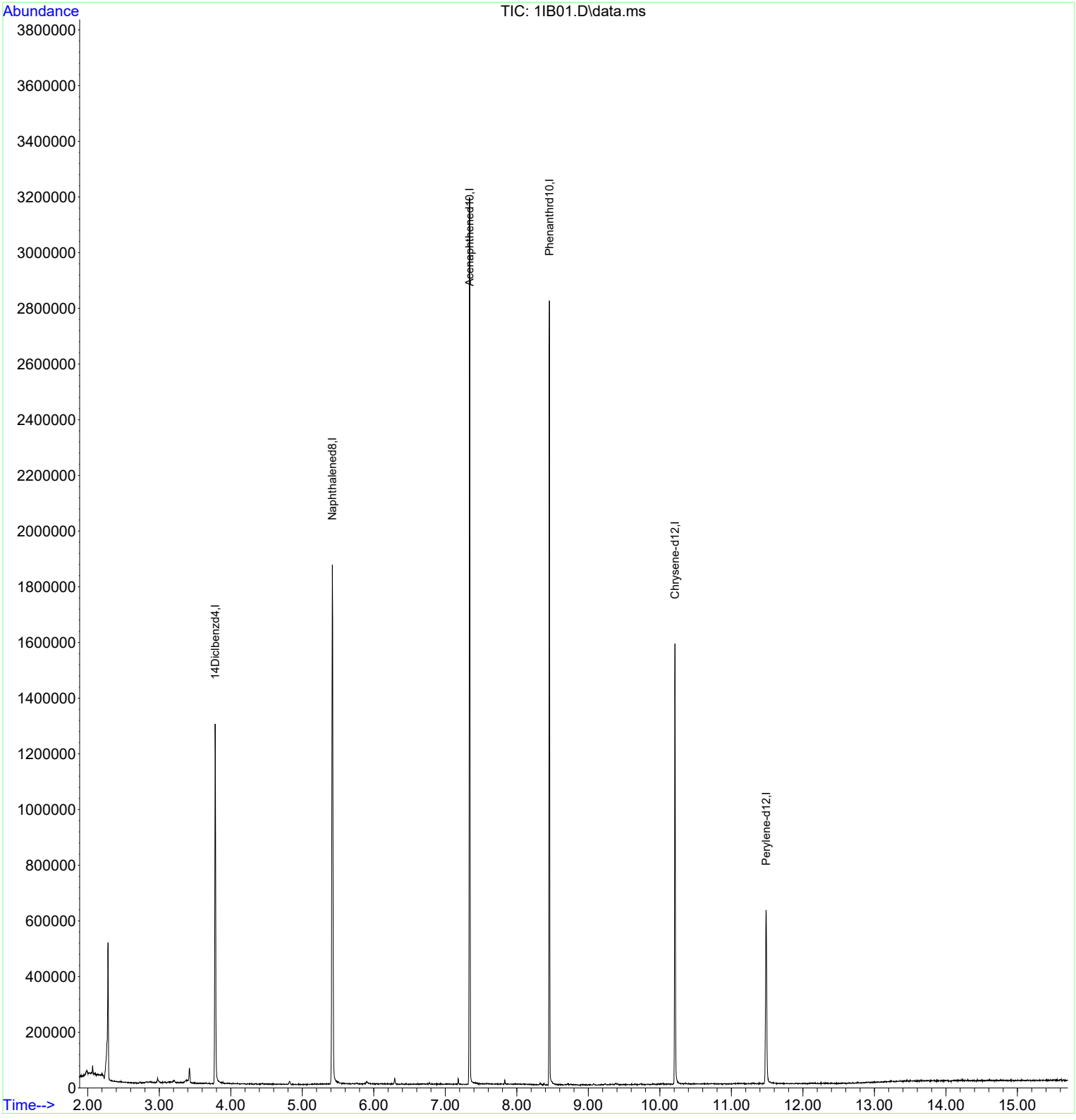
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	205088	20.00	ug/mL	0.00
21) Naphthalened8	5.421	136	1006637	20.00	ug/mL	0.00
39) Acenaphthened10	7.339	164	549759	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	675790	20.00	ug/mL	0.00
75) Chrysene-d12	10.212	240	389120	20.00	ug/mL	0.00
86) Perylene-d12	11.485	264	236896	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	0.000	112	0	0.00	%REC	
Spiked Amount 100.000			Recovery =	0.00%		
7) SURRPhenol-d5	0.000	99	0	0.00	%REC	
Spiked Amount 100.000			Recovery =	0.00%		
22) SURRNitrbenzened5	0.000	82	0	0.00	%REC	
Spiked Amount 100.000			Recovery =	0.00%		
44) SUR2Flbiphenyl	0.000	172	0	0.00	%REC	
Spiked Amount 100.000			Recovery =	0.00%		
62) SURR246Tribrphenl	0.000	330	0	0.00	%REC	
Spiked Amount 100.000			Recovery =	0.00%		
78) SURRTerphenyl-d14	0.000	244	0	0.00	%REC	
Spiked Amount 100.000			Recovery =	0.00%		
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1IB01.D Vial: 2
Acq On : 17 Mar 2022 12:52 Operator: JJY
Sample : InstrumentBlank Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:08:32 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL7.D Vial: 3
Acq On : 17 Mar 2022 13:15 Operator: JJY
Sample : ICAL 50 ug/ml SVMS9155 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:55:55 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:55:46 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	188784	20.00	ug/mL	0.00
21) Naphthalened8	5.430	136	936525	20.00	ug/mL	0.00
39) Acenaphthened10	7.345	164	478547	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	643750	20.00	ug/mL	0.00
75) Chrysene-d12	10.221	240	358579	20.00	ug/mL	0.00
86) Perylene-d12	11.494	264	271930	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.657	112	641463	125.00	%REC	0.00
Spiked Amount 100.000			Recovery = 125.00%			
7) SURRPhenol-d5	3.424	99	774520	125.00	%REC	0.01
Spiked Amount 100.000			Recovery = 125.00%			
22) SURRNitrbenzened5	4.447	82	662572	250.00	%REC	0.01
Spiked Amount 100.000			Recovery = 250.00%			
44) SURR2Flbiphenyl	6.754	172	1553169	250.00	%REC	0.00
Spiked Amount 100.000			Recovery = 250.00%			
62) SURR246Tribrphenl	7.987	330	168569	125.00	%REC	0.00
Spiked Amount 100.000			Recovery = 125.00%			
78) SURRTerphenyl-d14	9.502	244	1078113	250.00	%REC	0.00
Spiked Amount 100.000			Recovery = 250.00%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.935	74	431551	50.0000	ug/mL	99
3) Pyridine	1.947	79	710316	50.0000	ug/mL	98
5) Aniline	3.458	93	908900	50.0000	ug/mL#	46
6) bis2Clethletr	3.529	93	597914	50.0000	ug/mL	98
8) Phenol	3.438	94	842075	50.0000	ug/mL	97
9) 2-Cl-phenol	3.566	128	602539	50.0000	ug/mL	98
10) 13Diclbenz	3.725	146	698746	50.0000	ug/mL	99
11) 14Diclbenz	3.808	146	671350	50.0000	ug/mL	98
12) 12Diclbenz	3.970	146	629811	50.0000	ug/mL	99
13) Benzyl alcoho	3.958	108	402398	50.0000	ug/mL	96
14) bis2clispreth	4.123	45	683250	50.0000	ug/mL	99
15) 2Methylphenol	4.095	107	462005	50.0000	ug/mL	98
16) Ntrspyrrol	4.259	100	290264	50.0000	ug/mL	97
17) Acetophenone	4.271	105	800588	50.0000	ug/mL	99
18) Hexaclethane	4.362	117	275917	50.0000	ug/mL	98
19) N-Ntrsdinprop	4.288	70	416392	50.0000	ug/mL	99
20) 3&4Methylphenol	4.296	107	564452	50.0000	ug/mL	97
23) Nitrobenzene	4.473	77	635162	50.0000	ug/mL	98
24) Isophorone	4.799	82	1231729	50.0000	ug/mL	98
25) 2-Nitrophenol	4.885	139	316154	50.0000	ug/mL	98
26) 24Dimthpheno	4.995	122	462415	50.0000	ug/mL	99
27) bis2clethoxym	5.137	93	821707	50.0000	ug/mL	98
28) 24Diclphenol	5.240	162	622871	50.0000	ug/mL	100
29) 124Triclbenz	5.356	180	721723	50.0000	ug/mL	97
30) Benzoic acid	5.223	122	227792	50.0000	ug/mL	93
31) Naphthalene	5.461	128	2212477	50.0000	ug/mL	99
32) 4-Cl-aniline	5.584	127	853513	50.0000	ug/mL	98
33) 26Diclphenol	5.578	162	594515	50.0000	ug/mL	97
34) Hexaclprop	5.595	213	401060	50.0000	ug/mL	99
35) Hexaclbutdien	5.669	225	381043	50.0000	ug/mL	98
36) 4Cl3methylphe	6.240	107	703207	50.0000	ug/mL	99
37) 2Methylnaphth	6.351	142	1465128	50.0000	ug/mL	97
38) 1Methylnaphth	6.453	141	1200062	50.0000	ug/mL	99
40) Hxclcycpentdi	6.527	237	372314	50.0000	ug/mL	95

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL7.D Vial: 3
Acq On : 17 Mar 2022 13:15 Operator: JJY
Sample : ICAL 50 ug/ml SVMS9155 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:55:55 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:55:46 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

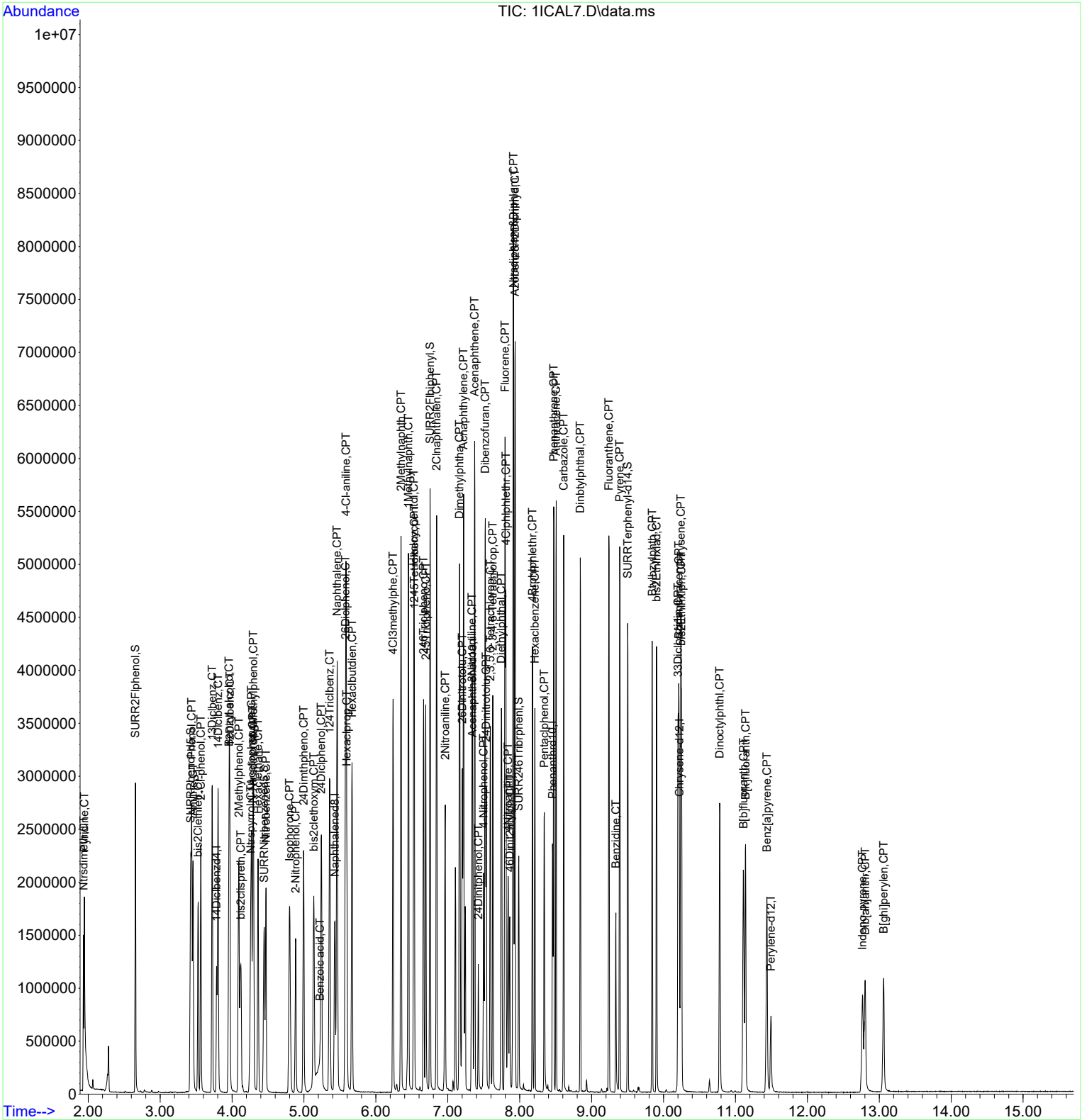
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.535	216	588552	50.0000	ug/mL	96
42) 246Triclpheno	6.663	196	451594	50.0000	ug/mL	99
43) 245Triclpheno	6.695	196	460802	50.0000	ug/mL	99
45) 2Clnaphthalen	6.845	162	1360150	50.0000	ug/mL	99
46) 2Nitroaniline	6.965	65	423142	50.0000	ug/mL	96
47) Acnaphthylene	7.220	152	2081150	50.0000	ug/mL	99
48) Dimethylphtha	7.163	163	1507270	50.0000	ug/mL	100
49) 26Dinitrotolu	7.203	165	367449	50.0000	ug/mL	98
50) Acenaphthene	7.374	154	1200341	50.0000	ug/mL	100
51) 3Nitroaniline	7.337	138	401115	50.0000	ug/mL	92
52) 24Dinitphenol	7.425	184	128126	50.0000	ug/mL	91
53) Dibenzofuran	7.521	168	1800892	50.0000	ug/mL	98
54) 24Dinitrotolu	7.536	165	463956	50.0000	ug/mL	97
55) 4-Nitrophenol	7.499	65	301827	50.0000	ug/mL	95
56) 2,3,5,6-Tetrachlorop	7.592	232	348514	50.0000	ug/mL	99
57) 2,3,4,6-Tetrachlorop	7.627	232	332788	50.0000	ug/mL	97
58) Fluorene	7.797	166	1422527	50.0000	ug/mL	99
59) 4Clphlphlethr	7.808	204	635354	50.0000	ug/mL	97
60) Diethylphthal	7.746	149	1600459	50.0000	ug/mL	99
61) 4Nitroaniline	7.840	138	373080	50.0000	ug/mL	98
64) 46Dinit2mylph	7.862	198	193602	50.0000	ug/mL	98
65) Ntrsdiphlam&Diphlam	7.914	169	1991681	100.0000	ug/mL	98
66) Azobenz&12Diphlhyd	7.936	182	659221	100.0000	ug/mL	100
67) 4Brphlphlethr	8.178	248	358785	50.0000	ug/mL	93
68) Hexaclbenzene	8.212	284	322189	50.0000	ug/mL	98
69) Pentaclphenol	8.343	266	182775	50.0000	ug/mL	93
70) Phenanthrene	8.473	178	1502932	50.0000	ug/mL	99
71) Anthracene	8.507	178	1496110	50.0000	ug/mL	99
72) Carbazole	8.613	167	1483109	50.0000	ug/mL	99
73) Dinbtylphthal	8.843	149	1927026	50.0000	ug/mL	99
74) Fluoranthene	9.240	202	1570588	50.0000	ug/mL	98
76) Benzidine	9.337	184	447447	50.0000	ug/mL	99
77) Pyrene	9.391	202	1564751	50.0000	ug/mL	97
79) Btylbzylphth	9.843	149	768006	50.0000	ug/mL	96
80) bis2Ethlhxlad	9.903	129	607438	50.0000	ug/mL	98
81) 33Diclbnzidin	10.201	252	406315	50.0000	ug/mL	95
82) B[a]anthracen	10.212	228	1154246	50.0000	ug/mL	98
83) Chrysene	10.241	228	1033605	50.0000	ug/mL	98
84) bis2Ethlhxlph	10.249	149	880076	50.0000	ug/mL	99
85) Dinoctylphthl	10.781	149	1486894	50.0000	ug/mL	100
87) B[b]fluoranth	11.113	252	939806	50.0000	ug/mL	98
88) B[k]fluoranth	11.141	252	885566	50.0000	ug/mL	99
89) Benz[a]pyrene	11.437	252	849512	50.0000	ug/mL	98
90) Indeno-pyrene	12.767	276	509671	50.0000	ug/mL	97
91) Dib[ah]anthr	12.804	278	533662	50.0000	ug/mL	99
92) B[ghi]perylen	13.062	276	508994	50.0000	ug/mL	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL7.D Vial: 3
Acq On : 17 Mar 2022 13:15 Operator: JJY
Sample : ICAL 50 ug/ml SVMS9155 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:55:55 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:55:46 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL6.D Vial: 4
Acq On : 17 Mar 2022 13:38 Operator: JJY
Sample : ICAL 40 ug/ml SVMS9154 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:57:21 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:55:46 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	188365	20.00	ug/mL	0.00
21) Naphthalened8	5.427	136	933333	20.00	ug/mL	0.00
39) Acenaphthened10	7.345	164	482163	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	638526	20.00	ug/mL	0.00
75) Chrysene-d12	10.215	240	334740	20.00	ug/mL	0.00
86) Perylene-d12	11.488	264	231575	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.657	112	524426	102.42	%REC	0.00
Spiked Amount 100.000			Recovery = 102.42%			
7) SURRPhenol-d5	3.421	99	629154	101.77	%REC	0.00
Spiked Amount 100.000			Recovery = 101.77%			
22) SURRNitrbenzened5	4.444	82	537552	203.52	%REC	0.00
Spiked Amount 100.000			Recovery = 203.52%			
44) SURR2Flbiphenyl	6.754	172	1291779	206.37	%REC	0.00
Spiked Amount 100.000			Recovery = 206.37%			
62) SURR246Tribrphenl	7.987	330	134467	98.96	%REC	0.00
Spiked Amount 100.000			Recovery = 98.96%			
78) SURRTerphenyl-d14	9.502	244	857301	212.95	%REC	0.00
Spiked Amount 100.000			Recovery = 212.95%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.932	74	349933	40.6338	ug/mL	99
3) Pyridine	1.947	79	576556	40.6747	ug/mL	99
5) Aniline	3.455	93	751512	41.4338	ug/mL#	45
6) bis2Clethletr	3.526	93	489953	41.0630	ug/mL	99
8) Phenol	3.436	94	697653	41.5168	ug/mL	99
9) 2-Cl-phenol	3.563	128	492969	40.9986	ug/mL	99
10) 13Diclbenz	3.723	146	575261	41.2554	ug/mL	96
11) 14Diclbenz	3.805	146	551719	41.1817	ug/mL	98
12) 12Diclbenz	3.967	146	514920	40.9699	ug/mL	98
13) Benzyl alcoho	3.955	108	330560	41.1651	ug/mL	94
14) bis2clispreth	4.123	45	556289	40.7996	ug/mL	98
15) 2Methylphenol	4.092	107	385741	41.8393	ug/mL	96
16) Ntrspyrrol	4.251	100	241285	41.6555	ug/mL	99
17) Acetophenone	4.265	105	662477	41.4664	ug/mL	98
18) Hexaclethane	4.362	117	225634	40.9790	ug/mL	98
19) N-Ntrsdinprop	4.282	70	332920	40.0657	ug/mL	98
20) 3&4Methylphenol	4.291	107	460169	40.8531	ug/mL	97
23) Nitrobenzene	4.470	77	521547	41.1966	ug/mL	98
24) Isophorone	4.797	82	1000929	40.7700	ug/mL	99
25) 2-Nitrophenol	4.885	139	254473	40.3827	ug/mL	98
26) 24Dimthpheno	4.993	122	377695	40.9791	ug/mL	95
27) bis2clethoxym	5.135	93	659822	40.2868	ug/mL	99
28) 24Diclphenol	5.237	162	515884	41.5534	ug/mL	99
29) 124Triclbenz	5.356	180	592687	41.2010	ug/mL	97
30) Benzoic acid	5.200	122	165479	36.4466	ug/mL	86
31) Naphthalene	5.459	128	1813294	41.1190	ug/mL	99
32) 4-Cl-aniline	5.584	127	721253	42.3965	ug/mL	99
33) 26Diclphenol	5.578	162	491220	41.4540	ug/mL	98
34) Hexaclprop	5.595	213	332511	41.5958	ug/mL	99
35) Hexaclbutdien	5.669	225	317237	41.7698	ug/mL	98
36) 4Cl3methylphe	6.237	107	577276	41.1863	ug/mL	99
37) 2Methylnaphth	6.351	142	1202004	41.1607	ug/mL	98
38) 1Methylnaphth	6.453	141	984314	41.1512	ug/mL	99
40) Hxclcycpentdi	6.527	237	302728	40.3500	ug/mL	97

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL6.D Vial: 4
Acq On : 17 Mar 2022 13:38 Operator: JJY
Sample : ICAL 40 ug/ml SVMS9154 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:57:21 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:55:46 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

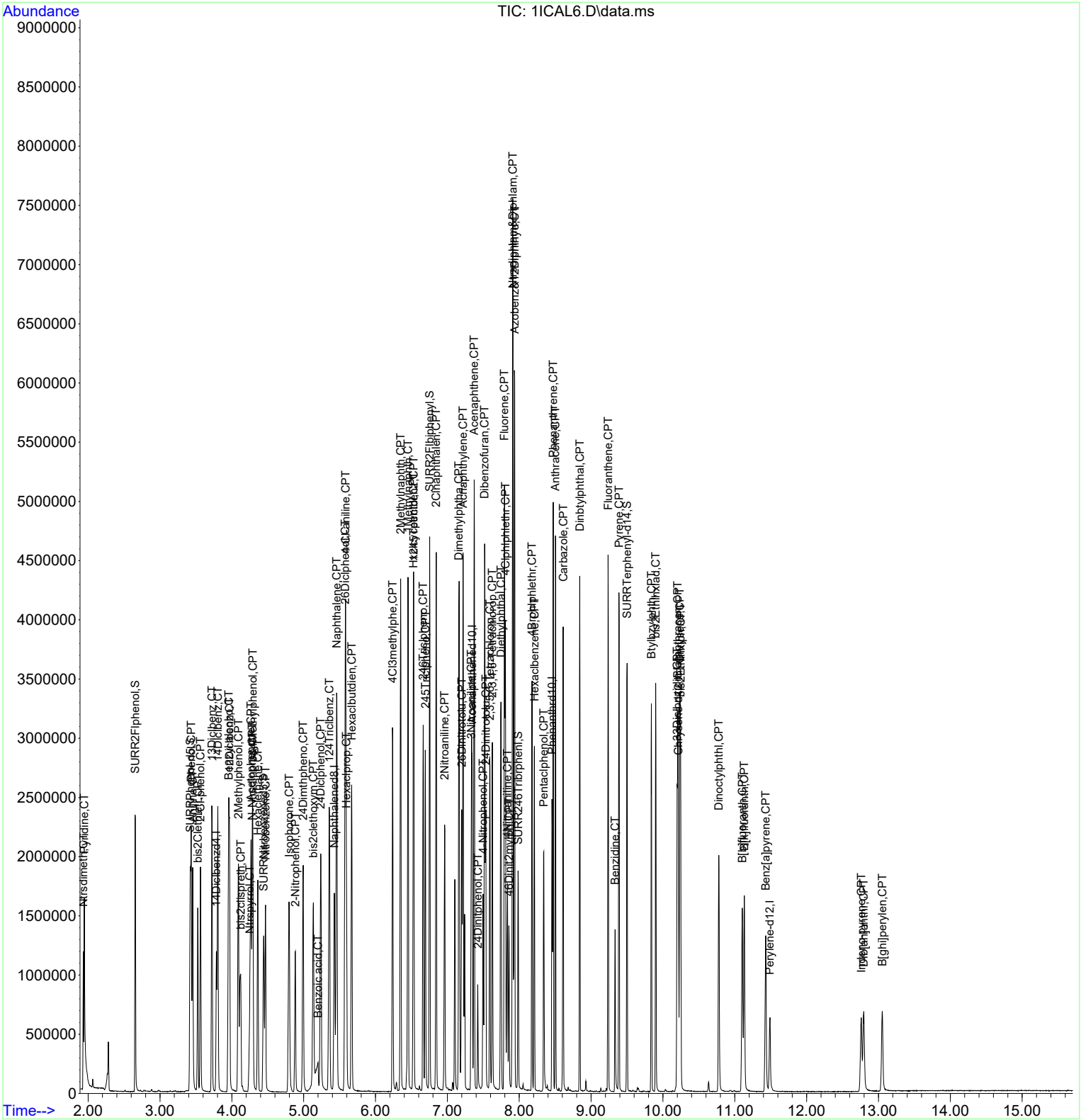
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.533	216	496078	41.8279	ug/mL	97
42) 246Triclpheno	6.663	196	370657	40.7310	ug/mL	98
43) 245Triclpheno	6.695	196	378889	40.8036	ug/mL	98
45) 2Clnaphthalen	6.845	162	1131033	41.2657	ug/mL	100
46) 2Nitroaniline	6.962	65	343815	40.3218	ug/mL	97
47) Acnaphthylene	7.217	152	1699885	40.5338	ug/mL	99
48) Dimethylphtha	7.161	163	1257780	41.4109	ug/mL	99
49) 26Dinitrotolu	7.203	165	297124	40.1274	ug/mL	99
50) Acenaphthene	7.374	154	975279	40.3204	ug/mL	98
51) 3Nitroaniline	7.334	138	326169	40.3529	ug/mL	93
52) 24Dinitphenol	7.425	184	95742	37.0822	ug/mL	91
53) Dibenzofuran	7.519	168	1491648	41.1036	ug/mL	99
54) 24Dinitrotolu	7.536	165	375494	40.1631	ug/mL	96
55) 4-Nitrophenol	7.496	65	244261	40.1603	ug/mL	98
56) 2,3,5,6-Tetrachlorop	7.593	232	277034	39.4470	ug/mL	97
57) 2,3,4,6-Tetrachlorop	7.627	232	269108	40.1291	ug/mL	95
58) Fluorene	7.794	166	1171043	40.8520	ug/mL	98
59) 4Clphlphlethr	7.808	204	539491	42.1375	ug/mL	97
60) Diethylphthal	7.746	149	1307466	40.5403	ug/mL	99
61) 4Nitroaniline	7.837	138	300020	39.9070	ug/mL	99
64) 46Dinit2mylph	7.860	198	150670	39.2307	ug/mL	100
65) Ntrsdiphlam&Diphlam	7.911	169	1638841	82.9575	ug/mL	98
66) Azobenz&12Diphlhyd	7.936	182	545379	83.4077	ug/mL	95
67) 4Brphlphlethr	8.178	248	300849	42.2691	ug/mL	98
68) Hexaclbenzene	8.212	284	262609	41.0873	ug/mL	100
69) Pentaclphenol	8.343	266	144417	39.8300	ug/mL	99
70) Phenanthrene	8.473	178	1224786	41.0799	ug/mL	100
71) Anthracene	8.505	178	1232997	41.5439	ug/mL	98
72) Carbazole	8.613	167	1189681	40.4358	ug/mL	99
73) Dinbtylphthal	8.843	149	1549814	40.5416	ug/mL	99
74) Fluoranthene	9.238	202	1263456	40.5515	ug/mL	98
76) Benzidine	9.334	184	364781	43.6654	ug/mL	99
77) Pyrene	9.388	202	1250495	42.8040	ug/mL	98
79) Btylbzylphth	9.840	149	596323	41.5876	ug/mL	97
80) bis2Ethlhxlad	9.900	129	459233	40.4929	ug/mL	99
81) 33Diclbnzidin	10.198	252	296410	39.0730	ug/mL	95
82) B[a]anthracen	10.207	228	892524	41.4161	ug/mL	98
83) Chrysene	10.235	228	805470	41.7390	ug/mL	99
84) bis2Ethlhxlph	10.246	149	674640	41.0581	ug/mL	98
85) Dinoctylphthl	10.778	149	1044993	37.6427	ug/mL	99
87) B[b]fluoranth	11.105	252	661297	41.3137	ug/mL	98
88) B[k]fluoranth	11.133	252	630673	41.8137	ug/mL	99
89) Benz[a]pyrene	11.431	252	588286	40.6588	ug/mL	96
90) Indeno-pyrene	12.761	276	331789	38.2215	ug/mL	96
91) Dib[ah]anthr	12.795	278	343084	37.7459	ug/mL	99
92) B[ghi]perylen	13.054	276	343331	39.6037	ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL6.D Vial: 4
Acq On : 17 Mar 2022 13:38 Operator: JJY
Sample : ICAL 40 ug/ml SVMS9154 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:57:21 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:55:46 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL5.D Vial: 5
Acq On : 17 Mar 2022 14:01 Operator: JJY
Sample : ICAL 30 ug/ml SVMS9153 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:58:34 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:58:19 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	186598	20.00	ug/mL	0.00
21) Naphthalened8	5.427	136	929046	20.00	ug/mL	0.00
39) Acenaphthened10	7.345	164	480738	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	620635	20.00	ug/mL	0.00
75) Chrysene-d12	10.215	240	340217	20.00	ug/mL	0.00
86) Perylene-d12	11.488	264	222122	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.657	112	395298	77.00	%REC	0.00
Spiked Amount 100.000			Recovery = 77.00%			
7) SURRPhenol-d5	3.418	99	466729	75.54	%REC	0.00
Spiked Amount 100.000			Recovery = 75.54%			
22) SURRNitrbenzened5	4.441	82	402952	151.93	%REC	0.00
Spiked Amount 100.000			Recovery = 151.93%			
44) SURR2Flbiphenyl	6.754	172	982639	154.98	%REC	0.00
Spiked Amount 100.000			Recovery = 154.98%			
62) SURR246Tribrphenl	7.984	330	98021	72.73	%REC	0.00
Spiked Amount 100.000			Recovery = 72.73%			
78) SURRTerphenyl-d14	9.499	244	658794	155.96	%REC	0.00
Spiked Amount 100.000			Recovery = 155.96%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.935	74	260376	30.2810	ug/mL	98
3) Pyridine	1.949	79	425564	30.0534	ug/mL	99
5) Aniline	3.455	93	561843	30.7194	ug/mL	96
6) bis2Clethletr	3.526	93	364927	30.4693	ug/mL	99
8) Phenol	3.432	94	525310	30.9696	ug/mL	99
9) 2-Cl-phenol	3.563	128	374431	31.0475	ug/mL	97
10) 13Diclbenz	3.722	146	431614	30.7640	ug/mL	98
11) 14Diclbenz	3.805	146	423946	31.4791	ug/mL	99
12) 12Diclbenz	3.967	146	398244	31.6034	ug/mL	99
13) Benzyl alcoho	3.952	108	249999	30.9764	ug/mL	97
14) bis2clispreth	4.120	45	424123	31.0900	ug/mL	97
15) 2Methylphenol	4.089	107	290014	31.0405	ug/mL	99
16) Ntrspyrrol	4.242	100	174628	29.8163	ug/mL	97
17) Acetophenone	4.262	105	496002	30.7761	ug/mL	98
18) Hexaclethane	4.362	117	170159	30.8193	ug/mL	98
19) N-Ntrsdinprop	4.279	70	257122	31.2111	ug/mL	99
20) 3&4Methylphenol	4.285	107	352431	31.2513	ug/mL	96
23) Nitrobenzene	4.467	77	388416	30.3680	ug/mL	99
24) Isophorone	4.791	82	753490	30.5390	ug/mL	98
25) 2-Nitrophenol	4.882	139	185663	29.4582	ug/mL	99
26) 24Dimthpheno	4.990	122	282530	30.4230	ug/mL	96
27) bis2clethoxym	5.132	93	496245	30.3303	ug/mL	99
28) 24Diclphenol	5.234	162	383564	30.4467	ug/mL	96
29) 124Triclbenz	5.356	180	452074	31.1043	ug/mL	99
30) Benzoic acid	5.166	122	112657	26.0858	ug/mL	97
31) Naphthalene	5.458	128	1387241	31.1668	ug/mL	100
32) 4-Cl-aniline	5.578	127	552369	31.6703	ug/mL	99
33) 26Diclphenol	5.578	162	371202	30.9085	ug/mL	98
34) Hexaclprop	5.595	213	252390	31.0983	ug/mL	98
35) Hexaclbutdien	5.666	225	239741	31.0254	ug/mL	99
36) 4Cl3methylphe	6.237	107	436622	30.8377	ug/mL	98
37) 2Methylnaphth	6.348	142	921806	31.2579	ug/mL	97
38) 1Methylnaphth	6.450	141	767298	31.7693	ug/mL	99
40) Hxclcycpentdi	6.527	237	232221	30.9088	ug/mL	96

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL5.D Vial: 5
Acq On : 17 Mar 2022 14:01 Operator: JJY
Sample : ICAL 30 ug/ml SVMS9153 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:58:34 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:58:19 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

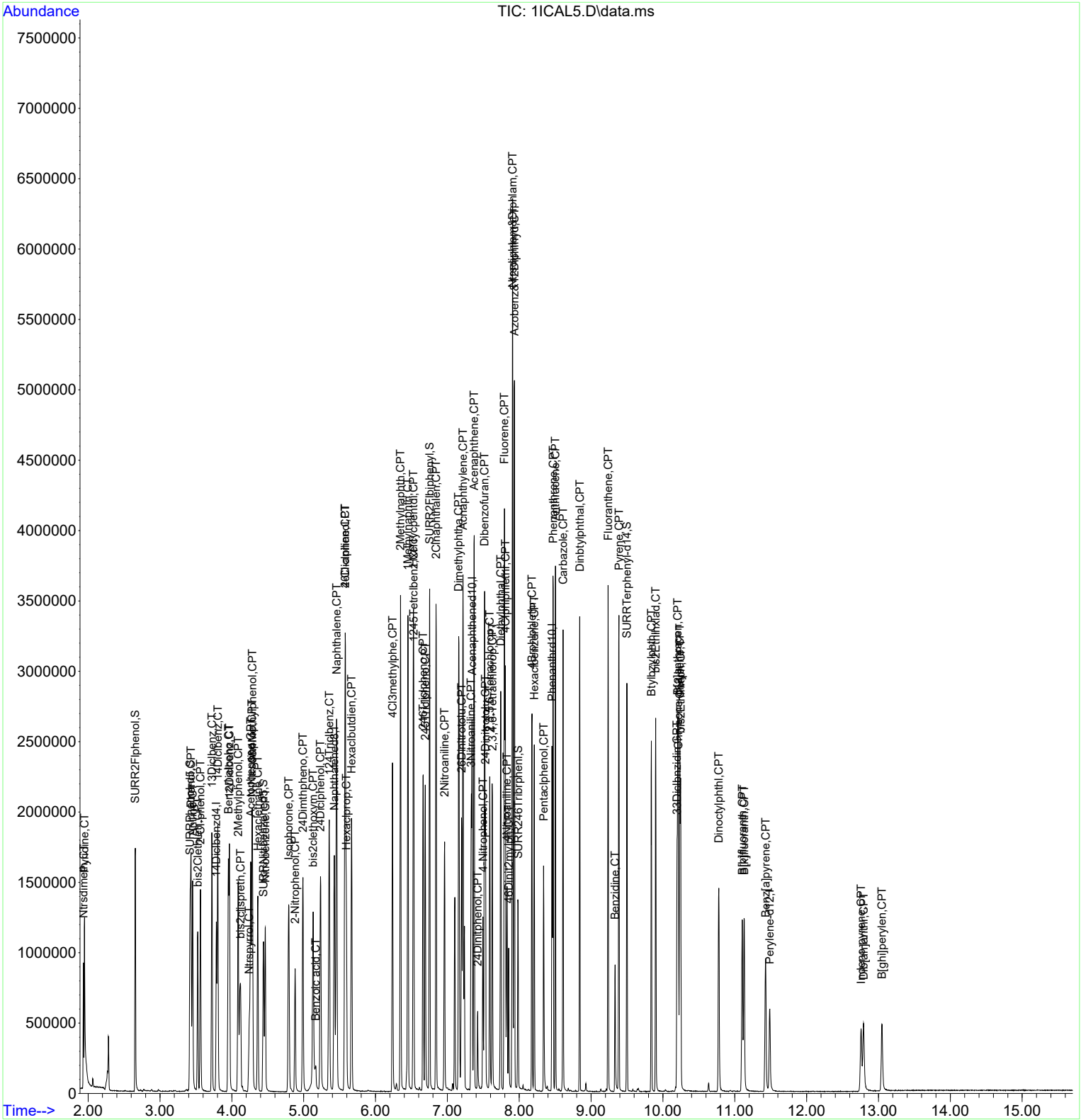
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.532	216	379020	31.3366 ug/mL	96
42) 246Triclpheno	6.663	196	280970	30.6865 ug/mL	97
43) 245Triclpheno	6.692	196	293333	31.3684 ug/mL	97
45) 2Clnaphthalen	6.842	162	861288	31.0263 ug/mL	99
46) 2Nitroaniline	6.962	65	260317	30.4972 ug/mL	97
47) Acnaphthylene	7.217	152	1333661	31.6840 ug/mL	99
48) Dimethylphtha	7.158	163	958994	31.1185 ug/mL	99
49) 26Dinitrotolu	7.197	165	227990	30.8328 ug/mL	96
50) Acenaphthene	7.374	154	754193	31.1478 ug/mL	100
51) 3Nitroaniline	7.331	138	246986	30.5125 ug/mL	92
52) 24Dinitphenol	7.422	184	61606	24.8375 ug/mL	93
53) Dibenzofuran	7.518	168	1148378	31.3064 ug/mL	100
54) 24Dinitrotolu	7.530	165	280844	30.0670 ug/mL	98
55) 4-Nitrophenol	7.496	65	175918	28.9514 ug/mL	93
56) 2,3,5,6-Tetrachlorop	7.589	232	209313	30.1006 ug/mL	97
57) 2,3,4,6-Tetrachlorop	7.626	232	202164	30.1871 ug/mL	98
58) Fluorene	7.794	166	909887	31.5001 ug/mL	100
59) 4Clphlphlethr	7.808	204	412822	31.4979 ug/mL	96
60) Diethylphthal	7.743	149	963679	29.7681 ug/mL	99
61) 4Nitroaniline	7.831	138	218080	29.1276 ug/mL	98
64) 46Dinit2mylph	7.854	198	104557	28.2808 ug/mL	100
65) Ntrsdiphlam&Diphlam	7.908	169	1286218	65.7690 ug/mL	98
66) Azobenz&12Diphlhyd	7.933	182	421738	64.9741 ug/mL	96
67) 4Brphlphlethr	8.178	248	223658	31.4380 ug/mL	94
68) Hexaclbenzene	8.209	284	205577	32.6477 ug/mL	97
69) Pentaclphenol	8.340	266	106239	30.2094 ug/mL	97
70) Phenanthrene	8.473	178	932570	31.7519 ug/mL	99
71) Anthracene	8.504	178	945270	32.1471 ug/mL	100
72) Carbazole	8.610	167	906240	31.5182 ug/mL	99
73) Dinbtylphthal	8.843	149	1183267	31.6312 ug/mL	99
74) Fluoranthene	9.238	202	976640	32.0287 ug/mL	99
76) Benzidine	9.334	184	249498	28.0975 ug/mL	98
77) Pyrene	9.388	202	951449	30.9584 ug/mL	99
79) Btylbzylphth	9.840	149	445304	29.9610 ug/mL	97
80) bis2Ethlhxlad	9.900	129	353749	30.5018 ug/mL	99
81) 33Diclbnzidin	10.195	252	215595	28.2902 ug/mL	99
82) B[a]anthracen	10.206	228	678829	30.4537 ug/mL	99
83) Chrysene	10.235	228	609951	30.4369 ug/mL	99
84) bis2Ethlhxlph	10.246	149	517212	30.5661 ug/mL	98
85) Dinoctylphthl	10.778	149	783059	28.5958 ug/mL	100
87) B[b]fluoranth	11.104	252	475049	30.4412 ug/mL	97
88) B[k]fluoranth	11.133	252	468301	31.6522 ug/mL	100
89) Benz[a]pyrene	11.431	252	429945	30.7268 ug/mL	98
90) Indeno-pyrene	12.758	276	229924	28.2419 ug/mL	97
91) Dib[ah]anthr	12.795	278	241721	28.5296 ug/mL	98
92) B[ghi]perylen	13.048	276	241954	29.2424 ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL5.D Vial: 5
Acq On : 17 Mar 2022 14:01 Operator: JJY
Sample : ICAL 30 ug/ml SVMS9153 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:58:34 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:58:19 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL4.D Vial: 6
Acq On : 17 Mar 2022 14:24 Operator: JJY
Sample : ICAL 20 ug/ml SVMS9152 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:59:48 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:59:34 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	197336	20.00	ug/mL	0.00
21) Naphthalened8	5.425	136	990240	20.00	ug/mL	0.00
39) Acenaphthened10	7.343	164	517266	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	663161	20.00	ug/mL	0.00
75) Chrysene-d12	10.215	240	360611	20.00	ug/mL	0.00
86) Perylene-d12	11.488	264	228088	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.654	112	281506	51.39	%REC	0.00
Spiked Amount 100.000			Recovery = 51.39%			
7) SURRPhenol-d5	3.413	99	332728	50.80	%REC	0.00
Spiked Amount 100.000			Recovery = 50.80%			
22) SURRNitrbenzened5	4.436	82	284859	100.34	%REC	0.00
Spiked Amount 100.000			Recovery = 100.34%			
44) SURR2Flbiphenyl	6.752	172	723964	104.96	%REC	0.00
Spiked Amount 100.000			Recovery = 104.96%			
62) SURR246Tribrphenl	7.982	330	70829	49.34	%REC	0.00
Spiked Amount 100.000			Recovery = 49.34%			
78) SURRTerphenyl-d14	9.499	244	474752	104.65	%REC	0.00
Spiked Amount 100.000			Recovery = 104.65%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.932	74	180818	19.8225	ug/mL	100
3) Pyridine	1.952	79	296415	19.7821	ug/mL	100
5) Aniline	3.450	93	410507	21.0553	ug/mL	100
6) bis2Clethletr	3.521	93	262640	20.6281	ug/mL	100
8) Phenol	3.427	94	377615	20.8265	ug/mL	100
9) 2-Cl-phenol	3.561	128	267695	20.7477	ug/mL	100
10) 13Diclbenz	3.720	146	306455	20.4806	ug/mL	100
11) 14Diclbenz	3.802	146	300545	20.7607	ug/mL	100
12) 12Diclbenz	3.964	146	286559	21.1266	ug/mL	100
13) Benzyl alcoho	3.947	108	177268	20.5465	ug/mL	100
14) bis2clispreth	4.117	45	301745	20.6653	ug/mL	100
15) 2Methylphenol	4.086	107	204912	20.5015	ug/mL	100
16) Ntrspyrrol	4.237	100	128795	20.8366	ug/mL	100
17) Acetophenone	4.257	105	358485	20.8532	ug/mL	100
18) Hexaclethane	4.359	117	121186	20.5677	ug/mL	100
19) N-Ntrsdinprop	4.274	70	186286	21.0982	ug/mL	100
20) 3&4Methylphenol	4.282	107	258816	21.4037	ug/mL	100
23) Nitrobenzene	4.461	77	279183	20.3954	ug/mL	100
24) Isophorone	4.785	82	541262	20.4592	ug/mL	100
25) 2-Nitrophenol	4.879	139	131924	19.7571	ug/mL	100
26) 24Dimthpheno	4.984	122	203680	20.4808	ug/mL	100
27) bis2clethoxym	5.129	93	353493	20.1961	ug/mL	100
28) 24Diclphenol	5.231	162	278418	20.6322	ug/mL	100
29) 124Triclbenz	5.354	180	330084	21.0492	ug/mL	100
30) Benzoic acid	5.140	122	63129	14.3378	ug/mL	100
31) Naphthalene	5.456	128	1009433	21.0049	ug/mL	100
32) 4-Cl-aniline	5.575	127	402654	21.2650	ug/mL	100
33) 26Diclphenol	5.572	162	271629	21.0077	ug/mL	100
34) Hexaclprop	5.592	213	181815	20.7646	ug/mL	100
35) Hexaclbutdien	5.666	225	172607	20.7210	ug/mL	100
36) 4Cl3methylphe	6.234	107	309313	20.3071	ug/mL	100
37) 2Methylnaphth	6.348	142	681229	21.3738	ug/mL	100
38) 1Methylnaphth	6.450	141	564793	21.5166	ug/mL	100
40) Hxclcycpentdi	6.524	237	163059	19.9690	ug/mL	100

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL4.D Vial: 6
Acq On : 17 Mar 2022 14:24 Operator: JJY
Sample : ICAL 20 ug/ml SVMS9152 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:59:48 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:59:34 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

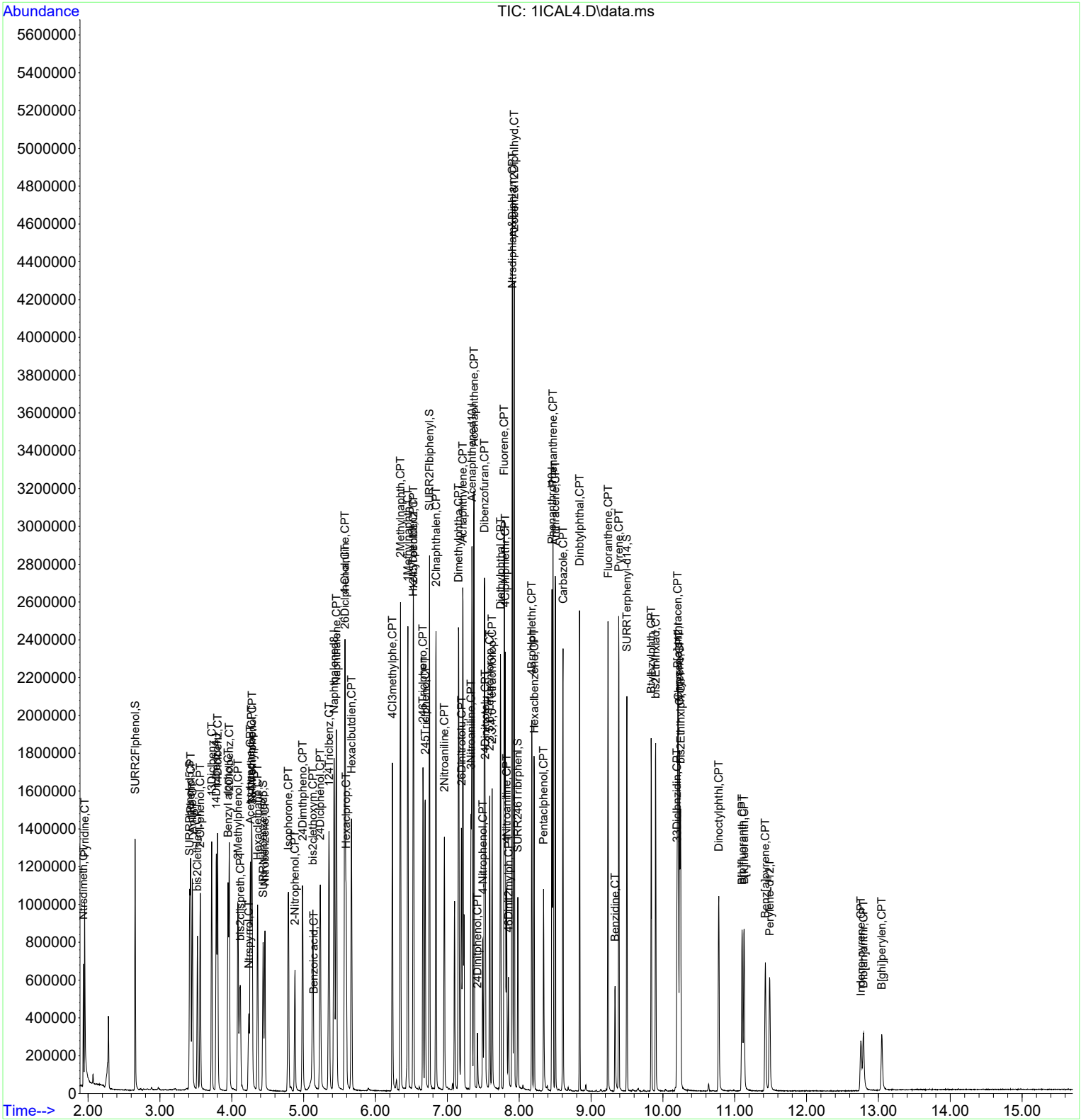
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.530	216	276714	20.9514	ug/mL	100
42) 246Triclpheno	6.661	196	199199	20.0664	ug/mL	100
43) 245Triclpheno	6.692	196	207036	20.2683	ug/mL	100
45) 2Clnaphthalen	6.842	162	624529	20.6731	ug/mL	100
46) 2Nitroaniline	6.959	65	186089	20.1502	ug/mL	100
47) Acnaphthylene	7.215	152	980116	21.2430	ug/mL	100
48) Dimethylphtha	7.155	163	712917	21.2360	ug/mL	100
49) 26Dinitrotolu	7.198	165	162971	20.2956	ug/mL	100
50) Acenaphthene	7.371	154	559619	21.2094	ug/mL	100
51) 3Nitroaniline	7.331	138	171302	19.5567	ug/mL	100
52) 24Dinitphenol	7.419	184	36102	14.3504	ug/mL	100
53) Dibenzofuran	7.516	168	849507	21.2154	ug/mL	100
54) 24Dinitrotolu	7.527	165	203690	20.2519	ug/mL	100
55) 4-Nitrophenol	7.493	65	121278	18.7683	ug/mL	100
56) 2,3,5,6-Tetrachlorop	7.590	232	145781	19.4621	ug/mL	100
57) 2,3,4,6-Tetrachlorop	7.624	232	144243	19.9758	ug/mL	100
58) Fluorene	7.791	166	662934	20.9802	ug/mL	100
59) 4Clphlphlethr	7.806	204	307839	21.4718	ug/mL	100
60) Diethylphthal	7.740	149	718574	20.6826	ug/mL	100
61) 4Nitroaniline	7.826	138	156024	19.5571	ug/mL	100
64) 46Dinit2mylph	7.851	198	65274	16.8450	ug/mL	100
65) Ntrsdiphlam&Diphlam	7.905	169	954183	44.2441	ug/mL	100
66) Azobenz&12Diphlhyd	7.931	182	311915	43.7636	ug/mL	100
67) 4Brphlphlethr	8.175	248	160987	20.8446	ug/mL	100
68) Hexaclbenzene	8.209	284	150693	21.7568	ug/mL	100
69) Pentaclphenol	8.340	266	68408	18.1624	ug/mL	100
70) Phenanthrene	8.471	178	678506	21.2074	ug/mL	100
71) Anthracene	8.505	178	687482	21.3710	ug/mL	100
72) Carbazole	8.610	167	651837	20.8646	ug/mL	100
73) Dinbtylphthal	8.840	149	862454	21.1927	ug/mL	100
74) Fluoranthene	9.238	202	695775	20.8838	ug/mL	100
76) Benzidine	9.334	184	170493	18.5056	ug/mL	100
77) Pyrene	9.386	202	689498	20.9432	ug/mL	100
79) Btylbzylphth	9.837	149	316358	20.0902	ug/mL	100
80) bis2Ethlhxlad	9.900	129	252314	20.4114	ug/mL	100
81) 33Diclbnzidin	10.195	252	142007	17.9207	ug/mL	100
82) B[a]anthracen	10.207	228	479593	20.1970	ug/mL	100
83) Chrysene	10.232	228	439767	20.6035	ug/mL	100
84) bis2Ethlhxlph	10.246	149	364636	20.2034	ug/mL	100
85) Dinoctylphthl	10.778	149	532747	18.6456	ug/mL	100
87) B[b]fluoranth	11.102	252	336130	20.8735	ug/mL	100
88) B[k]fluoranth	11.130	252	326227	21.0857	ug/mL	100
89) Benz[a]pyrene	11.426	252	294191	20.3109	ug/mL	100
90) Indeno-pyrene	12.755	276	140420	17.1315	ug/mL	100
91) Dib[ah]anthr	12.792	278	154382	18.0394	ug/mL	100
92) B[ghi]perylen	13.045	276	152488	18.0999	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL4.D Vial: 6
Acq On : 17 Mar 2022 14:24 Operator: JJY
Sample : ICAL 20 ug/ml SVMS9152 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 14:59:48 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 14:59:34 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL3.D Vial: 7
Acq On : 17 Mar 2022 14:47 Operator: JJY
Sample : ICAL 10 ug/ml SVMS9151 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 15:04:21 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 15:00:47 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	197893	20.00	ug/mL	0.00
21) Naphthalened8	5.422	136	985577	20.00	ug/mL	0.00
39) Acenaphthened10	7.342	164	521869	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	659167	20.00	ug/mL	0.00
75) Chrysene-d12	10.212	240	393859	20.00	ug/mL	0.00
86) Perylene-d12	11.488	264	267428	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.654	112	137959	24.94	%REC	0.00
Spiked Amount 100.000			Recovery = 24.94%			
7) SURRPhenol-d5	3.410	99	161648	24.51	%REC	0.00
Spiked Amount 100.000			Recovery = 24.51%			
22) SURRNitrbenzened5	4.433	82	142431	50.36	%REC	0.00
Spiked Amount 100.000			Recovery = 50.36%			
44) SURR2Flbiphenyl	6.751	172	373790	53.05	%REC	0.00
Spiked Amount 100.000			Recovery = 53.05%			
62) SURR246Tribrphenl	7.979	330	33014	22.87	%REC	0.00
Spiked Amount 100.000			Recovery = 22.87%			
78) SURRTerphenyl-d14	9.499	244	249590	49.79	%REC	0.00
Spiked Amount 100.000			Recovery = 49.79%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.932	74	89500	9.8057	ug/mL	97
3) Pyridine	1.955	79	149702	9.9899	ug/mL	96
5) Aniline	3.450	93	195294	9.8586	ug/mL	95
6) bis2Clethletr	3.521	93	135598	10.5373	ug/mL	97
8) Phenol	3.424	94	185944	10.1219	ug/mL	99
9) 2-Cl-phenol	3.560	128	133765	10.2426	ug/mL	97
10) 13Diclbenz	3.720	146	155917	10.3287	ug/mL	98
11) 14Diclbenz	3.802	146	151840	10.3606	ug/mL	98
12) 12Diclbenz	3.964	146	145051	10.5157	ug/mL	98
13) Benzyl alcoho	3.944	108	86981	9.9851	ug/mL	97
14) bis2clispreth	4.109	45	157685	10.6800	ug/mL	100
15) 2Methylphenol	4.083	107	106285	10.5379	ug/mL	93
16) Ntrspyrrol	4.228	100	61947	9.8902	ug/mL	97
17) Acetophenone	4.254	105	184736	10.6028	ug/mL	97
18) Hexaclethane	4.359	117	60801	10.2176	ug/mL	96
19) N-Ntrsdinprop	4.268	70	97987	10.9166	ug/mL	97
20) 3&4Methylphenol	4.276	107	127833	10.3601	ug/mL	98
23) Nitrobenzene	4.455	77	141030	10.3006	ug/mL	97
24) Isophorone	4.782	82	267920	10.1170	ug/mL	99
25) 2-Nitrophenol	4.876	139	58771	8.8702	ug/mL	97
26) 24Dimthpheno	4.981	122	99226	9.9649	ug/mL	95
27) bis2clethoxym	5.126	93	178782	10.2376	ug/mL	98
28) 24Diclphenol	5.228	162	133695	9.8763	ug/mL	99
29) 124Triclbenz	5.350	180	164795	10.4219	ug/mL	99
30) Benzoic acid	5.103	122	24138	5.9277	ug/mL	92
31) Naphthalene	5.453	128	512142	10.5746	ug/mL	99
32) 4-Cl-aniline	5.572	127	203105	10.6094	ug/mL	99
33) 26Diclphenol	5.569	162	136532	10.4773	ug/mL	99
34) Hexaclprop	5.589	213	88340	10.0408	ug/mL	99
35) Hexaclbutdien	5.663	225	90466	10.8141	ug/mL	95
36) 4Cl3methylphe	6.234	107	152028	9.9898	ug/mL	98
37) 2Methylnaphth	6.345	142	345339	10.7026	ug/mL	96
38) 1Methylnaphth	6.447	141	290028	10.8948	ug/mL	97
40) Hxclcycpentdi	6.524	237	80382	9.7609	ug/mL	99

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL3.D Vial: 7
Acq On : 17 Mar 2022 14:47 Operator: JJY
Sample : ICAL 10 ug/ml SVMS9151 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 15:04:21 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 15:00:47 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

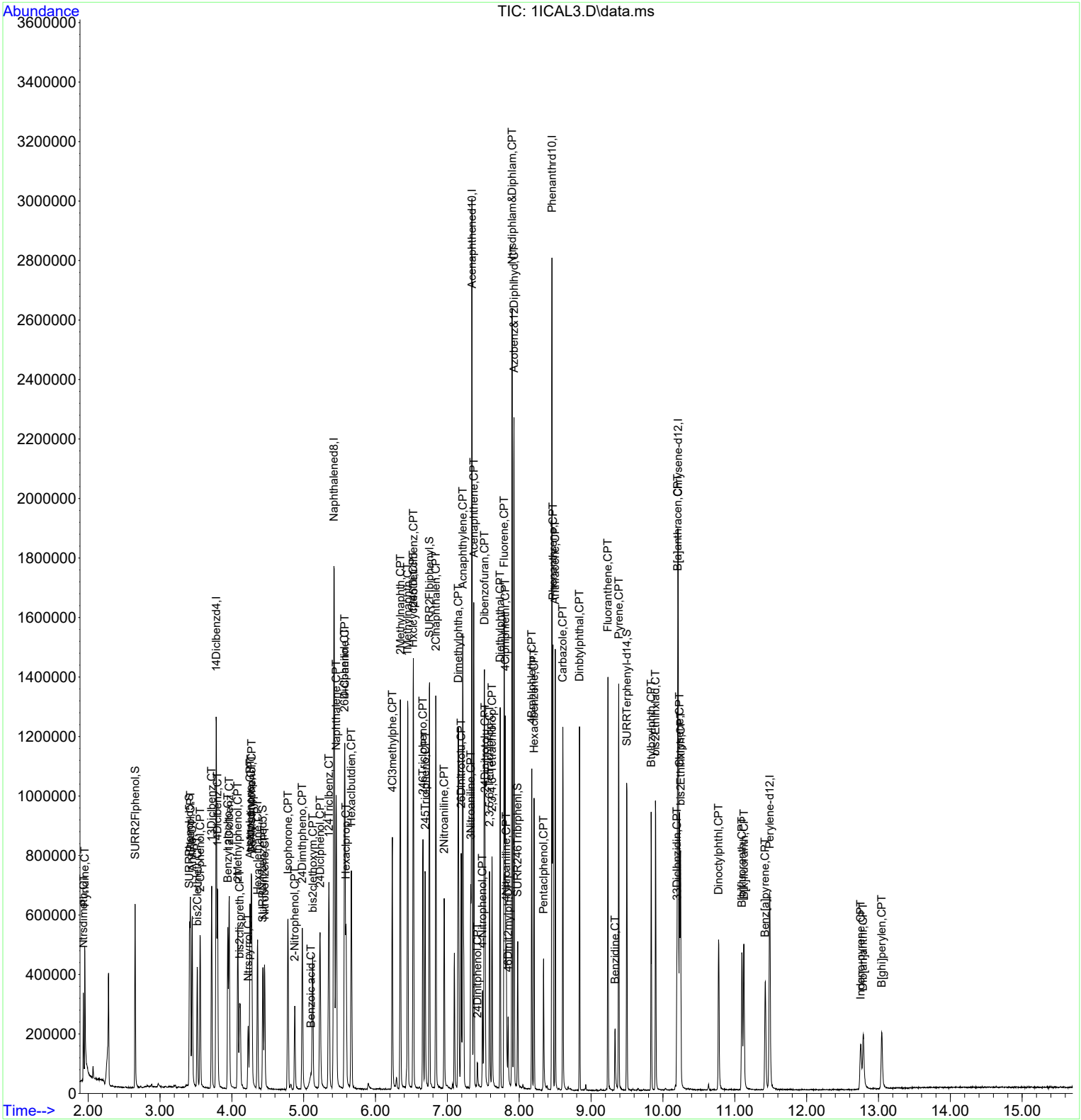
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.527	216	146984	10.9011 ug/mL	95
42) 246Triclpheno	6.660	196	95349	9.5124 ug/mL	99
43) 245Triclpheno	6.692	196	97241	9.4042 ug/mL	98
45) 2Clnaphthalen	6.839	162	324927	10.5719 ug/mL	99
46) 2Nitroaniline	6.956	65	89184	9.5540 ug/mL	99
47) Acnaphthylene	7.214	152	515911	10.9136 ug/mL	99
48) Dimethylphtha	7.152	163	363343	10.5644 ug/mL	97
49) 26Dinitrotolu	7.192	165	82163	10.1046 ug/mL	93
50) Acenaphthene	7.368	154	282624	10.4588 ug/mL	99
51) 3Nitroaniline	7.325	138	82071	9.3388 ug/mL	91
52) 24Dinitphenol	7.419	184	10824	4.5886 ug/mL	96
53) Dibenzofuran	7.516	168	433998	10.5822 ug/mL	99
54) 24Dinitrotolu	7.524	165	98666	9.6928 ug/mL	96
55) 4-Nitrophenol	7.487	65	53447	8.3264 ug/mL	92
56) 2,3,5,6-Tetrachlorop	7.587	232	70202	9.3523 ug/mL	97
57) 2,3,4,6-Tetrachlorop	7.621	232	67806	9.3103 ug/mL	96
58) Fluorene	7.791	166	340895	10.5639 ug/mL	98
59) 4Clphlphlethr	7.805	204	159470	10.8258 ug/mL	96
60) Diethylphthal	7.734	149	360409	10.1951 ug/mL	99
61) 4Nitroaniline	7.820	138	74277	9.2797 ug/mL	98
64) 46Dinit2mylph	7.845	198	24011	6.4899 ug/mL	94
65) Ntrsdiphlam&Diphlam	7.902	169	497218	22.5956 ug/mL	99
66) Azobenz&12Diphlhyd	7.928	182	159846	22.0447 ug/mL#	83
67) 4Brphlphlethr	8.175	248	83811	10.8036 ug/mL	98
68) Hexaclbenzene	8.206	284	76981	10.9415 ug/mL	96
69) Pentaclphenol	8.340	266	29362	8.0273 ug/mL	93
70) Phenanthrene	8.470	178	351230	10.8803 ug/mL	99
71) Anthracene	8.502	178	355787	10.9395 ug/mL	100
72) Carbazole	8.607	167	333216	10.6158 ug/mL	99
73) Dinbtylphthal	8.840	149	426074	10.3784 ug/mL	99
74) Fluoranthene	9.235	202	357698	10.6834 ug/mL	99
76) Benzidine	9.334	184	68306	6.9174 ug/mL	98
77) Pyrene	9.385	202	356161	9.7896 ug/mL	99
79) Btylbzylphth	9.837	149	155504	9.0314 ug/mL	98
80) bis2Ethlhxlad	9.897	129	129528	9.5448 ug/mL	99
81) 33Diclbnzidin	10.195	252	61797	7.3307 ug/mL	99
82) B[a]anthracen	10.207	228	260677	10.0264 ug/mL	98
83) Chrysene	10.232	228	243634	10.3727 ug/mL	99
84) bis2Ethlhxlph	10.246	149	192216	9.7264 ug/mL	98
85) Dinoctylphthl	10.775	149	266325	8.6812 ug/mL	100
87) B[b]fluoranth	11.099	252	181236	9.4954 ug/mL	96
88) B[k]fluoranth	11.127	252	181198	9.8551 ug/mL	100
89) Benz[a]pyrene	11.423	252	168827	9.9027 ug/mL	98
90) Indeno-pyrene	12.752	276	83441	9.0053 ug/mL	97
91) Dib[ah]anthr	12.787	278	92001	9.3992 ug/mL	98
92) B[ghi]perylen	13.045	276	98094	10.1723 ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL3.D Vial: 7
Acq On : 17 Mar 2022 14:47 Operator: JJY
Sample : ICAL 10 ug/ml SVMS9151 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 15:04:21 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 15:00:47 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL2.D Vial: 8
Acq On : 17 Mar 2022 15:10 Operator: JJY
Sample : ICAL 5 ug/ml SVMS9150 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 15:38:54 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 15:06:11 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	202647	20.00	ug/mL	0.00
21) Naphthalened8	5.422	136	999811	20.00	ug/mL	0.00
39) Acenaphthened10	7.342	164	525096	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	664833	20.00	ug/mL	0.00
75) Chrysene-d12	10.212	240	399257	20.00	ug/mL	0.00
86) Perylene-d12	11.482	264	271069	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.654	112	66944	11.82	%REC	0.00
Spiked Amount 100.000			Recovery = 11.82%			
7) SURRPhenol-d5	3.410	99	79789	11.86	%REC	0.00
Spiked Amount 100.000			Recovery = 11.86%			
22) SURRNitrbenzened5	4.430	82	70139	24.41	%REC	0.00
Spiked Amount 100.000			Recovery = 24.41%			
44) SURR2Flbiphenyl	6.751	172	195706	27.27	%REC	0.00
Spiked Amount 100.000			Recovery = 27.27%			
62) SURR246Tribrphenl	7.979	330	16628	11.65	%REC	0.00
Spiked Amount 100.000			Recovery = 11.65%			
78) SURRTerphenyl-d14	9.496	244	126346	24.89	%REC	0.00
Spiked Amount 100.000			Recovery = 24.89%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.935	74	44411	4.7701	ug/mL	96
3) Pyridine	1.955	79	73973	4.8215	ug/mL	94
5) Aniline	3.450	93	95880	4.7399	ug/mL	94
6) bis2Clethletr	3.518	93	69568	5.2232	ug/mL	98
8) Phenol	3.424	94	91196	4.8360	ug/mL	98
9) 2-Cl-phenol	3.560	128	67770	5.0430	ug/mL	99
10) 13Diclbenz	3.720	146	82113	5.2773	ug/mL	94
11) 14Diclbenz	3.802	146	79336	5.2485	ug/mL	97
12) 12Diclbenz	3.964	146	75531	5.2927	ug/mL	99
13) Benzyl alcoho	3.944	108	41748	4.6815	ug/mL	96
14) bis2clispreth	4.117	45	78823	5.1435	ug/mL	99
15) 2Methylphenol	4.083	107	52205	5.0008	ug/mL	98
16) Ntrspyrrol	4.222	100	30576	4.7776	ug/mL	92
17) Acetophenone	4.254	105	92941	5.1471	ug/mL	98
18) Hexaclethane	4.359	117	31680	5.1764	ug/mL	92
19) N-Ntrsdinprop	4.268	70	49310	5.2681	ug/mL	94
20) 3&4Methylphenol	4.274	107	67166	5.2777	ug/mL	96
23) Nitrobenzene	4.455	77	72321	5.1759	ug/mL	96
24) Isophorone	4.779	82	131499	4.8834	ug/mL	97
25) 2-Nitrophenol	4.876	139	27913	4.2489	ug/mL	94
26) 24Dimthpheno	4.981	122	48858	4.8402	ug/mL	96
27) bis2clethoxym	5.123	93	88010	4.9445	ug/mL	96
28) 24Diclphenol	5.226	162	67665	4.9396	ug/mL	98
29) 124Triclbenz	5.351	180	83908	5.1872	ug/mL	98
30) Benzoic acid	5.075	122	7824	2.0620	ug/mL	86
31) Naphthalene	5.453	128	263184	5.2959	ug/mL	99
32) 4-Cl-aniline	5.569	127	101831	5.1804	ug/mL	97
33) 26Diclphenol	5.569	162	66886	5.0118	ug/mL	99
34) Hexaclprop	5.589	213	43606	4.8818	ug/mL	97
35) Hexaclbutdien	5.663	225	46718	5.4169	ug/mL	93
36) 4Cl3methylphe	6.234	107	72904	4.7233	ug/mL	96
37) 2Methylnaphth	6.348	142	177407	5.3448	ug/mL	95
38) 1Methylnaphth	6.450	141	152609	5.5517	ug/mL	100
40) Hxclcycpentdi	6.524	237	38093	4.6194	ug/mL	98

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL2.D Vial: 8
Acq On : 17 Mar 2022 15:10 Operator: JJY
Sample : ICAL 5 ug/ml SVMS9150 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 15:38:54 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 15:06:11 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

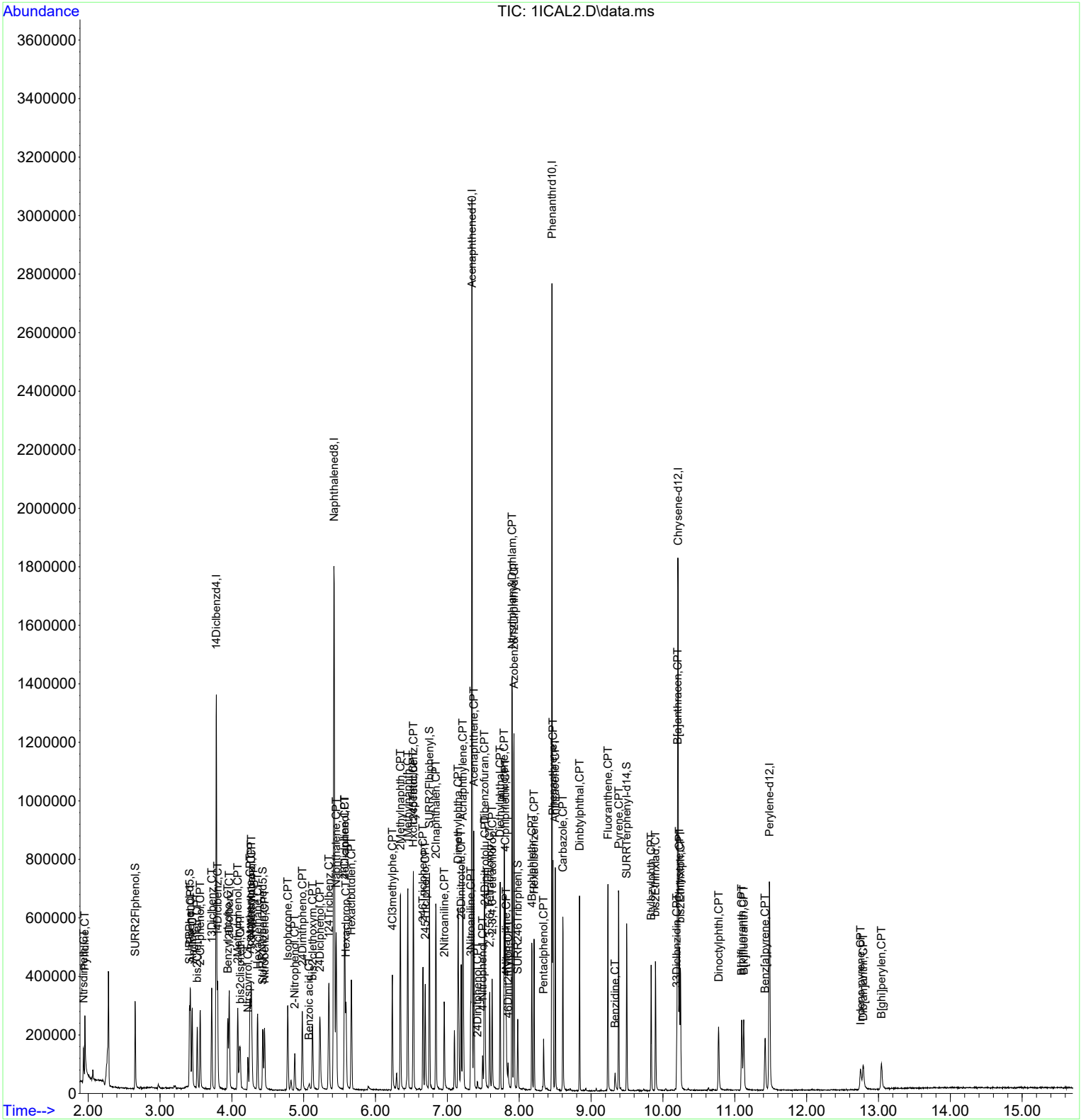
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.527	216	75048	5.4338	ug/mL	92
42) 246Triclpheno	6.660	196	46272	4.6331	ug/mL	97
43) 245Triclpheno	6.692	196	48875	4.7543	ug/mL	94
45) 2Clnaphthalen	6.839	162	166741	5.3308	ug/mL	98
46) 2Nitroaniline	6.956	65	40919	4.3958	ug/mL	94
47) Acnaphthylene	7.215	152	268170	5.5369	ug/mL	99
48) Dimethylphtha	7.149	163	187662	5.3623	ug/mL	99
49) 26Dinitrotolu	7.192	165	40811	4.9778	ug/mL	95
50) Acenaphthene	7.368	154	143197	5.2187	ug/mL	98
51) 3Nitroaniline	7.325	138	41617	4.7695	ug/mL	91
52) 24Dinitphenol	7.419	184	3458	1.6338	ug/mL	83
53) Dibenzofuran	7.516	168	231517	5.5458	ug/mL	100
54) 24Dinitrotolu	7.524	165	47905	4.7061	ug/mL	94
55) 4-Nitrophenol	7.490	65	21503	3.4446	ug/mL	97
56) 2,3,5,6-Tetrachlorop	7.590	232	31514	4.2273	ug/mL	96
57) 2,3,4,6-Tetrachlorop	7.624	232	34091	4.7173	ug/mL	99
58) Fluorene	7.791	166	177710	5.4121	ug/mL	94
59) 4Clphlphlethr	7.806	204	85107	5.6488	ug/mL	98
60) Diethylphthal	7.734	149	184263	5.1602	ug/mL	99
61) 4Nitroaniline	7.820	138	34785	4.3822	ug/mL	97
64) 46Dinit2mylph	7.845	198	8467	2.4404	ug/mL	98
65) Ntrsdiphlam&Diphlam	7.902	169	263458	11.5702	ug/mL	99
66) Azobenz&12Diphlhyd	7.928	182	86442	11.5830	ug/mL#	87
67) 4Brphlphlethr	8.178	248	43413	5.4606	ug/mL	92
68) Hexaclbenzene	8.206	284	40523	5.6050	ug/mL	93
69) Pentaclphenol	8.340	266	11329	3.1970	ug/mL	96
70) Phenanthrene	8.470	178	177663	5.3623	ug/mL	100
71) Anthracene	8.502	178	181114	5.4195	ug/mL	99
72) Carbazole	8.607	167	167779	5.2352	ug/mL	98
73) Dinbtylphthal	8.840	149	218925	5.2475	ug/mL	100
74) Fluoranthene	9.235	202	185821	5.4284	ug/mL	99
76) Benzidine	9.334	184	23715	2.5248	ug/mL	94
77) Pyrene	9.385	202	185061	5.0391	ug/mL	98
79) Btylbzylphth	9.837	149	73236	4.2788	ug/mL	97
80) bis2Ethlhxlad	9.897	129	59529	4.3671	ug/mL	97
81) 33Diclbnzidin	10.192	252	28421	3.5135	ug/mL	95
82) B[a]anthracen	10.204	228	133587	5.0660	ug/mL	96
83) Chrysene	10.229	228	128088	5.3398	ug/mL	99
84) bis2Ethlhxlph	10.243	149	92417	4.6386	ug/mL	100
85) Dinoctylphthl	10.775	149	117731	3.8883	ug/mL	99
87) B[b]fluoranth	11.096	252	88531	4.6227	ug/mL	97
88) B[k]fluoranth	11.124	252	90130	4.8503	ug/mL	98
89) Benz[a]pyrene	11.423	252	80080	4.6431	ug/mL	98
90) Indeno-pyrene	12.752	276	37222	4.0437	ug/mL	92
91) Dib[ah]anthr	12.789	278	38889	3.9674	ug/mL	97
92) B[ghi]perylen	13.042	276	45511	4.6401	ug/mL	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL2.D Vial: 8
Acq On : 17 Mar 2022 15:10 Operator: JJY
Sample : ICAL 5 ug/ml SVMS9150 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 15:38:54 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 15:06:11 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL1.D Vial: 9
Acq On : 17 Mar 2022 15:33 Operator: JJY
Sample : ICAL 1 ug/ml SVMS9149 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 15:49:34 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 15:41:26 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	204187	20.00	ug/mL	0.00
21) Naphthalened8	5.422	136	1036286	20.00	ug/mL	0.00
39) Acenaphthened10	7.340	164	549577	20.00	ug/mL	0.00
63) Phenanthrd10	8.454	188	660058	20.00	ug/mL	0.00
75) Chrysene-d12	10.212	240	384461	20.00	ug/mL	0.00
86) Perylene-d12	11.485	264	224584	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.657	112	12308	2.18	%REC	0.00
Spiked Amount 100.000			Recovery = 2.18%			
7) SURRPhenol-d5	3.413	99	15641	2.33	%REC	0.00
Spiked Amount 100.000			Recovery = 2.33%			
22) SURRNitrbenzened5	4.430	82	14376	4.85	%REC	0.00
Spiked Amount 100.000			Recovery = 4.85%			
44) SURR2Flbiphenyl	6.749	172	42813	5.62	%REC	0.00
Spiked Amount 100.000			Recovery = 5.62%			
62) SURR246Tribrphenl	7.979	330	2572	1.74	%REC	0.00
Spiked Amount 100.000			Recovery = 1.74%			
78) SURRTerphenyl-d14	9.499	244	24914	5.10	%REC	0.00
Spiked Amount 100.000			Recovery = 5.10%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.947	74	8135	0.8739	ug/mL	92
3) Pyridine	1.975	79	14029	0.9129	ug/mL	89
5) Aniline	3.450	93	19517	0.9659	ug/mL	98
6) bis2Clethletr	3.521	93	13482	0.9972	ug/mL	96
8) Phenol	3.424	94	19581	1.0362	ug/mL	94
9) 2-Cl-phenol	3.563	128	12648	0.9328	ug/mL	91
10) 13Diclbenz	3.723	146	17027	1.0761	ug/mL	93
11) 14Diclbenz	3.802	146	17503	1.1397	ug/mL	97
12) 12Diclbenz	3.964	146	16928	1.1659	ug/mL	88
13) Benzyl alcoho	3.944	108	8015	0.9016	ug/mL#	75
14) bis2clispreth	4.109	45	17732	1.1429	ug/mL	91
15) 2Methylphenol	4.081	107	10557	1.0036	ug/mL	94
16) Ntrspyrrol	4.228	100	5537	0.8651	ug/mL	84
17) Acetophenone	4.254	105	19514	1.0673	ug/mL	92
18) Hexaclethane	4.359	117	6848	1.1040	ug/mL	95
19) N-Ntrsdinprop	4.265	70	10205	1.0725	ug/mL	97
20) 3&4Methylphenol	4.279	107	12416	0.9594	ug/mL	88
23) Nitrobenzene	4.456	77	14056	0.9649	ug/mL	91
24) Isophorone	4.777	82	26972	0.9702	ug/mL	97
25) 2-Nitrophenol	4.879	139	3858	0.5811	ug/mL	95
26) 24Dimthpheno	4.978	122	8696	0.8356	ug/mL	84
27) bis2clethoxym	5.126	93	18089	0.9823	ug/mL	94
28) 24Diclphenol	5.231	162	11450	0.8081	ug/mL	98
29) 124Triclbenz	5.348	180	18443	1.0932	ug/mL	98
30) Benzoic acid	0.000		0	N.D.		
31) Naphthalene	5.453	128	58443	1.1235	ug/mL	97
32) 4-Cl-aniline	5.572	127	19920	0.9719	ug/mL	95
33) 26Diclphenol	5.572	162	12919	0.9336	ug/mL	93
34) Hexaclprop	5.592	213	7513	0.8147	ug/mL	96
35) Hexaclbutdien	5.663	225	10053	1.1092	ug/mL	93
36) 4Cl3methylphe	6.234	107	11920	0.7520	ug/mL	95
37) 2Methylnaphth	6.345	142	38100	1.0949	ug/mL	99
38) 1Methylnaphth	6.447	141	32712	1.1274	ug/mL	98
40) Hxclcycpentdi	6.521	237	6137	0.7202	ug/mL	99

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL1.D Vial: 9
Acq On : 17 Mar 2022 15:33 Operator: JJY
Sample : ICAL 1 ug/ml SVMS9149 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 15:49:34 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 15:41:26 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

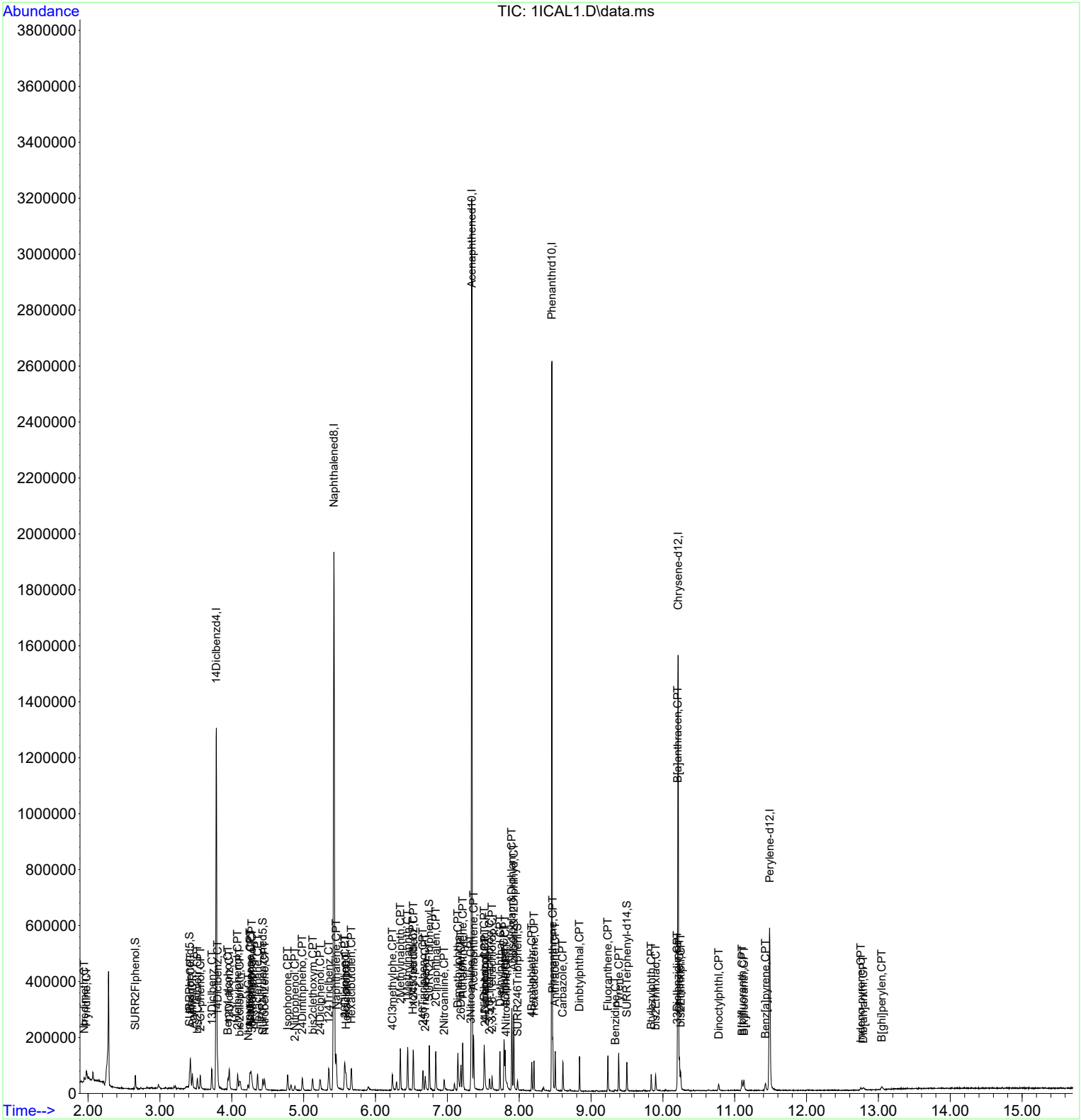
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.527	216	16968	1.1571 ug/mL	87
42) 246Triclpheno	6.661	196	7450	0.7215 ug/mL	95
43) 245Triclpheno	6.692	196	6985	0.6546 ug/mL	93
45) 2Clnaphthalen	6.840	162	36895	1.1147 ug/mL	98
46) 2Nitroaniline	6.956	65	6670	0.6987 ug/mL	89
47) Acnaphthylene	7.215	152	58902	1.1415 ug/mL	95
48) Dimethylphtha	7.146	163	40683	1.0975 ug/mL	95
49) 26Dinitrotolu	7.189	165	7670	0.8945 ug/mL	92
50) Acenaphthene	7.365	154	31009	1.0719 ug/mL	94
51) 3Nitroaniline	7.325	138	6106	0.6738 ug/mL	97
52) 24Dinitphenol	0.000		0	N.D.	
53) Dibenzofuran	7.513	168	49776	1.1189 ug/mL	97
54) 24Dinitrotolu	7.524	165	7940	0.7526 ug/mL	96
55) 4-Nitrophenol	7.522	65	2992	0.4830 ug/mL#	1
56) 2,3,5,6-Tetrachlorop	7.587	232	4617	0.6074 ug/mL	92
57) 2,3,4,6-Tetrachlorop	7.621	232	4965	0.6627 ug/mL#	82
58) Fluorene	7.789	166	38851	1.1152 ug/mL	93
59) 4Clphlphlethr	7.806	204	17496	1.0860 ug/mL	95
60) Diethylphthal	7.732	149	37885	1.0083 ug/mL	98
61) 4Nitroaniline	7.817	138	4971	0.6109 ug/mL	91
64) 46Dinit2mylph	0.000		0	N.D.	
65) Ntrsdiphlam&Diphlam	7.897	169	55586	2.3961 ug/mL	97
66) Azobenz&12Diphlhyd	7.925	182	18797	2.4718 ug/mL	95
67) 4Brphlphlethr	8.175	248	9165	1.1436 ug/mL	96
68) Hexaclbenzene	8.206	284	9089	1.2412 ug/mL	95
69) Pentaclphenol	0.000		0	N.D.	
70) Phenanthrene	8.468	178	39256	1.1792 ug/mL	97
71) Anthracene	8.502	178	36934	1.0978 ug/mL	97
72) Carbazole	8.607	167	33539	1.0459 ug/mL	97
73) Dinbtylphthal	8.840	149	38953	0.9327 ug/mL	100
74) Fluoranthene	9.235	202	36066	1.0463 ug/mL	99
76) Benzidine	9.337	184	2220	0.2675 ug/mL	94
77) Pyrene	9.386	202	37705	1.0648 ug/mL	97
79) Btylbzylphth	9.837	149	9960	0.6192 ug/mL	83
80) bis2Ethlhxlad	9.900	129	7414	0.5770 ug/mL	95
81) 33Diclbnzidin	10.198	252	3028	0.4090 ug/mL	91
82) B[a]anthracen	10.207	228	25854	1.0160 ug/mL	98
83) Chrysene	10.229	228	26071	1.1160 ug/mL	96
84) bis2Ethlhxlph	10.246	149	13164	0.6945 ug/mL	97
85) Dinoctylphthl	10.775	149	11560	0.4117 ug/mL	99
87) B[b]fluoranth	11.102	252	13629	0.8699 ug/mL	98
88) B[k]fluoranth	11.127	252	15035	0.9815 ug/mL	93
89) Benz[a]pyrene	11.429	252	11121	0.7876 ug/mL	97
90) Indeno-pyrene	12.755	276	3278	0.4440 ug/mL	88
91) Dib[ah]anthr	12.790	278	4574	0.5833 ug/mL	85
92) B[ghi]perylen	13.045	276	6064	0.7553 ug/mL	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL1.D Vial: 9
Acq On : 17 Mar 2022 15:33 Operator: JJY
Sample : ICAL 1 ug/ml SVMS9149 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 15:49:34 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 15:41:26 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S031722\1ICV1.D Vial: 10
Acq On : 17 Mar 2022 15:56 Operator: JJY
Sample : ICV 20 ug/ml SVMS9156 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:12:53 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	98	0.00
2	CT	Ntrsdimeth	20.000	20.627	-3.1	99	0.00
3	CT	Pyridine	20.000	18.919	5.4	92	0.00
4	S	SURR2Flphenol	50.000	51.981	-4.0	97	0.00
5	CT	Aniline	20.000	20.796	-4.0	97	0.00
6	CPT	bis2Clethletr	20.000	20.321	-1.6	99	0.00
7	S	SURRPhenol-d5	50.000	52.130	-4.3	99	0.00
8	CPT	Phenol	20.000	20.629	-3.1	99	0.00
9	CPT	2-Cl-phenol	20.000	20.502	-2.5	98	0.00
10	CT	13Diclbenz	20.000	19.712	1.4	98	0.00
11	CT	14Diclbenz	20.000	19.732	1.3	98	0.00
12	CT	12Diclbenz	20.000	19.877	0.6	98	0.00
13	CT	Benzyl alcoho	20.000	20.417	-2.1	96	0.00
14	CPT	bis2clispreth	20.000	20.133	-0.7	100	0.00
15	CPT	2Methylphenol	20.000	20.278	-1.4	99	0.00
16	CT	Ntrspyrrol	20.000	21.112	-5.6	98	0.00
17	CPT	Acetophenone	20.000	19.110	4.5	94	0.00
18	CPT	Hexaclethane	20.000	19.838	0.8	98	0.00
19	CPT	N-Ntrsdinprop	20.000	20.311	-1.6	100	0.00
20	CPT	3&4Methylphenol	20.000	20.568	-2.8	97	0.00
21	I	Naphthalened8	20.000	20.000	0.0	99	0.00
22	S	SURRNitrbenzened5	100.000	100.902	-0.9	99	0.00
23	CPT	Nitrobenzene	20.000	19.860	0.7	97	0.00
24	CPT	Isophorone	20.000	20.067	-0.3	97	0.00
25	CPT	2-Nitrophenol	20.000	19.784	1.1	95	0.00
26	CPT	24Dimthpheno	20.000	20.975	-4.9	99	0.00
27	CPT	bis2clethoxym	20.000	20.188	-0.9	99	0.00
28	CPT	24Diclphenol	20.000	20.607	-3.0	96	0.00
29	CT	124Triclbenz	20.000	19.650	1.8	96	0.00
30	CT	Benzoic acid	20.000	19.085	4.6	97	0.00
31	CPT	Naphthalene	20.000	19.700	1.5	97	0.00
32	CPT	4-Cl-aniline	20.000	20.425	-2.1	98	0.00
33	CT	26Diclphenol	20.000	20.698	-3.5	98	0.00
34	CT	Hexaclprop	20.000	21.479	-7.4	100	0.00
35	CPT	Hexaclbutdien	20.000	19.662	1.7	99	0.00
36	CPT	4Cl3methylphe	20.000	21.237	-6.2	99	0.00
37	CPT	2Methylnaphth	20.000	20.751	-3.8	101	0.00
38	CT	1Methylnaphth	20.000	19.678	1.6	97	0.00
39	I	Acenaphthened10	20.000	20.000	0.0	99	0.00
40	CPT	Hxclcycpentdi	20.000	19.028	4.9	94	0.00
41	CPT	1245Tetrclbenz	20.000	21.188	-5.9	106	0.00
42	CPT	246Triclpheno	20.000	19.433	2.8	95	0.00
43	CPT	245Triclpheno	20.000	19.737	1.3	97	0.00
44	S	SURR2Flbiphenyl	100.000	99.305	0.7	98	0.00
45	CPT	2Clnaphthalen	20.000	19.667	1.7	98	0.00
46	CPT	2Nitroaniline	20.000	19.631	1.8	95	0.00
47	CPT	Acnaphthylene	20.000	19.498	2.5	97	0.00
48	CPT	Dimethylphtha	20.000	19.738	1.3	97	0.00
49	CPT	26Dinitrotolu	20.000	20.467	-2.3	99	0.00
50	CPT	Acenaphthene	20.000	19.412	2.9	95	0.00
51	CPT	3Nitroaniline	20.000	20.316	-1.6	101	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S031722\1ICV1.D Vial: 10
Acq On : 17 Mar 2022 15:56 Operator: JJY
Sample : ICV 20 ug/ml SVMS9156 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:12:53 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	20.000	18.131	9.3	86	0.00
53	CPT	Dibenzofuran	20.000	19.842	0.8	98	0.00
54	CPT	24Dinitrotolu	20.000	19.733	1.3	96	0.00
55	CPT	4-Nitrophenol	20.000	18.994	5.0	93	0.00
56	CT	2,3,5,6-Tetrachlorop	20.000	19.430	2.9	95	0.00
57	CPT	2,3,4,6-Tetrachlorop	20.000	20.405	-2.0	100	0.00
58	CPT	Fluorene	20.000	19.956	0.2	99	0.00
59	CPT	4Clphlphlethr	20.000	19.176	4.1	95	0.00
60	CPT	Diethylphthal	20.000	19.816	0.9	96	0.00
61	CPT	4Nitroaniline	20.000	20.216	-1.1	99	0.00
62	S	SURR246Tribrphenl	50.000	51.002	-2.0	99	0.00
63	I	Phenanthrd10	20.000	20.000	0.0	99	0.00
64	CPT	46Dinit2mylph	20.000	18.823	5.9	93	0.00
65	CPT	Ntrsdiphlam&Diphlam	40.000	39.880	0.3	99	0.00
66	CT	Azobenz&12Diphlhyd	40.000	40.170	-0.4	99	0.00
67	CPT	4Brphlphlethr	20.000	19.110	4.5	96	0.00
68	CPT	Hexaclbenzene	20.000	19.888	0.6	98	0.00
69	CPT	Pentaclphenol	20.000	19.066	4.7	96	0.00
70	CPT	Phenanthrene	20.000	19.615	1.9	98	0.00
71	CPT	Anthracene	20.000	19.450	2.8	97	0.00
72	CPT	Carbazole	20.000	19.486	2.6	97	0.00
73	CPT	Dinbtylphthal	20.000	19.170	4.1	94	0.00
74	CPT	Fluoranthene	20.000	19.486	2.6	98	0.00
75	I	Chrysene-d12	20.000	20.000	0.0	99	0.00
76	CT	Benzidine	20.000	18.120	9.4	83	0.00
77	CPT	Pyrene	20.000	20.376	-1.9	99	0.00
78	S	SURRTerphenyl-d14	100.000	100.614	-0.6	99	0.00
79	CPT	Btylbzylphth	20.000	19.771	1.1	96	0.00
80	CT	bis2Ethlhxlad	20.000	19.174	4.1	93	0.00
81	CPT	33Diclbnzidin	20.000	18.650	6.8	89	0.00
82	CPT	B[a]anthracen	20.000	19.581	2.1	98	0.00
83	CPT	Chrysene	20.000	20.063	-0.3	100	0.00
84	CPT	bis2Ethlhxlph	20.000	19.495	2.5	96	0.00
85	CPT	Dinoctylphthl	20.000	19.661	1.7	96	0.00
86	I	Perylene-d12	20.000	20.000	0.0	100	0.00
87	CPT	B[b]fluoranth	20.000	20.985	-4.9	97	0.00
88	CPT	B[k]fluoranth	20.000	20.273	-1.4	96	0.00
89	CPT	Benz[a]pyrene	20.000	21.236	-6.2	100	0.00
90	CPT	Indeno-pyrene	20.000	19.907	0.5	104	0.00
91	CPT	Dib[ah]anthr	20.000	19.759	1.2	100	0.00
92	CPT	B[ghi]perylen	20.000	19.695	1.5	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S031722\1ICV1.D Vial: 10
Acq On : 17 Mar 2022 15:56 Operator: JJY
Sample : ICV 20 ug/ml SVMS9156 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:12:53 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	1.000	1.000	0.0	98	0.00
2	CT	Ntrsdimeth	0.895	0.923	-3.1	99	0.00
3	CT	Pyridine	1.486	1.406	5.4	92	0.00
4	S	SURR2Flphenol	0.544	0.565	-3.9	97	0.00
5	CT	Aniline	1.969	2.048	-4.0	97	0.00
6	CPT	bis2Clethletr	1.324	1.345	-1.6	99	0.00
7	S	SURRPhenol-d5	0.652	0.680	-4.3	99	0.00
8	CPT	Phenol	1.861	1.919	-3.1	99	0.00
9	CPT	2-Cl-phenol	1.315	1.348	-2.5	98	0.00
10	CT	13Diclbenz	1.567	1.544	1.5	98	0.00
11	CT	14Diclbenz	1.534	1.514	1.3	98	0.00
12	CT	12Diclbenz	1.456	1.447	0.6	98	0.00
13	CT	Benzyl alcoho	0.859	0.876	-2.0	96	0.00
14	CPT	bis2clispreth	1.551	1.561	-0.6	100	0.00
15	CPT	2Methylphenol	1.031	1.045	-1.4	99	0.00
16	CT	Ntrspyrrol	0.615	0.649	-5.5	98	0.00
17	CPT	Acetophenone	1.808	1.728	4.4	94	0.00
18	CPT	Hexaclethane	0.617	0.612	0.8	98	0.00
19	CPT	N-Ntrsdinprop	0.942	0.956	-1.5	100	0.00
20	CPT	3&4Methylphenol	1.260	1.296	-2.9	97	0.00
21	I	Naphthalened8	1.000	1.000	0.0	99	0.00
22	S	SURRNitrbenzened5	0.057	0.058	-1.8	99	0.00
23	CPT	Nitrobenzene	0.280	0.278	0.7	97	0.00
24	CPT	Isophorone	0.534	0.536	-0.4	97	0.00
25	CPT	2-Nitrophenol	0.120	0.128	-6.7	95	0.00
26	CPT	24Dimthpheno	0.196	0.206	-5.1	99	0.00
27	CPT	bis2clethoxym	0.355	0.358	-0.8	99	0.00
28	CPT	24Diclphenol	0.266	0.274	-3.0	96	0.00
29	CT	124Triclbenz	0.330	0.324	1.8	96	0.00
30	CT	Benzoic acid	0.068	0.062	8.8	97	0.00
31	CPT	Naphthalene	1.022	1.006	1.6	97	0.00
32	CPT	4-Cl-aniline	0.394	0.402	-2.0	98	0.00
33	CT	26Diclphenol	0.265	0.274	-3.4	98	0.00
34	CT	Hexaclprop	0.173	0.186	-7.5	100	0.00
35	CPT	Hexaclbutdien	0.178	0.175	1.7	99	0.00
36	CPT	4Cl3methylphe	0.295	0.313	-6.1	99	0.00
37	CPT	2Methylnaphth	0.681	0.707	-3.8	101	0.00
38	CT	1Methylnaphth	0.570	0.561	1.6	97	0.00
39	I	Acenaphthened10	1.000	1.000	0.0	99	0.00
40	CPT	Hxclcycpentdi	0.298	0.300	-0.7	94	0.00
41	CPT	1245Tetrclbenz	0.546	0.571	-4.6	106	0.00
42	CPT	246Triclpheno	0.361	0.371	-2.8	95	0.00
43	CPT	245Triclpheno	0.369	0.392	-6.2	97	0.00
44	S	SURR2Flbiphenyl	0.282	0.278	1.4	98	0.00
45	CPT	2Clnaphthalen	1.224	1.197	2.2	98	0.00
46	CPT	2Nitroaniline	0.332	0.348	-4.8	95	0.00
47	CPT	Acnaphthylene	1.916	1.857	3.1	97	0.00
48	CPT	Dimethylphtha	1.368	1.353	1.1	97	0.00
49	CPT	26Dinitrotolu	0.307	0.315	-2.6	99	0.00
50	CPT	Acenaphthene	1.064	1.037	2.5	95	0.00
51	CPT	3Nitroaniline	0.314	0.338	-7.6	101	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S031722\1ICV1.D Vial: 10
Acq On : 17 Mar 2022 15:56 Operator: JJY
Sample : ICV 20 ug/ml SVMS9156 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:12:53 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	0.072	0.061	15.3	86	0.00
53	CPT	Dibenzofuran	1.646	1.626	1.2	98	0.00
54	CPT	24Dinitrotolu	0.370	0.383	-3.5	96	0.00
55	CPT	4-Nitrophenol	0.225	0.222	1.3	93	0.00
56	CT	2,3,5,6-Tetrachlorop	0.261	0.272	-4.2	95	0.00
57	CPT	2,3,4,6-Tetrachlorop	0.260	0.281	-8.1	100	0.00
58	CPT	Fluorene	1.289	1.281	0.6	99	0.00
59	CPT	4Clphlphlethr	0.593	0.574	3.2	95	0.00
60	CPT	Diethylphthal	1.369	1.356	0.9	96	0.00
61	CPT	4Nitroaniline	0.280	0.301	-7.5	99	0.00
62	S	SURR246Tribrphenl	0.051	0.055	-7.8	99	0.00
63	I	Phenanthrd10	1.000	1.000	0.0	99	0.00
64	CPT	46Dinit2mylph	0.095	0.093	2.1	93	0.00
65	CPT	Ntrsdiphlam&Diphlam	0.723	0.719	0.6	99	0.00
66	CT	Azobenz&12Diphlhyd	0.238	0.236	0.8	99	0.00
67	CPT	4Brphlphlethr	0.248	0.236	4.8	96	0.00
68	CPT	Hexaclbenzene	0.230	0.225	2.2	98	0.00
69	CPT	Pentaclphenol	0.100	0.100	0.0	96	0.00
70	CPT	Phenanthrene	1.035	1.007	2.7	98	0.00
71	CPT	Anthracene	1.034	1.016	1.7	97	0.00
72	CPT	Carbazole	0.978	0.962	1.6	97	0.00
73	CPT	Dinbtylphthal	1.253	1.239	1.1	94	0.00
74	CPT	Fluoranthene	1.051	1.035	1.5	98	0.00
75	I	Chrysene-d12	1.000	1.000	0.0	99	0.00
76	CT	Benzidine	0.387	0.397	-2.6	83	0.00
77	CPT	Pyrene	1.859	1.914	-3.0	99	0.00
78	S	SURRTerphenyl-d14	0.255	0.262	-2.7	99	0.00
79	CPT	Btylbzylphth	0.791	0.845	-6.8	96	0.00
80	CT	bis2Ethlhxlad	0.628	0.657	-4.6	93	0.00
81	CPT	33Diclbnzidin	0.353	0.352	0.3	89	0.00
82	CPT	B[a]anthracen	1.327	1.307	1.5	98	0.00
83	CPT	Chrysene	1.235	1.227	0.6	100	0.00
84	CPT	bis2Ethlhxlph	0.943	0.980	-3.9	96	0.00
85	CPT	Dinoctylphthl	1.338	1.424	-6.4	96	0.00
86	I	Perylene-d12	1.000	1.000	0.0	100	0.00
87	CPT	B[b]fluoranth	1.369	1.437	-5.0	97	0.00
88	CPT	B[k]fluoranth	1.361	1.379	-1.3	96	0.00
89	CPT	Benz[a]pyrene	1.219	1.295	-6.2	100	0.00
90	CPT	Indeno-pyrene	0.605	0.640	-5.8	104	0.00
91	CPT	Dib[ah]anthr	0.657	0.680	-3.5	100	0.00
92	CPT	B[ghi]perylen	0.690	0.696	-0.9	104	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV1.D Vial: 10
Acq On : 17 Mar 2022 15:56 Operator: JJY
Sample : ICV 20 ug/ml SVMS9156 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:12:53 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	194081	20.00	ug/mL	0.00
21) Naphthalened8	5.425	136	976940	20.00	ug/mL	0.00
39) Acenaphthened10	7.343	164	511167	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	657095	20.00	ug/mL	0.00
75) Chrysene-d12	10.215	240	358220	20.00	ug/mL	0.00
86) Perylene-d12	11.485	264	228084	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.654	112	274156	51.98	%REC	0.00
Spiked Amount 100.000			Recovery = 51.98%			
7) SURRPhenol-d5	3.416	99	329696	52.13	%REC	0.00
Spiked Amount 100.000			Recovery = 52.13%			
22) SURRNitrbenzened5	4.436	82	280923	100.90	%REC	0.00
Spiked Amount 100.000			Recovery = 100.90%			
44) SURR2Flbiphenyl	6.752	172	711795	99.31	%REC	0.00
Spiked Amount 100.000			Recovery = 99.31%			
62) SURR246Tribrphenl	7.982	330	70063	51.00	%REC	0.00
Spiked Amount 100.000			Recovery = 51.00%			
78) SURRTerphenyl-d14	9.499	244	468635	100.61	%REC	0.00
Spiked Amount 100.000			Recovery = 100.61%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.932	74	179229	20.6272	ug/mL	99
3) Pyridine	1.949	79	272896	18.9187	ug/mL	100
5) Aniline	3.453	93	397441	20.7957	ug/mL	98
6) bis2Clethletr	3.524	93	261042	20.3212	ug/mL	99
8) Phenol	3.430	94	372450	20.6290	ug/mL	100
9) 2-Cl-phenol	3.561	128	261705	20.5019	ug/mL	99
10) 13Diclbenz	3.723	146	299682	19.7116	ug/mL	97
11) 14Diclbenz	3.805	146	293768	19.7316	ug/mL	99
12) 12Diclbenz	3.964	146	280816	19.8766	ug/mL	99
13) Benzyl alcoho	3.950	108	170099	20.4170	ug/mL	99
14) bis2clispreth	4.120	45	302970	20.1332	ug/mL	97
15) 2Methylphenol	4.086	107	202856	20.2784	ug/mL	94
16) Ntrspyrrol	4.237	100	125968	21.1122	ug/mL	95
17) Acetophenone	4.260	105	335291	19.1097	ug/mL	100
18) Hexaclethane	4.359	117	118697	19.8375	ug/mL	99
19) N-Ntrsdinprop	4.274	70	185608	20.3113	ug/mL	99
20) 3&4Methylphenol	4.282	107	251545	20.5681	ug/mL	98
23) Nitrobenzene	4.461	77	271377	19.8604	ug/mL	100
24) Isophorone	4.788	82	523709	20.0673	ug/mL	99
25) 2-Nitrophenol	4.879	139	125268	19.7836	ug/mL	97
26) 24Dimthpheno	4.987	122	200949	20.9749	ug/mL	97
27) bis2clethoxym	5.129	93	349584	20.1880	ug/mL	97
28) 24Diclphenol	5.231	162	267723	20.6069	ug/mL	95
29) 124Triclbenz	5.354	180	316683	19.6497	ug/mL	99
30) Benzoic acid	5.138	122	60998	19.0855	ug/mL	92
31) Naphthalene	5.456	128	983069	19.6995	ug/mL	99
32) 4-Cl-aniline	5.575	127	393086	20.4251	ug/mL	99
33) 26Diclphenol	5.572	162	267456	20.6982	ug/mL	97
34) Hexaclprop	5.592	213	181790	21.4791	ug/mL	98
35) Hexaclbutdien	5.666	225	170616	19.6616	ug/mL	97
36) 4Cl3methylphe	6.234	107	306097	21.2370	ug/mL	97
37) 2Methylnaphth	6.348	142	690780	20.7513	ug/mL	97
38) 1Methylnaphth	6.450	141	548314	19.6777	ug/mL	100
40) Hxclcycpentdi	6.524	237	153417	19.0276	ug/mL	94

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV1.D Vial: 10
Acq On : 17 Mar 2022 15:56 Operator: JJY
Sample : ICV 20 ug/ml SVMS9156 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:12:53 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

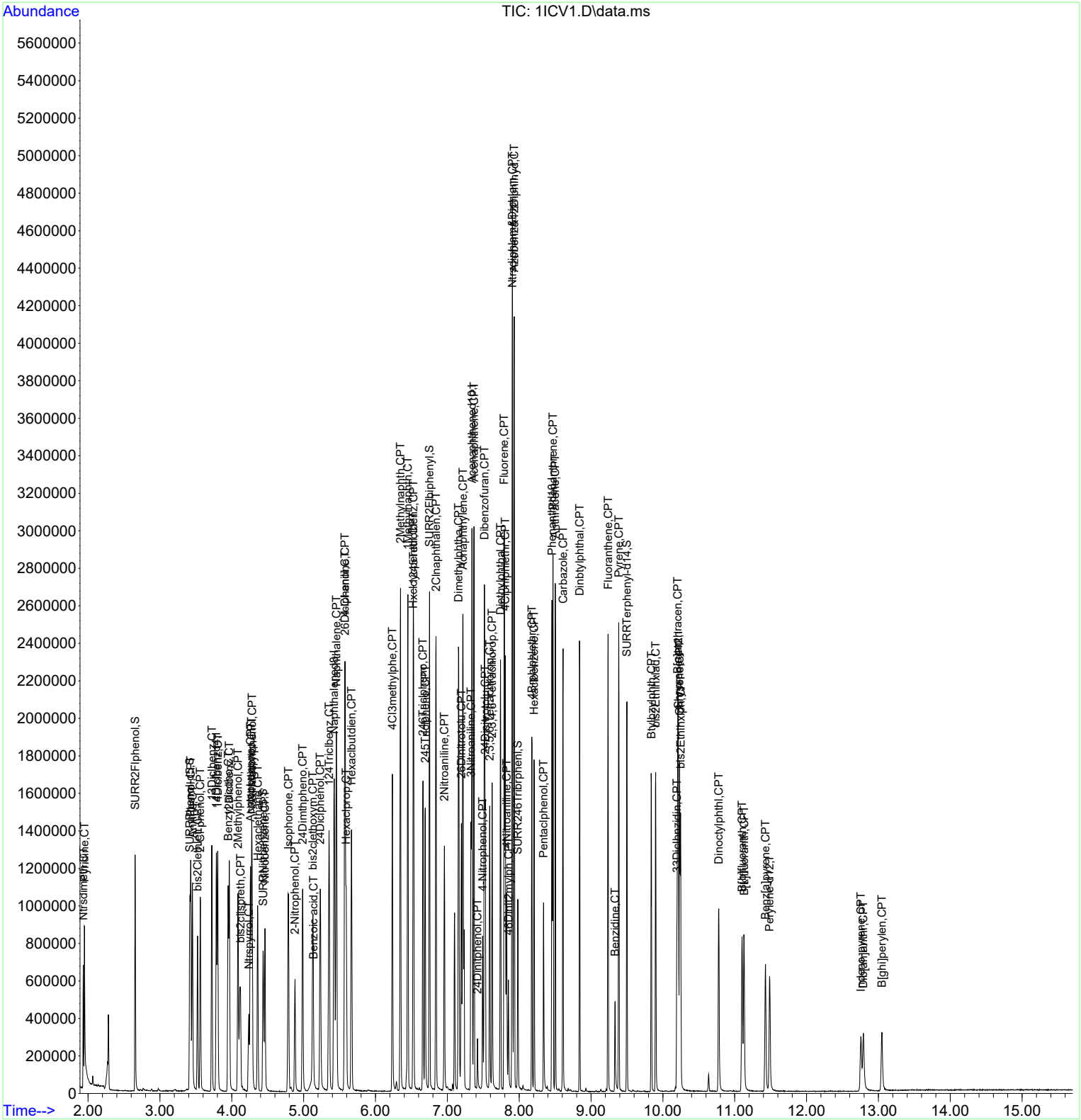
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.530	216	292075	21.1885 ug/mL	97
42) 246Triclpheno	6.661	196	189826	19.4329 ug/mL	96
43) 245Triclpheno	6.692	196	200387	19.7369 ug/mL	99
45) 2Clnaphthalen	6.842	162	612080	19.6673 ug/mL	98
46) 2Nitroaniline	6.959	65	177674	19.6314 ug/mL	99
47) Acnaphthylene	7.218	152	949449	19.4976 ug/mL	100
48) Dimethylphtha	7.155	163	691418	19.7381 ug/mL	99
49) 26Dinitrotolu	7.195	165	160766	20.4665 ug/mL	93
50) Acenaphthene	7.371	154	530294	19.4120 ug/mL	99
51) 3Nitroaniline	7.328	138	172893	20.3165 ug/mL	96
52) 24Dinitphenol	7.419	184	30934	18.1311 ug/mL	95
53) Dibenzofuran	7.516	168	831329	19.8424 ug/mL	99
54) 24Dinitrotolu	7.527	165	195824	19.7328 ug/mL	98
55) 4-Nitrophenol	7.490	65	113237	18.9942 ug/mL	97
56) 2,3,5,6-Tetrachlorop	7.590	232	138834	19.4298 ug/mL	97
57) 2,3,4,6-Tetrachlorop	7.624	232	143766	20.4049 ug/mL	95
58) Fluorene	7.791	166	654959	19.9560 ug/mL	99
59) 4Clphlphlethr	7.806	204	293373	19.1763 ug/mL	99
60) Diethylphthal	7.740	149	693328	19.8159 ug/mL	100
61) 4Nitroaniline	7.826	138	153853	20.2159 ug/mL	97
64) 46Dinit2mylph	7.851	198	60879	18.8231 ug/mL	99
65) Ntrsdiphlam&Diphlam	7.905	169	944294	39.8795 ug/mL	98
66) Azobenz&12Diphlhyd	7.931	182	310219	40.1698 ug/mL	97
67) 4Brphlphlethr	8.178	248	155202	19.1097 ug/mL	99
68) Hexaclbenzene	8.206	284	148120	19.8882 ug/mL	98
69) Pentaclphenol	8.340	266	65898	19.0662 ug/mL	99
70) Phenanthrene	8.471	178	661786	19.6146 ug/mL	99
71) Anthracene	8.502	178	667491	19.4497 ug/mL	100
72) Carbazole	8.610	167	631970	19.4860 ug/mL	99
73) Dinbtylphthal	8.840	149	814280	19.1705 ug/mL	100
74) Fluoranthene	9.238	202	680059	19.4860 ug/mL	99
76) Benzidine	9.334	184	142313	18.1199 ug/mL	99
77) Pyrene	9.386	202	685742	20.3760 ug/mL	99
79) Btylbzylphth	9.840	149	302783	19.7712 ug/mL	98
80) bis2Ethlhxlad	9.900	129	235198	19.1745 ug/mL	99
81) 33Diclbnzidin	10.195	252	126185	18.6498 ug/mL	91
82) B[a]anthracen	10.207	228	468260	19.5811 ug/mL	98
83) Chrysene	10.232	228	439704	20.0631 ug/mL	99
84) bis2Ethlhxlph	10.246	149	351113	19.4954 ug/mL	99
85) Dinoctylphthl	10.778	149	510158	19.6609 ug/mL	100
87) B[b]fluoranth	11.102	252	327699	20.9848 ug/mL	99
88) B[k]fluoranth	11.130	252	314563	20.2728 ug/mL	98
89) Benz[a]pyrene	11.429	252	295270	21.2357 ug/mL	99
90) Indeno-pyrene	12.755	276	145923	19.9072 ug/mL	96
91) Dib[ah]anthr	12.790	278	155003	19.7589 ug/mL	98
92) B[ghi]perylen	13.048	276	158647	19.6950 ug/mL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV1.D Vial: 10
Acq On : 17 Mar 2022 15:56 Operator: JJY
Sample : ICV 20 ug/ml SVMS9156 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:12:53 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S031722\1ICV2.D Vial: 11
Acq On : 17 Mar 2022 16:19 Operator: JJY
Sample : ICV 40 ug/ml SVMS9157 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:41:59 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	101	0.00
2	CT	Ntrsdimeth	40.000	41.675	-4.2	102	0.00
3	CT	Pyridine	40.000	38.247	4.4	94	0.00
4	S	SURR2Flphenol	100.000	102.378	-2.4	101	0.00
5	CT	Aniline	40.000	39.847	0.4	100	0.00
6	CPT	bis2Clethletr	40.000	38.938	2.7	101	0.00
7	S	SURRPhenol-d5	100.000	103.330	-3.3	102	0.00
8	CPT	Phenol	40.000	39.225	1.9	100	0.00
9	CPT	2-Cl-phenol	40.000	38.759	3.1	99	0.00
10	CT	13Diclbenz	40.000	37.662	5.8	98	0.00
11	CT	14Diclbenz	40.000	37.621	5.9	100	0.00
12	CT	12Diclbenz	40.000	36.549	8.6	99	0.00
13	CT	Benzyl alcoho	40.000	38.868	2.8	97	0.00
14	CPT	bis2clispreth	40.000	38.227	4.4	102	0.00
15	CPT	2Methylphenol	40.000	38.588	3.5	99	0.00
16	CT	Ntrspyrrol	40.000	41.660	-4.1	101	0.01
17	CPT	Acetophenone	40.000	35.979	10.1	94	0.00
18	CPT	Hexaclethane	40.000	38.043	4.9	99	0.00
19	CPT	N-Ntrsdinprop	40.000	37.264	6.8	101	0.00
20	CPT	3&4Methylphenol	40.000	38.555	3.6	101	0.00
21	I	Naphthalened8	20.000	20.000	0.0	102	0.00
22	S	SURRNitrbenzened5	200.000	198.749	0.6	100	0.00
23	CPT	Nitrobenzene	40.000	39.046	2.4	99	0.00
24	CPT	Isophorone	40.000	38.925	2.7	98	0.01
25	CPT	2-Nitrophenol	40.000	40.322	-0.8	101	0.00
26	CPT	24Dimthpheno	40.000	40.559	-1.4	100	0.00
27	CPT	bis2clethoxym	40.000	39.681	0.8	101	0.00
28	CPT	24Diclphenol	40.000	40.693	-1.7	99	0.00
29	CT	124Triclbenz	40.000	37.437	6.4	99	0.00
30	CT	Benzoic acid	40.000	40.143	-0.4	102	0.06
31	CPT	Naphthalene	40.000	37.723	5.7	101	0.00
32	CPT	4-Cl-aniline	40.000	38.112	4.7	99	0.00
33	CT	26Diclphenol	40.000	39.253	1.9	100	0.00
34	CT	Hexaclprop	40.000	41.452	-3.6	102	0.00
35	CPT	Hexaclbutdien	40.000	37.030	7.4	98	0.00
36	CPT	4Cl3methylphe	40.000	41.147	-2.9	100	0.00
37	CPT	2Methylnaphth	40.000	40.723	-1.8	103	0.00
38	CT	1Methylnaphth	40.000	38.941	2.6	100	0.00
39	I	Acenaphthened10	20.000	20.000	0.0	101	0.00
40	CPT	Hxclcycpentdi	40.000	37.671	5.8	95	0.00
41	CPT	1245Tetrclbenz	40.000	41.920	-4.8	104	0.00
42	CPT	246Triclpheno	40.000	39.261	1.8	99	0.00
43	CPT	245Triclpheno	40.000	39.499	1.3	100	0.00
44	S	SURR2Flbiphenyl	200.000	197.103	1.4	99	0.00
45	CPT	2Clnaphthalen	40.000	39.528	1.2	99	0.00
46	CPT	2Nitroaniline	40.000	39.688	0.8	100	0.00
47	CPT	Acnaphthylene	40.000	38.782	3.0	100	0.00
48	CPT	Dimethylphtha	40.000	39.932	0.2	101	0.00
49	CPT	26Dinitrotolu	40.000	40.065	-0.2	101	0.00
50	CPT	Acenaphthene	40.000	38.795	3.0	99	0.00
51	CPT	3Nitroaniline	40.000	40.128	-0.3	101	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S031722\1ICV2.D Vial: 11
Acq On : 17 Mar 2022 16:19 Operator: JJY
Sample : ICV 40 ug/ml SVMS9157 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:41:59 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	40.000	40.718	-1.8	101	0.00
53	CPT	Dibenzofuran	40.000	39.282	1.8	100	0.00
54	CPT	24Dinitrotolu	40.000	39.329	1.7	99	0.00
55	CPT	4-Nitrophenol	40.000	39.313	1.7	98	0.00
56	CT	2,3,5,6-Tetrachlorop	40.000	39.122	2.2	99	0.00
57	CPT	2,3,4,6-Tetrachlorop	40.000	40.027	-0.1	101	0.00
58	CPT	Fluorene	40.000	39.674	0.8	101	0.00
59	CPT	4Clphlphlethr	40.000	39.107	2.2	98	0.00
60	CPT	Diethylphthal	40.000	38.802	3.0	99	0.00
61	CPT	4Nitroaniline	40.000	40.027	-0.1	100	0.01
62	S	SURR246Tribrphenl	100.000	98.515	1.5	99	0.00
63	I	Phenanthrd10	20.000	20.000	0.0	100	0.00
64	CPT	46Dinit2mylph	40.000	41.543	-3.9	103	0.00
65	CPT	Ntrsdiphlam&Diphlam	80.000	81.765	-2.2	103	0.00
66	CT	Azobenz&12Diphlhyd	80.000	83.193	-4.0	104	0.00
67	CPT	4Brphlphlethr	40.000	39.264	1.8	97	0.00
68	CPT	Hexaclbenzene	40.000	40.287	-0.7	102	0.00
69	CPT	Pentaclphenol	40.000	40.127	-0.3	100	0.00
70	CPT	Phenanthrene	40.000	40.077	-0.2	101	0.00
71	CPT	Anthracene	40.000	39.613	1.0	99	0.00
72	CPT	Carbazole	40.000	39.122	2.2	99	0.00
73	CPT	Dinbtylphthal	40.000	38.885	2.8	99	0.00
74	CPT	Fluoranthene	40.000	39.560	1.1	100	0.00
75	I	Chrysene-d12	20.000	20.000	0.0	100	0.00
76	CT	Benzidine	40.000	41.050	-2.6	95	0.00
77	CPT	Pyrene	40.000	40.681	-1.7	99	0.00
78	S	SURRTerphenyl-d14	200.000	201.679	-0.8	98	0.00
79	CPT	Btylbzylphth	40.000	38.909	2.7	95	0.00
80	CT	bis2Ethlhxlad	40.000	39.010	2.5	97	0.00
81	CPT	33Diclbnzidin	40.000	37.962	5.1	92	0.00
82	CPT	B[a]anthracen	40.000	37.971	5.1	93	0.00
83	CPT	Chrysene	40.000	39.919	0.2	98	0.00
84	CPT	bis2Ethlhxlph	40.000	37.962	5.1	94	0.00
85	CPT	Dinoctylphthl	40.000	36.921	7.7	93	0.00
86	I	Perylene-d12	20.000	20.000	0.0	93	0.00
87	CPT	B[b]fluoranth	40.000	40.846	-2.1	91	0.00
88	CPT	B[k]fluoranth	40.000	40.545	-1.4	94	0.00
89	CPT	Benz[a]pyrene	40.000	41.594	-4.0	93	0.00
90	CPT	Indeno-pyrene	40.000	37.140	7.1	85	0.00
91	CPT	Dib[ah]anthr	40.000	36.433	8.9	84	0.00
92	CPT	B[ghi]perylen	40.000	36.623	8.4	84	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV2.D Vial: 11
Acq On : 17 Mar 2022 16:19 Operator: JJY
Sample : ICV 40 ug/ml SVMS9157 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:41:59 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	191189	20.00	ug/mL	0.00
21) Naphthalened8	5.427	136	947729	20.00	ug/mL	0.00
39) Acenaphthened10	7.345	164	487659	20.00	ug/mL	0.00
63) Phenanthrd10	8.459	188	638044	20.00	ug/mL	0.00
75) Chrysene-d12	10.218	240	334016	20.00	ug/mL	0.00
86) Perylene-d12	11.488	264	214944	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.657	112	531911	102.38	%REC	0.00
Spiked Amount 100.000			Recovery = 102.38%			
7) SURRPhenol-d5	3.421	99	643767	103.33	%REC	0.00
Spiked Amount 100.000			Recovery = 103.33%			
22) SURRNitrbenzened5	4.441	82	536792	198.75	%REC	0.00
Spiked Amount 100.000			Recovery = 198.75%			
44) SURR2Flbiphenyl	6.754	172	1283554	197.10	%REC	0.00
Spiked Amount 100.000			Recovery = 197.10%			
62) SURR246Tribrphenl	7.987	330	133469	98.52	%REC	0.00
Spiked Amount 100.000			Recovery = 98.52%			
78) SURRTerphenyl-d14	9.502	244	842591	201.68	%REC	0.00
Spiked Amount 100.000			Recovery = 201.68%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.935	74	356714	41.6747	ug/mL	97
3) Pyridine	1.947	79	543474	38.2467	ug/mL	98
5) Aniline	3.455	93	750203	39.8475	ug/mL#	81
6) bis2Clethletr	3.526	93	492730	38.9375	ug/mL	99
8) Phenol	3.435	94	697635	39.2246	ug/mL	100
9) 2-Cl-phenol	3.566	128	487379	38.7586	ug/mL	97
10) 13Diclbenz	3.722	146	564059	37.6623	ug/mL	99
11) 14Diclbenz	3.805	146	551768	37.6213	ug/mL	100
12) 12Diclbenz	3.967	146	508663	36.5487	ug/mL	100
13) Benzyl alcoho	3.955	108	318997	38.8684	ug/mL	96
14) bis2clispreth	4.123	45	566674	38.2267	ug/mL	94
15) 2Methylphenol	4.092	107	380260	38.5875	ug/mL	99
16) Ntrspyrrol	4.251	100	244867	41.6603	ug/mL	99
17) Acetophenone	4.265	105	621868	35.9792	ug/mL	99
18) Hexaclethane	4.362	117	224237	38.0430	ug/mL	98
19) N-Ntrsdinprop	4.282	70	335450	37.2639	ug/mL	99
20) 3&4Methylphenol	4.291	107	464491	38.5545	ug/mL	97
23) Nitrobenzene	4.470	77	517574	39.0456	ug/mL	98
24) Isophorone	4.797	82	985474	38.9249	ug/mL	98
25) 2-Nitrophenol	4.885	139	257418	40.3219	ug/mL	98
26) 24Dimthpheno	4.993	122	376954	40.5590	ug/mL	99
27) bis2clethoxym	5.135	93	666592	39.6812	ug/mL	98
28) 24Diclphenol	5.237	162	512865	40.6925	ug/mL	99
29) 124Triclbenz	5.356	180	585306	37.4367	ug/mL	97
30) Benzoic acid	5.197	122	168275	40.1430	ug/mL	90
31) Naphthalene	5.461	128	1826232	37.7234	ug/mL	99
32) 4-Cl-aniline	5.584	127	711550	38.1124	ug/mL	99
33) 26Diclphenol	5.578	162	492049	39.2530	ug/mL	100
34) Hexaclprop	5.595	213	340344	41.4523	ug/mL	98
35) Hexaclbutdien	5.669	225	311724	37.0299	ug/mL	99
36) 4Cl3methylphe	6.237	107	575335	41.1470	ug/mL	99
37) 2Methylnaphth	6.351	142	1240967	40.7230	ug/mL	97
38) 1Methylnaphth	6.453	141	982501	38.9406	ug/mL	100
40) Hxclcycpentdi	6.527	237	289042	37.6705	ug/mL	95

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV2.D Vial: 11
Acq On : 17 Mar 2022 16:19 Operator: JJY
Sample : ICV 40 ug/ml SVMS9157 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:41:59 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

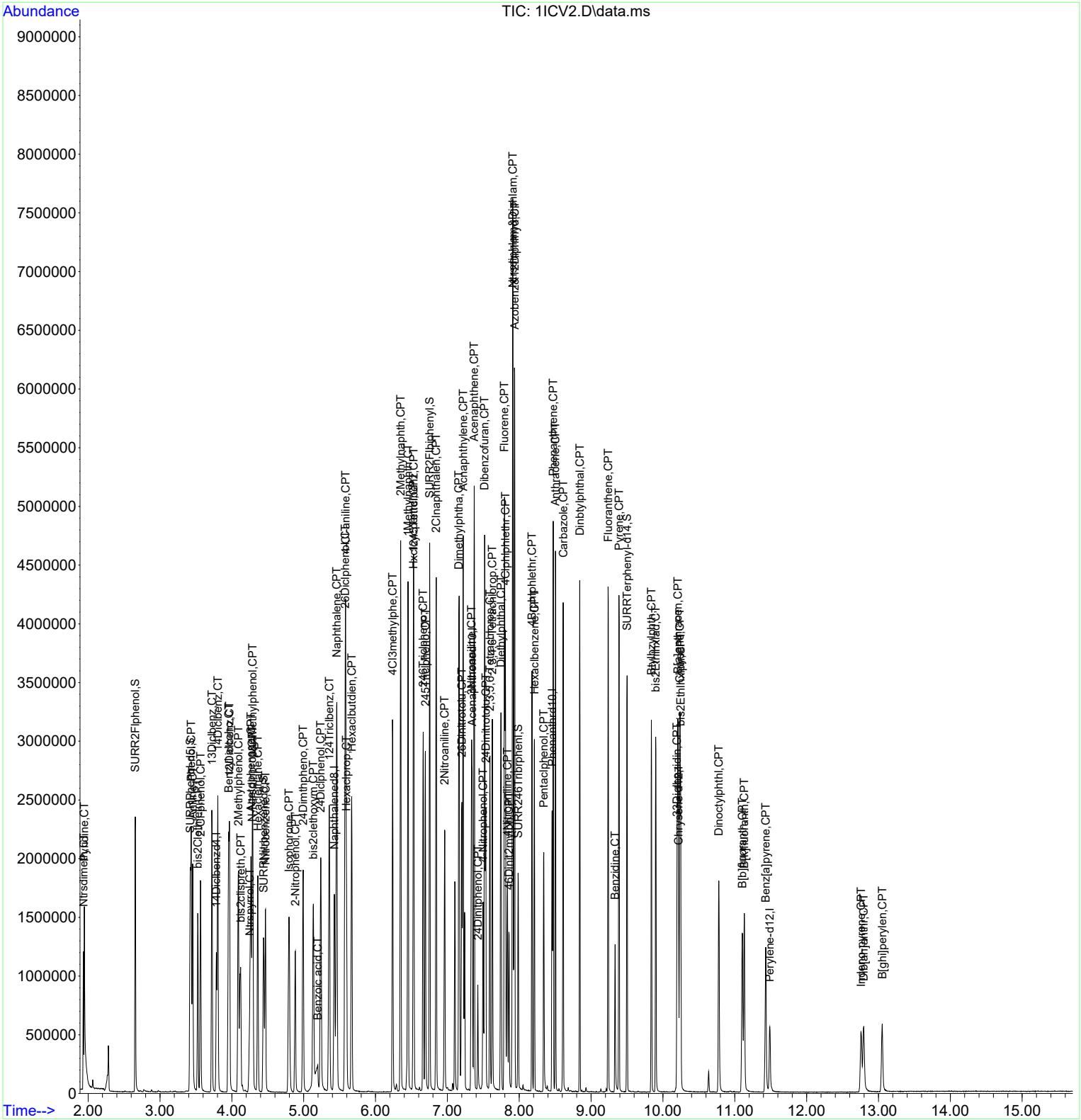
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.533	216	517933	41.9202	ug/mL	95
42) 246Triclpheno	6.663	196	365967	39.2613	ug/mL	100
43) 245Triclpheno	6.695	196	378291	39.4992	ug/mL	99
45) 2Clnaphthalen	6.845	162	1124843	39.5277	ug/mL	99
46) 2Nitroaniline	6.962	65	344715	39.6877	ug/mL	97
47) Acnaphthylene	7.220	152	1694375	38.7821	ug/mL	100
48) Dimethylphtha	7.161	163	1264421	39.9321	ug/mL	99
49) 26Dinitrotolu	7.203	165	300238	40.0647	ug/mL	98
50) Acenaphthene	7.374	154	969153	38.7954	ug/mL	99
51) 3Nitroaniline	7.337	138	329637	40.1278	ug/mL	97
52) 24Dinitphenol	7.425	184	97075	40.7184	ug/mL	90
53) Dibenzofuran	7.519	168	1486103	39.2820	ug/mL	100
54) 24Dinitrotolu	7.536	165	373163	39.3286	ug/mL	95
55) 4-Nitrophenol	7.496	65	239338	39.3129	ug/mL	96
56) 2,3,5,6-Tetrachlorop	7.592	232	275205	39.1219	ug/mL	98
57) 2,3,4,6-Tetrachlorop	7.627	232	272025	40.0273	ug/mL	97
58) Fluorene	7.794	166	1181072	39.6740	ug/mL	100
59) 4Clphlphlethr	7.808	204	530260	39.1066	ug/mL	98
60) Diethylphthal	7.746	149	1295194	38.8023	ug/mL	99
61) 4Nitroaniline	7.837	138	301326	40.0269	ug/mL	98
64) 46Dinit2mylph	7.860	198	155300	41.5430	ug/mL	98
65) Ntrsdiphlam&Diphlam	7.911	169	1687558	81.7645	ug/mL	99
66) Azobenz&12Diphlhyd	7.936	182	565378	83.1932	ug/mL	95
67) 4Brphlphlethr	8.178	248	291332	39.2636	ug/mL	99
68) Hexaclbenzene	8.212	284	267571	40.2873	ug/mL	99
69) Pentaclphenol	8.343	266	144595	40.1273	ug/mL	99
70) Phenanthrene	8.473	178	1231689	40.0767	ug/mL	100
71) Anthracene	8.505	178	1225075	39.6129	ug/mL	99
72) Carbazole	8.613	167	1177045	39.1216	ug/mL	99
73) Dinbtylphthal	8.843	149	1526599	38.8854	ug/mL	99
74) Fluoranthene	9.238	202	1266100	39.5601	ug/mL	98
76) Benzidine	9.334	184	347692	41.0496	ug/mL	98
77) Pyrene	9.388	202	1232801	40.6810	ug/mL	99
79) Btylbzylphth	9.840	149	565004	38.9093	ug/mL	98
80) bis2Ethlhxlad	9.900	129	446366	39.0098	ug/mL	99
81) 33Diclbnzidin	10.195	252	273367	37.9618	ug/mL	98
82) B[a]anthracen	10.209	228	833846	37.9709	ug/mL	98
83) Chrysene	10.235	228	788414	39.9186	ug/mL	98
84) bis2Ethlhxlph	10.246	149	633562	37.9624	ug/mL	98
85) Dinoctylphthl	10.778	149	966843	36.9214	ug/mL	99
87) B[b]fluoranth	11.107	252	601109	40.8464	ug/mL	99
88) B[k]fluoranth	11.133	252	592875	40.5451	ug/mL	99
89) Benz[a]pyrene	11.431	252	545017	41.5935	ug/mL	98
90) Indeno-pyrene	12.758	276	281793	37.1397	ug/mL	97
91) Dib[ah]anthr	12.795	278	289783	36.4328	ug/mL	98
92) B[ghi]perylen	13.054	276	287810	36.6231	ug/mL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV2.D Vial: 11
Acq On : 17 Mar 2022 16:19 Operator: JJY
Sample : ICV 40 ug/ml SVMS9157 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 16:41:59 2022

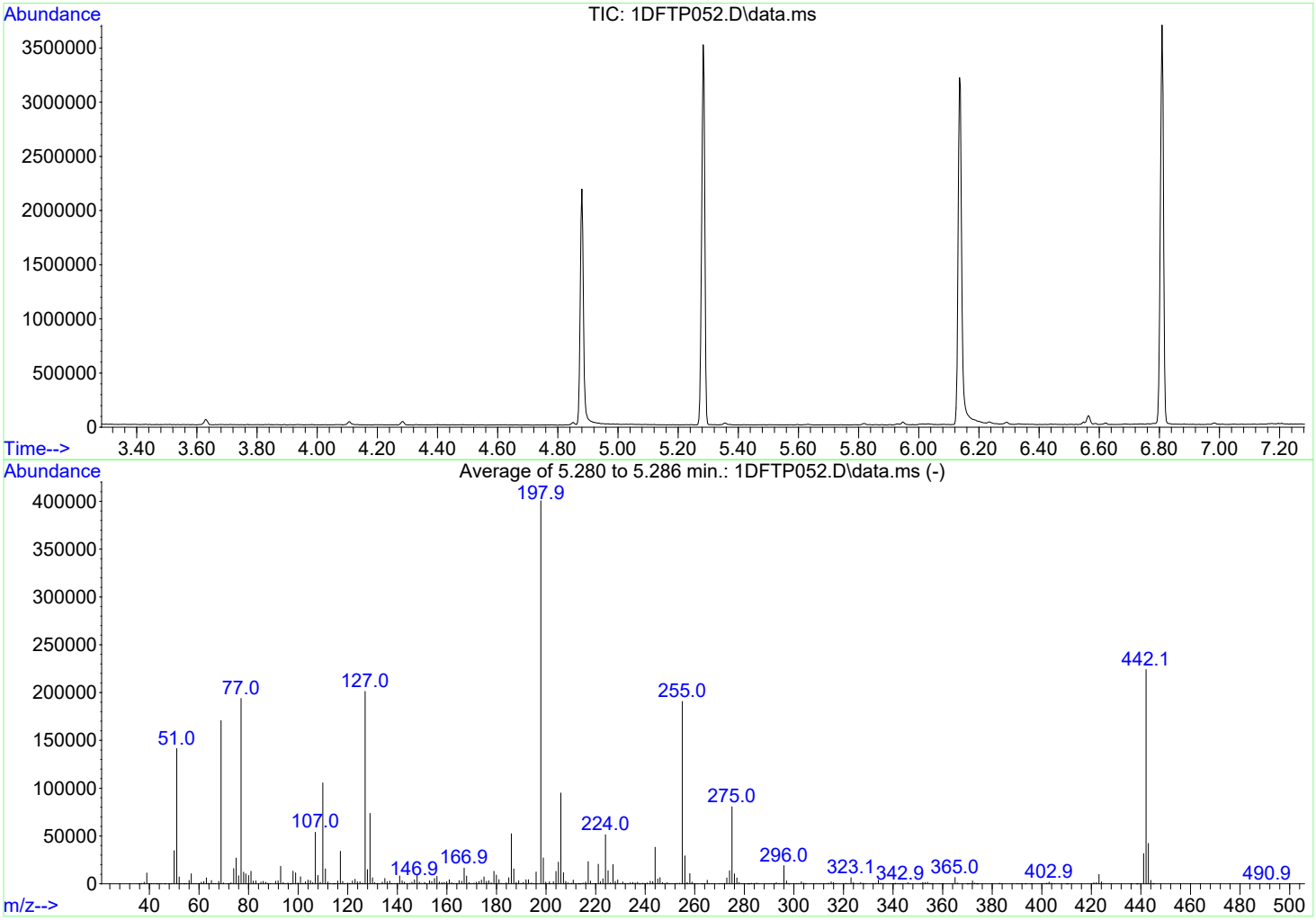
Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Data Path : C:\INSTARCH\DATA\1S031722\
Data File : 1DFTP052.D
Acq On : 17 Mar 2022 12:36
Operator : JJY
Sample : DFTPP TUNE SVMS9169
Misc : SVMS1,25ng DFTPP
ALS Vial : 1 Sample Multiplier: 1

Integration File: DDD.p

Method : C:\INSTARCH\METHOD\1DFTPP.M
Title : DFTPP TUNE
Last Update : Thu Mar 17 12:48:04 2022



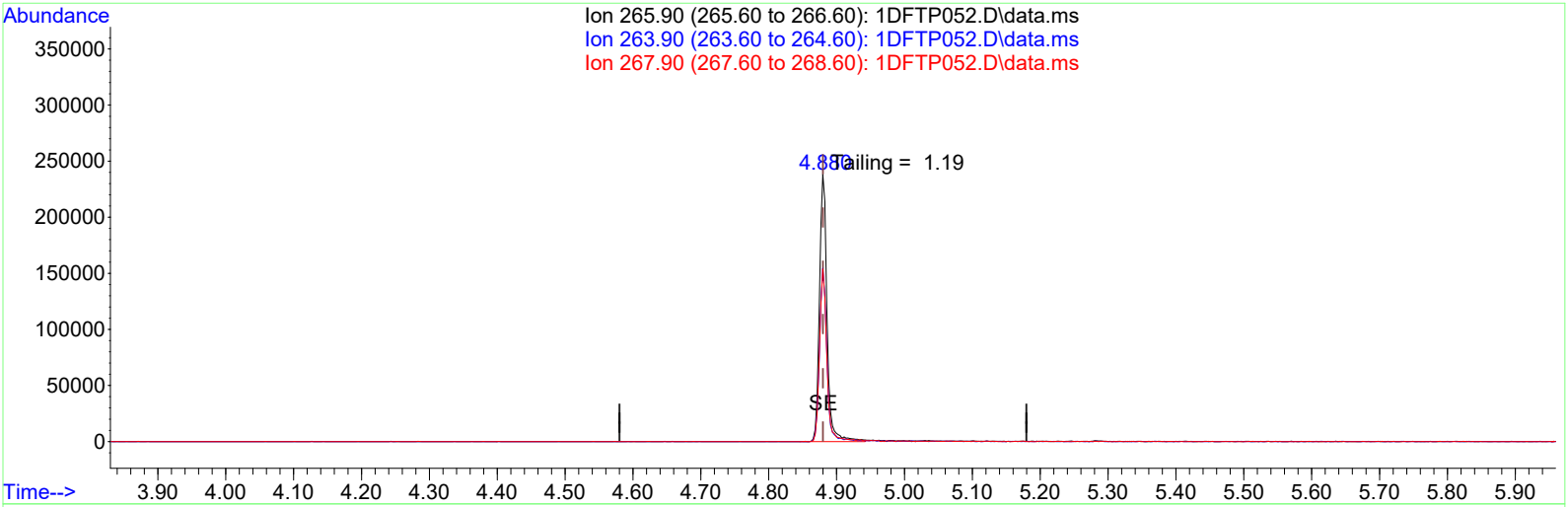
AutoFind: Scans 773, 774, 775; Background Corrected with Scan 764

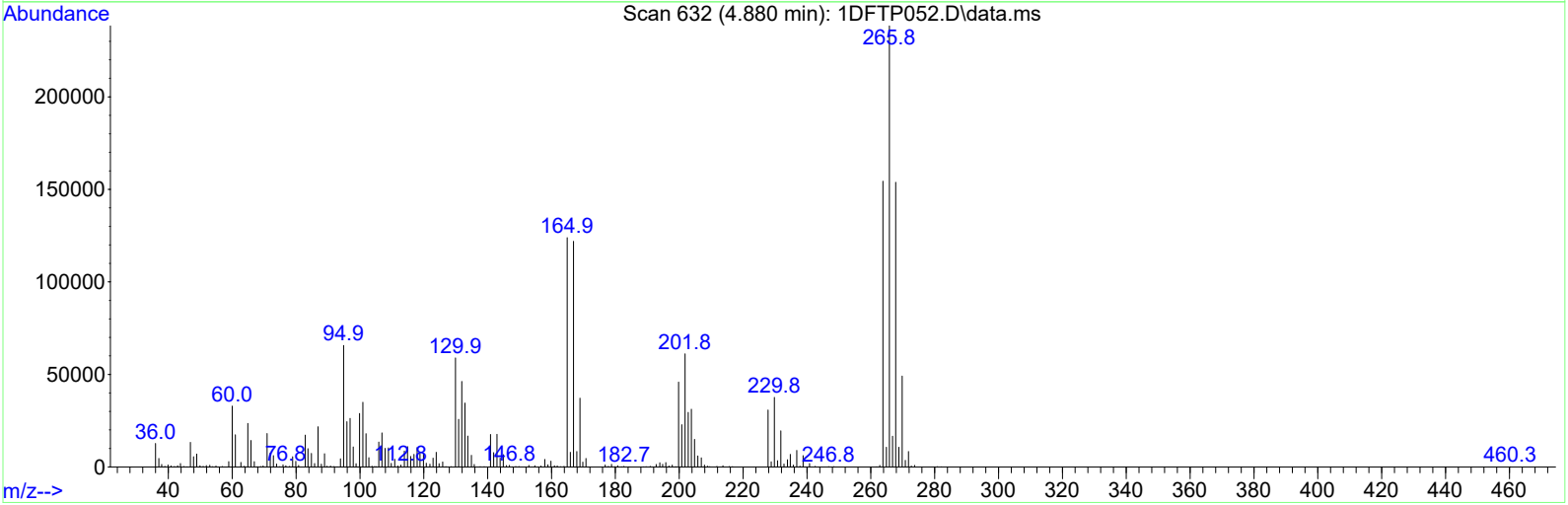
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.3	141443	PASS
68	69	0.00	2	1.5	2628	PASS
70	69	0.00	2	0.5	903	PASS
127	198	10	80	50.2	201259	PASS
197	198	0.00	2	0.0	0	PASS
198	198	50	100	100.0	400619	PASS
199	198	5	9	6.8	27072	PASS
275	198	10	60	20.1	80552	PASS
365	198	1	100	1.7	6619	PASS
441	442	0.01	24	14.1	31549	PASS
442	198	50	100	55.9	224107	PASS
443	442	15	24	18.9	42315	PASS

Quantitation Report (Qedit)

Data File : C:\INSTARCH\DATA\1S031722\1DFTP052.D Vial: 1
Acq On : 17 Mar 2022 12:36 Operator: JJY
Sample : DFTPP TUNE SVMS9169 Inst : SVMS1
Misc : SVMS1,25ng DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 12:48:12 2022

Quant Method : C:\INSTARCH\METHOD\1DFTPP.M
Quant Title : DFTPP TUNE
QLast Update : Thu Mar 17 12:48:04 2022
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M





TIC: 1DFTP052.D\data.ms

(1) Pentachlorophenol

4.880min (-0.000) 26.49 ng

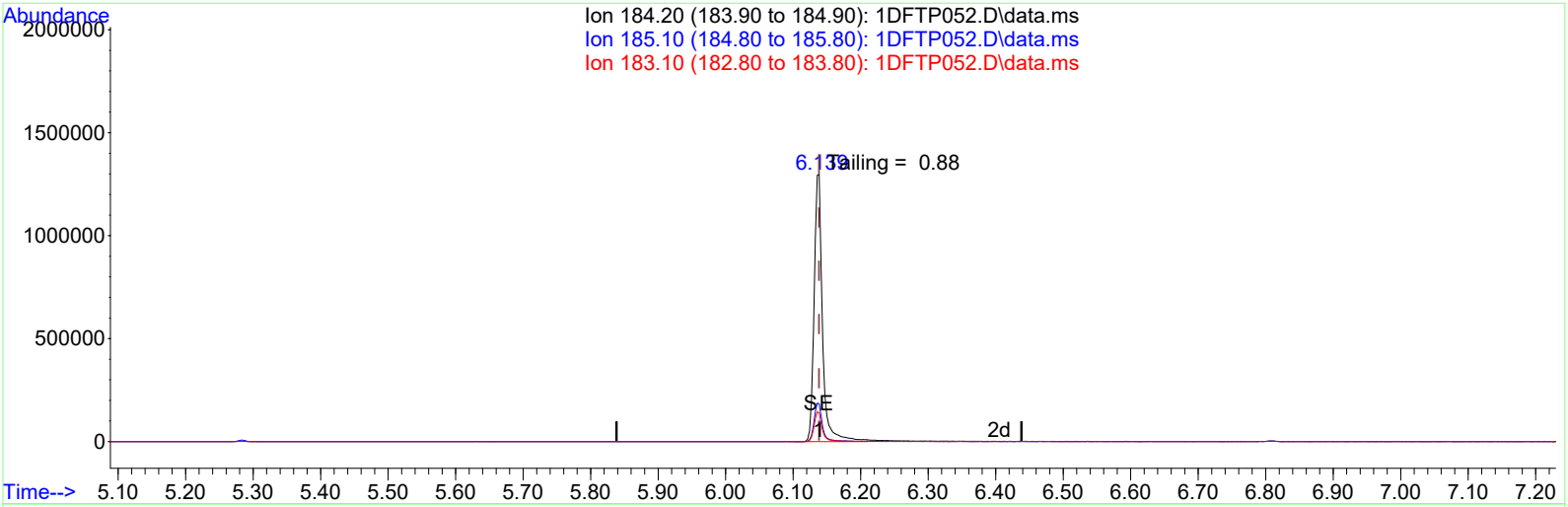
response 186422

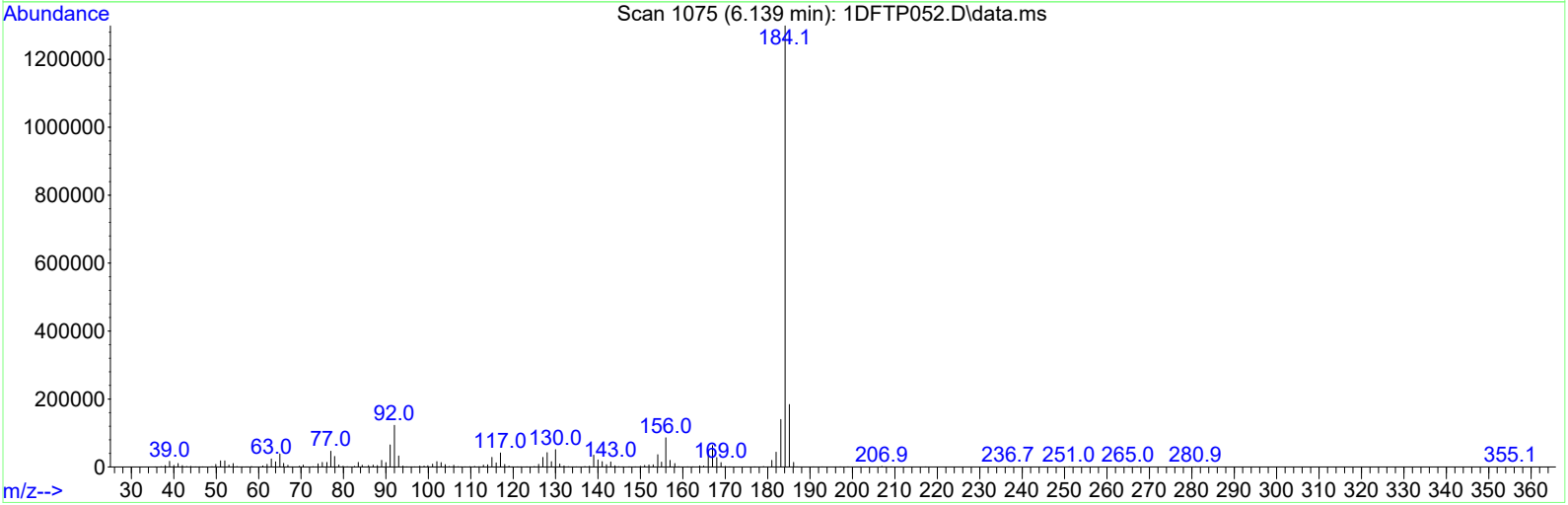
Ion	Exp%	Act%
265.90	100.00	100.00
263.90	64.60	61.33
267.90	65.00	62.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\INSTARCH\DATA\1S031722\1DFTP052.D Vial: 1
Acq On : 17 Mar 2022 12:36 Operator: JJY
Sample : DFTPP TUNE SVMS9169 Inst : SVMS1
Misc : SVMS1,25ng DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 17 12:48:12 2022

Quant Method : C:\INSTARCH\METHOD\1DFTPP.M
Quant Title : DFTPP TUNE
QLast Update : Thu Mar 17 12:48:04 2022
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M





TIC: 1DFTP052.D\data.ms

(3) Benzidine

6.139min (0.000) 24.65 ng

response 1125711

Ion	Exp%	Act%
184.20	100.00	100.00
185.10	15.90	14.35
183.10	12.20	10.68
0.00	0.00	0.00

Data File Name	1DFTP052.D
Vial Number	1
Data File Path	C:\INSTARCH\DATA\1S031722\
Operator	JJY
Date Acquired	3/17/2022 12:36
Instrument Name	SVMS1
Sample Name	DFTPP TUNE SVMS9169
Sample Multiplier	1
Misc Info	SVMS1,25ng DFTPP
Calibration Title	DFTPP TUNE
Last Calibration Update	Thu Mar 17 12:48:04 2022

#	Name	Ret Time	Target Response
1)	Pentachlorophenol	4.88	186422
2)	DFTPP	5.28	313891
3)	Benzidine	6.14	1125711
4)	DDE	6.29	1598
5)	DDD	6.56	12137
6)	DDT	6.81	517758

DDT % Degradation

$$\frac{DDD+DDEx100}{DDD+DDE+DDT} \quad 2.58\ \%$$

Response Factor Report SVMS1

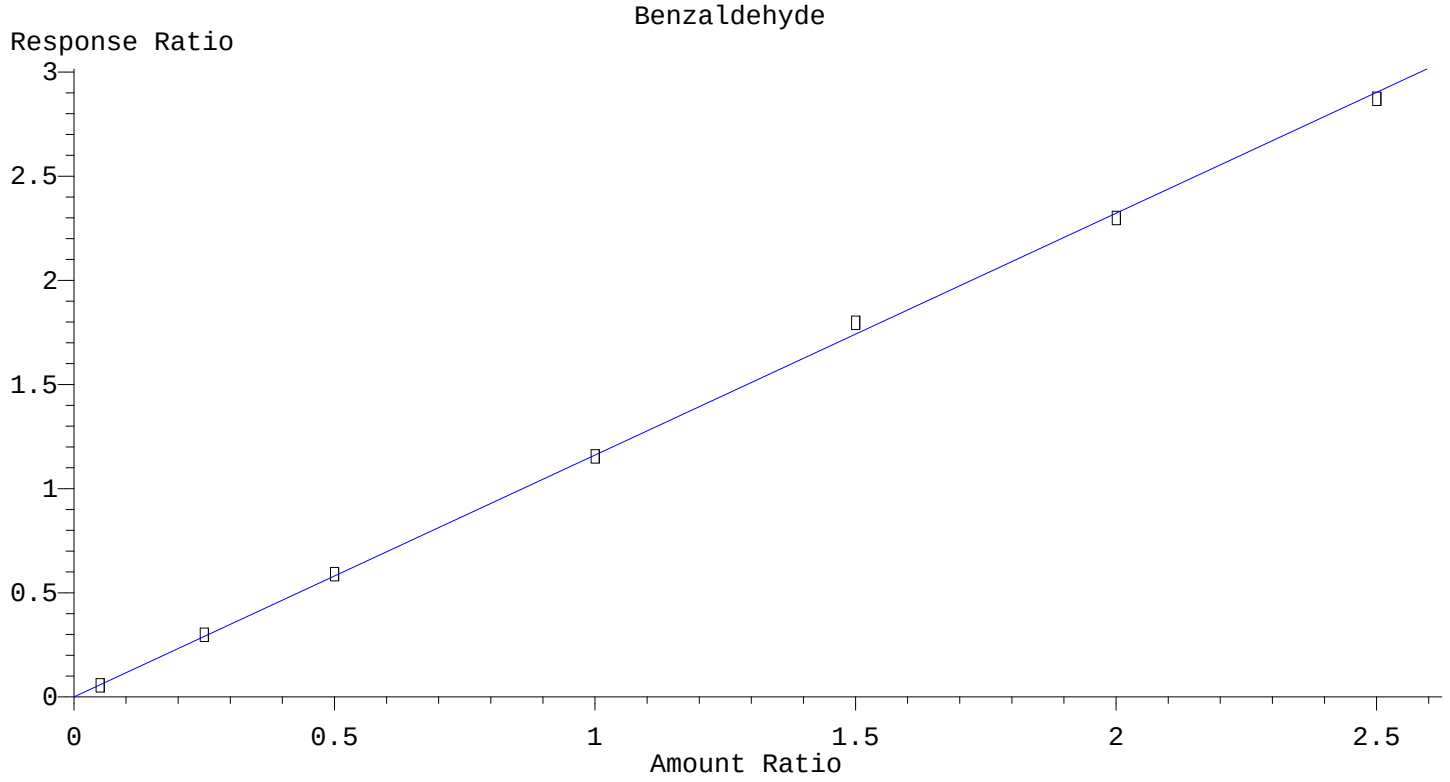
Method Path : C:\INSTARCH\METHOD\
Method File : 1A031722.M
Title : Method for 8270 Analysis
Last Update : Wed Mar 23 09:34:38 2022
Response Via : Initial Calibration

Calibration Files
1 =1ICAL1A.D 5 =1ICAL2A.D 10 =1ICAL3A.D 20 =1ICAL4A.D 30 =1ICAL5A.D 40 =1ICAL6A.D 50 =1ICAL7A.D

	Compound	1	5	10	20	30	40	50	Avg	%RSD
1) I	14Diclbenzd4	ISTD								
2) CPT	Benzaldehyde	1.109	1.192	1.179	1.155	1.197	1.149	1.148	1.161	2.63
3) I	Naphthalened8	ISTD								
4) CPT	Caprolactam	0.038	0.077	0.094	0.108	0.114	0.118	0.120	0.096	31.09#
5) I	Acenaphthened10	ISTD								
6) CPT	Biphenyl	1.418	1.569	1.518	1.497	1.406	1.392	1.344	1.449	5.53
7) I	Phenanthrd10	ISTD								
8) CPT	Atrazine	0.132	0.190	0.193	0.206	0.209	0.203	0.201	0.191	14.13
9) I	Chrysene-d12	ISTD								

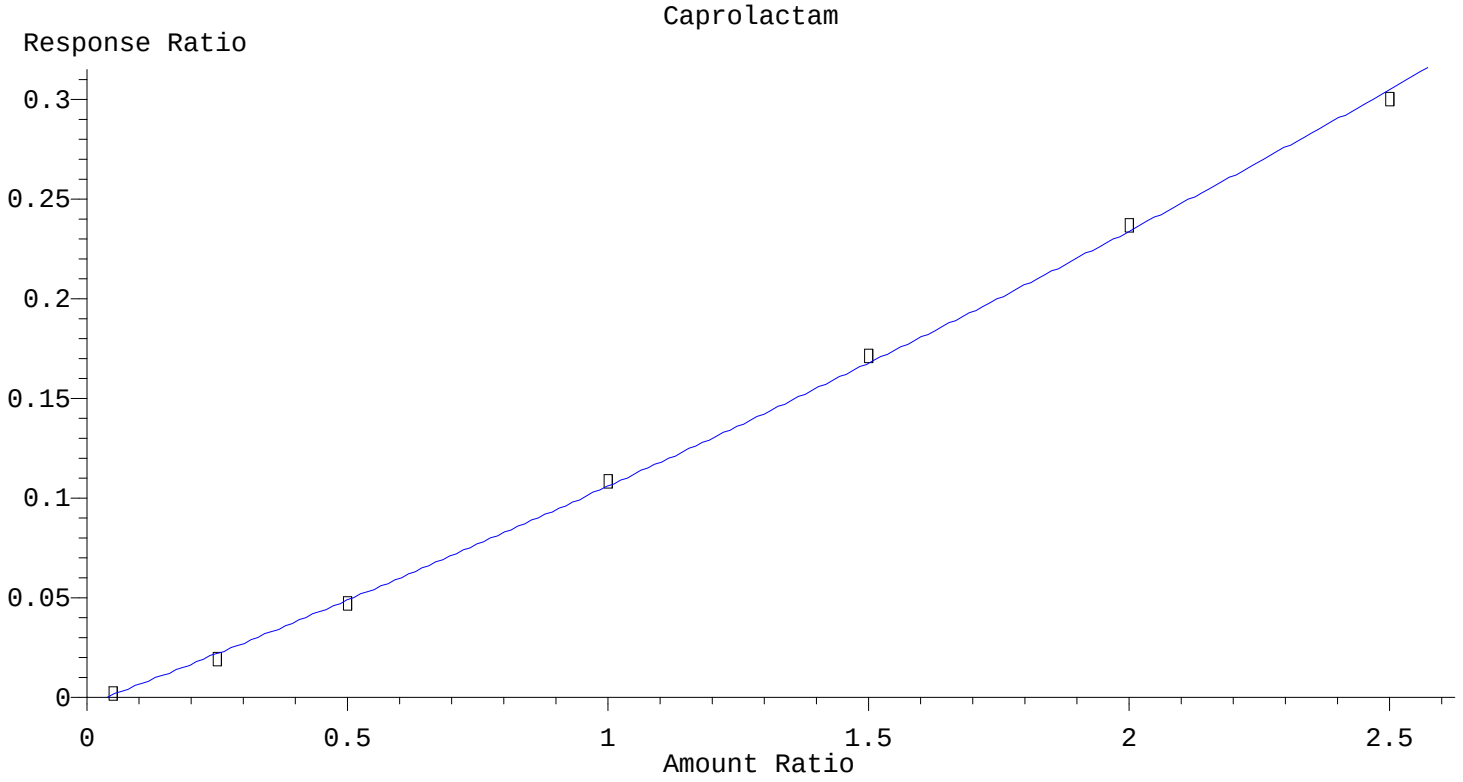
(#) = Out of Range

Benzaldehyde



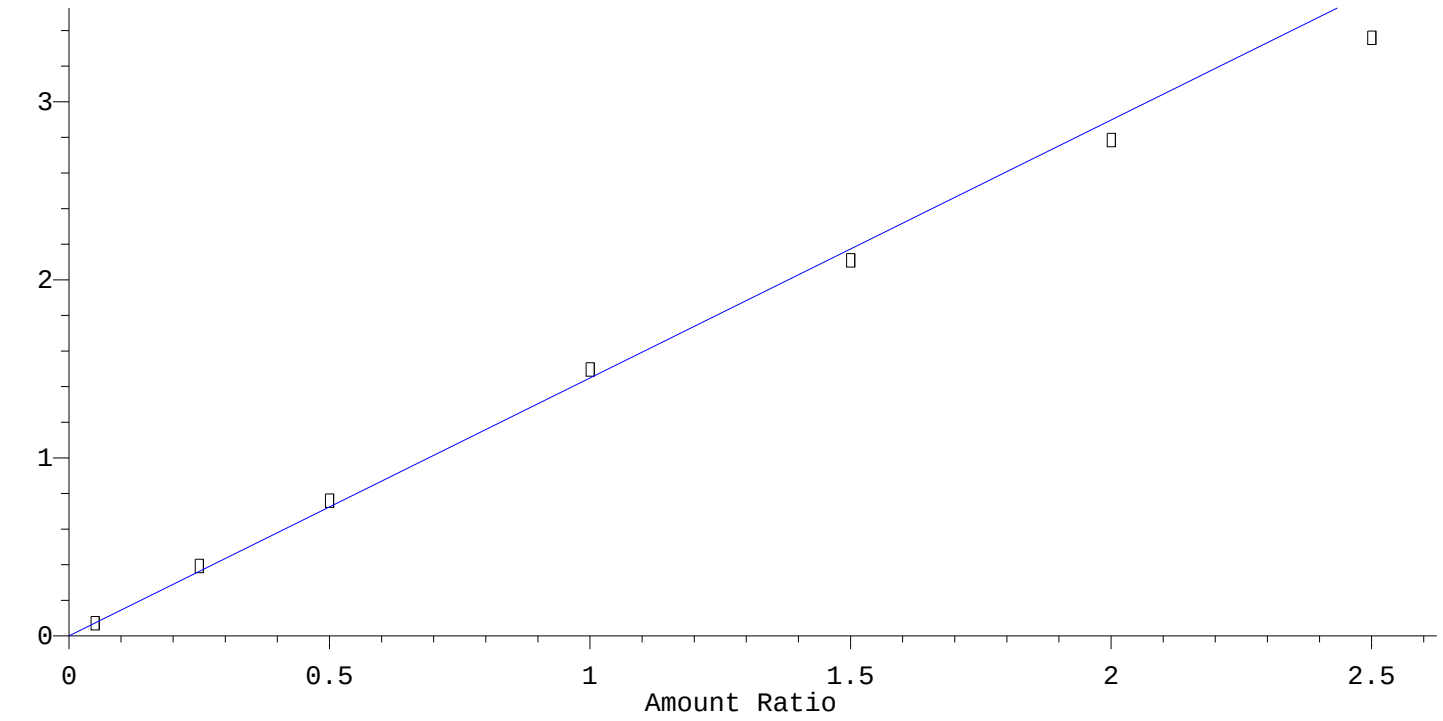
Resp Ratio = 1.161e+000 * Amt
RF Rel Std Dev = 2.625% Curve Fit: Avg RF

Caprolactam



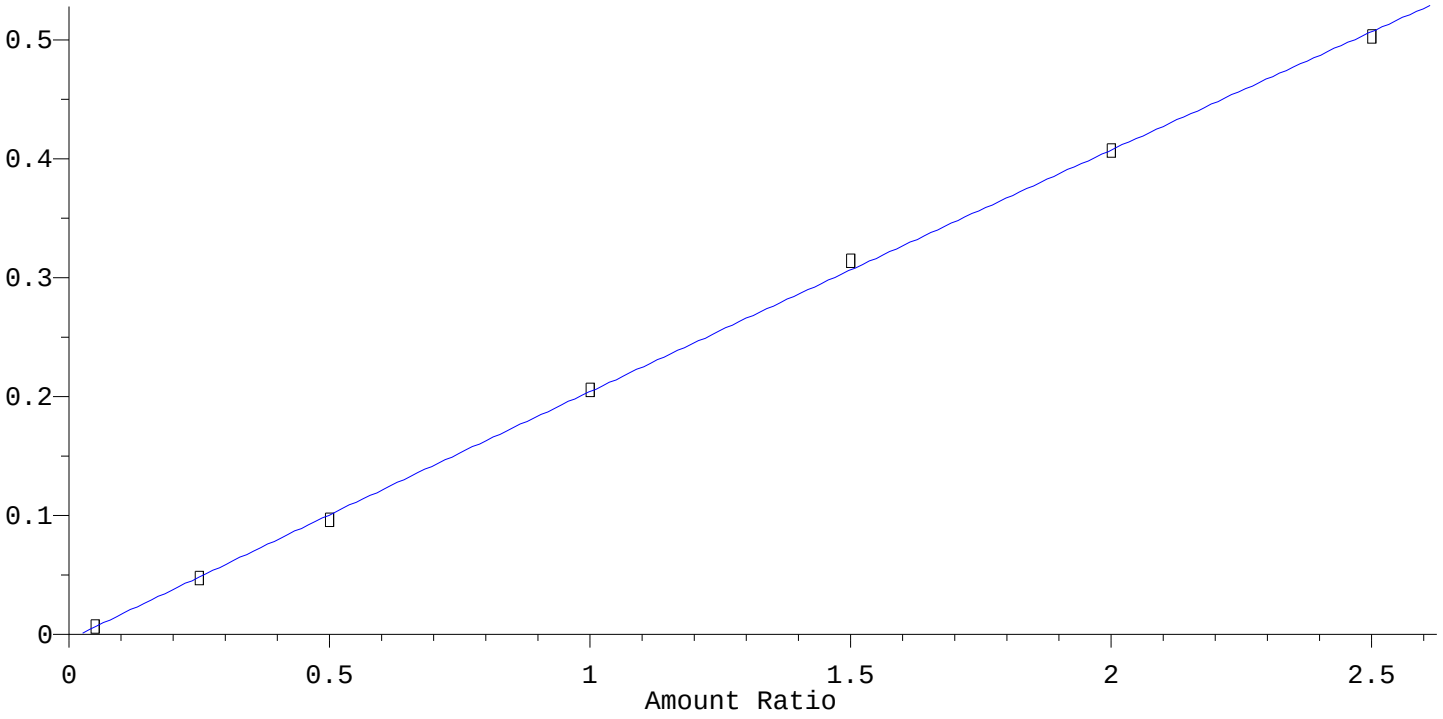
R = 9.175e-003 A*A + 1.005e-001 A - 3.679e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)

Biphenyl



Resp Ratio = 1.449e+000 * Amt
RF Rel Std Dev = 5.535% Curve Fit: Avg RF

Atrazine



R = -2.697e-003 A*A + 2.112e-001 A - 4.341e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

Quantitation Report (Not Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1IB02.D Vial: 12
Acq On : 17 Mar 2022 16:42 Operator: JJY
Sample : InstrumentBlank Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:40:01 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

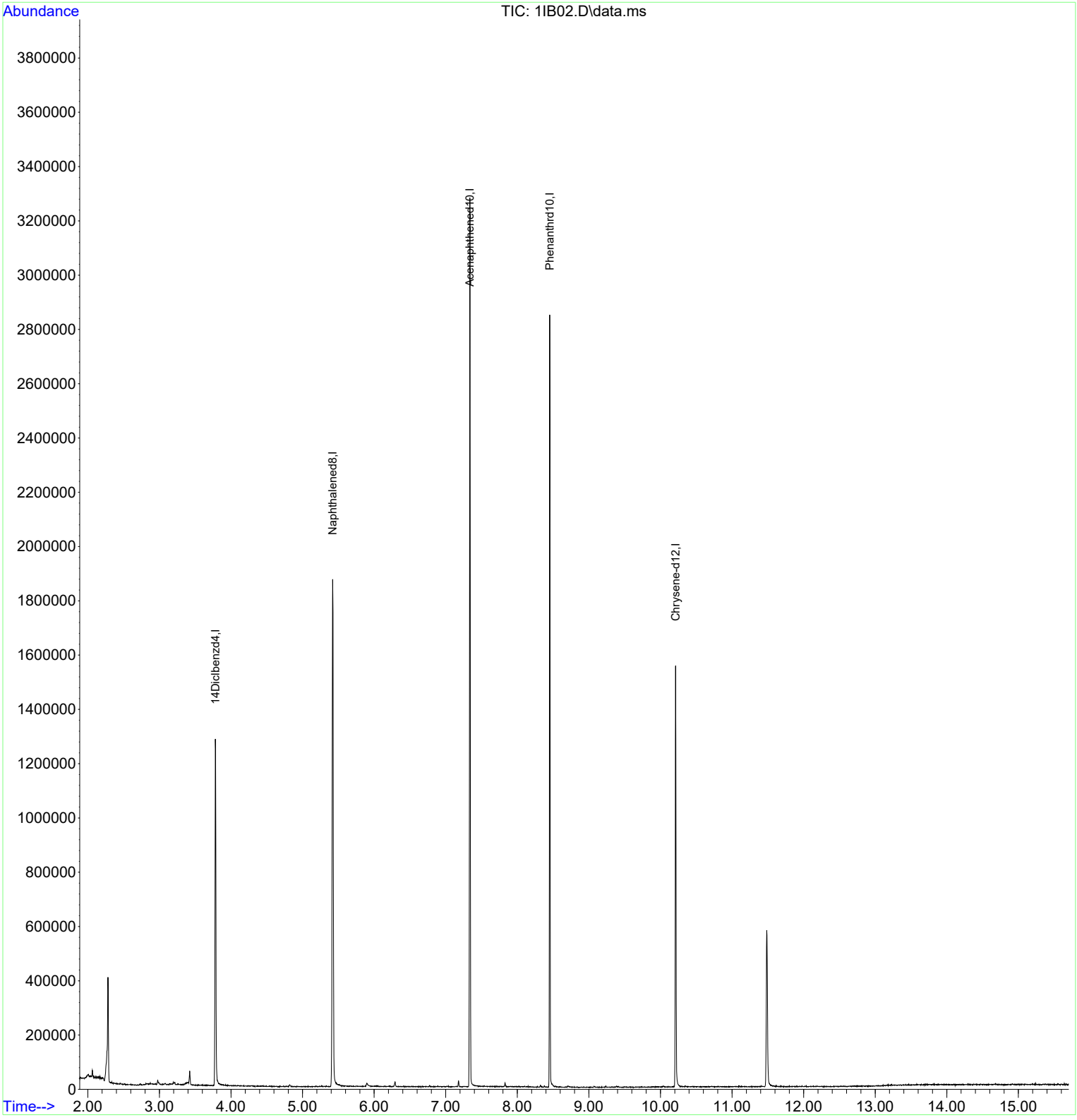
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	203852	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	1040186	20.00	ug/mL	0.00
5) Acenaphthened10	7.337	164	570844	20.00	ug/mL	0.00
7) Phenanthrd10	8.453	188	681648	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	384883	20.00	ug/mL	0.00
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1IB02.D Vial: 12
Acq On : 17 Mar 2022 16:42 Operator: JJY
Sample : InstrumentBlank Inst : SVMS1
Misc : 500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:40:01 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL7A.D Vial: 13
Acq On : 17 Mar 2022 17:04 Operator: JJY
Sample : ICAL A 50 ug/ml SVMS9245 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:29:01 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:28:02 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

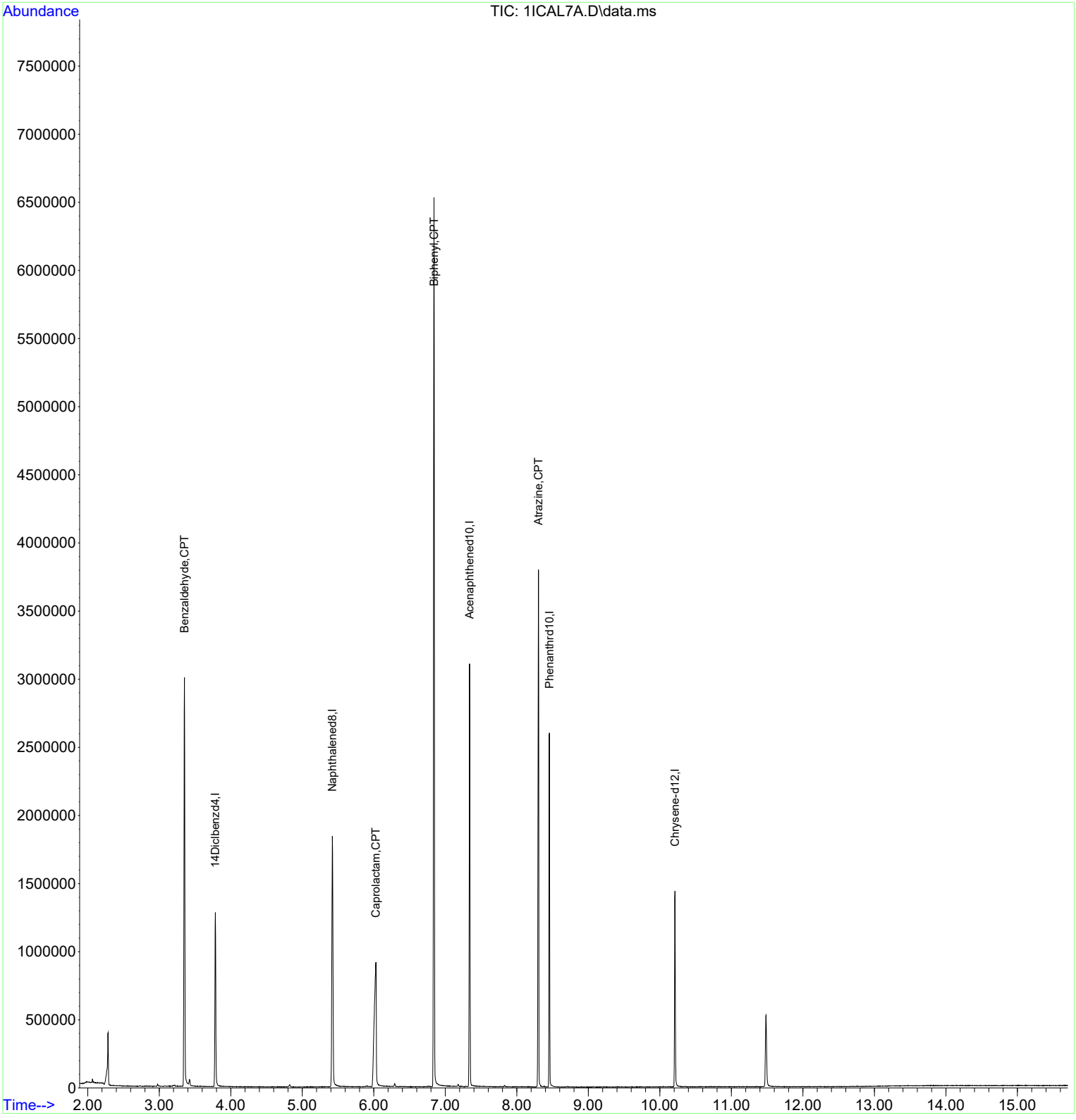
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	198756	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	1028836	20.00	ug/mL	0.00
5) Acenaphthened10	7.340	164	544493	20.00	ug/mL	0.00
7) Phenanthrd10	8.456	188	662238	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	365071	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.353	77	570655	50.0000	ug/mL	99
4) Caprolactam	6.030	55	308773	50.0000	ug/mL	96
6) Biphenyl	6.842	154	1828893	50.0000	ug/mL	99
8) Atrazine	8.303	200	333039	50.0000	ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL7A.D Vial: 13
Acq On : 17 Mar 2022 17:04 Operator: JJY
Sample : ICAL A 50 ug/ml SVMS9245 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:29:01 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:28:02 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL6A.D Vial: 14
Acq On : 17 Mar 2022 17:28 Operator: JJY
Sample : ICAL A 40 ug/ml SVMS9244 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:29:43 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:28:02 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

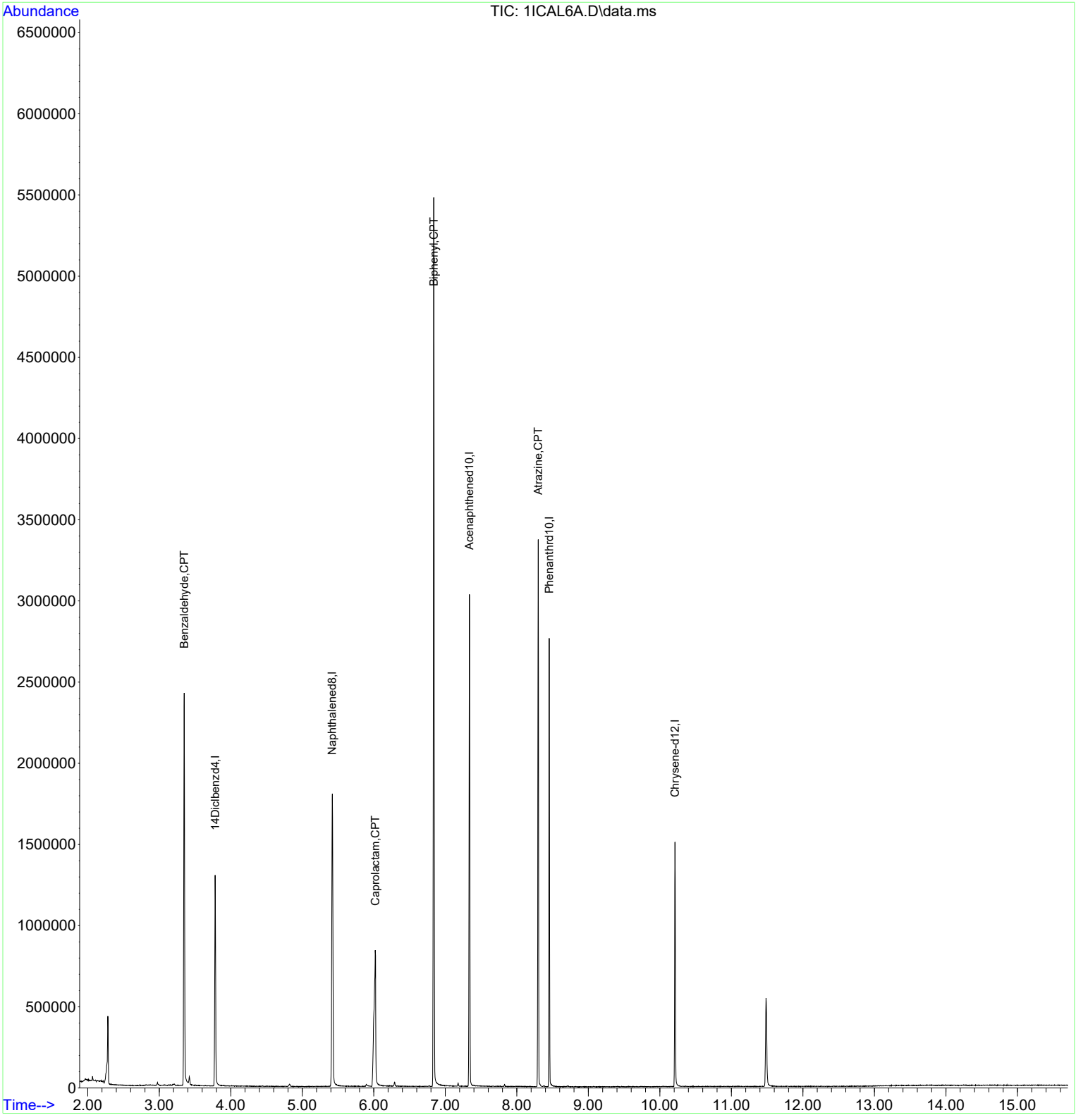
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	204477	20.00	ug/mL	0.00
3) Naphthalened8	5.419	136	1026089	20.00	ug/mL	0.00
5) Acenaphthened10	7.337	164	543187	20.00	ug/mL	0.00
7) Phenanthrd10	8.453	188	669749	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	378301	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.350	77	470052	40.0330	ug/mL	99
4) Caprolactam	6.021	55	242961	39.4483	ug/mL	95
6) Biphenyl	6.840	154	1512591	41.4521	ug/mL	99
8) Atrazine	8.300	200	272524	40.4559	ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL6A.D Vial: 14
Acq On : 17 Mar 2022 17:28 Operator: JJY
Sample : ICAL A 40 ug/ml SVMS9244 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:29:43 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:28:02 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL5A.D Vial: 15
Acq On : 17 Mar 2022 17:51 Operator: JJY
Sample : ICAL A 30 ug/ml SVMS9243 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:30:33 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:30:05 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

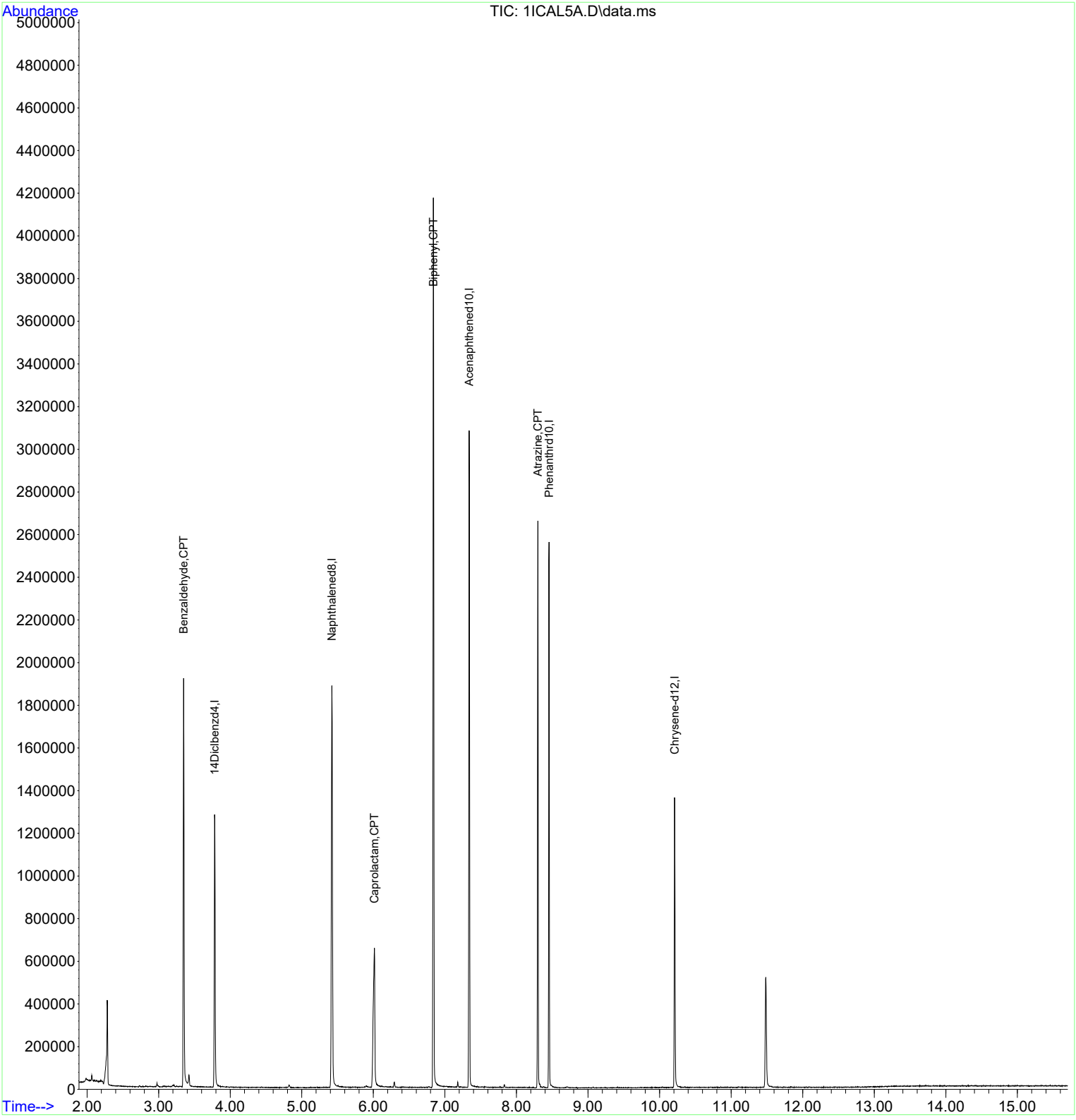
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	199910	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	1031455	20.00	ug/mL	0.00
5) Acenaphthened10	7.339	164	546209	20.00	ug/mL	0.00
7) Phenanthrd10	8.456	188	643962	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	361776	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.350	77	358984	31.2592	ug/mL	99
4) Caprolactam	6.015	55	176705	28.7396	ug/mL	99
6) Biphenyl	6.839	154	1152044	30.8370	ug/mL	100
8) Atrazine	8.300	200	202357	31.0656	ug/mL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL5A.D Vial: 15
Acq On : 17 Mar 2022 17:51 Operator: JJY
Sample : ICAL A 30 ug/ml SVMS9243 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:30:33 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:30:05 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL4A.D Vial: 16
Acq On : 17 Mar 2022 18:13 Operator: JJY
Sample : ICAL A 20 ug/ml SVMS9242 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:31:17 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:30:49 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

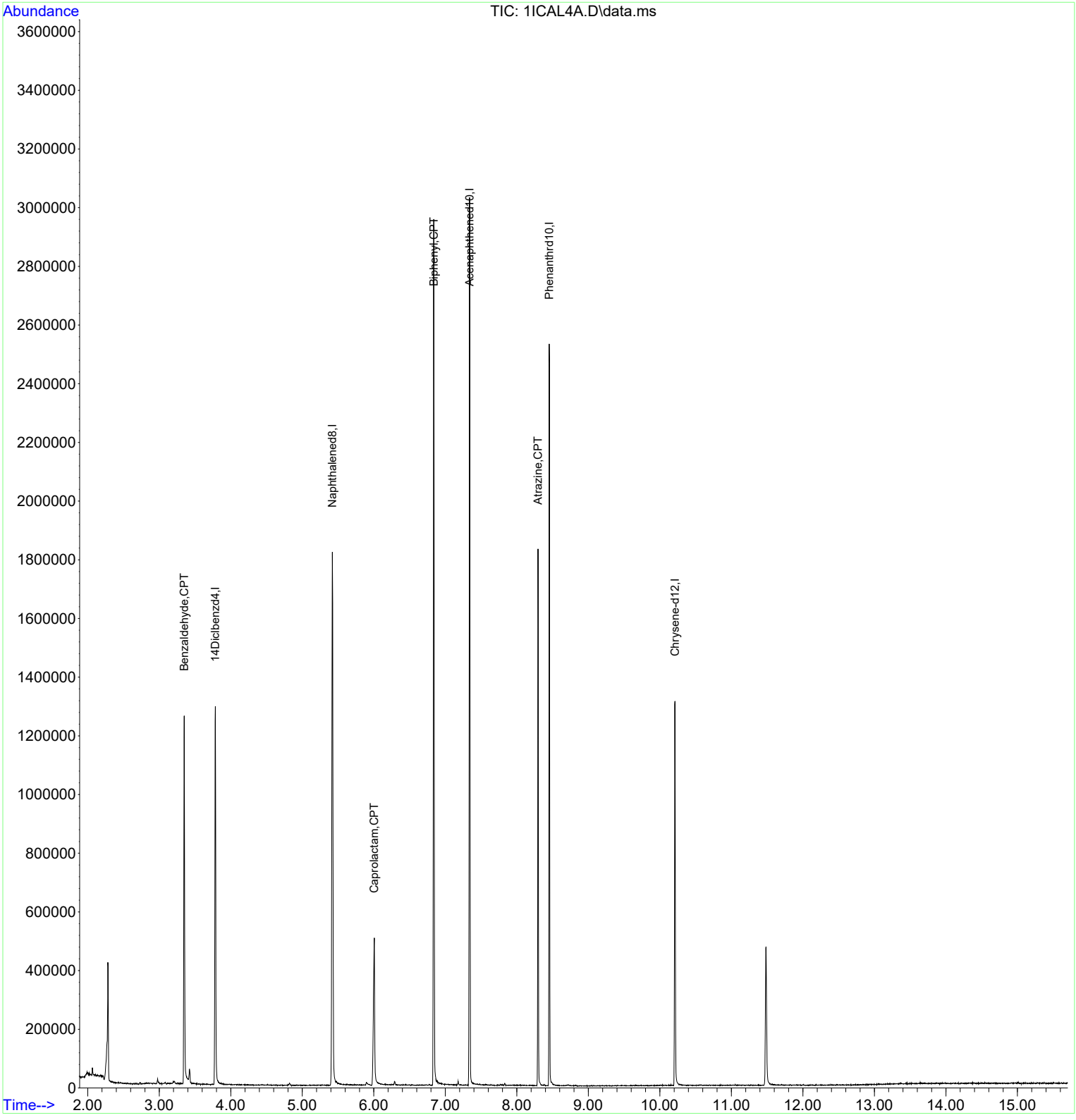
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	200989	20.00	ug/mL	0.00
3) Naphthalened8	5.421	136	1003095	20.00	ug/mL	0.00
5) Acenaphthened10	7.339	164	526003	20.00	ug/mL	0.00
7) Phenanthrd10	8.453	188	635189	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	345207	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.350	77	232043	19.8198	ug/mL	100
4) Caprolactam	6.007	55	108688	18.4352	ug/mL	100
6) Biphenyl	6.839	154	787169	21.6781	ug/mL	100
8) Atrazine	8.297	200	130583	20.0860	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL4A.D Vial: 16
Acq On : 17 Mar 2022 18:13 Operator: JJY
Sample : ICAL A 20 ug/ml SVMS9242 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:31:17 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:30:49 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL3A.D Vial: 17
Acq On : 17 Mar 2022 18:37 Operator: JJY
Sample : ICAL A 10 ug/ml SVMS9241 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:32:07 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:31:43 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

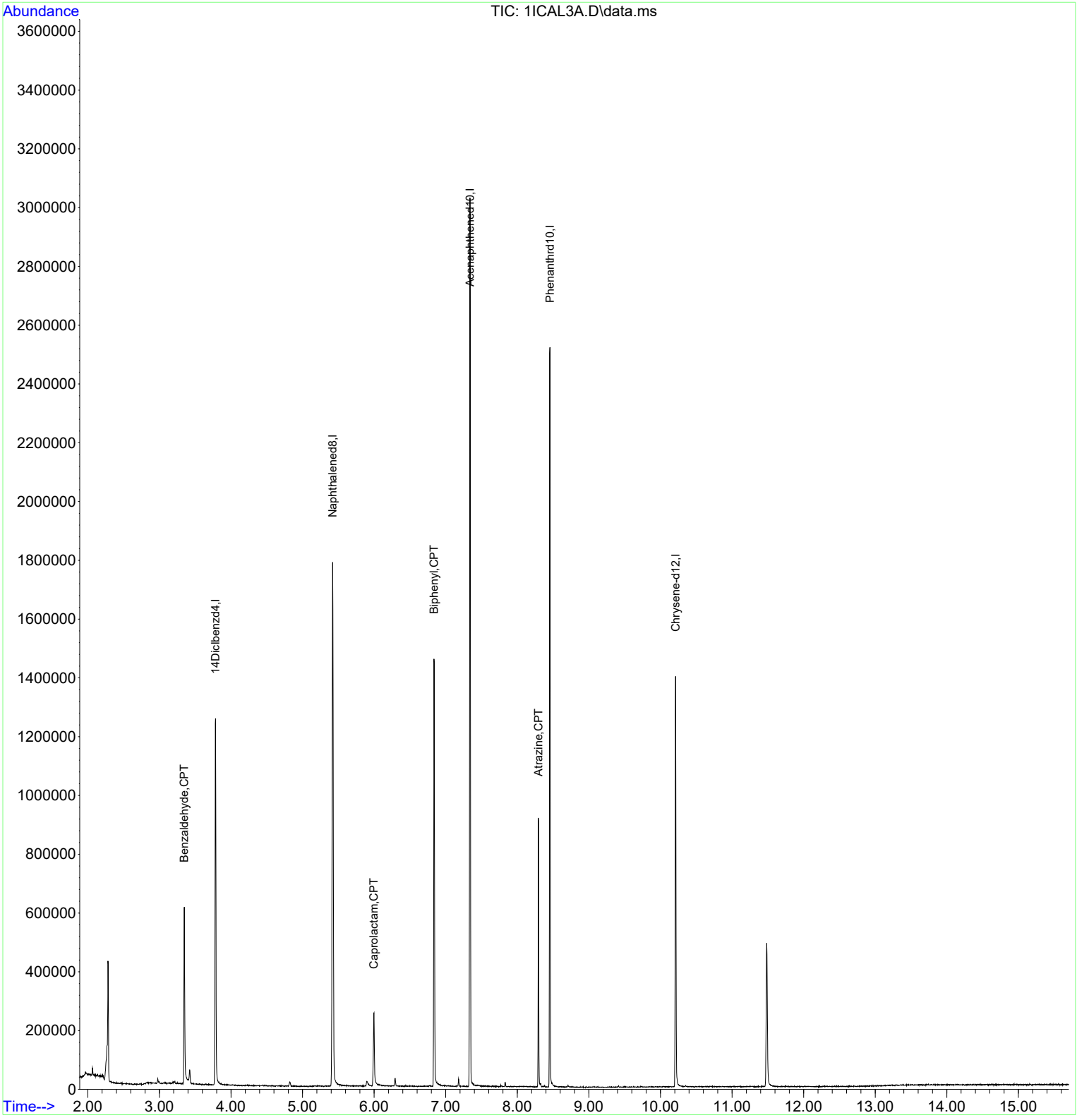
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	196284	20.00	ug/mL	0.00
3) Naphthalened8	5.421	136	1000245	20.00	ug/mL	0.00
5) Acenaphthened10	7.339	164	534578	20.00	ug/mL	0.00
7) Phenanthrd10	8.456	188	652086	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	352324	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.347	77	115669	10.1395	ug/mL	98
4) Caprolactam	5.995	55	47131	8.1769	ug/mL	89
6) Biphenyl	6.837	154	405783	10.7698	ug/mL	99
8) Atrazine	8.297	200	62787	9.3974	ug/mL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL3A.D Vial: 17
Acq On : 17 Mar 2022 18:37 Operator: JJY
Sample : ICAL A 10 ug/ml SVMS9241 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:32:07 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:31:43 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL2A.D Vial: 18
Acq On : 17 Mar 2022 19:00 Operator: JJY
Sample : ICAL A 5 ug/ml SVMS9240 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:33:01 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:32:41 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

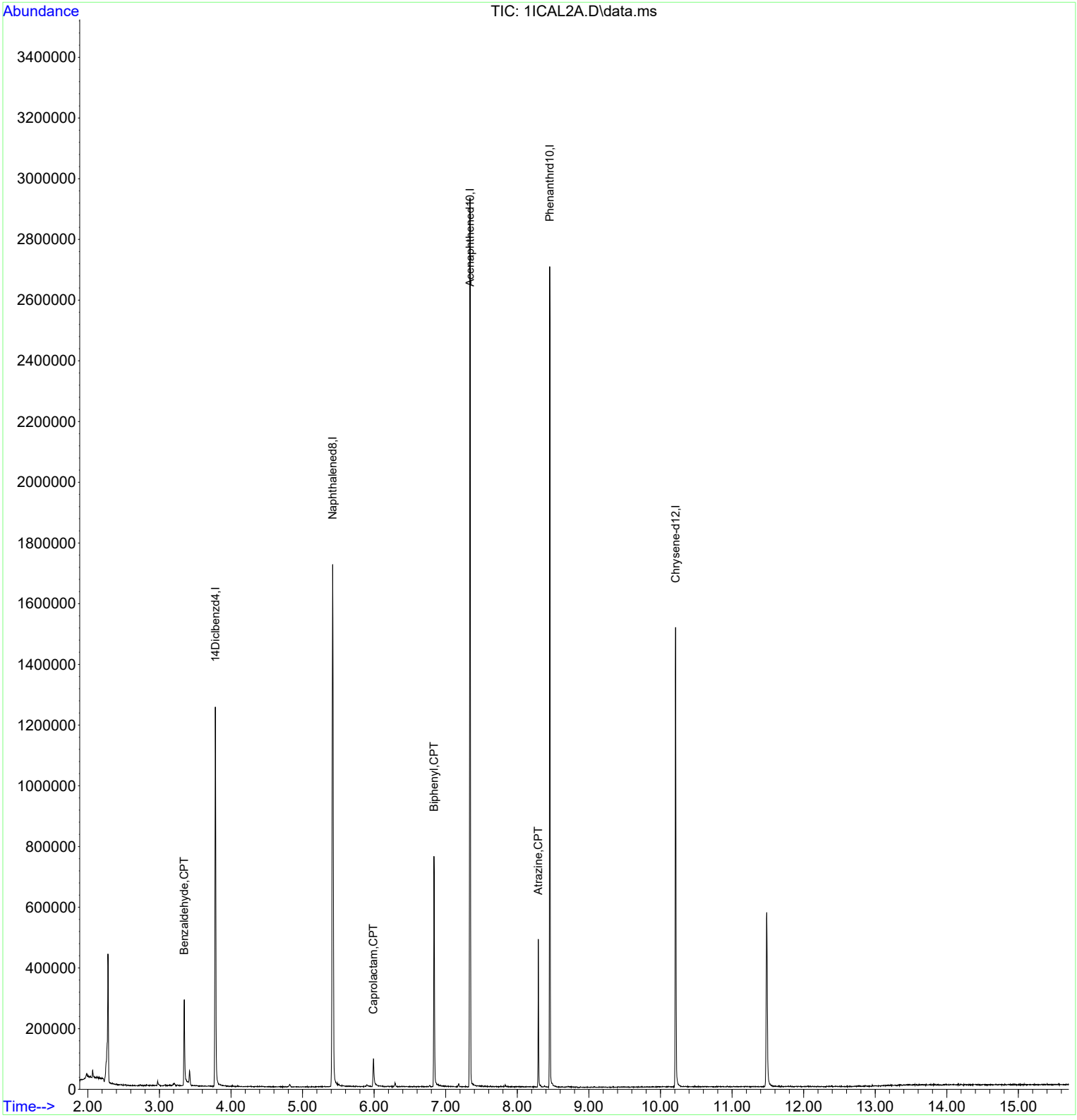
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	194200	20.00	ug/mL	0.00
3) Naphthalened8	5.421	136	973780	20.00	ug/mL	0.00
5) Acenaphthened10	7.339	164	520268	20.00	ug/mL	0.00
7) Phenanthrd10	8.453	188	647272	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	372530	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.347	77	57850	5.1113	ug/mL	96
4) Caprolactam	5.990	55	18658	3.4508	ug/mL	88
6) Biphenyl	6.837	154	204087	5.4812	ug/mL	99
8) Atrazine	8.294	200	30695	4.6848	ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL2A.D Vial: 18
Acq On : 17 Mar 2022 19:00 Operator: JJY
Sample : ICAL A 5 ug/ml SVMS9240 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:33:01 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:32:41 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL1A.D Vial: 19
Acq On : 17 Mar 2022 19:23 Operator: JJY
Sample : ICAL A 1 ug/ml SVMS9239 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:33:47 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:33:29 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

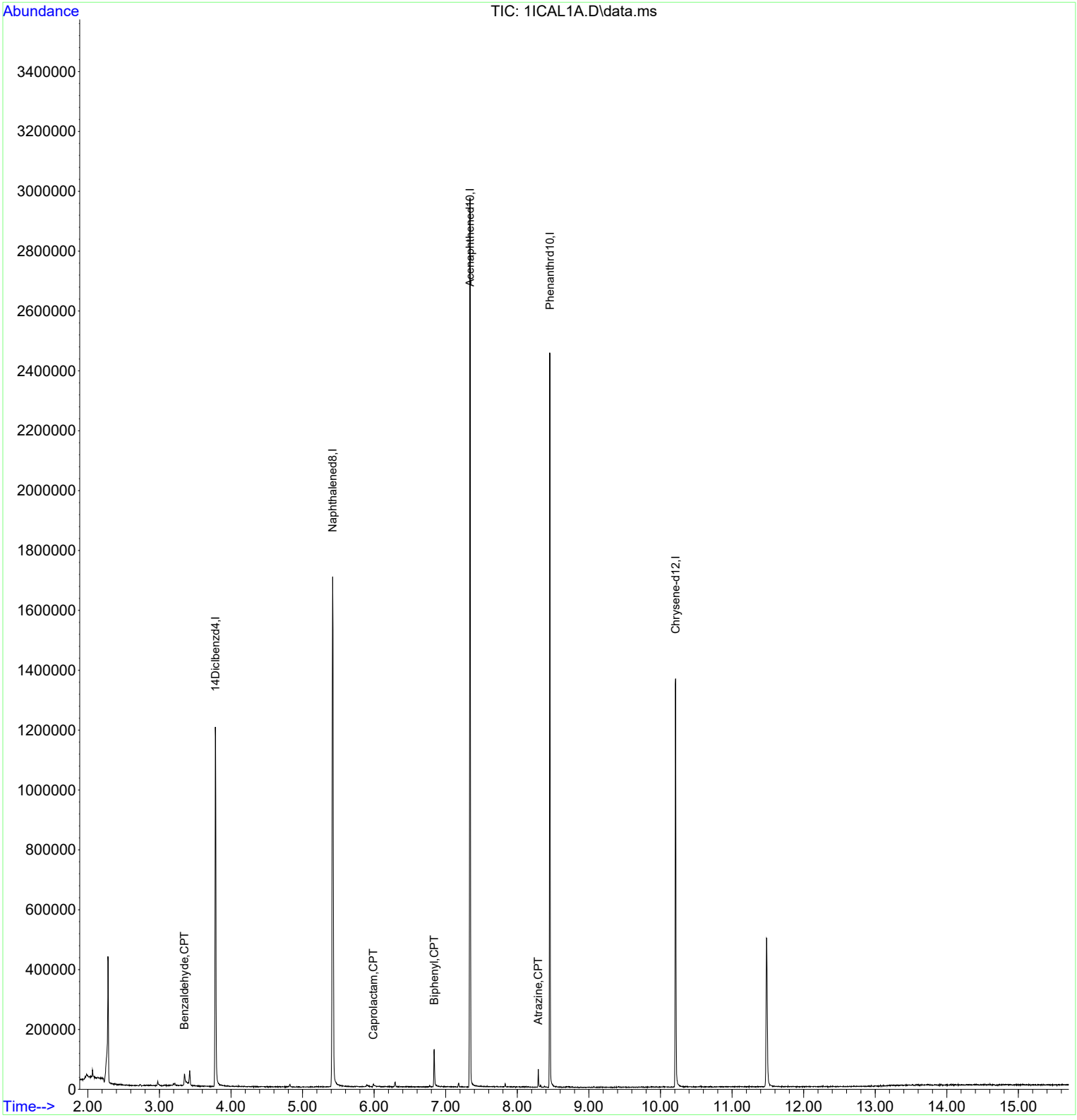
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	187879	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	951684	20.00	ug/mL	0.00
5) Acenaphthened10	7.340	164	512096	20.00	ug/mL	0.00
7) Phenanthrd10	8.456	188	623660	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	350735	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.350	77	10419	0.9480	ug/mL#	63
4) Caprolactam	5.990	55	1806	0.3604	ug/mL	92
6) Biphenyl	6.839	154	36305	0.9750	ug/mL	100
8) Atrazine	8.294	200	4103	0.6568	ug/mL	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICAL1A.D Vial: 19
Acq On : 17 Mar 2022 19:23 Operator: JJY
Sample : ICAL A 1 ug/ml SVMS9239 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:33:47 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:33:29 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S031722\1ICV1A.D Vial: 20
Acq On : 17 Mar 2022 19:46 Operator: JJY
Sample : ICV A 20 ug/ml SVMS9246 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:37:14 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	96	0.00
2	CPT	Benzaldehyde	20.000	20.056	-0.3	97	0.00
3	I	Naphthalened8	20.000	20.000	0.0	95	0.00
4	CPT	Caprolactam	20.000	19.658	1.7	92	0.00
5	I	Acenaphthened10	20.000	20.000	0.0	96	0.00
6	CPT	Biphenyl	20.000	20.804	-4.0	96	0.00
7	I	Phenanthrd10	20.000	20.000	0.0	96	0.00
8	CPT	Atrazine	20.000	19.999	0.0	96	0.00
9	I	Chrysene-d12	20.000	20.000	0.0	98	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S031722\1ICV1A.D Vial: 20
Acq On : 17 Mar 2022 19:46 Operator: JJY
Sample : ICV A 20 ug/ml SVMS9246 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:37:14 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	1.000	1.000	0.0	96	0.00
2	CPT	Benzaldehyde	1.161	1.165	-0.3	97	0.00
3	I	Naphthalened8	1.000	1.000	0.0	95	0.00
4	CPT	Caprolactam	0.096	0.104	-8.3	92	0.00
5	I	Acenaphthened10	1.000	1.000	0.0	96	0.00
6	CPT	Biphenyl	1.449	1.507	-4.0	96	0.00
7	I	Phenanthrd10	1.000	1.000	0.0	96	0.00
8	CPT	Atrazine	0.191	0.204	-6.8	96	0.00
9	I	Chrysene-d12	1.000	1.000	0.0	98	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV1A.D Vial: 20
Acq On : 17 Mar 2022 19:46 Operator: JJY
Sample : ICV A 20 ug/ml SVMS9246 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:37:14 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

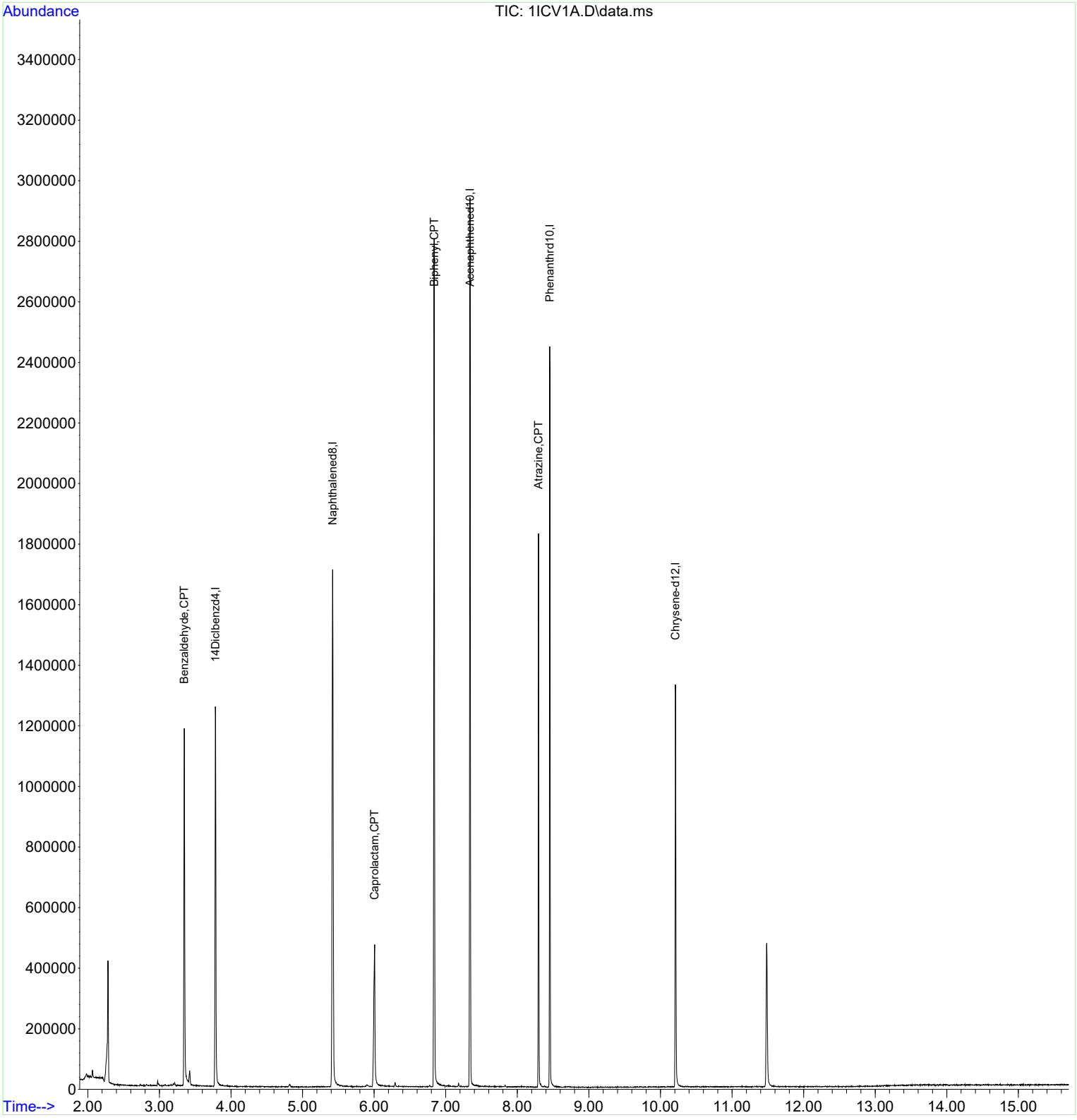
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	193263	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	957249	20.00	ug/mL	0.00
5) Acenaphthened10	7.340	164	503349	20.00	ug/mL	0.00
7) Phenanthrd10	8.453	188	612460	20.00	ug/mL	0.00
9) Chrysene-d12	10.209	240	337576	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.347	77	225059	20.0563	ug/mL	98
4) Caprolactam	6.007	55	99505	19.6583	ug/mL	97
6) Biphenyl	6.840	154	758727	20.8042	ug/mL	100
8) Atrazine	8.297	200	125049	19.9988	ug/mL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV1A.D Vial: 20
Acq On : 17 Mar 2022 19:46 Operator: JJY
Sample : ICV A 20 ug/ml SVMS9246 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:37:14 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S031722\1ICV2A.D Vial: 21
Acq On : 17 Mar 2022 20:08 Operator: JJY
Sample : ICV A 40 ug/ml SVMS9247 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:38:55 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	95	0.00
2	CPT	Benzaldehyde	40.000	40.573	-1.4	97	0.00
3	I	Naphthalened8	20.000	20.000	0.0	96	0.00
4	CPT	Caprolactam	40.000	39.183	2.0	92	0.01
5	I	Acenaphthened10	20.000	20.000	0.0	95	0.00
6	CPT	Biphenyl	40.000	39.874	0.3	98	0.00
7	I	Phenanthrd10	20.000	20.000	0.0	94	0.00
8	CPT	Atrazine	40.000	40.566	-1.4	95	0.00
9	I	Chrysene-d12	20.000	20.000	0.0	91	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV2A.D Vial: 21
Acq On : 17 Mar 2022 20:08 Operator: JJY
Sample : ICV A 40 ug/ml SVMS9247 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:38:55 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

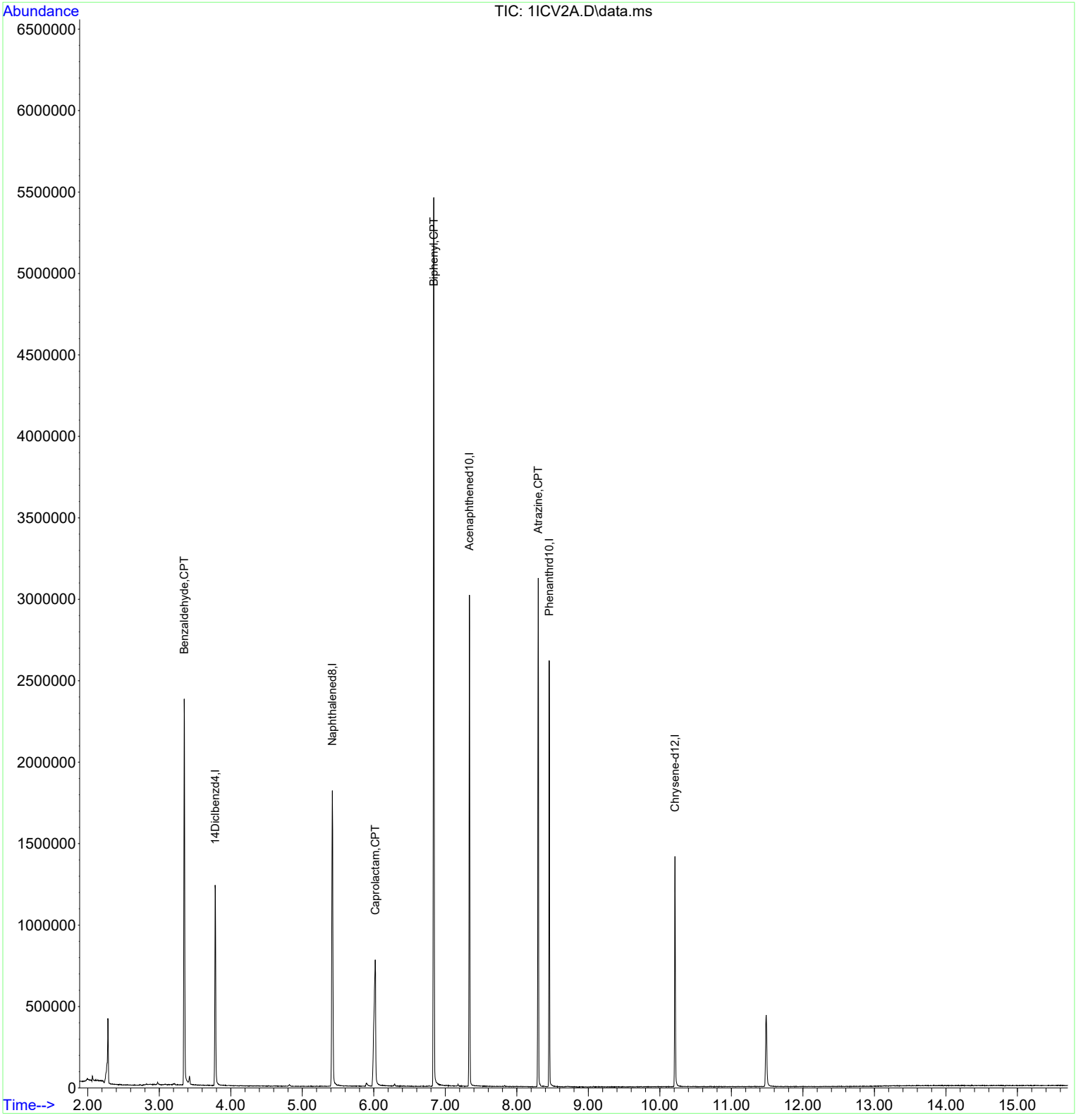
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	193355	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	981244	20.00	ug/mL	0.00
5) Acenaphthened10	7.337	164	515302	20.00	ug/mL	0.00
7) Phenanthrd10	8.453	188	629013	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	345890	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.350	77	455502	40.5731	ug/mL	99
4) Caprolactam	6.021	55	224108	39.1827	ug/mL	99
6) Biphenyl	6.839	154	1488745	39.8743	ug/mL	99
8) Atrazine	8.300	200	259776	40.5658	ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S031722\1ICV2A.D Vial: 21
Acq On : 17 Mar 2022 20:08 Operator: JJY
Sample : ICV A 40 ug/ml SVMS9247 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 09:38:55 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

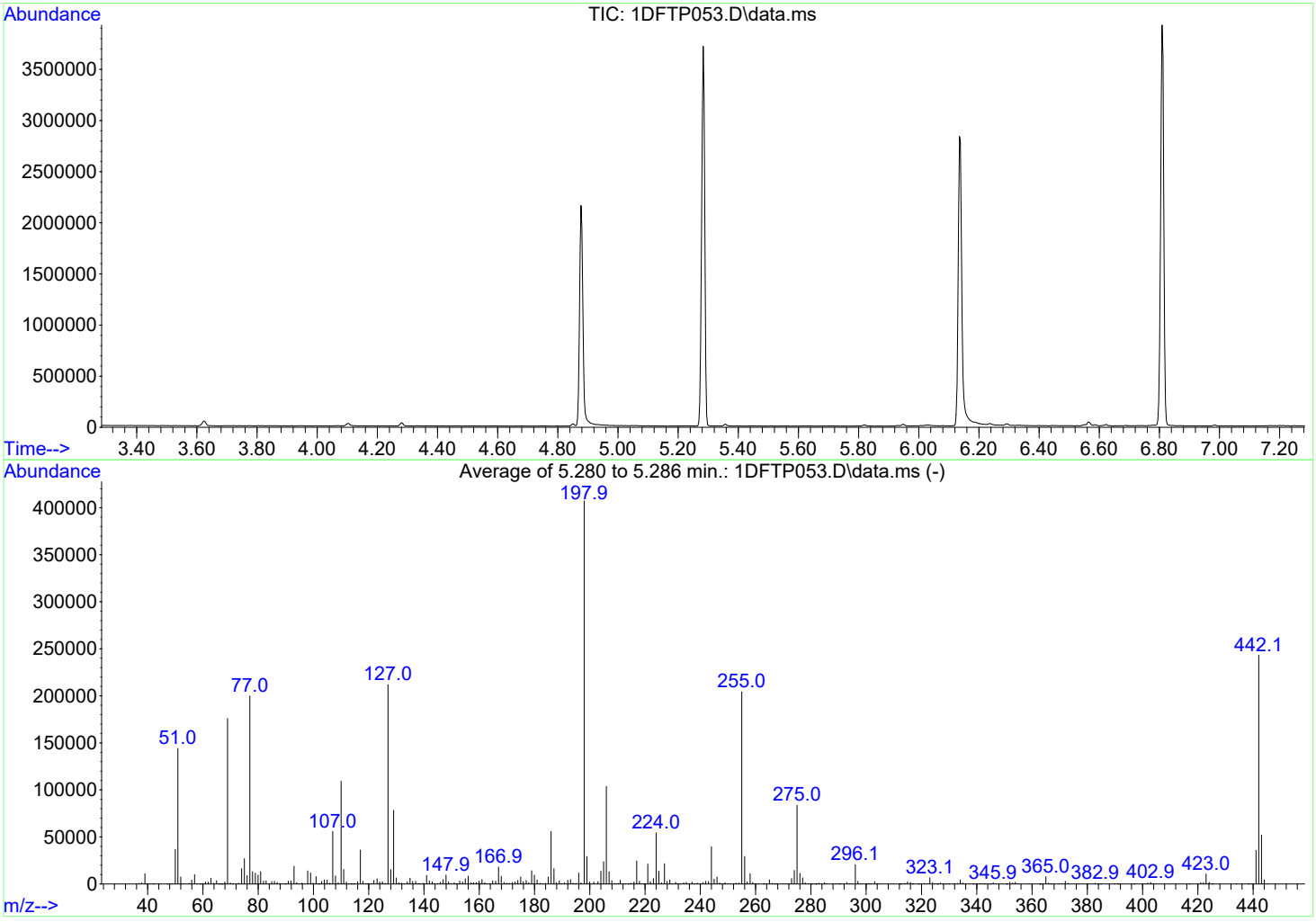


SEMI - VOLATILE ORGANIC ANALYSIS
CONTINUING CALIBRATION
DOCUMENTS

Data Path : C:\INSTARCH\DATA\1S032322\
Data File : 1DFTP053.D
Acq On : 23 Mar 2022 10:24
Operator : JJY
Sample : DFTPP TUNE SVMS9169
Misc : SVMS1,25ng DFTPP
ALS Vial : 1 Sample Multiplier: 1

Integration File: DDD.p

Method : C:\INSTARCH\METHOD\1DFTPP.M
Title : DFTPP TUNE
Last Update : Thu Mar 17 12:48:04 2022



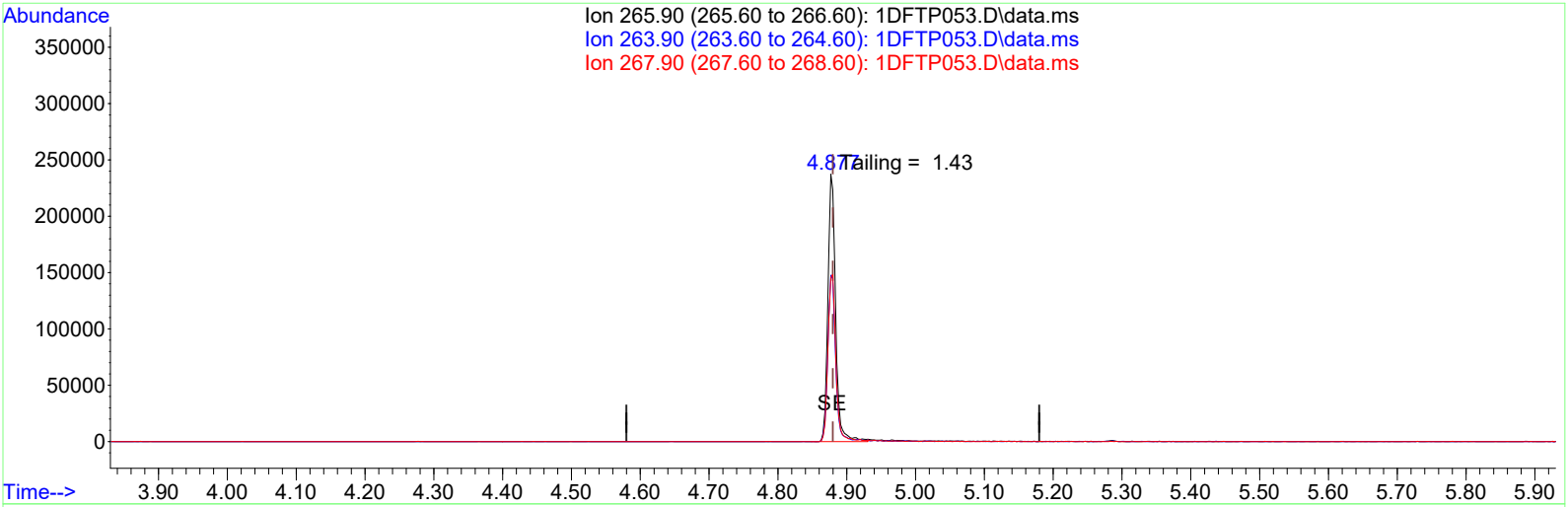
AutoFind: Scans 773, 774, 775; Background Corrected with Scan 765

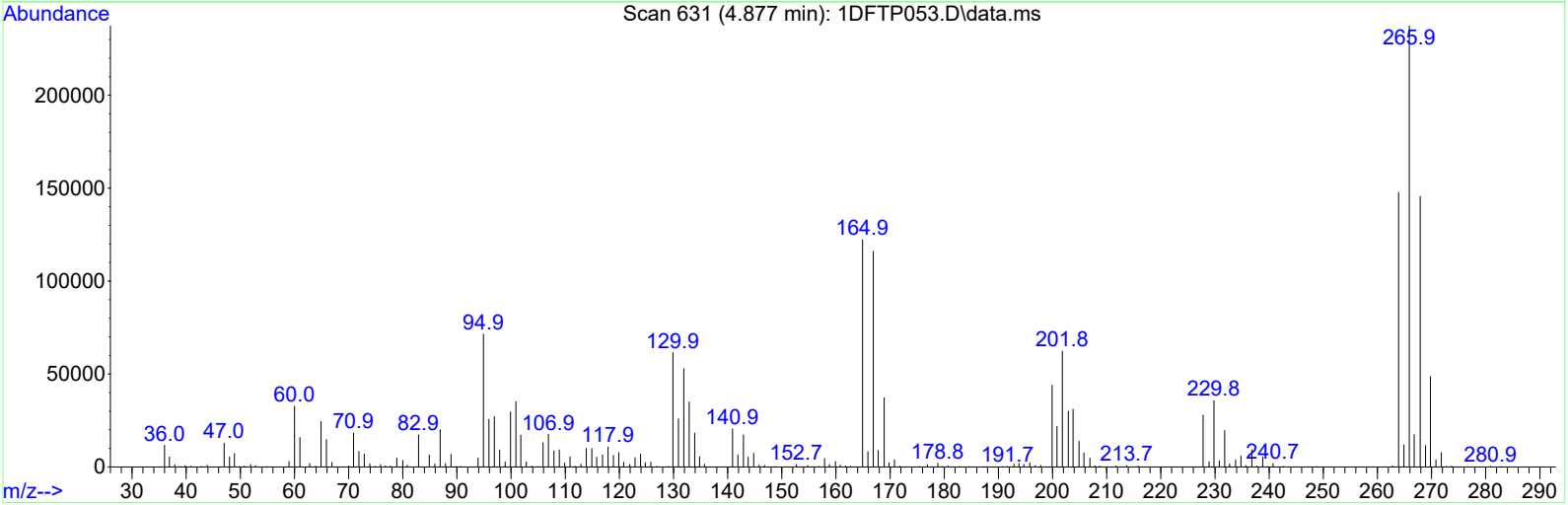
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.4	144060	PASS
68	69	0.00	2	1.3	2241	PASS
70	69	0.00	2	0.6	1025	PASS
127	198	10	80	52.0	211968	PASS
197	198	0.00	2	0.3	1196	PASS
198	198	50	100	100.0	407253	PASS
199	198	5	9	7.2	29301	PASS
275	198	10	60	20.6	83720	PASS
365	198	1	100	1.9	7858	PASS
441	442	0.01	24	14.7	35787	PASS
442	198	50	100	59.7	243200	PASS
443	442	15	24	21.4	52013	PASS

Quantitation Report (Qedit)

Data File : C:\INSTARCH\DATA\1S032322\1DFTP053.D Vial: 1
Acq On : 23 Mar 2022 10:24 Operator: JJY
Sample : DFTPP TUNE SVMS9169 Inst : SVMS1
Misc : SVMS1,25ng DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 10:34:24 2022

Quant Method : C:\INSTARCH\METHOD\1DFTPP.M
Quant Title : DFTPP TUNE
QLast Update : Thu Mar 17 12:48:04 2022
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M





TIC: 1DFTP053.D\data.ms

(1) Pentachlorophenol

4.877min (-0.003) 25.87 ng

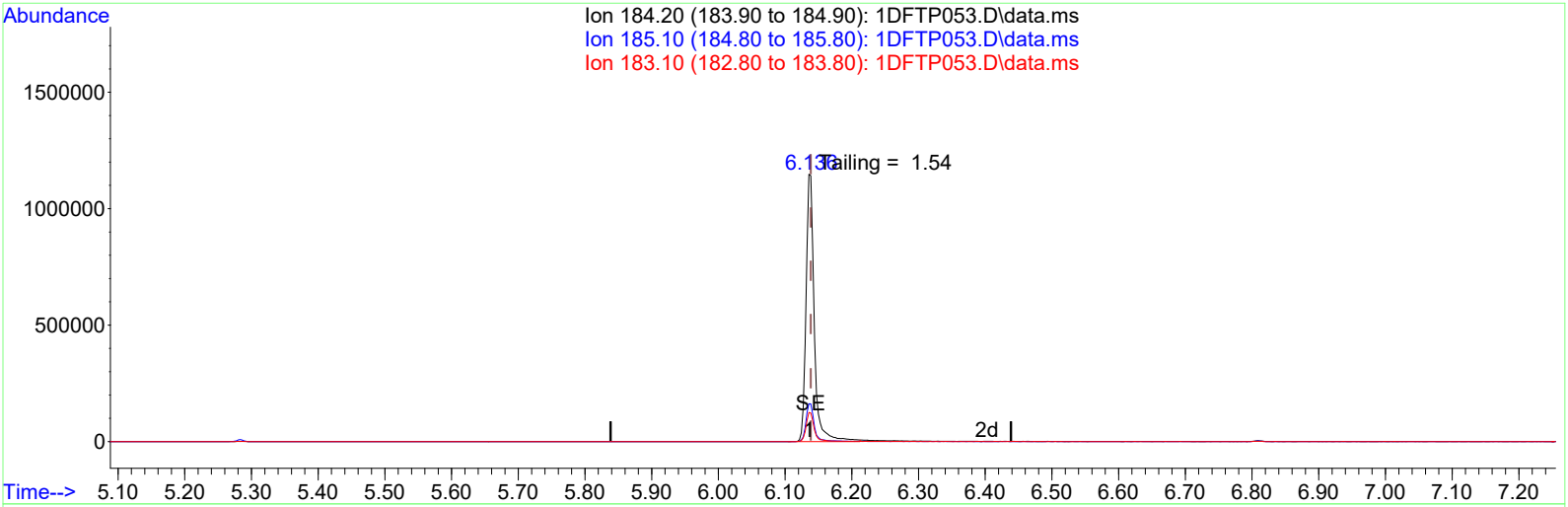
response 182045

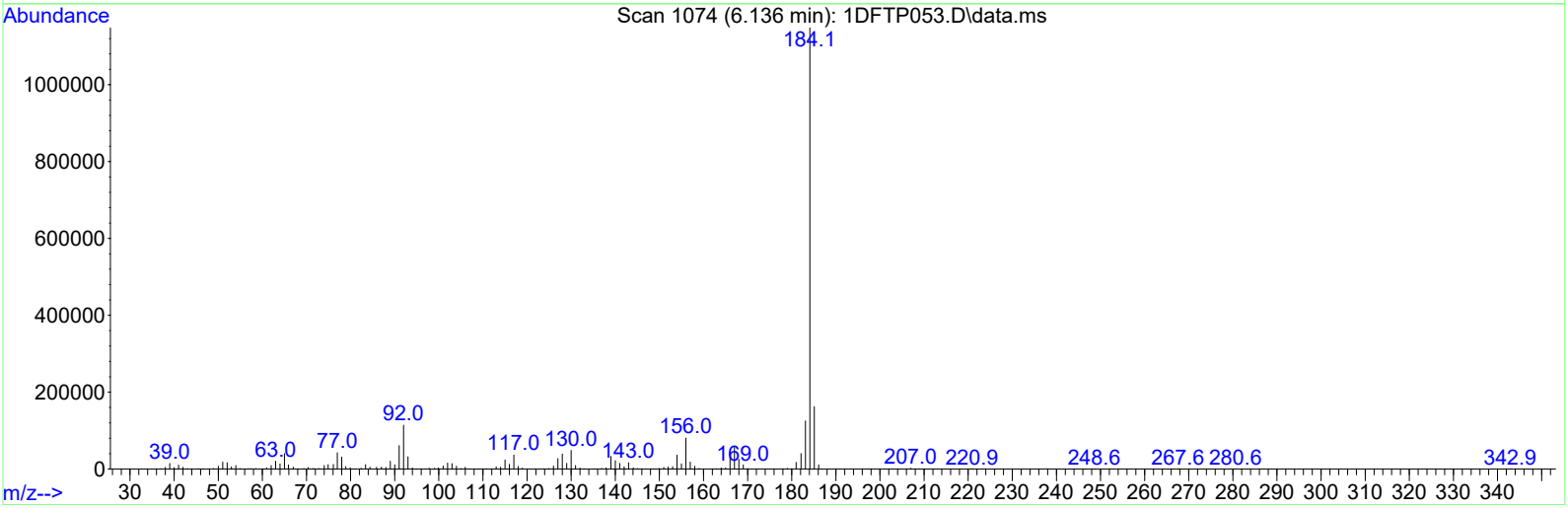
Ion	Exp%	Act%
265.90	100.00	100.00
263.90	64.60	63.50
267.90	65.00	65.79
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\INSTARCH\DATA\1S032322\1DFTP053.D Vial: 1
Acq On : 23 Mar 2022 10:24 Operator: JJY
Sample : DFTPP TUNE SVMS9169 Inst : SVMS1
Misc : SVMS1,25ng DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 10:34:24 2022

Quant Method : C:\INSTARCH\METHOD\1DFTPP.M
Quant Title : DFTPP TUNE
QLast Update : Thu Mar 17 12:48:04 2022
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M





TIC: 1DFTP053.D\data.ms

(3) Benzidine

6.136min (-0.003) 21.84 ng

response 997154

Ion	Exp%	Act%
184.20	100.00	100.00
185.10	15.90	14.06
183.10	12.20	10.66
0.00	0.00	0.00

Data File Name	1DFTP053.D
Vial Number	1
Data File Path	C:\INSTARCH\DATA\1S032322\
Operator	JJY
Date Acquired	3/23/2022 10:24
Instrument Name	SVMS1
Sample Name	DFTPP TUNE SVMS9169
Sample Multiplier	1
Misc Info	SVMS1,25ng DFTPP
Calibration Title	DFTPP TUNE
Last Calibration Update	Thu Mar 17 12:48:04 2022

#	Name	Ret Time	Target Response
1)	Pentachlorophenol	4.88	182045
2)	DFTPP	5.28	323824
3)	Benzidine	6.14	997154
4)	DDE	6.29	1249
5)	DDD	6.57	6520
6)	DDT	6.81	548884

DDT % Degradation

$$\frac{DDD+DDEx100}{DDD+DDE+DDT} \quad 1.40\ \%$$

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S032322\1CCV053.D Vial: 2
Acq On : 23 Mar 2022 10:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 10:59:42 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	99	0.00
2	CT	Ntrsdimeth	20.000	20.947	-4.7	101	0.00
3	CT	Pyridine	20.000	20.788	-3.9	102	0.00
4	S	SURR2Flphenol	50.000	52.064	-4.1	98	0.00
5	CT	Aniline	20.000	20.883	-4.4	98	0.00
6	CPT	bis2Clethletr	20.000	20.647	-3.2	102	0.00
7	S	SURRPhenol-d5	50.000	51.318	-2.6	98	0.00
8	CPT	Phenol	20.000	20.507	-2.5	99	0.00
9	CPT	2-Cl-phenol	20.000	20.818	-4.1	100	0.00
10	CT	13Diclbenz	20.000	20.087	-0.4	100	0.00
11	CT	14Diclbenz	20.000	20.135	-0.7	100	0.00
12	CT	12Diclbenz	20.000	19.639	1.8	97	0.00
13	CT	Benzyl alcoho	20.000	20.413	-2.1	97	0.00
14	CPT	bis2clispreth	20.000	19.788	1.1	99	0.00
15	CPT	2Methylphenol	20.000	20.443	-2.2	100	0.00
16	CT	Ntrspyrrol	20.000	20.392	-2.0	95	0.00
17	CPT	Acetophenone	20.000	19.633	1.8	97	0.00
18	CPT	Hexaclethane	20.000	20.089	-0.4	100	0.00
19	CPT	N-Ntrsdinprop	20.000	19.681	1.6	97	0.00
20	CPT	3&4Methylphenol	20.000	20.362	-1.8	97	0.00
21	I	Naphthalened8	20.000	20.000	0.0	98	0.00
22	S	SURRNitrbenzened5	100.000	101.983	-2.0	99	0.00
23	CPT	Nitrobenzene	20.000	20.063	-0.3	98	0.00
24	CPT	Isophorone	20.000	19.671	1.6	95	0.00
25	CPT	2-Nitrophenol	20.000	20.902	-4.5	100	0.00
26	CPT	24Dimthpheno	20.000	20.750	-3.8	97	0.00
27	CPT	bis2clethoxym	20.000	19.882	0.6	97	0.00
28	CPT	24Diclphenol	20.000	20.935	-4.7	97	0.00
29	CT	124Triclbenz	20.000	20.028	-0.1	98	0.00
30	CT	Benzoic acid	20.000	20.679	-3.4	108	0.00
31	CPT	Naphthalene	20.000	19.801	1.0	98	0.00
32	CPT	4-Cl-aniline	20.000	20.458	-2.3	98	0.00
33	CT	26Diclphenol	20.000	20.503	-2.5	97	0.00
34	CT	Hexaclprop	20.000	22.316	-11.6	104	0.00
35	CPT	Hexaclbutdien	20.000	20.094	-0.5	101	0.00
36	CPT	4Cl3methylphe	20.000	21.044	-5.2	98	0.00
37	CPT	2Methylnaphth	20.000	20.029	-0.1	98	0.00
38	CT	1Methylnaphth	20.000	19.679	1.6	97	0.00
39	I	Acenaphthened10	20.000	20.000	0.0	99	0.00
40	CPT	Hxclcycpentdi	20.000	21.018	-5.1	104	0.00
41	CPT	1245Tetrclbenz	20.000	19.666	1.7	98	0.00
42	CPT	246Triclpheno	20.000	19.749	1.3	97	0.00
43	CPT	245Triclpheno	20.000	20.022	-0.1	98	0.00
44	S	SURR2Flbiphenyl	100.000	98.894	1.1	98	0.00
45	CPT	2Clnaphthalen	20.000	19.840	0.8	99	0.00
46	CPT	2Nitroaniline	20.000	19.622	1.9	95	0.00
47	CPT	Acnaphthylene	20.000	19.754	1.2	98	0.00
48	CPT	Dimethylphtha	20.000	19.946	0.3	98	0.00
49	CPT	26Dinitrotolu	20.000	20.351	-1.8	98	0.00
50	CPT	Acenaphthene	20.000	19.658	1.7	96	0.00
51	CPT	3Nitroaniline	20.000	19.888	0.6	99	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S032322\1CCV053.D Vial: 2
Acq On : 23 Mar 2022 10:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 10:59:42 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	20.000	23.625	-18.1	126	0.00
53	CPT	Dibenzofuran	20.000	19.858	0.7	98	0.00
54	CPT	24Dinitrotolu	20.000	20.234	-1.2	99	0.00
55	CPT	4-Nitrophenol	20.000	19.342	3.3	95	0.00
56	CT	2,3,5,6-Tetrachlorop	20.000	20.317	-1.6	100	0.00
57	CPT	2,3,4,6-Tetrachlorop	20.000	19.943	0.3	97	0.00
58	CPT	Fluorene	20.000	19.984	0.1	99	0.00
59	CPT	4Clphlphlethr	20.000	19.667	1.7	98	0.00
60	CPT	Diethylphthal	20.000	19.913	0.4	97	0.00
61	CPT	4Nitroaniline	20.000	19.062	4.7	93	0.00
62	S	SURR246Tribrphenl	50.000	51.799	-3.6	101	0.00
63	I	Phenanthrd10	20.000	20.000	0.0	99	0.00
64	CPT	46Dinit2mylph	20.000	23.036	-15.2	120	0.00
65	CPT	Ntrsdiphlam&Diphlam	40.000	38.889	2.8	97	0.00
66	CT	Azobenz&12Diphlhyd	40.000	38.272	4.3	95	0.00
67	CPT	4Brphlphlethr	20.000	19.241	3.8	97	0.00
68	CPT	Hexaclbenzene	20.000	20.347	-1.7	101	0.00
69	CPT	Pentaclphenol	20.000	21.492	-7.5	110	0.00
70	CPT	Phenanthrene	20.000	19.831	0.8	99	0.00
71	CPT	Anthracene	20.000	19.310	3.5	97	0.00
72	CPT	Carbazole	20.000	19.568	2.2	97	0.00
73	CPT	Dinbtylphthal	20.000	19.819	0.9	98	0.00
74	CPT	Fluoranthene	20.000	20.315	-1.6	102	0.00
75	I	Chrysene-d12	20.000	20.000	0.0	108	0.00
76	CT	Benzidine	20.000	19.488	2.6	99	0.00
77	CPT	Pyrene	20.000	19.272	3.6	103	0.00
78	S	SURRTerphenyl-d14	100.000	93.025	7.0	100	0.00
79	CPT	Btylbzylphth	20.000	18.900	5.5	100	0.00
80	CT	bis2Ethlhxlad	20.000	19.023	4.9	101	0.00
81	CPT	33Diclbnzidin	20.000	16.954	15.2	87	0.00
82	CPT	B[a]anthracen	20.000	19.745	1.3	107	0.00
83	CPT	Chrysene	20.000	19.784	1.1	107	0.00
84	CPT	bis2Ethlhxlph	20.000	19.138	4.3	103	0.00
85	CPT	Dinoctylphthl	20.000	19.491	2.5	103	0.00
86	I	Perylene-d12	20.000	20.000	0.0	114	0.00
87	CPT	B[b]fluoranth	20.000	21.090	-5.4	112	0.00
88	CPT	B[k]fluoranth	20.000	19.706	1.5	107	0.00
89	CPT	Benz[a]pyrene	20.000	20.924	-4.6	113	0.00
90	CPT	Indeno-pyrene	20.000	19.741	1.3	118	0.00
91	CPT	Dib[ah]anthr	20.000	20.769	-3.8	121	0.00
92	CPT	B[ghi]perylen	20.000	20.689	-3.4	125	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S032322\1CCV053.D Vial: 2
Acq On : 23 Mar 2022 10:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 10:59:42 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	1.000	1.000	0.0	99	0.00
2	CT	Ntrsdimeth	0.895	0.938	-4.8	101	0.00
3	CT	Pyridine	1.486	1.545	-4.0	102	0.00
4	S	SURR2Flphenol	0.544	0.566	-4.0	98	0.00
5	CT	Aniline	1.969	2.056	-4.4	98	0.00
6	CPT	bis2Clethletr	1.324	1.367	-3.2	102	0.00
7	S	SURRPhenol-d5	0.652	0.669	-2.6	98	0.00
8	CPT	Phenol	1.861	1.908	-2.5	99	0.00
9	CPT	2-Cl-phenol	1.315	1.369	-4.1	100	0.00
10	CT	13Diclbenz	1.567	1.574	-0.4	100	0.00
11	CT	14Diclbenz	1.534	1.545	-0.7	100	0.00
12	CT	12Diclbenz	1.456	1.430	1.8	97	0.00
13	CT	Benzyl alcoho	0.859	0.876	-2.0	97	0.00
14	CPT	bis2clispreth	1.551	1.534	1.1	99	0.00
15	CPT	2Methylphenol	1.031	1.054	-2.2	100	0.00
16	CT	Ntrspyrrol	0.615	0.627	-2.0	95	0.00
17	CPT	Acetophenone	1.808	1.775	1.8	97	0.00
18	CPT	Hexaclethane	0.617	0.619	-0.3	100	0.00
19	CPT	N-Ntrsdinprop	0.942	0.927	1.6	97	0.00
20	CPT	3&4Methylphenol	1.260	1.283	-1.8	97	0.00
21	I	Naphthalened8	1.000	1.000	0.0	98	0.00
22	S	SURRNitrbenzened5	0.057	0.058	-1.8	99	0.00
23	CPT	Nitrobenzene	0.280	0.281	-0.4	98	0.00
24	CPT	Isophorone	0.534	0.525	1.7	95	0.00
25	CPT	2-Nitrophenol	0.120	0.136	-13.3	100	0.00
26	CPT	24Dimthpheno	0.196	0.203	-3.6	97	0.00
27	CPT	bis2clethoxym	0.355	0.352	0.8	97	0.00
28	CPT	24Diclphenol	0.266	0.278	-4.5	97	0.00
29	CT	124Triclbenz	0.330	0.330	0.0	98	0.00
30	CT	Benzoic acid	0.068	0.070	-2.9	108	0.00
31	CPT	Naphthalene	1.022	1.011	1.1	98	0.00
32	CPT	4-Cl-aniline	0.394	0.403	-2.3	98	0.00
33	CT	26Diclphenol	0.265	0.271	-2.3	97	0.00
34	CT	Hexaclprop	0.173	0.193	-11.6	104	0.00
35	CPT	Hexaclbutdien	0.178	0.178	0.0	101	0.00
36	CPT	4Cl3methylphe	0.295	0.310	-5.1	98	0.00
37	CPT	2Methylnaphth	0.681	0.684	-0.4	98	0.00
38	CT	1Methylnaphth	0.570	0.561	1.6	97	0.00
39	I	Acenaphthened10	1.000	1.000	0.0	99	0.00
40	CPT	Hxclcycpentdi	0.298	0.332	-11.4	104	0.00
41	CPT	1245Tetrclbenz	0.546	0.533	2.4	98	0.00
42	CPT	246Triclpheno	0.361	0.377	-4.4	97	0.00
43	CPT	245Triclpheno	0.369	0.398	-7.9	98	0.00
44	S	SURR2Flbiphenyl	0.282	0.277	1.8	98	0.00
45	CPT	2Clnaphthalen	1.224	1.207	1.4	99	0.00
46	CPT	2Nitroaniline	0.332	0.347	-4.5	95	0.00
47	CPT	Acnaphthylene	1.916	1.880	1.9	98	0.00
48	CPT	Dimethylphtha	1.368	1.366	0.1	98	0.00
49	CPT	26Dinitrotolu	0.307	0.313	-2.0	98	0.00
50	CPT	Acenaphthene	1.064	1.050	1.3	96	0.00
51	CPT	3Nitroaniline	0.314	0.331	-5.4	99	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S032322\1CCV053.D Vial: 2
Acq On : 23 Mar 2022 10:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 10:59:42 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	0.072	0.089	-23.6#	126	0.00
53	CPT	Dibenzofuran	1.646	1.628	1.1	98	0.00
54	CPT	24Dinitrotolu	0.370	0.393	-6.2	99	0.00
55	CPT	4-Nitrophenol	0.225	0.226	-0.4	95	0.00
56	CT	2,3,5,6-Tetrachlorop	0.261	0.285	-9.2	100	0.00
57	CPT	2,3,4,6-Tetrachlorop	0.260	0.275	-5.8	97	0.00
58	CPT	Fluorene	1.289	1.283	0.5	99	0.00
59	CPT	4Clphlphlethr	0.593	0.588	0.8	98	0.00
60	CPT	Diethylphthal	1.369	1.363	0.4	97	0.00
61	CPT	4Nitroaniline	0.280	0.283	-1.1	93	0.00
62	S	SURR246Tribrphenl	0.051	0.056	-9.8	101	0.00
63	I	Phenanthrd10	1.000	1.000	0.0	99	0.00
64	CPT	46Dinit2mylph	0.095	0.119	-25.3#	120	0.00
65	CPT	Ntrsdiphlam&Diphlam	0.723	0.702	2.9	97	0.00
66	CT	Azobenz&12Diphlhyd	0.238	0.226	5.0	95	0.00
67	CPT	4Brphlphlethr	0.248	0.238	4.0	97	0.00
68	CPT	Hexaclbenzene	0.230	0.230	0.0	101	0.00
69	CPT	Pentaclphenol	0.100	0.115	-15.0	110	0.00
70	CPT	Phenanthrene	1.035	1.018	1.6	99	0.00
71	CPT	Anthracene	1.034	1.009	2.4	97	0.00
72	CPT	Carbazole	0.978	0.966	1.2	97	0.00
73	CPT	Dinbtylphthal	1.253	1.279	-2.1	98	0.00
74	CPT	Fluoranthene	1.051	1.077	-2.5	102	0.00
75	I	Chrysene-d12	1.000	1.000	0.0	108	0.00
76	CT	Benzidine	0.387	0.432	-11.6	99	0.00
77	CPT	Pyrene	1.859	1.814	2.4	103	0.00
78	S	SURRTerphenyl-d14	0.255	0.243	4.7	100	0.00
79	CPT	Btylbzylphth	0.791	0.807	-2.0	100	0.00
80	CT	bis2Ethlhxlad	0.628	0.651	-3.7	101	0.00
81	CPT	33Diclbnzidin	0.353	0.316	10.5	87	0.00
82	CPT	B[a]anthracen	1.327	1.318	0.7	107	0.00
83	CPT	Chrysene	1.235	1.211	1.9	107	0.00
84	CPT	bis2Ethlhxlph	0.943	0.962	-2.0	103	0.00
85	CPT	Dinoctylphthl	1.338	1.410	-5.4	103	0.00
86	I	Perylene-d12	1.000	1.000	0.0	114	0.00
87	CPT	B[b]fluoranth	1.369	1.444	-5.5	112	0.00
88	CPT	B[k]fluoranth	1.361	1.341	1.5	107	0.00
89	CPT	Benz[a]pyrene	1.219	1.276	-4.7	113	0.00
90	CPT	Indeno-pyrene	0.605	0.634	-4.8	118	0.00
91	CPT	Dib[ah]anthr	0.657	0.718	-9.3	121	0.00
92	CPT	B[ghi]perylen	0.690	0.732	-6.1	125	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 2

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV053.D Vial: 2
Acq On : 23 Mar 2022 10:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 10:59:42 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	195239	20.00	ug/mL	0.00
21) Naphthalened8	5.425	136	974402	20.00	ug/mL	0.00
39) Acenaphthened10	7.343	164	511342	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	658155	20.00	ug/mL	0.00
75) Chrysene-d12	10.215	240	390284	20.00	ug/mL	0.00
86) Perylene-d12	11.491	264	260793	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.654	112	276231	52.06	%REC	0.00
Spiked Amount 100.000			Recovery = 52.06%			
7) SURRPhenol-d5	3.413	99	326498	51.32	%REC	0.00
Spiked Amount 100.000			Recovery = 51.32%			
22) SURRNitrbenzened5	4.436	82	283193	101.98	%REC	0.00
Spiked Amount 100.000			Recovery = 101.98%			
44) SURR2Flbiphenyl	6.752	172	709238	98.89	%REC	0.00
Spiked Amount 100.000			Recovery = 98.89%			
62) SURR246Tribrphenl	7.982	330	71230	51.80	%REC	0.00
Spiked Amount 100.000			Recovery = 51.80%			
78) SURRTerphenyl-d14	9.499	244	473312	93.02	%REC	0.00
Spiked Amount 100.000			Recovery = 93.02%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.932	74	183092	20.9468	ug/mL	99
3) Pyridine	1.949	79	301650	20.7881	ug/mL	100
5) Aniline	3.450	93	401488	20.8829	ug/mL	98
6) bis2Clethletr	3.521	93	266811	20.6471	ug/mL	98
8) Phenol	3.427	94	372450	20.5066	ug/mL	100
9) 2-Cl-phenol	3.561	128	267331	20.8184	ug/mL	98
10) 13Diclbenz	3.720	146	307217	20.0874	ug/mL	99
11) 14Diclbenz	3.802	146	301562	20.1349	ug/mL	99
12) 12Diclbenz	3.964	146	279115	19.6391	ug/mL	98
13) Benzyl alcoho	3.947	108	171082	20.4132	ug/mL	99
14) bis2clispreth	4.117	45	299550	19.7879	ug/mL	98
15) 2Methylphenol	4.083	107	205723	20.4430	ug/mL	97
16) Ntrspyrrol	4.234	100	122400	20.3925	ug/mL	95
17) Acetophenone	4.257	105	346533	19.6333	ug/mL	99
18) Hexaclethane	4.359	117	120918	20.0889	ug/mL	99
19) N-Ntrsdinprop	4.274	70	180919	19.6807	ug/mL	99
20) 3&4Methylphenol	4.279	107	250506	20.3616	ug/mL	95
23) Nitrobenzene	4.461	77	273435	20.0632	ug/mL	99
24) Isophorone	4.785	82	512045	19.6715	ug/mL	98
25) 2-Nitrophenol	4.879	139	132368	20.9015	ug/mL	99
26) 24Dimthpheno	4.984	122	198274	20.7496	ug/mL	96
27) bis2clethoxym	5.126	93	343390	19.8819	ug/mL	97
28) 24Diclphenol	5.231	162	271278	20.9349	ug/mL	98
29) 124Triclbenz	5.351	180	321934	20.0276	ug/mL	99
30) Benzoic acid	5.140	122	67984	20.6792	ug/mL	91
31) Naphthalene	5.456	128	985570	19.8011	ug/mL	99
32) 4-Cl-aniline	5.575	127	392688	20.4576	ug/mL	99
33) 26Diclphenol	5.572	162	264243	20.5028	ug/mL	97
34) Hexaclprop	5.592	213	188378	22.3155	ug/mL	97
35) Hexaclbutdien	5.666	225	173914	20.0938	ug/mL	98
36) 4Cl3methylphe	6.234	107	302522	21.0436	ug/mL	98
37) 2Methylnaphth	6.348	142	666366	20.0289	ug/mL	100
38) 1Methylnaphth	6.450	141	546928	19.6791	ug/mL	99
40) Hxclcycpentdi	6.524	237	169616	21.0185	ug/mL	98

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV053.D Vial: 2
Acq On : 23 Mar 2022 10:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 10:59:42 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

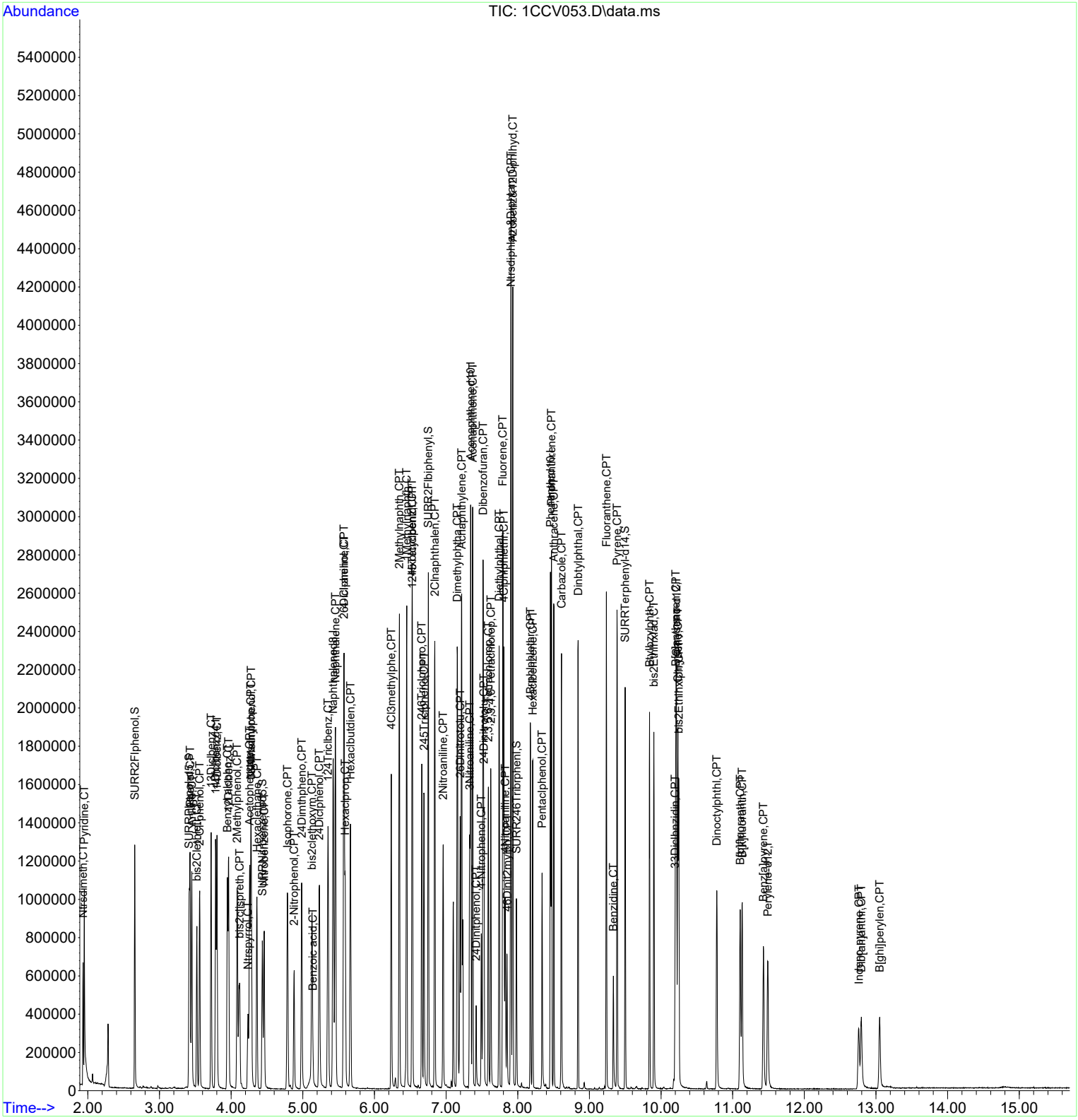
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.530	216	272436	19.6661	ug/mL	96
42) 246Triclpheno	6.661	196	193012	19.7493	ug/mL	98
43) 245Triclpheno	6.692	196	203347	20.0217	ug/mL	95
45) 2Clnaphthalen	6.842	162	617438	19.8401	ug/mL	99
46) 2Nitroaniline	6.959	65	177647	19.6219	ug/mL	97
47) Acnaphthylene	7.218	152	961466	19.7539	ug/mL	99
48) Dimethylphtha	7.155	163	698568	19.9464	ug/mL	99
49) 26Dinitrotolu	7.198	165	159910	20.3506	ug/mL	99
50) Acenaphthene	7.371	154	536909	19.6578	ug/mL	100
51) 3Nitroaniline	7.328	138	169225	19.8876	ug/mL	94
52) 24Dinitphenol	7.419	184	45582	23.6253	ug/mL	94
53) Dibenzofuran	7.516	168	832241	19.8582	ug/mL	96
54) 24Dinitrotolu	7.527	165	200912	20.2338	ug/mL	100
55) 4-Nitrophenol	7.490	65	115603	19.3421	ug/mL	98
56) 2,3,5,6-Tetrachlorop	7.590	232	145502	20.3168	ug/mL	98
57) 2,3,4,6-Tetrachlorop	7.624	232	140495	19.9434	ug/mL	97
58) Fluorene	7.791	166	656052	19.9839	ug/mL	99
59) 4Clphlphlethr	7.806	204	300451	19.6668	ug/mL	100
60) Diethylphthal	7.740	149	696962	19.9130	ug/mL	99
61) 4Nitroaniline	7.826	138	144719	19.0624	ug/mL	98
64) 46Dinit2mylph	7.851	198	78315	23.0363	ug/mL	97
65) Ntrsdiphlam&Diphlam	7.905	169	924619	38.8893	ug/mL	98
66) Azobenz&12Diphlhyd	7.931	182	297321	38.2720	ug/mL	94
67) 4Brphlphlethr	8.178	248	156456	19.2407	ug/mL	97
68) Hexaclbenzene	8.209	284	151490	20.3469	ug/mL	99
69) Pentaclphenol	8.340	266	75556	21.4915	ug/mL	95
70) Phenanthrene	8.471	178	669698	19.8307	ug/mL	100
71) Anthracene	8.505	178	664110	19.3105	ug/mL	100
72) Carbazole	8.610	167	635522	19.5675	ug/mL	99
73) Dinbtylphthal	8.843	149	841946	19.8188	ug/mL	99
74) Fluoranthene	9.238	202	708525	20.3152	ug/mL	99
76) Benzidine	9.334	184	168640	19.4881	ug/mL	99
77) Pyrene	9.386	202	707899	19.2717	ug/mL	98
79) Btylbzylphth	9.840	149	314925	18.9002	ug/mL	95
80) bis2Ethlhxlad	9.900	129	254195	19.0229	ug/mL	99
81) 33Diclbnzidin	10.195	252	123204	16.9539	ug/mL	93
82) B[a]anthracen	10.207	228	514383	19.7452	ug/mL	98
83) Chrysene	10.235	228	472635	19.7841	ug/mL	99
84) bis2Ethlhxlph	10.246	149	375495	19.1376	ug/mL	99
85) Dinoctylphthl	10.778	149	550491	19.4905	ug/mL	100
87) B[b]fluoranth	11.105	252	376564	21.0896	ug/mL	98
88) B[k]fluoranth	11.133	252	349619	19.7061	ug/mL	98
89) Benz[a]pyrene	11.429	252	332658	20.9239	ug/mL	98
90) Indeno-pyrene	12.761	276	165280	19.7405	ug/mL	96
91) Dib[ah]anthr	12.795	278	187221	20.7691	ug/mL	94
92) B[ghi]perylen	13.051	276	190985	20.6891	ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV053.D Vial: 2
Acq On : 23 Mar 2022 10:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 10:59:42 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S032322\1CCV054.D Vial: 3
Acq On : 23 Mar 2022 11:06 Operator: JJY
Sample : CCV A 20 ug/ml SVMS9248 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 11:24:16 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	99	0.00
2	CPT	Benzaldehyde	20.000	19.652	1.7	98	0.00
3	I	Naphthalened8	20.000	20.000	0.0	99	0.00
4	CPT	Caprolactam	20.000	20.834	-4.2	101	0.00
5	I	Acenaphthened10	20.000	20.000	0.0	102	0.00
6	CPT	Biphenyl	20.000	19.552	2.2	96	0.00
7	I	Phenanthrd10	20.000	20.000	0.0	101	0.00
8	CPT	Atrazine	20.000	19.402	3.0	97	0.00
9	I	Chrysene-d12	20.000	20.000	0.0	106	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\1S032322\1CCV054.D Vial: 3
Acq On : 23 Mar 2022 11:06 Operator: JJY
Sample : CCV A 20 ug/ml SVMS9248 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 11:24:16 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	1.000	1.000	0.0	99	0.00
2	CPT	Benzaldehyde	1.161	1.141	1.7	98	0.00
3	I	Naphthalened8	1.000	1.000	0.0	99	0.00
4	CPT	Caprolactam	0.096	0.111	-15.6	101	0.00
5	I	Acenaphthened10	1.000	1.000	0.0	102	0.00
6	CPT	Biphenyl	1.449	1.417	2.2	96	0.00
7	I	Phenanthrd10	1.000	1.000	0.0	101	0.00
8	CPT	Atrazine	0.191	0.198	-3.7	97	0.00
9	I	Chrysene-d12	1.000	1.000	0.0	106	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV054.D Vial: 3
Acq On : 23 Mar 2022 11:06 Operator: JJY
Sample : CCV A 20 ug/ml SVMS9248 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 11:24:16 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

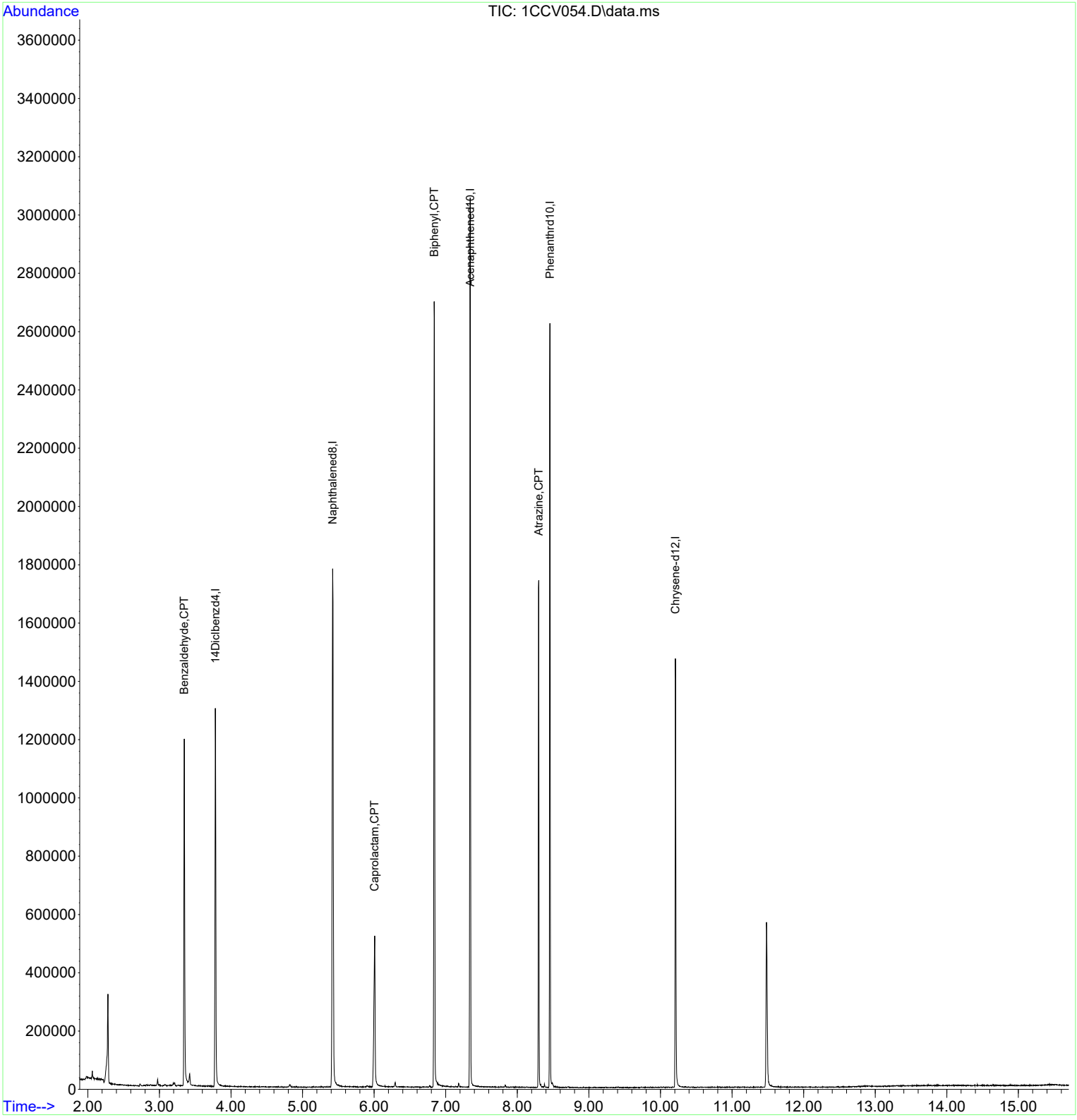
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	198483	20.00	ug/mL	0.00
3) Naphthalened8	5.421	136	991621	20.00	ug/mL	0.00
5) Acenaphthened10	7.342	164	535896	20.00	ug/mL	0.00
7) Phenanthrd10	8.456	188	638562	20.00	ug/mL	0.00
9) Chrysene-d12	10.209	240	365932	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.347	77	226473	19.6515	ug/mL	99
4) Caprolactam	6.007	55	110018	20.8340	ug/mL	99
6) Biphenyl	6.839	154	759154	19.5517	ug/mL	100
8) Atrazine	8.300	200	126454	19.4019	ug/mL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV054.D Vial: 3
Acq On : 23 Mar 2022 11:06 Operator: JJY
Sample : CCV A 20 ug/ml SVMS9248 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 11:24:16 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Ending CCV %Recovery Report

Data File Name	1CCV055.D
Data File Path	C:\INSTARCH\DATA\1S032322\
Operator	JJY
Date Acquired	3/23/2022 15:43
Acq. Method File	1S031722.M
Sample Name	CCV 20 ug/ml SVMS9158
Misc Info	500ul+5ul S4539C
Vial Number	15
Instrument Name	SVMS1
Sample Multiplier	1

#	Name	Ret Time	Amount	Units	Response	50-150 %REC
1	14Diclbenzd4	3.78	20.00	ug/mL	198695	ISTD
2	Ntrsdimeth	1.93	20.00	ug/mL	177902	100
3	Pyridine	1.95	20.31	ug/mL	299862	102
4	SURR2Flphenol	2.65	51.88	%REC	280122	104
5	Aniline	3.45	20.85	ug/mL	407958	104
6	bis2Clethletr	3.52	20.14	ug/mL	264915	101
7	SURRPhenol-d5	3.42	51.62	%REC	334202	103
8	Phenol	3.43	20.39	ug/mL	376932	102
9	2-Cl-phenol	3.56	20.54	ug/mL	268467	103
10	13Diclbenz	3.72	19.79	ug/mL	307954	99
11	14Diclbenz	3.80	19.66	ug/mL	299725	98
12	12Diclbenz	3.96	19.51	ug/mL	282247	98
13	Benzyl alcoho	3.95	20.69	ug/mL	176451	103
14	bis2clispreth	4.12	19.06	ug/mL	293669	95
15	2Methylphenol	4.09	19.81	ug/mL	202906	99
16	Ntrspyrrol	4.24	20.64	ug/mL	126090	103
17	Acetophenone	4.26	19.51	ug/mL	350505	98
18	Hexaclethane	4.36	19.24	ug/mL	117835	96
19	N-Ntrsdinprop	4.27	19.23	ug/mL	179943	96
20	3&4Methylphenol	4.28	20.52	ug/mL	256868	103
21	Naphthalened8	5.42	20.00	ug/mL	973904	ISTD
22	SURRNitrbenzened5	4.44	99.82	%REC	277039	100
23	Nitrobenzene	4.46	19.78	ug/mL	269497	99
24	Isophorone	4.79	20.29	ug/mL	527986	101
25	2-Nitrophenol	4.88	20.99	ug/mL	132856	105
26	24Dimthpheno	4.98	21.08	ug/mL	201356	105
27	bis2clethoxym	5.13	19.84	ug/mL	342550	99
28	24Diclphenol	5.23	21.26	ug/mL	275328	106
29	124Triclbenz	5.35	20.10	ug/mL	198695	100
30	Benzoic acid	5.15	24.49	ug/mL	322876	122
31	Naphthalene	5.46	19.86	ug/mL	987810	99
32	4-Cl-aniline	5.57	20.40	ug/mL	391397	102
33	26Diclphenol	5.57	20.50	ug/mL	264062	102
34	Hexaclprop	5.59	17.72	ug/mL	149468	89
35	Hexaclbutdien	5.67	20.12	ug/mL	174035	101
36	4Cl3methylphe	6.23	21.05	ug/mL	302490	105
37	2Methylnaphth	6.35	19.99	ug/mL	664792	100

38	1Methylnaphth	6.45	19.93	ug/mL	553107	100
39	Acenaphthened10	7.34	20.00	ug/mL	198695	ISTD
40	Hxclcycpentdi	6.52	13.34	ug/mL	513682	67
41	1245Tetrclbenz	6.53	20.05	ug/mL	278701	100
42	246Triclpheno	6.66	19.83	ug/mL	194652	99
43	245Triclpheno	6.69	19.83	ug/mL	202321	99
44	SURR2Flbiphenyl	6.75	97.73	%REC	704488	98
45	2Clnaphthalen	6.84	19.93	ug/mL	622909	100
46	2Nitroaniline	6.96	20.20	ug/mL	183802	101
47	Acnaphthylene	7.21	19.53	ug/mL	198695	98
48	Dimethylphtha	7.15	19.82	ug/mL	955669	99
49	26Dinitrotolu	7.19	19.96	ug/mL	157525	100
50	Acenaphthene	7.37	19.66	ug/mL	539524	98
51	3Nitroaniline	7.33	20.12	ug/mL	171986	101
52	24Dinitphenol	7.42	22.92	ug/mL	43800	115
53	Dibenzofuran	7.51	19.85	ug/mL	835546	99
54	24Dinitrotolu	7.53	20.39	ug/mL	198695	102
55	4-Nitrophenol	7.49	19.28	ug/mL	203412	96
56	2,3,5,6-Tetrachlorop	7.59	19.97	ug/mL	143574	100
57	2,3,4,6-Tetrachlorop	7.62	20.23	ug/mL	143225	101
58	Fluorene	7.79	20.15	ug/mL	664330	101
59	4Clphlphlethr	7.81	19.33	ug/mL	297052	97
60	Diethylphthal	7.74	19.72	ug/mL	693404	99
61	4Nitroaniline	7.82	20.25	ug/mL	154879	101
62	SURR246Tribrphenl	7.98	50.52	%REC	69710	101
63	Phenanthrd10	8.45	20.00	ug/mL	663388	ISTD
64	46Dinit2mylph	7.85	22.41	ug/mL	76301	112
65	Ntrsdiphlam&Diphlam	7.90	38.98	ug/mL	933856	97
66	Azobenz&12Diphlhyd	7.93	38.39	ug/mL	300531	96
67	4Brphlphlethr	8.18	19.27	ug/mL	157901	96
68	Hexaclbenzene	8.21	19.93	ug/mL	149846	100
69	Pentaclphenol	8.34	20.24	ug/mL	71198	101
70	Phenanthrene	8.47	20.13	ug/mL	684503	101
71	Anthracene	8.50	19.63	ug/mL	679728	98
72	Carbazole	8.61	20.04	ug/mL	655455	100
73	Dinbtylphthal	8.84	19.68	ug/mL	843092	98
74	Fluoranthene	9.24	20.74	ug/mL	728090	104
75	Chrysene-d12	10.22	20.00	ug/mL	389450	ISTD
76	Benzidine	9.33	22.85	ug/mL	202365	114
77	Pyrene	9.39	19.39	ug/mL	710746	97
78	SURRTerphenyl-d14	9.50	96.07	%REC	487238	96
79	Btylbzylphth	9.84	19.75	ug/mL	328733	99
80	bis2Ethlhxlad	9.90	18.99	ug/mL	253219	95
81	33Diclbnzidin	10.20	22.40	ug/mL	169687	112
82	B[a]anthracen	10.21	19.56	ug/mL	508475	98
83	Chrysene	10.24	19.83	ug/mL	472600	99
84	bis2Ethlhxlph	10.25	18.96	ug/mL	371240	95
85	Dinoctylphthl	10.78	19.99	ug/mL	564807	100
86	Perylene-d12	11.49	20.00	ug/mL	268152	ISTD
87	B[b]fluoranth	11.10	20.12	ug/mL	369317	101

88	B[k]fluoranth	11.13	19.78	ug/mL	360840	99
89	Benz[a]pyrene	11.43	20.63	ug/mL	337265	103
90	Indeno-pyrene	12.76	20.55	ug/mL	177803	103
91	Dib[ah]anthr	12.80	21.44	ug/mL	199415	107
92	B[ghi]perylen	13.05	21.04	ug/mL	199862	105

(#) = recovery out of range Average Percent Recovery = 101

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV055.D Vial: 15
Acq On : 23 Mar 2022 15:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 16:00:04 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	198695	20.00	ug/mL	0.00
21) Naphthalened8	5.425	136	973904	20.00	ug/mL	0.00
39) Acenaphthened10	7.340	164	513682	20.00	ug/mL	0.00
63) Phenanthrd10	8.453	188	663388	20.00	ug/mL	0.00
75) Chrysene-d12	10.215	240	389450	20.00	ug/mL	0.00
86) Perylene-d12	11.491	264	268152	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.654	112	280122	51.88	%REC	0.00
Spiked Amount 100.000			Recovery = 51.88%			
7) SURRPhenol-d5	3.416	99	334202	51.62	%REC	0.00
Spiked Amount 100.000			Recovery = 51.62%			
22) SURRNitrbenzened5	4.436	82	277039	99.82	%REC	0.00
Spiked Amount 100.000			Recovery = 99.82%			
44) SURR2Flbiphenyl	6.749	172	704488	97.73	%REC	0.00
Spiked Amount 100.000			Recovery = 97.73%			
62) SURR246Tribrphenl	7.982	330	69710	50.52	%REC	0.00
Spiked Amount 100.000			Recovery = 50.52%			
78) SURRTerphenyl-d14	9.499	244	487238	96.07	%REC	0.00
Spiked Amount 100.000			Recovery = 96.07%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.932	74	177902	19.9990	ug/mL	98
3) Pyridine	1.947	79	299862	20.3054	ug/mL	99
5) Aniline	3.453	93	407958	20.8503	ug/mL	99
6) bis2Clethletr	3.521	93	264915	20.1438	ug/mL	99
8) Phenol	3.430	94	376932	20.3924	ug/mL	98
9) 2-Cl-phenol	3.561	128	268467	20.5432	ug/mL	99
10) 13Diclbenz	3.720	146	307954	19.7854	ug/mL	98
11) 14Diclbenz	3.802	146	299725	19.6642	ug/mL	99
12) 12Diclbenz	3.964	146	282247	19.5140	ug/mL	99
13) Benzyl alcoho	3.947	108	176451	20.6876	ug/mL	97
14) bis2clispreth	4.117	45	293669	19.0620	ug/mL	97
15) 2Methylphenol	4.086	107	202906	19.8124	ug/mL	96
16) Ntrspyrrol	4.237	100	126090	20.6419	ug/mL	97
17) Acetophenone	4.260	105	350505	19.5130	ug/mL	98
18) Hexaclethane	4.359	117	117835	19.2362	ug/mL	97
19) N-Ntrsdinprop	4.274	70	179943	19.2341	ug/mL	99
20) 3&4Methylphenol	4.279	107	256868	20.5156	ug/mL	95
23) Nitrobenzene	4.461	77	269497	19.7843	ug/mL	97
24) Isophorone	4.785	82	527986	20.2942	ug/mL	97
25) 2-Nitrophenol	4.879	139	132856	20.9851	ug/mL	97
26) 24Dimthpheno	4.984	122	201356	21.0829	ug/mL	97
27) bis2clethoxym	5.129	93	342550	19.8435	ug/mL	99
28) 24Diclphenol	5.231	162	275328	21.2584	ug/mL	97
29) 124Triclbenz	5.353	180	322876	20.0964	ug/mL	99
30) Benzoic acid	5.146	122	85921	24.4909	ug/mL	93
31) Naphthalene	5.456	128	987810	19.8562	ug/mL	100
32) 4-Cl-aniline	5.572	127	391397	20.4008	ug/mL	99
33) 26Diclphenol	5.572	162	264062	20.4993	ug/mL	95
34) Hexaclprop	5.589	213	149468	17.7152	ug/mL	98
35) Hexaclbutdien	5.666	225	174035	20.1181	ug/mL	97
36) 4Cl3methylphe	6.234	107	302490	21.0522	ug/mL	98
37) 2Methylnaphth	6.345	142	664792	19.9896	ug/mL	97
38) 1Methylnaphth	6.447	141	553107	19.9292	ug/mL	99
40) Hxclcycpentdi	6.524	237	107608	13.3397	ug/mL	91

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV055.D Vial: 15
Acq On : 23 Mar 2022 15:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 16:00:04 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

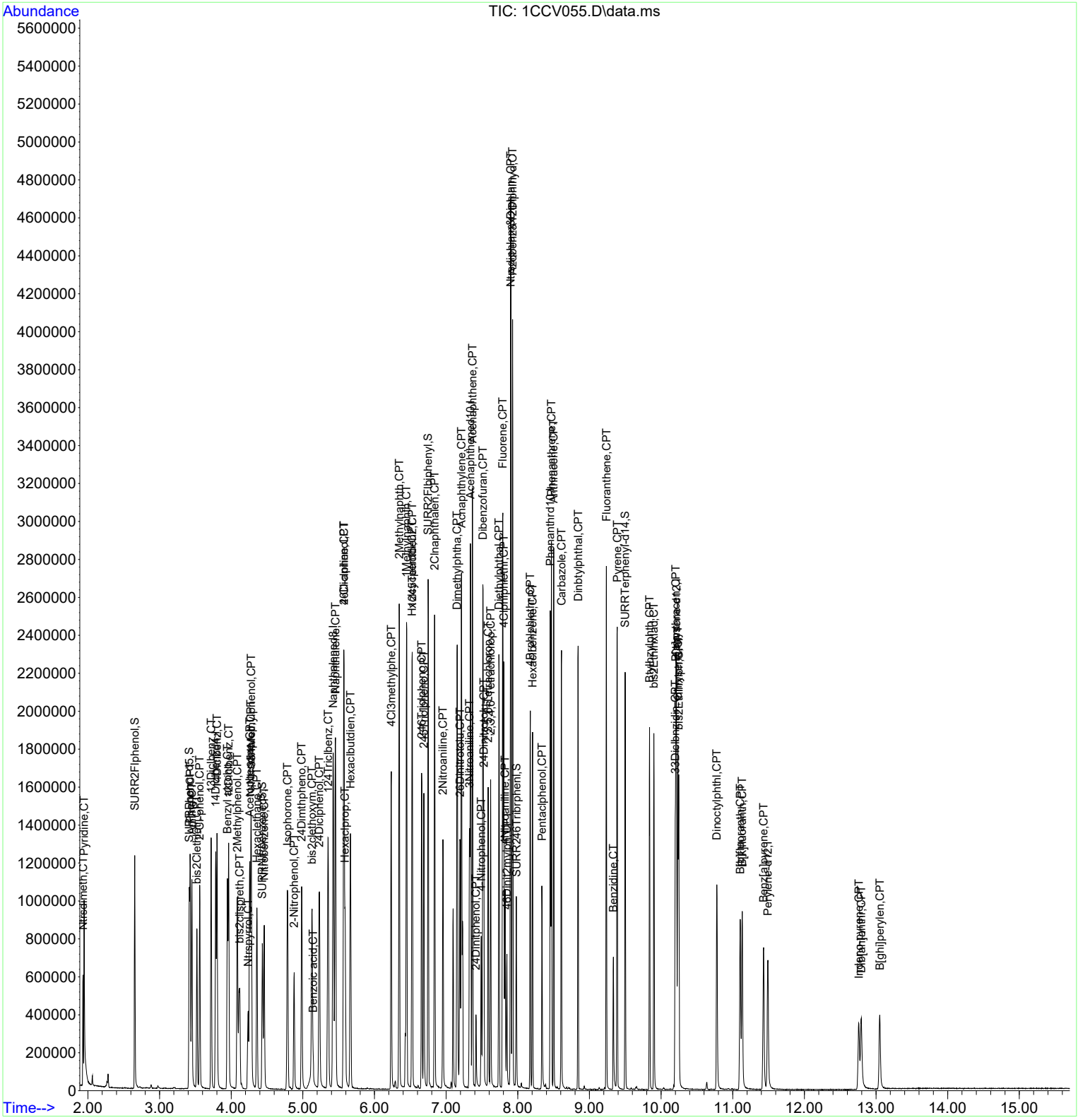
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.527	216	278701	20.0501 ug/mL	96
42) 246Triclpheno	6.661	196	194652	19.8257 ug/mL	99
43) 245Triclpheno	6.689	196	202321	19.8298 ug/mL	98
45) 2Clnaphthalen	6.840	162	622909	19.9286 ug/mL	99
46) 2Nitroaniline	6.956	65	183802	20.2000 ug/mL	96
47) Acnaphthylene	7.215	152	955669	19.5314 ug/mL	99
48) Dimethylphtha	7.152	163	697523	19.8192 ug/mL	99
49) 26Dinitrotolu	7.195	165	157525	19.9558 ug/mL	98
50) Acenaphthene	7.368	154	539524	19.6638 ug/mL	99
51) 3Nitroaniline	7.325	138	171986	20.1152 ug/mL	96
52) 24Dinitphenol	7.416	184	43800	22.9167 ug/mL	94
53) Dibenzofuran	7.513	168	835546	19.8456 ug/mL	97
54) 24Dinitrotolu	7.527	165	203412	20.3908 ug/mL	94
55) 4-Nitrophenol	7.490	65	115736	19.2832 ug/mL	95
56) 2,3,5,6-Tetrachlorop	7.587	232	143574	19.9710 ug/mL	95
57) 2,3,4,6-Tetrachlorop	7.621	232	143225	20.2322 ug/mL	99
58) Fluorene	7.791	166	664330	20.1526 ug/mL	100
59) 4Clphlphlethr	7.806	204	297052	19.3325 ug/mL	97
60) Diethylphthal	7.737	149	693404	19.7211 ug/mL	99
61) 4Nitroaniline	7.823	138	154879	20.2494 ug/mL	98
64) 46Dinit2mylph	7.848	198	76301	22.4081 ug/mL	99
65) Ntrsdiphlam&Diphlam	7.902	169	933856	38.9764 ug/mL	99
66) Azobenz&12Diphlhyd	7.928	182	300531	38.3904 ug/mL	93
67) 4Brphlphlethr	8.175	248	157901	19.2668 ug/mL	97
68) Hexaclbenzene	8.206	284	149846	19.9328 ug/mL	97
69) Pentaclphenol	8.337	266	71198	20.2426 ug/mL	99
70) Phenanthrene	8.471	178	684503	20.1280 ug/mL	100
71) Anthracene	8.502	178	679728	19.6311 ug/mL	100
72) Carbazole	8.610	167	655455	20.0435 ug/mL	99
73) Dinbtylphthal	8.843	149	843092	19.6832 ug/mL	99
74) Fluoranthene	9.238	202	728090	20.7356 ug/mL	100
76) Benzidine	9.334	184	202365	22.8513 ug/mL	97
77) Pyrene	9.388	202	710746	19.3945 ug/mL	99
79) Btylbzylphth	9.840	149	328733	19.7451 ug/mL	95
80) bis2Ethlhxlad	9.900	129	253219	18.9909 ug/mL	99
81) 33Diclbnzidin	10.198	252	169687	22.4030 ug/mL	99
82) B[a]anthracen	10.207	228	508475	19.5573 ug/mL	98
83) Chrysene	10.235	228	472600	19.8265 ug/mL	97
84) bis2Ethlhxlph	10.246	149	371240	18.9619 ug/mL	99
85) Dinoctylphthl	10.778	149	564807	19.9862 ug/mL	100
87) B[b]fluoranth	11.105	252	369317	20.1161 ug/mL	98
88) B[k]fluoranth	11.133	252	360840	19.7804 ug/mL	98
89) Benz[a]pyrene	11.431	252	337265	20.6315 ug/mL	99
90) Indeno-pyrene	12.761	276	177803	20.5499 ug/mL	93
91) Dib[ah]anthr	12.795	278	199415	21.4446 ug/mL	100
92) B[ghi]perylen	13.054	276	199862	21.0400 ug/mL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV055.D Vial: 15
Acq On : 23 Mar 2022 15:43 Operator: JJY
Sample : CCV 20 ug/ml SVMS9158 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 16:00:04 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Ending CCV % Recovery- Additional analytes

Data File Name	1CCV056.D
Data File Path	C:\INSTARCH\DATA\1S032322\
Operator	JJY
Date Acquired	3/23/2022 16:06
Acq. Method File	1S031722.M
Sample Name	CCV A 20 ug/ml SVMS9248
Misc Info	500ul+5ul S4539C
Vial Number	16
Instrument Name	SVMS1
Sample Multiplier	1

#	Name	Ret Time	Amount	Units	Response	50-150 %REC
1	14Diclbenzd4	3.78	20.00	ug/mL	219398	ISTD
2	Benzaldehyde	3.35	20.17	ug/mL	256975	101
3	Naphthalened8	5.42	20.00	ug/mL	1151411	ISTD
4	Caprolactam	6.01	22.75	ug/mL	141027	114
5	Acenaphthened10	7.34	20.00	ug/mL	609978	ISTD
6	Biphenyl	6.84	20.02	ug/mL	884713	100
7	Phenanthrd10	8.46	20.00	ug/mL	739261	ISTD
8	Atrazine	8.30	20.44	ug/mL	154330	102

(#) = recovery out of range

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV056.D Vial: 16
Acq On : 23 Mar 2022 16:06 Operator: JJY
Sample : CCV A 20 ug/ml SVMS9248 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 16:24:17 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

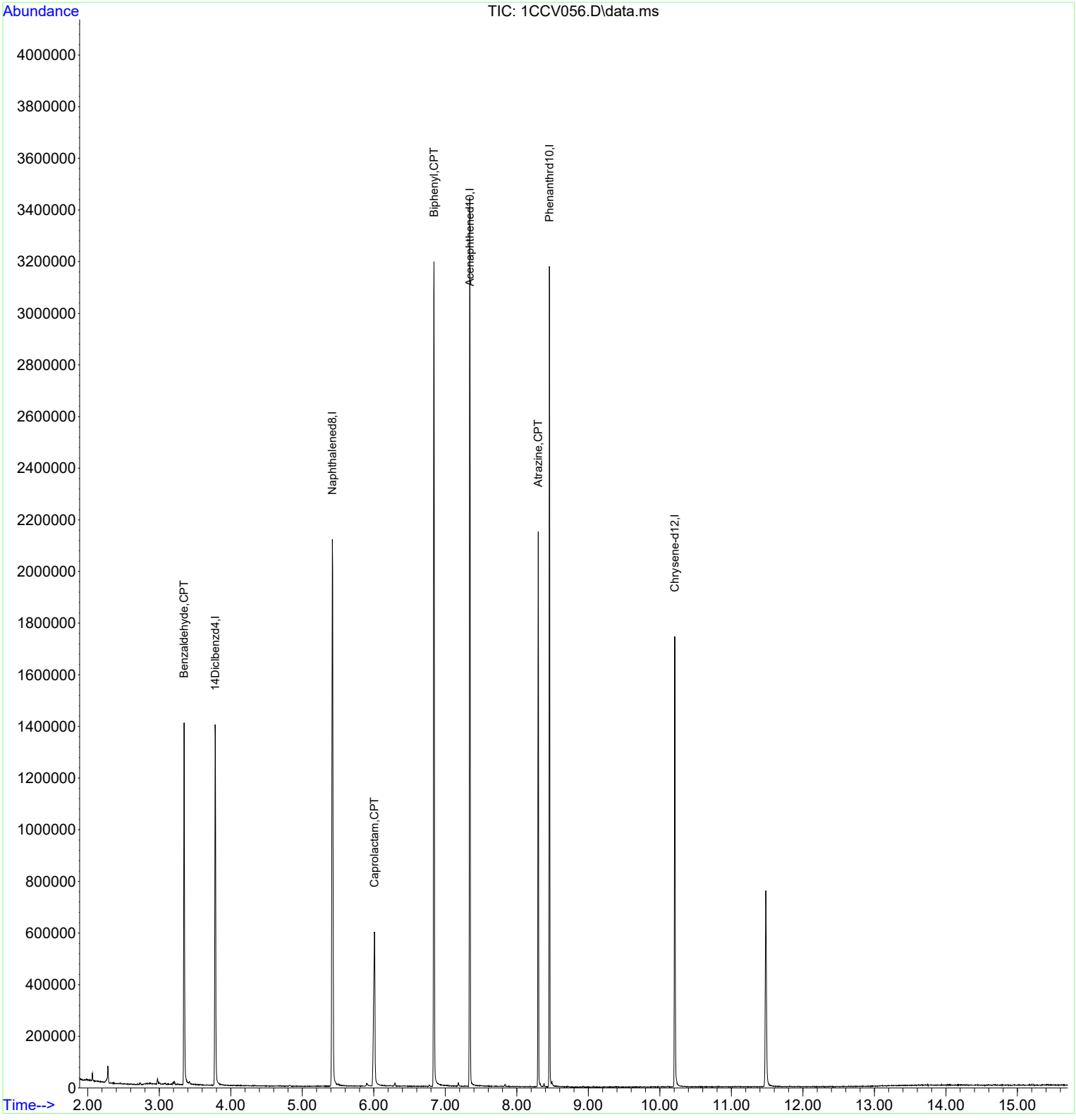
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.785	152	219398	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	1151411	20.00	ug/mL	0.00
5) Acenaphthened10	7.342	164	609978	20.00	ug/mL	0.00
7) Phenanthrd10	8.456	188	739261	20.00	ug/mL	0.00
9) Chrysene-d12	10.209	240	450771	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.347	77	256975	20.1726	ug/mL	100
4) Caprolactam	6.010	55	141027	22.7488	ug/mL	98
6) Biphenyl	6.842	154	884713	20.0181	ug/mL	100
8) Atrazine	8.300	200	154330	20.4447	ug/mL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1CCV056.D Vial: 16
Acq On : 23 Mar 2022 16:06 Operator: JJY
Sample : CCV A 20 ug/ml SVMS9248 Inst : SVMS1
Misc : 500ul+5ul S4539C Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 16:24:17 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



SEMI - VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL
DOCUMENTS

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1MBS01.D Vial: 4
Acq On : 23 Mar 2022 11:29 Operator: JJY
Sample : 210458,MBS, Inst : SVMS1
Misc : 1121218,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 11:45:43 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

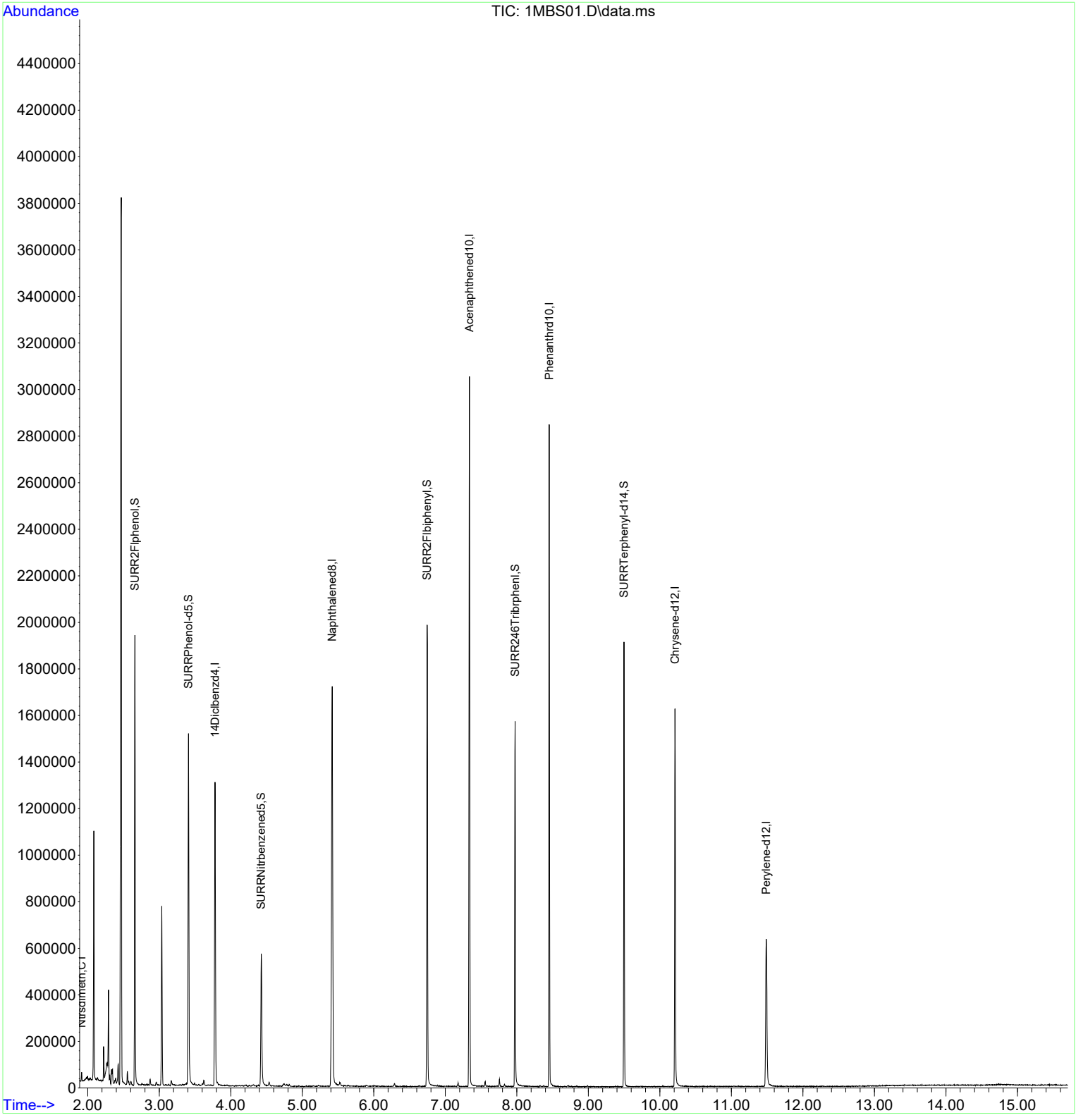
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.779	152	207220	20.00	ug/mL	0.00
21) Naphthalened8	5.419	136	1019906	20.00	ug/mL	0.00
39) Acenaphthened10	7.337	164	557629	20.00	ug/mL	0.00
63) Phenanthrd10	8.454	188	691836	20.00	ug/mL	0.00
75) Chrysene-d12	10.212	240	414591	20.00	ug/mL	0.00
86) Perylene-d12	11.488	264	257539	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.660	112	395652	70.26	%REC	0.00
Spiked Amount 100.000			Recovery = 70.26%			
7) SURRPhenol-d5	3.410	99	487651	72.22	%REC	0.00
Spiked Amount 100.000			Recovery = 72.22%			
22) SURRNitrbenzened5	4.427	82	214490	73.80	%REC	0.00
Spiked Amount 100.000			Recovery = 73.80%			
44) SURR2Flbiphenyl	6.746	172	556885	70.15	%REC	0.00
Spiked Amount 100.000			Recovery = 70.15%			
62) SURR246Tribrphenl	7.976	330	104161	68.57	%REC	0.00
Spiked Amount 100.000			Recovery = 68.57%			
78) SURRTerphenyl-d14	9.499	244	429166	79.04	%REC	0.00
Spiked Amount 100.000			Recovery = 79.04%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.915	74	1773	0.1911	ug/mL#	1

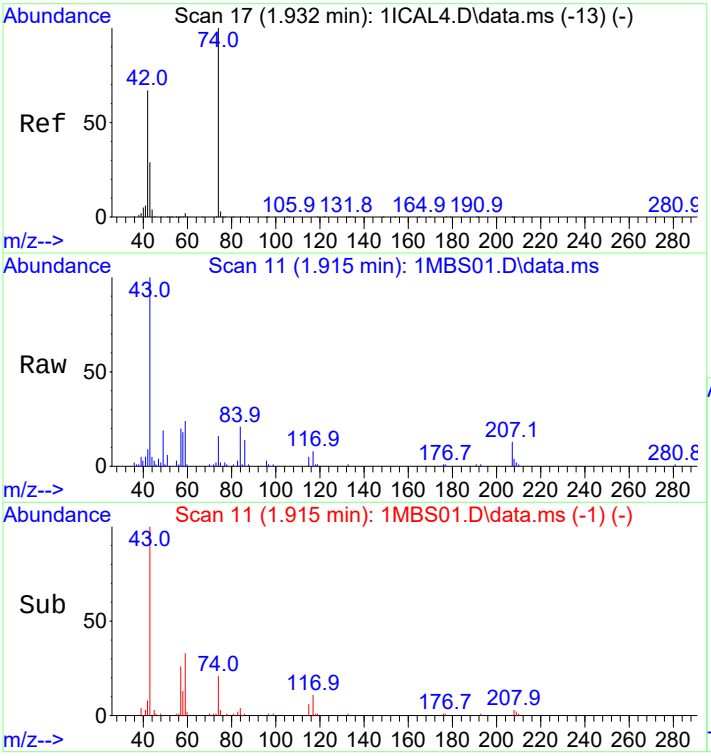
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1MBS01.D Vial: 4
Acq On : 23 Mar 2022 11:29 Operator: JJY
Sample : 210458,MBS, Inst : SVMS1
Misc : 1121218,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 11:45:43 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

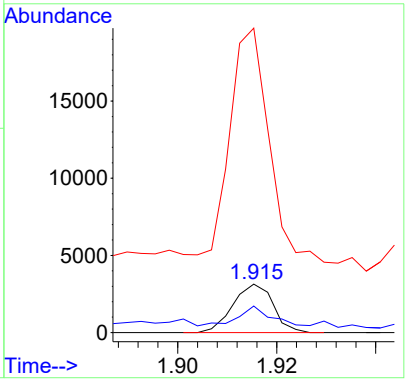




#2
Ntrsdimeth
Concen: 0.19 ug/mL
RT: 1.915 min Scan# 11
Delta R.T. -0.017 min
Lab File: 1MBS01.D
Acq: 23 Mar 2022 11:29

Tgt Ion: 74 Resp: 1773

Ion	Ratio	Lower	Upper
74	100		
42	28.9	36.9	96.9#
43	474.4	0.0	58.9#



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1MBS01.D Vial: 4
Acq On : 23 Mar 2022 11:29 Operator: JJY
Sample : 210458,MBS, Inst : SVMS1
Misc : 1121218,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:00:56 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

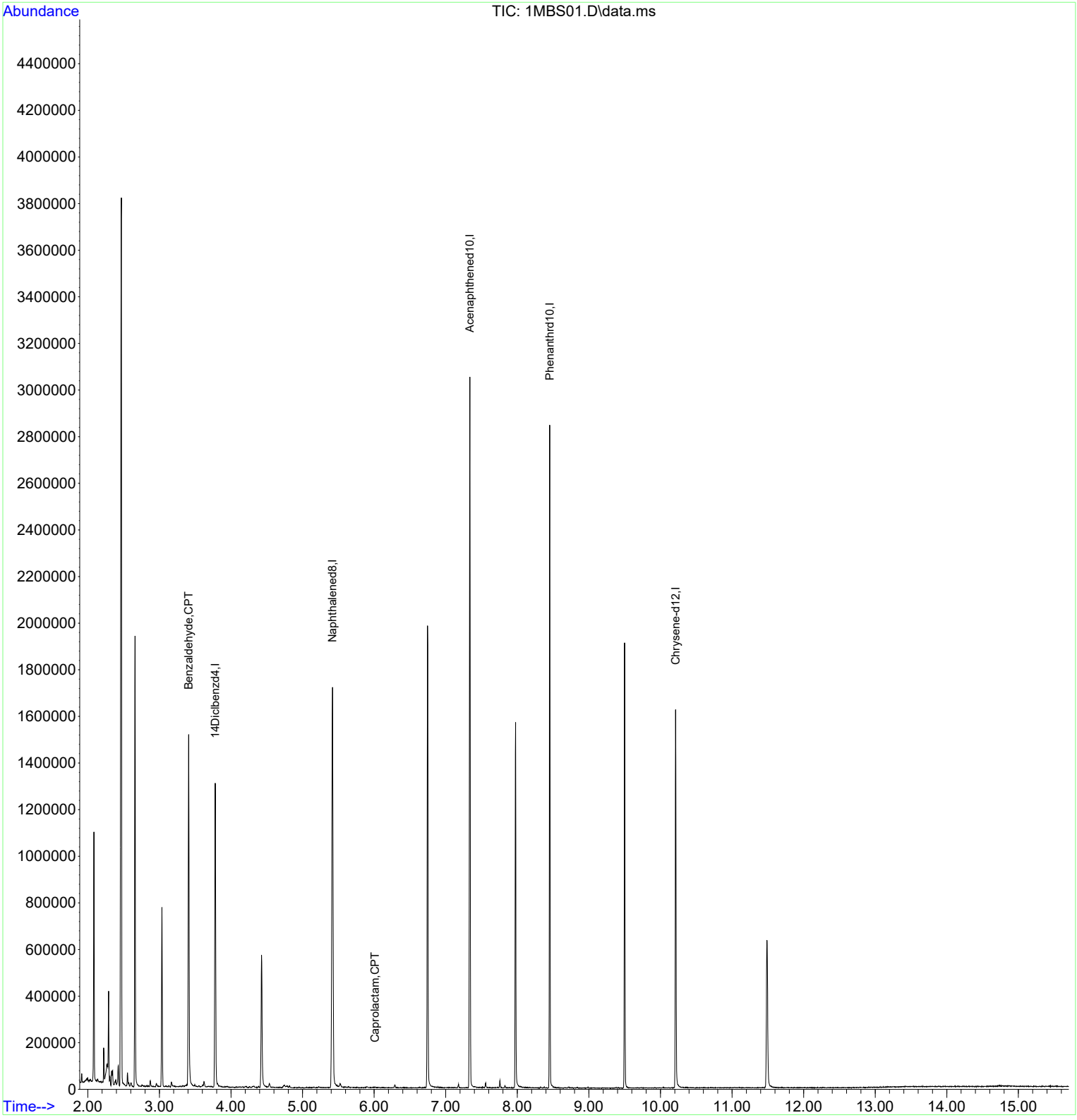
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.779	152	206846	20.00	ug/mL	0.00
3) Naphthalened8	5.419	136	1033209	20.00	ug/mL	0.00
5) Acenaphthened10	7.337	164	558971	20.00	ug/mL	0.00
7) Phenanthrd10	8.454	188	692520	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	412788	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.410	77	988	0.0823	ug/mL#	1
4) Caprolactam	6.013	55	559	0.8367	ug/mL#	37

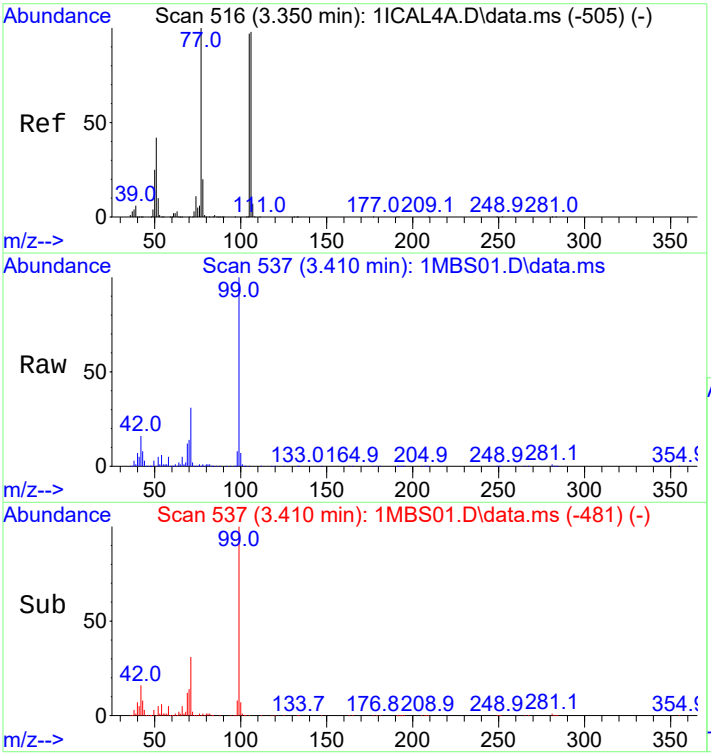
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1MBS01.D Vial: 4
Acq On : 23 Mar 2022 11:29 Operator: JJY
Sample : 210458,MBS, Inst : SVMS1
Misc : 1121218,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:00:56 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

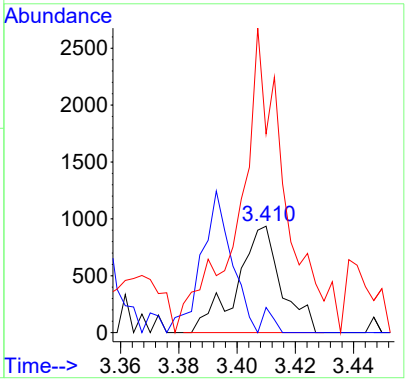


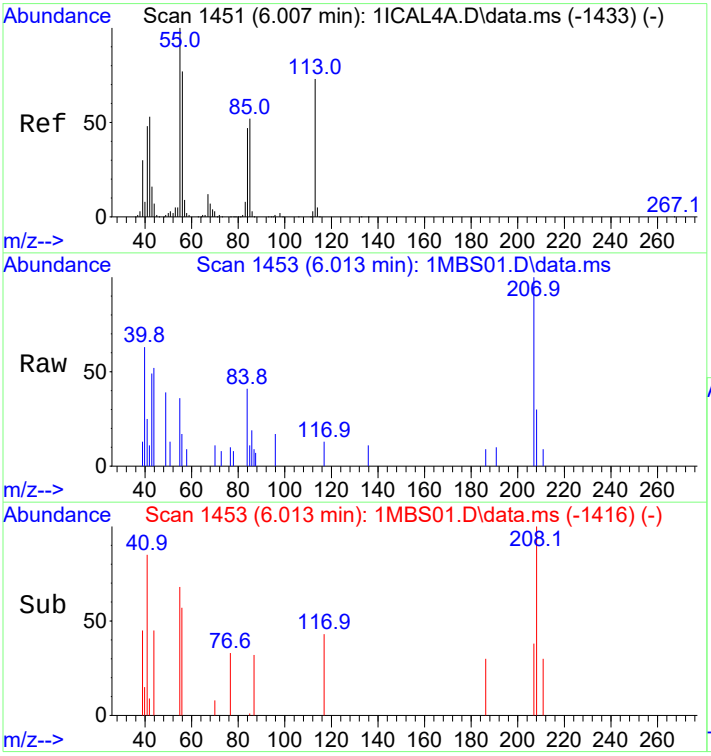


#2
Benzaldehyde
Concen: 0.08 ug/mL
RT: 3.410 min Scan# 537
Delta R.T. 0.060 min
Lab File: 1MBS01.D
Acq: 23 Mar 2022 11:29

Tgt Ion: 77 Resp: 988

Ion	Ratio	Lower	Upper
77	100		
105	90.8	65.0	125.0
51	298.3	12.5	72.5#

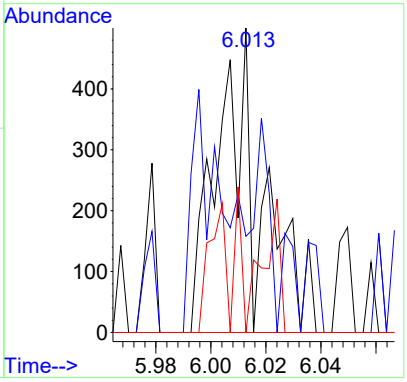




#4
Caprolactam
Concen: 0.84 ug/mL
RT: 6.013 min Scan# 1453
Delta R.T. 0.006 min
Lab File: 1MBS01.D
Acq: 23 Mar 2022 11:29

Tgt Ion: 55 Resp: 559

Ion	Ratio	Lower	Upper
55	100		
42	31.6	23.1	83.1
113	0.0	43.3	103.3#



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSS01.D Vial: 5
Acq On : 23 Mar 2022 11:52 Operator: JJY
Sample : 210458,LCSS, Inst : SVMS1
Misc : 1121219,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:08:50 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	190144	20.00	ug/mL	0.00
21) Naphthalened8	5.422	136	931296	20.00	ug/mL	0.00
39) Acenaphthened10	7.342	164	509638	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	635897	20.00	ug/mL	0.00
75) Chrysene-d12	10.212	240	377200	20.00	ug/mL	0.00
86) Perylene-d12	11.485	264	241802	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.660	112	399216	77.26	%REC	0.00
Spiked Amount 100.000			Recovery = 77.26%			
7) SURRPhenol-d5	3.415	99	482465	77.86	%REC	0.00
Spiked Amount 100.000			Recovery = 77.86%			
22) SURRNitrbenzened5	4.433	82	209484	78.93	%REC	0.00
Spiked Amount 100.000			Recovery = 78.93%			
44) SURR2Flbiphenyl	6.751	172	556788	77.02	%REC	0.00
Spiked Amount 100.000			Recovery = 77.02%			
62) SURR246Tribrphenl	7.984	330	102186	73.36	%REC	0.00
Spiked Amount 100.000			Recovery = 73.36%			
78) SURRTerphenyl-d14	9.499	244	406586	82.39	%REC	0.00
Spiked Amount 100.000			Recovery = 82.39%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.955	74	119866	14.0808	ug/mL	98
3) Pyridine	1.975	79	130180	9.2117	ug/mL	100
5) Aniline	3.450	93	196166	10.4767	ug/mL#	86
6) bis2Clethletr	3.518	93	189409	15.0501	ug/mL	99
8) Phenol	3.427	94	256272	14.4881	ug/mL	97
9) 2-Cl-phenol	3.560	128	193920	15.5062	ug/mL	97
10) 13Diclbenz	3.720	146	218832	14.6917	ug/mL	96
11) 14Diclbenz	3.799	146	215215	14.7547	ug/mL	98
12) 12Diclbenz	3.961	146	207645	15.0018	ug/mL	99
13) Benzyl alcoho	3.944	108	124303	15.2290	ug/mL	97
14) bis2clispreth	4.112	45	217329	14.7412	ug/mL	97
15) 2Methylphenol	4.086	107	151966	15.5057	ug/mL	97
16) Ntrspyrrol	4.231	100	90913	15.5524	ug/mL	97
17) Acetophenone	4.254	105	262592	15.2762	ug/mL	98
18) Hexaclethane	4.356	117	84011	14.3313	ug/mL	97
19) N-Ntrsdinprop	4.268	70	137931	15.4065	ug/mL	97
20) 3&4Methylphenol	4.276	107	190168	15.8714	ug/mL	98
23) Nitrobenzene	4.455	77	202477	15.5443	ug/mL	97
24) Isophorone	4.779	82	373785	15.0245	ug/mL	99
25) 2-Nitrophenol	4.876	139	93314	15.6451	ug/mL	95
26) 24Dimthpheno	4.981	122	145594	15.9418	ug/mL	99
27) bis2clethoxym	5.123	93	257481	15.5979	ug/mL	100
28) 24Diclphenol	5.228	162	194917	15.7383	ug/mL	98
29) 124Triclbenz	5.350	180	241311	15.7068	ug/mL	98
30) Benzoic acid	5.098	122	20956	9.3354	ug/mL	92
31) Naphthalene	5.453	128	741706	15.5913	ug/mL	99
32) 4-Cl-aniline	5.572	127	145140	7.9112	ug/mL	98
33) 26Diclphenol	5.572	162	208048	16.8898	ug/mL	96
34) Hexaclprop	5.589	213	58400	7.2384	ug/mL	96
35) Hexaclbutdien	5.663	225	129989	15.7140	ug/mL	97
36) 4Cl3methylphe	6.240	107	233807	17.0165	ug/mL	99
37) 2Methylnaphth	6.348	142	484101	15.0086	ug/mL	99
38) 1Methylnaphth	6.450	141	414873	15.3828	ug/mL	99
40) Hxclcycpentdi	6.524	237	3647	0.7878	ug/mL	87

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSS01.D Vial: 5
Acq On : 23 Mar 2022 11:52 Operator: JJY
Sample : 210458,LCSS, Inst : SVMS1
Misc : 1121219,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:08:50 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

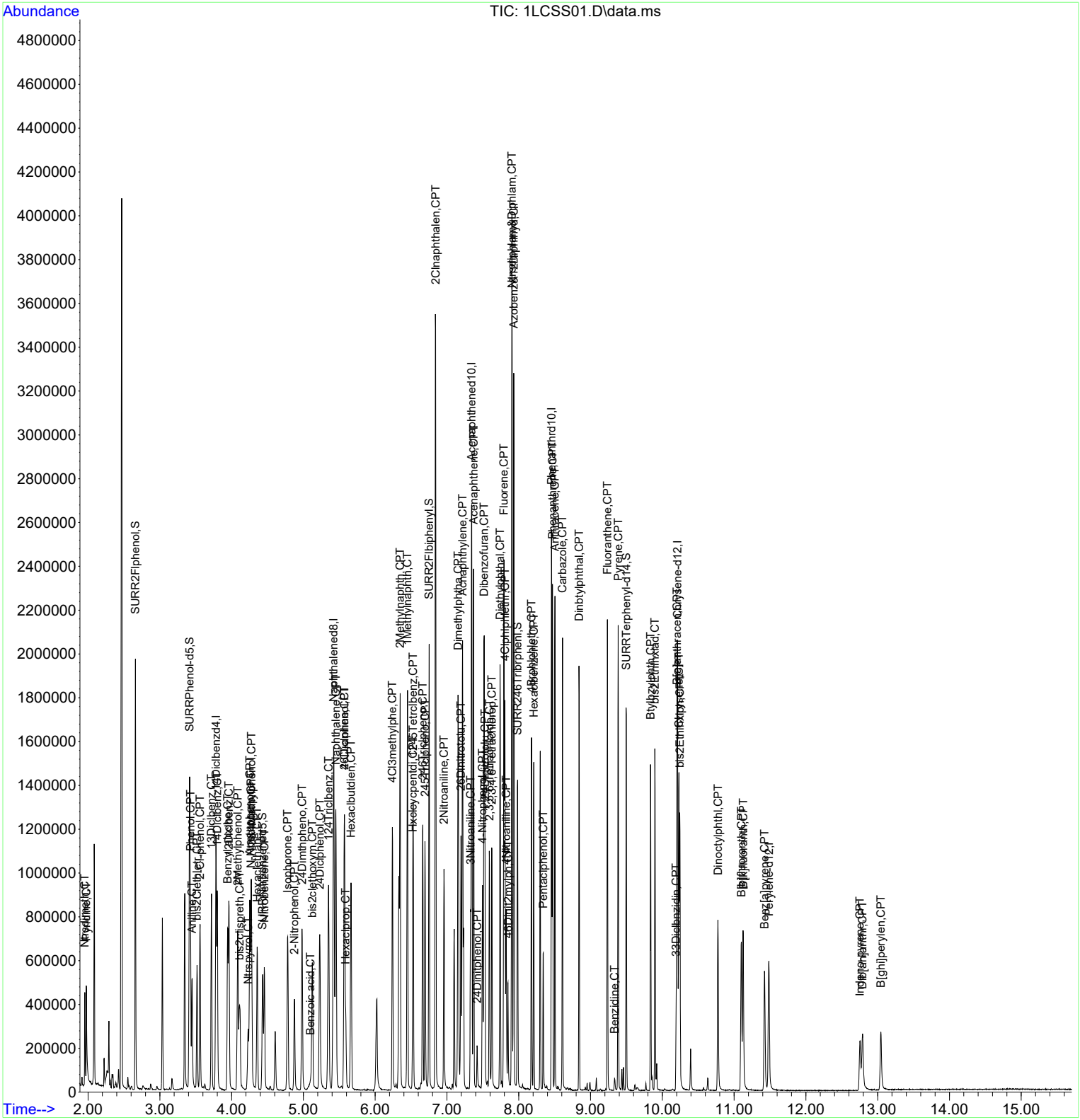
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.530	216	218945	15.6631 ug/mL	99
42) 246Triclpheno	6.663	196	143964	14.8357 ug/mL	99
43) 245Triclpheno	6.694	196	150624	14.9064 ug/mL	98
45) 2Clnaphthalen	6.842	162	449659	14.3195 ug/mL	97
46) 2Nitroaniline	6.959	65	140209	15.6062 ug/mL	97
47) Acnaphthylene	7.217	152	733984	14.8933 ug/mL	100
48) Dimethylphtha	7.155	163	556367	15.7640 ug/mL	99
49) 26Dinitrotolu	7.195	165	125528	16.0285 ug/mL	93
50) Acenaphthene	7.371	154	412022	14.9848 ug/mL	98
51) 3Nitroaniline	7.328	138	95089	11.3820 ug/mL	98
52) 24Dinitphenol	7.422	184	23658	15.1656 ug/mL	91
53) Dibenzofuran	7.516	168	651444	15.3975 ug/mL	97
54) 24Dinitrotolu	7.530	165	159835	16.1924 ug/mL	95
55) 4-Nitrophenol	7.493	65	89590	15.4902 ug/mL	96
56) 2,3,5,6-Tetrachlorop	7.592	232	100751	14.3359 ug/mL	98
57) 2,3,4,6-Tetrachlorop	7.626	232	98028	14.0813 ug/mL	96
58) Fluorene	7.794	166	526252	15.9147 ug/mL	99
59) 4Clphlphlethr	7.808	204	241488	15.6332 ug/mL	96
60) Diethylphthal	7.740	149	562832	16.1345 ug/mL	99
61) 4Nitroaniline	7.825	138	113347	15.1452 ug/mL	97
64) 46Dinit2mylph	7.851	198	52003	17.0496 ug/mL	99
65) Ntrsdiphlam&Diphlam	7.905	169	763362	32.7210 ug/mL	98
66) Azobenz&12Diphlhyd	7.931	182	242233	31.7943 ug/mL#	84
67) 4Brphlphlethr	8.178	248	127498	16.0715 ug/mL	97
68) Hexaclbenzene	8.209	284	118230	16.1465 ug/mL	97
69) Pentaclphenol	8.343	266	40447	12.9295 ug/mL	94
70) Phenanthrene	8.470	178	536016	16.2406 ug/mL	97
71) Anthracene	8.504	178	541711	16.1195 ug/mL	100
72) Carbazole	8.610	167	514231	16.2670 ug/mL	99
73) Dinbtylphthal	8.840	149	687433	16.6317 ug/mL	99
74) Fluoranthene	9.235	202	576348	16.9468 ug/mL	98
76) Benzidine	9.334	184	9364	2.1618 ug/mL	92
77) Pyrene	9.385	202	582938	16.3439 ug/mL	99
79) Btylbzylphth	9.837	149	252510	15.7734 ug/mL	99
80) bis2Ethlhxlad	9.897	129	200041	15.5494 ug/mL	99
81) 33Diclbnzidin	10.192	252	51013	8.0533 ug/mL	93
82) B[a]anthracen	10.204	228	403591	15.9830 ug/mL	99
83) Chrysene	10.232	228	380771	16.3891 ug/mL	99
84) bis2Ethlhxlph	10.243	149	293672	15.5121 ug/mL	98
85) Dinoctylphthl	10.775	149	400708	15.0740 ug/mL	99
87) B[b]fluoranth	11.102	252	272468	16.4581 ug/mL	99
88) B[k]fluoranth	11.127	252	273740	16.6410 ug/mL	99
89) Benz[a]pyrene	11.425	252	243021	16.4864 ug/mL	100
90) Indeno-pyrene	12.752	276	120611	15.9341 ug/mL	96
91) Dib[ah]anthr	12.789	278	124680	15.3467 ug/mL	99
92) B[ghi]perylen	13.045	276	136596	16.1336 ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSS01.D Vial: 5
Acq On : 23 Mar 2022 11:52 Operator: JJY
Sample : 210458,LCSS, Inst : SVMS1
Misc : 1121219,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:08:50 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSS01.D Vial: 5
Acq On : 23 Mar 2022 11:52 Operator: JJY
Sample : 210458,LCSS, Inst : SVMS1
Misc : 1121219,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:24:59 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

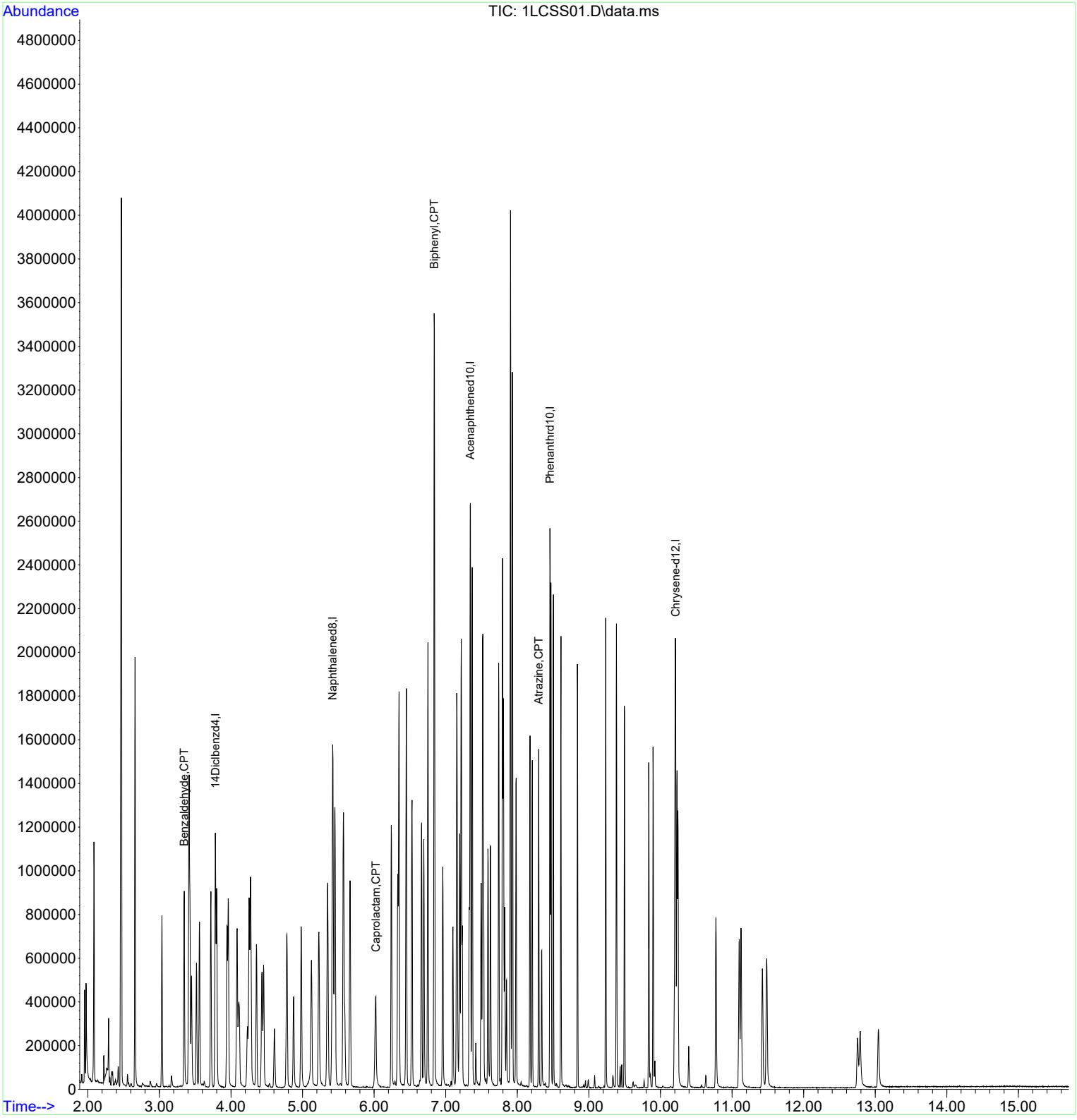
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	189620	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	937176	20.00	ug/mL	0.00
5) Acenaphthened10	7.342	164	509709	20.00	ug/mL	0.00
7) Phenanthrd10	8.456	188	636525	20.00	ug/mL	0.00
9) Chrysene-d12	10.212	240	376437	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.347	77	173753	15.7816	ug/mL	98
4) Caprolactam	6.024	55	99387	20.0123	ug/mL	95
6) Biphenyl	6.839	154	558982	15.1360	ug/mL	100
8) Atrazine	8.300	200	107036	16.5071	ug/mL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSS01.D Vial: 5
Acq On : 23 Mar 2022 11:52 Operator: JJY
Sample : 210458,LCSS, Inst : SVMS1
Misc : 1121219,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:24:59 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSDS01.D Vial: 6
Acq On : 23 Mar 2022 12:15 Operator: JJY
Sample : 210458,LCSDS, Inst : SVMS1
Misc : 1121220,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:31:52 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	200092	20.00	ug/mL	0.00
21) Naphthalened8	5.422	136	995042	20.00	ug/mL	0.00
39) Acenaphthened10	7.342	164	533613	20.00	ug/mL	0.00
63) Phenanthrd10	8.456	188	675653	20.00	ug/mL	0.00
75) Chrysene-d12	10.215	240	370728	20.00	ug/mL	0.00
86) Perylene-d12	11.485	264	214991	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.660	112	399821	73.53	%REC	0.00
Spiked Amount 100.000			Recovery = 73.53%			
7) SURRPhenol-d5	3.413	99	487697	74.80	%REC	0.00
Spiked Amount 100.000			Recovery = 74.80%			
22) SURRNitrbenzened5	4.430	82	216140	76.22	%REC	0.00
Spiked Amount 100.000			Recovery = 76.22%			
44) SURR2Flbiphenyl	6.751	172	554910	73.16	%REC	0.00
Spiked Amount 100.000			Recovery = 73.16%			
62) SURR246Tribrphenl	7.982	330	111283	76.16	%REC	0.00
Spiked Amount 100.000			Recovery = 76.16%			
78) SURRTerphenyl-d14	9.499	244	417769	86.24	%REC	0.00
Spiked Amount 100.000			Recovery = 86.24%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.955	74	119753	13.3682	ug/mL	96
3) Pyridine	1.978	79	133012	8.9441	ug/mL	98
5) Aniline	3.447	93	196668	9.9813	ug/mL	98
6) bis2Clethletr	3.518	93	194109	14.6568	ug/mL	100
8) Phenol	3.427	94	267614	14.3771	ug/mL	99
9) 2-Cl-phenol	3.560	128	200716	15.2516	ug/mL	97
10) 13Diclbenz	3.719	146	217021	13.8458	ug/mL	99
11) 14Diclbenz	3.799	146	218607	14.2421	ug/mL	97
12) 12Diclbenz	3.961	146	211595	14.5271	ug/mL	99
13) Benzyl alcoho	3.944	108	129604	15.0890	ug/mL	94
14) bis2clispreth	4.112	45	218220	14.0657	ug/mL	98
15) 2Methylphenol	4.083	107	161110	15.6215	ug/mL	96
16) Ntrspyrrol	4.231	100	96342	15.6618	ug/mL	99
17) Acetophenone	4.251	105	270327	14.9443	ug/mL	99
18) Hexaclethane	4.356	117	85778	13.9052	ug/mL	100
19) N-Ntrsdinprop	4.268	70	142189	15.0925	ug/mL	100
20) 3&4Methylphenol	4.276	107	193711	15.3633	ug/mL	99
23) Nitrobenzene	4.455	77	207411	14.9030	ug/mL	98
24) Isophorone	4.779	82	388018	14.5975	ug/mL	99
25) 2-Nitrophenol	4.876	139	98382	15.4482	ug/mL	98
26) 24Dimthpheno	4.981	122	159223	16.3173	ug/mL	98
27) bis2clethoxym	5.123	93	256478	14.5418	ug/mL	98
28) 24Diclphenol	5.225	162	204597	15.4616	ug/mL	96
29) 124Triclbenz	5.350	180	240940	14.6780	ug/mL	100
30) Benzoic acid	5.092	122	13167	6.7211	ug/mL	86
31) Naphthalene	5.450	128	751798	14.7910	ug/mL	99
32) 4-Cl-aniline	5.569	127	197960	10.0991	ug/mL	97
33) 26Diclphenol	5.569	162	211495	16.0697	ug/mL	98
34) Hexaclprop	5.586	213	35197	4.0830	ug/mL	97
35) Hexaclbutdien	5.663	225	132583	15.0007	ug/mL	97
36) 4Cl3methylphe	6.240	107	239913	16.3423	ug/mL	99
37) 2Methylnaphth	6.345	142	500601	14.5051	ug/mL	98
38) 1Methylnaphth	6.447	141	424380	14.6909	ug/mL	99
40) Hxclcycpentdi	0.000		0	N.D.		

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSDS01.D Vial: 6
Acq On : 23 Mar 2022 12:15 Operator: JJY
Sample : 210458,LCSDS, Inst : SVMS1
Misc : 1121220,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:31:52 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

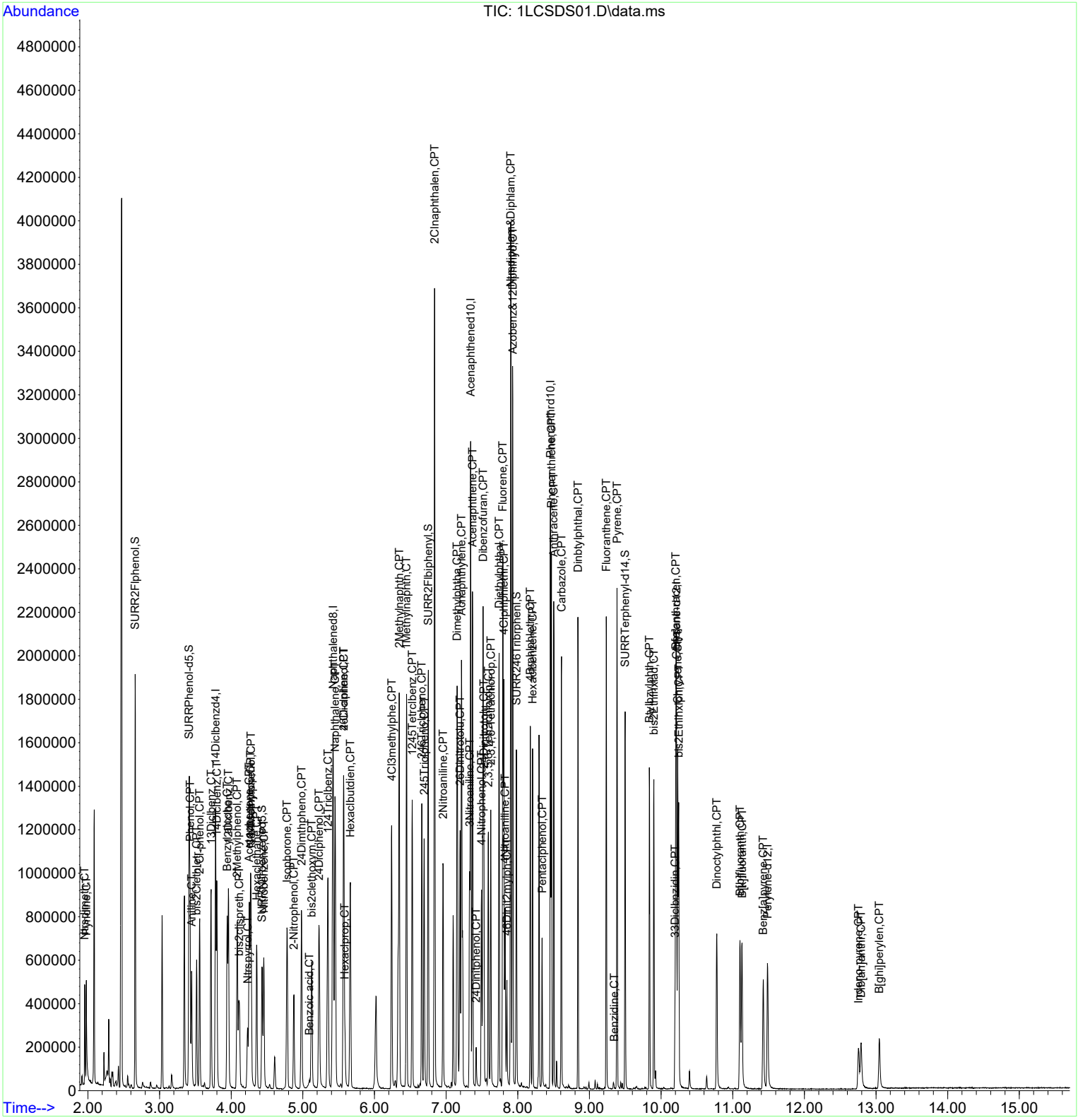
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.527	216	221585	15.1135 ug/mL	94
42) 246Triclpheno	6.660	196	152108	14.9683 ug/mL	99
43) 245Triclpheno	6.694	196	161120	15.2248 ug/mL	97
45) 2Clnaphthalen	6.839	162	455206	13.8291 ug/mL	96
46) 2Nitroaniline	6.956	65	147954	15.7257 ug/mL	97
47) Acnaphthylene	7.214	152	737820	14.2687 ug/mL	99
48) Dimethylphtha	7.152	163	596155	16.1489 ug/mL	100
49) 26Dinitrotolu	7.195	165	134640	16.4195 ug/mL	94
50) Acenaphthene	7.368	154	421201	14.6189 ug/mL	98
51) 3Nitroaniline	7.328	138	116843	13.2920 ug/mL	98
52) 24Dinitphenol	7.419	184	22426	14.1977 ug/mL	98
53) Dibenzofuran	7.516	168	662997	14.9467 ug/mL	100
54) 24Dinitrotolu	7.527	165	172686	16.7012 ug/mL	99
55) 4-Nitrophenol	7.493	65	98413	16.1531 ug/mL	99
56) 2,3,5,6-Tetrachlorop	7.590	232	110887	15.0359 ug/mL	96
57) 2,3,4,6-Tetrachlorop	7.624	232	112565	15.4050 ug/mL	97
58) Fluorene	7.791	166	538460	15.5368 ug/mL	100
59) 4Clphlphlethr	7.805	204	241658	14.9025 ug/mL	100
60) Diethylphthal	7.740	149	595706	16.3096 ug/mL	99
61) 4Nitroaniline	7.823	138	122574	15.6191 ug/mL	94
64) 46Dinit2mylph	7.848	198	50422	15.8709 ug/mL	99
65) Ntrsdiphlam&Diphlam	7.902	169	802855	32.3595 ug/mL	100
66) Azobenz&12Diphlhyd	7.931	182	256293	31.6496 ug/mL	95
67) 4Brphlphlethr	8.175	248	133588	15.8368 ug/mL	98
68) Hexaclbenzene	8.206	284	126632	16.2861 ug/mL	94
69) Pentaclphenol	8.340	266	45496	13.5540 ug/mL	97
70) Phenanthrene	8.470	178	582333	16.6265 ug/mL	99
71) Anthracene	8.502	178	579196	16.2270 ug/mL	99
72) Carbazole	8.610	167	555244	16.5409 ug/mL	98
73) Dinbtylphthal	8.840	149	732857	16.6894 ug/mL	99
74) Fluoranthene	9.235	202	606007	16.7620 ug/mL	99
76) Benzidine	9.346	184	407	1.0459 ug/mL	69
77) Pyrene	9.385	202	611544	17.4764 ug/mL	99
79) Btylbzylphth	9.837	149	263441	16.7103 ug/mL	100
80) bis2Ethlhxlad	9.900	129	195024	15.4270 ug/mL	99
81) 33Diclbnzidin	10.195	252	57637	9.1007 ug/mL	95
82) B[a]anthracen	10.206	228	410724	16.5566 ug/mL	99
83) Chrysene	10.232	228	383022	16.7863 ug/mL	100
84) bis2Ethlhxlph	10.246	149	293688	15.7806 ug/mL	96
85) Dinoctylphthl	10.778	149	385595	14.7872 ug/mL	99
87) B[b]fluoranth	11.102	252	268242	18.2235 ug/mL	97
88) B[k]fluoranth	11.130	252	258633	17.6833 ug/mL	99
89) Benz[a]pyrene	11.425	252	226692	17.2965 ug/mL	99
90) Indeno-pyrene	12.755	276	100721	15.0604 ug/mL	98
91) Dib[ah]anthr	12.792	278	108205	15.0090 ug/mL	96
92) B[ghi]perylen	13.045	276	116555	15.5083 ug/mL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSDS01.D Vial: 6
Acq On : 23 Mar 2022 12:15 Operator: JJY
Sample : 210458,LCSDS, Inst : SVMS1
Misc : 1121220,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:31:52 2022

Quant Method : C:\INSTARCH\METHOD\1S031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Thu Mar 17 16:07:40 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSDS01.D Vial: 6
Acq On : 23 Mar 2022 12:15 Operator: JJY
Sample : 210458,LCSDS, Inst : SVMS1
Misc : 1121220,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:35:51 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M

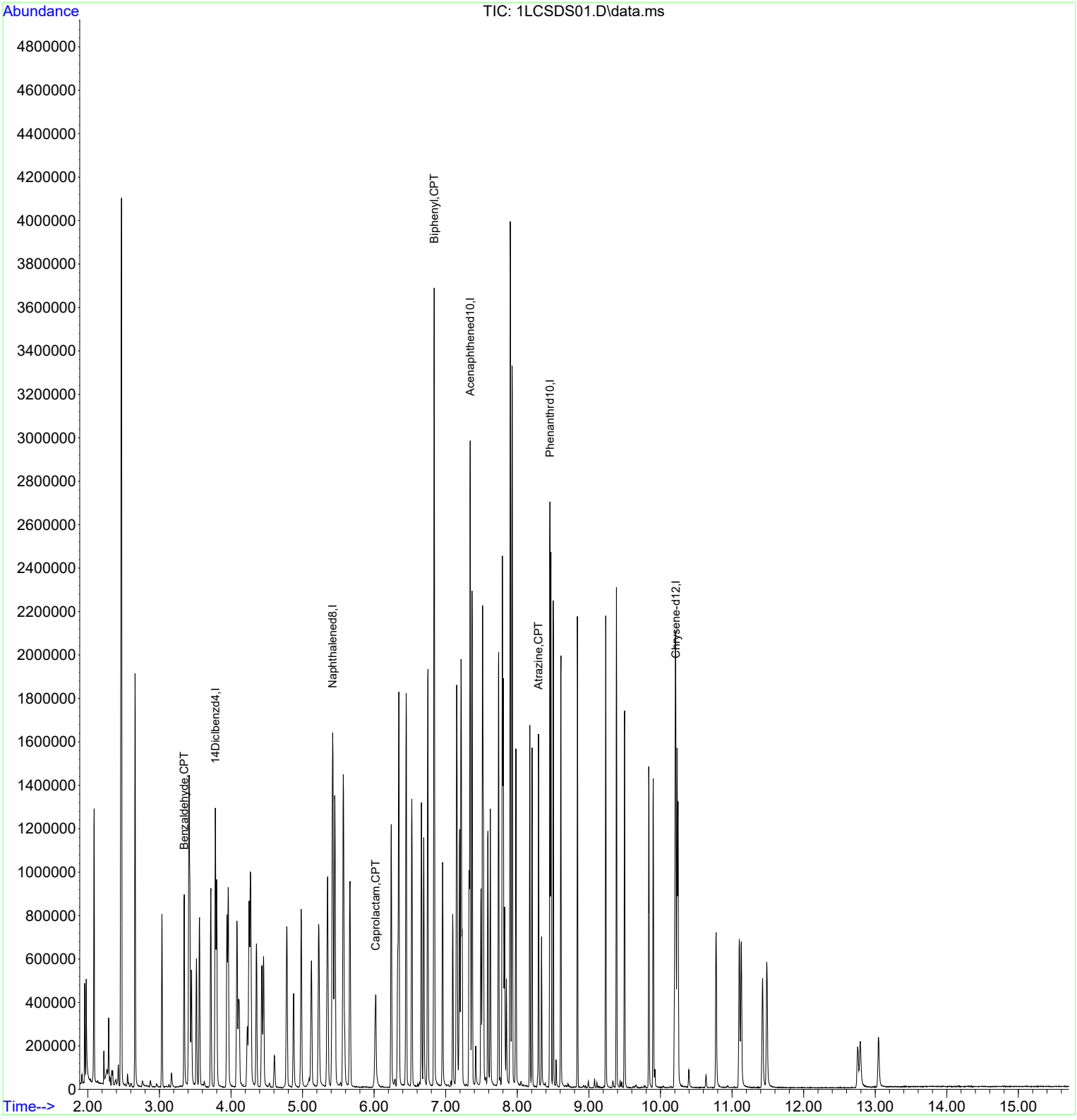
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.782	152	198864	20.00	ug/mL	0.00
3) Naphthalened8	5.422	136	1000539	20.00	ug/mL	0.00
5) Acenaphthened10	7.342	164	534506	20.00	ug/mL	0.00
7) Phenanthrd10	8.456	188	676420	20.00	ug/mL	0.00
9) Chrysene-d12	10.215	240	369913	20.00	ug/mL	0.00
Target Compounds						Qvalue
2) Benzaldehyde	3.347	77	176808	15.3126	ug/mL	96
4) Caprolactam	6.021	55	104881	19.8060	ug/mL	97
6) Biphenyl	6.839	154	568023	14.6672	ug/mL	100
8) Atrazine	8.297	200	117916	17.1038	ug/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\DATA\1S032322\1LCSDS01.D Vial: 6
Acq On : 23 Mar 2022 12:15 Operator: JJY
Sample : 210458,LCSDS, Inst : SVMS1
Misc : 1121220,500ul+5ul S4585A Multiplr: 1.00
Integrator: RTE
Quant Time: Mar 23 12:35:51 2022

Quant Method : C:\INSTARCH\METHOD\1A031722.M
Quant Title : Method for 8270 Analysis
QLast Update : Wed Mar 23 09:36:13 2022
Response via : Initial Calibration
DataAcq Meth:1S031722.M



SEMI - VOLATILE ORGANIC ANALYSIS
LOGBOOK
DOCUMENTS

S SVOC 8270 SOIL Analytical Run
210458 on 3/23/2022

Date Analyzed: _____ JJY 3/23/22 Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
168330	1121147		3/17/2022 16:03		TETRA TECH	PWDF	SVOC 8270 QSM 5		S	4	Y
		PWDF-WS-01-031722						94704			
168330	1121148		3/17/2022 16:23		TETRA TECH	PWDF	SVOC 8270 QSM 5		S	4	Y
		PWDF-WS-02-031722						94704			
168330	1121149		3/17/2022 16:58		TETRA TECH	PWDF	SVOC 8270 QSM 5		S	4	Y
		PWDF-WS-03-031722						94704			
	1121218						SVOC 8270 QSM 5				
				MBS				94704			
	1121219						SVOC 8270 QSM 5				
				LCSS				94704			
	1121220						SVOC 8270 QSM 5				
				LCSDS 1121219				94704			

6 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpA476.tmp

PrepWrkSht
on 3/23/2022

Prep Batch **94,704** Date Prepped: 3/21/2022 Prepped By:: AJZ

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	1121218	MBS		SVOC 8270 QSM 5	SOLID	1.0	10.00			
	1121219	LCSS		SVOC 8270 QSM 5	SOLID	1.0	10.00			
168330	1121147			SVOC 8270 QSM 5	SOIL	1.0	9.61		4	
	1121148			SVOC 8270 QSM 5	SOIL	1.0	5.31		4	
	1121149			SVOC 8270 QSM 5	SOIL	1.0	5.95		4	
	1121220	LCSDS	1121219	SVOC 8270 QSM 5	SOLID	1.0	10.00			

Notes:_____

Method 8270-SV GC/MS Extraction Bench Sheet

(SOP Reference #'s SV006 & SV007)

3510=WATER
3546=Microwave
3535=SPE
sonication=14-dioxane soils

Prep Batch #:	94704
Prep Method:	3546
Analyst:	AJZ
Date:	03/21/2022
Start Time:	11:30
End Date:	03/22/2022
End Time:	13:30

Reagent Lots>>>

Sodium Sulfate	MISC1050
Diatomaceous Earth	S4536
Dionex Solution	MISC0981D
Methylene Chloride	ED025US
Acetone	ED355US
Sulfuric Acid	NA
Sodium Hydroxide	NA
SPE Cartridge	NA

Matrix:	ASH
Balance Used:	SVB03
Ave MW temp(°C):	110.0

SPE Aparatus (check one):

Autotrace 280:	NA
Manual SPE:	NA
Initial Concentration By:	AJZ
Date:	03/21/2022
GPC Cleanup? (yes/no):	YES
Date:	03/21/2022
Final Concentration By:	JLH
Date:	03/22/2022

Microwave Cell #	Sample ID	Comments	(Solids) Sample Weight (g)	(Liquids) Sample Volume (L)	Final Volume (mL)	ph Adj. <2 (Yes/No)	pH Adj. >12 (Yes/No)
1	1121218	MB	10.00		1.0		
2	1121219	LCS	10.00		1.0		
6	1121220	LCSD	10.00		1.0		
3	1121147		9.61		1.0		
4	1121148		5.31		1.0		
5	1121149		5.95		1.0		
		**ALL SAMPLES HAVE					
		LIMITED VOLUME**					
		(MS) Parent Sample					
		(MSD)					

MB=Method Blank, LCS=Laboratory Control Sample, MS=Matrix Spike & MSD=Matrix Spike Duplicate

MS/MSD/ LCS Spike Amount (mL):	1	Surrogate Spike Amount (mL):	1
Spike Concentration (µg/mL):	20	Surrogate Spike Conc. (µg/mL):	20/40
Spike Reference #:	SVMS9251	Surrogate Spike Reference #:	SVMS9254

Relinquished to: JJY
Date: 03/22/2022

Reviewed By: JJY
Date: 03/23/2022

Semi-Volatiles Sample Cleanup Record Sheet

FSV14-02, FSV25-01, FSV26-01, FSV28-01

Prep Batch Number(s): 94704

GPC

Cleanup Performed (Y/N):	Y
Date:	03/22/2022
Time:	9:06
Analyst Initials:	JLH
$MeCl_2$ Lot:	EC849US

Florisil

Cleanup Performed (Y/N):	N
Date:	
Time:	
Analyst Initials:	
Cartridge I.D. Number:	
Hexane Lot:	
Acetone Lot:	

Acid

Cleanup Performed (Y/N):	N
Date:	
Time:	
Analyst Initials:	
H_2SO_4 Lot:	
Number of treatments:	

Sulfur

Cleanup Performed (Y/N):	Y
Date:	03/22/2022
Time:	13:00
Analyst Initials:	WMB
Copper Lot:	027040-BL

Comments:

8270 SVOC Analysis Data Review Checklist

Analytical Run #: 210458	**Independent Reviewer: AJZ**
Sequence Date: 03/23/2022	**Date of Review: 03/23/2022**
Analyst/Data Interpreter: JJY	**Approval: Yes**

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirements:	Acceptance Criteria	Analyst Review		Independent Review		Comments (indicate reference to an attachment if necessary)
		Yes	No	Yes	No	
1. INITIAL CALIBRATION (ICAL)						
a. Was the initial calibration performed using a minimum of five standard concentration levels?	Lowest standard at or near MRL	x		x		
b. SPCC responses.	Avg. RRF ≥ 0.05	x		x		
c. Is the variation between calibration response factors for all concentration levels <15% RSD or r^2 > 0.990 for the regression line. RSD≤ 15%, ≤ 30% for CCCs.	RSD≤ 15%, ≤ 30% for CCCs	x		x		
d. Were the standards used for the ICAL uniquely identified?		x		x		
e. Was there a DFTPP standard analyzed prior to the ICAL?		x		x		
f. Was an instrument blank (IB) analyzed prior to the ICAL?		x		x		
g. Data reviewer: was the ICAL viewed on the data system (ChemStation) to verify that peaks are correctly identified?	Viewed on data system by 2nd analyst			x		
2. INITIAL CALIBRATION VERIFICATION (ICV)						
a. Were there a second source ICVs for all target analytes analyzed after the initial calibration and prior to analysis of any samples?	Second source	x		x		
b. Were the SPCC within QC limits	RRF ≥ 0.05	x		x		
c. Were the CCCs within QC limits	%D ≤ 20%	x		x		
d. Were the ICVs uniquely identified (i.e. Standard Number)?		x		x		
3. CONTINUING CALIBRATION VERIFICATION (CCV)						
a. Were CCVs for target analytes analyzed at the beginning of the sequence and after every 12 hours.		x		x		
b. Were SPCC compounds acceptable?	RRF ≥ 0.050	x		x		
c. Were the CCCs compounds acceptable?	%D ≤ 20%	x		x		
d. Were the recoveries for the CCVs acceptable?	%D≤20%	x		x		
e. Was each CCV uniquely identified (i.e. Standard Number)?		x		x		

Additional Comments:

8270 SVOC Analysis Data Review Checklist

Requirements:	Acceptance Criteria	Analyst		Independent		Comments (indicate reference to an attachment if necessary)
		Yes	No	Yes	No	
4. DFTPP						
a. Was a DFTPP tune check ran at the beginning of every twelve hour shift?		x		x		
b. Were the relative abundance criteria met?		x		x		
c. Was the peak tailing <2 on Pentachlorophenol and <2 on Benzidine?	Tailing <2%	x		x		
d. Was the breakdown of DDT to DDE and DDD less than 20%	Breakdown ≤20%	x		x		
5. BLANKS						
a. Was method blank (MB) analyzed prior to the analysis of samples?		x		x		
b. Were the MB results less than the reporting limit (RL)?	< MRL	x		x		
c. Was a MB prepped and analyzed at a frequency of one per Prep Batch?	Batch <20 samples	x		x		
6. LABORATORY CONTROL SAMPLE (LCS)						
a. Was a LCS analyzed prior to the analysis of samples?		x		x		
b. Were the LCS recoveries in each LCS within the acceptance criteria?	In-house limits or client specified limits		x		x	hexachlorocyclopentadiene low recovery. "Q" samples.
7. MATRIX SPIKES						
a. Was a matrix spiked (MS) sample analyzed at a frequency one per Prep Batch?	Batch <20 samples		x		x	LCS/LCSD.
b. Were MS recoveries in each MS within the acceptance criteria?	In-house limits or client specified limits	na		na		
8. LABORATORY CONTROL SPIKE / MATRIX SPIKE DUPLICATE						
a. Was a duplicate matrix spike or laboratory control spike sample analyzed at a frequency one per Prep Batch?	Batch <20 samples	x		x		
b. Were MSD or LCSD recoveries within the acceptance criteria?	In-house limits or client specified limits		x		x	hexachlorocyclopentadiene low recovery. "Q" samples.
c. Is the relative percent difference (RPD) between a matrix spike (MS) and its' duplicate (MSD) or laboratory control spike (LCS) and its' duplicate (LCSD) within the acceptance criteria?	In-house limits or client specified limits		x		x	4-chloroaniline and hexachlorocyclopentadiene high RPDs. "Y" samples.

Additional Comments:

8270 SVOC Analysis Data Review Checklist

Requirements:	Acceptance Criteria	Analyst		Independent		Comments (indicate reference to an attachment if necessary)
		Yes	No	Yes	No	
9. SAMPLES (INCLUDING BLANKS, STANDARDS, AND QC SAMPLES)						
a. Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		x		x		
b. Are surrogate recoveries for all samples, blanks, standards, and QC samples within acceptance criteria?			x		x	See below.
c. Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed?		x		x		
d. Were all samples extracted within holding times?	Waters extracted within 7days of collection, soils 14 days of collection	x		x		
e.Were all samples analyzed within 40 days of extracting?	Analysis within 40 days of extraction	x		x		
f. Did the samples require additional cleanup steps? (i.e. acid treatment, acid-base fractioning, and GPC)	GPC, Acid/Base, Treatments	x		x		GPC, sulfur.
g. Where all manual integratinons performed properly?		x		x		
h. Was the rational for the manual integration verified?		x		x		
10. RECORDS AND REPORTING						
a. Are Run, Prep Batch and Extraction sheets, Summary sheets, Sequence file, initial and rerun raw and process data present in the data file?		x		x		
b. Are all chromatograms dated and initialed?		x		x		
c. Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, a NCR completed?		x		x		
d. Do all values, dilution factors and qualifiers listed on the raw reports match the LIMS data?		x		x		
e. Is the ICAL method referenced on the Raw Data?		x		x		

Additional Comments:

All surrogate recoveries were within the QC limits in the MBS and LCSS/LCSDS. All surrogate recoveries in the associated samples were outside the QC limits (low) except for phenol-d5 in sample 1121147. The surrogate recoveries were confirmed by repeat analysis.
the surrogate recoveries were low due to the sample matrix - ash.

Sequence Name: C:\INSTARCH\SEQUENCE\1S031722.s
Comment: 8270 ical
Operator: JJY
Data Path: C:\INSTARCH\DATA\1S031722\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

JJY
3/23/22

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info	
1)	Sample	100	1PRIM01	1S031722 PRIME 100 ug/ml
2)	DFTPP	1	1DFTP052	1DFTPP DFTPP TUNE SVMS9169
3)	Sample	2	1IB01	1S031722 InstrumentBlank
4)	Sample	3	1ICAL7	1S031722 ICAL 50 ug/ml SVMS9155
5)	Sample	4	1ICAL6	1S031722 ICAL 40 ug/ml SVMS9154
6)	Sample	5	1ICAL5	1S031722 ICAL 30 ug/ml SVMS9153
7)	Sample	6	1ICAL4	1S031722 ICAL 20 ug/ml SVMS9152
8)	Sample	7	1ICAL3	1S031722 ICAL 10 ug/ml SVMS9151
9)	Sample	8	1ICAL2	1S031722 ICAL 5 ug/ml SVMS9150
10)	Sample	9	1ICAL1	1S031722 ICAL 1 ug/ml SVMS9149
11)	Sample	10	1ICV1	1S031722 ICV 20 ug/ml SVMS9156
12)	Sample	11	1ICV2	1S031722 ICV 40 ug/ml SVMS9157
13)	Sample	12	1IB02	1S031722 InstrumentBlank
14)	Sample	13	1ICAL7A	1S031722 ICAL A 50 ug/ml SVMS9245
15)	Sample	14	1ICAL6A	1S031722 ICAL A 40 ug/ml SVMS9244
16)	Sample	15	1ICAL5A	1S031722 ICAL A 30 ug/ml SVMS9243
17)	Sample	16	1ICAL4A	1S031722 ICAL A 20 ug/ml SVMS9242
18)	Sample	17	1ICAL3A	1S031722 ICAL A 10 ug/ml SVMS9241
19)	Sample	18	1ICAL2A	1S031722 ICAL A 5 ug/ml SVMS9240
20)	Sample	19	1ICAL1A	1S031722 ICAL A 1 ug/ml SVMS9239
21)	Sample	20	1ICV1A	1S031722 ICV A 20 ug/ml SVMS9246
22)	Sample	21	1ICV2A	1S031722 ICV A 40 ug/ml SVMS9247
23)	Sample	22	1IB03	1S031722 InstrumentBlank

Sequence Name: C:\INSTARCH\SEQUENCE\1S032322.s
Comment: 8270
Operator: JJY
Data Path: C:\INSTARCH\DATA\1S032322\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

JJY
3/23/22

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line			Sample Name/Misc Info	
1)	Sample	100	1PRIM01	1S031722 PRIME 100 ug/ml
2)	DFTPP	1	1DFTP053	1DFTPP DFTPP TUNE SVMS9169
3)	Sample	2	1CCV053	1S031722 CCV 20 ug/ml SVMS9158
4)	Sample	3	1CCV054	1S031722 CCV A 20 ug/ml SVMS9248
5)	Sample	4	1MBS01	1S031722 210458,MBS,
6)	Sample	5	1LCSS01	1S031722 210458,LCSS,
7)	Sample	6	1LCSDS01	1S031722 210458,LCSDS,
8)	Sample	7	1IB01	1S031722 InstrumentBlank
9)	Sample	8	1121147	1S031722 210458,1121147,
10)	Sample	9	1121148	1S031722 210458,1121148,
11)	Sample	10	1121149	1S031722 210458,1121149,
12)	Sample	11	1121147R	1S031722 210458,1121147,
13)	Sample	12	1121148R	1S031722 210458,1121148,
14)	Sample	13	1121149R	1S031722 210458,1121149,
15)	Sample	14	1IB02	1S031722 InstrumentBlank
16)	Sample	15	1CCV055	1S031722 CCV 20 ug/ml SVMS9158
17)	Sample	16	1CCV056	1S031722 CCV A 20 ug/ml SVMS9248

SVOC_Logbook_04
Semi-Volatiles Standard Prep Logbook
Logbook Created 12/15/2020
NOTEBOOK VIEW: LTN_SVOC_Logbook_04_Default, NOTEBOOK: SVOC_Logbook_04, PAGE: 42
Page is Unlocked
Page is not Witnessed
Project: Unassigned
Page Title: 101521

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9146	8270 ICAL Intermediate Std	Methylene chloride ChemPure lot DZ849-US	JJY	10/15/2021	04/15/2022

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S4542A	1000	ug/ml	1000	10	100
S4520A	2000	ug/ml	500	10	100
S4543A	2000	ug/ml	500	10	100
S4509B	5000	ug/ml	200	10	100
S4508B	10000	ug/ml	100	10	100

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9147	8270 ICV Intermediate Std	Methylene chloride ChemPure lot DZ849-US	JJY	10/15/2021	03/27/2022

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S4504B	1000	ug/ml	1000	10	100
S4449B	2000	ug/ml	500	10	100
S4503B	2000	ug/ml	500	10	100
S4509B	5000	ug/ml	200	10	100
S4508B	10000	ug/ml	100	10	100

1

CT Laboratories LLC

SVOC_Logbook_04
Semi-Volatiles Standard Prep Logbook
Logbook Created 12/15/2020
NOTEBOOK VIEW: LTN_SVOC_Logbook_04_Default, NOTEBOOK: SVOC_Logbook_04, PAGE: 43
Page is Unlocked
Page is not Witnessed
Project: Unassigned
Page Title: 101821

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9148	1,4-Dioxane Surrogate	Methanol ChemPure lot DW011-X	JJY	10/18/2021	04/18/2022

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S4468B	2000	ug/ml	500	100	10

	Initial Calibration	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
	8270 ICAL Standards	Methylene chloride ChemPure lot DZ849-US	JJY	10/18/2021	03/27/2022

Standard Number	Standard Description	Parent ID	Parent Concentration	Units	Standard Volume (ml)	Final Volume (ml)	Final Concentration (ug/ml)
SVMS9149	ICAL 1	SVMS9146	100	ug/ml	0.005	0.50	1.0
SVMS9150	ICAL 2	SVMS9146	100	ug/ml	0.025	0.50	5.0
SVMS9151	ICAL 3	SVMS9146	100	ug/ml	0.050	0.50	10
SVMS9152	ICAL 4	SVMS9146	100	ug/ml	0.100	0.50	20
SVMS9153	ICAL 5	SVMS9146	100	ug/ml	0.150	0.50	30
SVMS9154	ICAL 6	SVMS9146	100	ug/ml	0.200	0.50	40
SVMS9155	ICAL 7	SVMS9146	100	ug/ml	0.250	0.50	50
SVMS9156	ICV 1	SVMS9147	100	ug/ml	0.100	0.50	20
SVMS9157	ICV 2	SVMS9147	100	ug/ml	0.200	0.50	40
SVMS9158	CCV	SVMS9146	100	ug/ml	1.00	5.0	20

	Initial Calibration	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
	8270 Additionals ICAL	Methylene chloride ChemPure lot DZ849-US	JJY	10/18/2021	12/22/2021

Standard Number	Standard Description	Parent ID	Parent Concentration	Units	Standard Volume (ml)	Final Volume (ml)	Final Concentration (ug/ml)
SVMS9159	ICAL 1 A	SVMS9122	100	ug/ml	0.005	0.50	1.0
SVMS9160	ICAL 2 A	SVMS9122	100	ug/ml	0.025	0.50	5.0
SVMS9161	ICAL 3 A	SVMS9122	100	ug/ml	0.050	0.50	10
SVMS9162	ICAL 4 A	SVMS9122	100	ug/ml	0.100	0.50	20
SVMS9163	ICAL 5 A	SVMS9122	100	ug/ml	0.150	0.50	30
SVMS9164	ICAL 6 A	SVMS9122	100	ug/ml	0.200	0.50	40
SVMS9165	ICAL 7 A	SVMS9122	100	ug/ml	0.250	0.50	50
SVMS9166	ICV 1 A	SVMS9123	100	ug/ml	0.100	0.50	20
SVMS9167	ICV 2 A	SVMS9123	100	ug/ml	0.200	0.50	40
SVMS9168	CCV A	SVMS9122	100	ug/ml	1.00	5.0	20

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9169	DFTPP Tuning Mix	Methylene chloride ChemPure lot DZ849-US	JJY	10/18/2021	04/18/2022

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S4451	1000	ug/ml	500	10	50

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SVOC_Logbook_04
Semi-Volatiles Standard Prep Logbook
Logbook Created 12/15/2020
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Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9236	8270 Additionals ICAL Stock	Methylene chloride ChemPure lot DZ849-US	JJY	01/03/2022	07/03/2022

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S4506C	1000	ug/ml	1000	10	100
S4519B	1000	ug/ml	1000	10	100

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9237	8270 Additionals CCV	Methylene chloride ChemPure lot DZ849-US	JJY	01/03/2022	07/03/2022

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
SVMS9236	100	ug/ml	1000	5	20

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SVOC_Logbook_04
Semi-Volatiles Standard Prep Logbook
Logbook Created 12/15/2020
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Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9238	8270 Additionals ICV Stock	Methylene chloride ChemPure lot DZ849-US	JJY	01/11/2022	07/11/2022

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S4572A	1000	ug/mL	1000	10	100
S4496B	1000	ug/mL	1000	10	100

	Initial Calibration	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
	8270 Additionals ICAL	Methylene chloride ChemPure lot DZ849-US	JJY	01/11/2022	07/11/2022

Standard Number	Standard Description	Parent ID	Parent Concentration	Units	Standard Volume (ml)	Final Volume (ml)	Final Concentration (ug/ml)
SVMS9239	ICAL 1A	SVMS9236	100	ug/mL	0.005	0.50	1.0
SVMS9240	ICAL 2A	SVMS9236	100	ug/mL	0.025	0.50	5.0
SVMS9241	ICAL 3A	SVMS9236	100	ug/mL	0.050	0.50	10
SVMS9242	ICAL 4A	SVMS9236	100	ug/mL	0.100	0.50	20
SVMS9243	ICAL 5A	SVMS9236	100	ug/mL	0.150	0.50	30
SVMS9244	ICAL 6A	SVMS9236	100	ug/mL	0.200	0.50	40
SVMS9245	ICAL 7A	SVMS9236	100	ug/mL	0.250	0.50	50
SVMS9246	ICV 1A	SVMS9238	100	ug/mL	0.100	0.50	20
SVMS9247	ICV 2A	SVMS9238	100	ug/mL	0.200	0.50	40
SVMS9248	CCV A	SVMS9236	100	ug/mL	1.00	5.0	20

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SVOC_Logbook_04
Semi-Volatiles Standard Prep Logbook
Logbook Created 12/15/2020
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Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9251	8270 Spike	Acetone ChemPure lot DX647-US	JJY	03/04/2022	09/04/2022

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S4446B	2000	ug/ml	500	50	20
S4520A	2000	ug/ml	500	50	20
S4563A	1000	ug/ml	1000	50	20
S4572B	1000	ug/ml	1000	50	20
S4573A	1000	ug/ml	1000	50	20

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9252	8270 Spike	Acetone ChemPure lot DX647-US	JJY	03/04/2022	09/04/2022

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S4446B	2000	ug/ml	100	10	20
S4520A	2000	ug/ml	100	10	20
S4563A	1000	ug/ml	200	10	20
S4572B	1000	ug/ml	200	10	20
S4573A	1000	ug/ml	200	10	20

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SVOC_Logbook_04
Semi-Volatiles Standard Prep Logbook
Logbook Created 12/15/2020

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Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS9254	8270 Surrogate Standards	Acetone Chempure lot ED355-US	NLS	03/21/22	09/21/22

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S4509D	5000	ug/mL	1000	250	20
S4508D	10000	ug/mL	1000	250	40

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CT Laboratories LLC

METALS
CLP FORMS
DOCUMENTS

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

PWDF-WS-01-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix (soil/water):	SOIL	SDG No.:	168330
% Solids:	100	Lab Sample ID:	1121147
Analytical Method:	EPA 7471B	Date Received:	03/19/2022
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	210467	Analysis Date/Time	03/23/2022 10:20
Analytical Prep Batch #:	94697	Prep. Date/Time:	03/22/2022 12:50
ICAL Calibration #:	03232022	Concentration Units:	mg/kg

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Mercury	0.0089	J	0.0029	0.0069	0.0091	0.0091

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INORGANIC ANALYSIS DATA SHEET

Sample Description

PWDF-WS-01-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix (soil/water):	SOIL	SDG No.:	168330
% Solids:	100	Lab Sample ID:	1121147
Analytical Method:	EPA 6010D	Date Received:	03/19/2022
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	210424	Analysis Date/Time	03/22/2022 15:21
Analytical Prep Batch #:	94695	Prep. Date/Time:	03/21/2022 12:25
ICAL Calibration #:		Concentration Units:	mg/kg

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Aluminum	1200		8.2	20	78	78
7440-36-0	Antimony	4.0		0.59	1.2	3.9	3.9
7440-38-2	Arsenic	2.0	U	0.75	2.0	3.9	3.9
7440-39-3	Barium	7.6		0.20	0.78	2.0	2.0
7440-41-7	Beryllium	0.20	U	0.071	0.20	0.78	0.78
7440-43-9	Cadmium	0.39	U	0.11	0.39	0.98	0.98
7440-70-2	Calcium	4500		11	31	98	98
7440-47-3	Chromium	2.2		0.28	0.78	2.0	2.0
7440-48-4	Cobalt	0.49	J	0.18	0.39	2.0	2.0
7440-50-8	Copper	4.5		0.51	1.2	2.0	2.0
7439-89-6	Iron	170	M	12	29	59	59
7439-92-1	Lead	0.72	J	0.31	0.78	2.0	2.0
7439-95-4	Magnesium	6100		15	39	98	98
7439-96-5	Manganese	14		0.27	0.78	2.0	2.0
7440-02-0	Nickel	0.92	J	0.24	0.78	2.0	2.0
7440-09-7	Potassium	5040		130	290	980	980
7782-49-2	Selenium	2.0	U	0.98	2.0	3.9	3.9
7440-22-4	Silver	2.0	U	0.71	2.0	3.9	3.9
7440-23-5	Sodium	3630		130	390	980	980
7440-28-0	Thallium	2.0	U	0.86	2.0	3.9	3.9
7440-62-2	Vanadium	1.2	J	0.20	0.78	2.0	2.0
7440-66-6	Zinc	140		0.26	0.78	2.0	2.0

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INORGANIC ANALYSIS DATA SHEET

Sample Description

PWDF-WS-02-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix (soil/water):	SOIL	SDG No.:	168330
% Solids:	100	Lab Sample ID:	1121148
Analytical Method:	EPA 7471B	Date Received:	03/19/2022
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	210467	Analysis Date/Time	03/23/2022 10:07
Analytical Prep Batch #:	94697	Prep. Date/Time:	03/22/2022 12:50
ICAL Calibration #:	03232022	Concentration Units:	mg/kg

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Mercury	0.0066	U	0.0028	0.0066	0.0087	0.0087

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INORGANIC ANALYSIS DATA SHEET

Sample Description

PWDF-WS-02-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix (soil/water):	SOIL	SDG No.:	168330
% Solids:	100	Lab Sample ID:	1121148
Analytical Method:	EPA 6010D	Date Received:	03/19/2022
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	210424	Analysis Date/Time	03/22/2022 15:43
Analytical Prep Batch #:	94695	Prep. Date/Time:	03/21/2022 12:25
ICAL Calibration #:		Concentration Units:	mg/kg

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Aluminum	1300		8.1	19	77	77
7440-36-0	Antimony	1.4	J	0.58	1.2	3.8	3.8
7440-38-2	Arsenic	1.9	U	0.73	1.9	3.8	3.8
7440-39-3	Barium	9.3		0.20	0.77	1.9	1.9
7440-41-7	Beryllium	0.19	U	0.069	0.19	0.77	0.77
7440-43-9	Cadmium	0.38	U	0.10	0.38	0.96	0.96
7440-70-2	Calcium	3800		11	31	96	96
7440-47-3	Chromium	2.5		0.27	0.77	1.9	1.9
7440-48-4	Cobalt	1.0	J	0.17	0.38	1.9	1.9
7440-50-8	Copper	2.0		0.50	1.2	1.9	1.9
7439-89-6	Iron	100		12	29	58	58
7439-92-1	Lead	0.56	J	0.30	0.77	1.9	1.9
7439-95-4	Magnesium	4900		14	38	96	96
7439-96-5	Manganese	9.0		0.27	0.77	1.9	1.9
7440-02-0	Nickel	0.93	J	0.23	0.77	1.9	1.9
7440-09-7	Potassium	7520		130	290	960	960
7782-49-2	Selenium	1.9	U	0.96	1.9	3.8	3.8
7440-22-4	Silver	1.9	U	0.69	1.9	3.8	3.8
7440-23-5	Sodium	563	J	120	380	960	960
7440-28-0	Thallium	1.9	U	0.85	1.9	3.8	3.8
7440-62-2	Vanadium	1.4	J	0.20	0.77	1.9	1.9
7440-66-6	Zinc	48		0.25	0.77	1.9	1.9

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Sample Description

PWDF-WS-03-031722

INORGANIC ANALYSIS DATA SHEET

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix (soil/water):	SOIL	SDG No.:	168330
% Solids:	100	Lab Sample ID:	1121149
Analytical Method:	EPA 7471B	Date Received:	03/19/2022
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	210467	Analysis Date/Time	03/23/2022 10:04
Analytical Prep Batch #:	94697	Prep. Date/Time:	03/22/2022 12:50
ICAL Calibration #:	03232022	Concentration Units:	mg/kg

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Mercury	0.0067	U	0.0029	0.0067	0.0089	0.0089

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INORGANIC ANALYSIS DATA SHEET

Sample Description

PWDF-WS-03-031722

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix (soil/water):	SOIL	SDG No.:	168330
% Solids:	100	Lab Sample ID:	1121149
Analytical Method:	EPA 6010D	Date Received:	03/19/2022
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	210424	Analysis Date/Time	03/22/2022 15:51
Analytical Prep Batch #:	94695	Prep. Date/Time:	03/21/2022 12:25
ICAL Calibration #:		Concentration Units:	mg/kg

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Aluminum	160		8.1	19	77	77
7440-36-0	Antimony	5.0		0.58	1.2	3.8	3.8
7440-38-2	Arsenic	1.9	U	0.73	1.9	3.8	3.8
7440-39-3	Barium	7.6		0.20	0.77	1.9	1.9
7440-41-7	Beryllium	0.19	U	0.069	0.19	0.77	0.77
7440-43-9	Cadmium	0.19	J	0.10	0.38	0.96	0.96
7440-70-2	Calcium	590		11	31	96	96
7440-47-3	Chromium	0.85	J	0.27	0.77	1.9	1.9
7440-48-4	Cobalt	0.61	J	0.17	0.38	1.9	1.9
7440-50-8	Copper	6.0		0.50	1.2	1.9	1.9
7439-89-6	Iron	38	J	12	29	58	58
7439-92-1	Lead	1.7	J	0.30	0.77	1.9	1.9
7439-95-4	Magnesium	3600		14	38	96	96
7439-96-5	Manganese	2.9		0.27	0.77	1.9	1.9
7440-02-0	Nickel	0.29	J	0.23	0.77	1.9	1.9
7440-09-7	Potassium	8800		130	290	960	960
7782-49-2	Selenium	1.9	U	0.96	1.9	3.8	3.8
7440-22-4	Silver	1.9	U	0.69	1.9	3.8	3.8
7440-23-5	Sodium	358	J	120	380	960	960
7440-28-0	Thallium	1.9	U	0.85	1.9	3.8	3.8
7440-62-2	Vanadium	0.39	J	0.20	0.77	1.9	1.9
7440-66-6	Zinc	83		0.25	0.77	1.9	1.9

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210467 Lab Sample ID: 1122119

ICAL Calibration #: 03232022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	3/23/22 09:29	3.0	3.00	100	90	110

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

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1122026

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	3/22/22	13:49	12000	11900	99	90	110
Antimony	3/22/22	13:49	500.0	511.0	102	90	110
Arsenic	3/22/22	13:49	2000	2050	102	90	110
Barium	3/22/22	13:49	2000	2040	102	90	110
Beryllium	3/22/22	13:49	50.0	48.20	96	90	110
Cadmium	3/22/22	13:49	50.0	51.10	102	90	110
Calcium	3/22/22	13:49	10000	9800	98	90	110
Chromium	3/22/22	13:49	200.0	205.0	102	90	110
Cobalt	3/22/22	13:49	500.0	509.0	102	90	110
Copper	3/22/22	13:49	250.0	243.0	97	90	110
Iron	3/22/22	13:49	5000	5130	103	90	110
Lead	3/22/22	13:49	500.0	500.0	100	90	110
Magnesium	3/22/22	13:49	10000	10300	103	90	110
Manganese	3/22/22	13:49	500.0	518.0	104	90	110
Nickel	3/22/22	13:49	500.0	504.0	101	90	110
Potassium	3/22/22	13:49	0.1	0.11	110	90	110
Selenium	3/22/22	13:49	2000	1980	99	90	110
Silver	3/22/22	13:49	50.0	48.30	97	90	110
Sodium	3/22/22	13:49	0.1	0.105	105	90	110
Thallium	3/22/22	13:49	2000	1980	99	90	110
Vanadium	3/22/22	13:49	500.0	505.0	101	90	110
Zinc	3/22/22	13:49	500.0	507.0	101	90	110

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

(1) Control Limits: 70-130

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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1122027

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	3/22/22	13:56	1200	1250	104	80	120
Antimony	3/22/22	13:56	60.0	62.30	104	80	120
Arsenic	3/22/22	13:56	60.0	56.20	94	80	120
Barium	3/22/22	13:56	30.0	30.70	102	80	120
Beryllium	3/22/22	13:56	12.00	11.90	99	80	120
Cadmium	3/22/22	13:56	15.00	15.00	100	80	120
Calcium	3/22/22	13:56	1500	1570	105	80	120
Chromium	3/22/22	13:56	30.0	31.90	106	80	120
Cobalt	3/22/22	13:56	30.0	32.10	107	80	120
Copper	3/22/22	13:56	30.0	33.30	111	80	120
Iron	3/22/22	13:56	900.0	998.0	111	80	120
Lead	3/22/22	13:56	30.0	30.0	100	80	120
Magnesium	3/22/22	13:56	1500	1680	112	80	120
Manganese	3/22/22	13:56	30.0	32.90	110	80	120
Nickel	3/22/22	13:56	30.0	31.30	104	80	120
Potassium	3/22/22	13:56	0.003	0.00348	116	80	120
Selenium	3/22/22	13:56	60.0	59.20	99	80	120
Sodium	3/22/22	13:56	0.006	0.00626	104	80	120
Thallium	3/22/22	13:56	60.0	60.80	101	80	120
Vanadium	3/22/22	13:56	30.0	32.00	107	80	120
Zinc	3/22/22	13:56	30.0	31.20	104	80	120

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

(1) Control Limits: 70-130

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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1122031

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	3/22/22 14:51	10.0	9.47	95	80	120

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

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1122034

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	3/22/22	16:06	5000	5000	100	90	110
Antimony	3/22/22	16:06	5000	4870	97	90	110
Arsenic	3/22/22	16:06	5000	5100	102	90	110
Barium	3/22/22	16:06	5000	4570	91	90	110
Beryllium	3/22/22	16:06	500.0	500.0	100	90	110
Cadmium	3/22/22	16:06	500.0	497.0	99	90	110
Calcium	3/22/22	16:06	5000	5010	100	90	110
Chromium	3/22/22	16:06	5000	4940	99	90	110
Cobalt	3/22/22	16:06	5000	4580	92	90	110
Copper	3/22/22	16:06	5000	4700	94	90	110
Iron	3/22/22	16:06	5000	4870	97	90	110
Lead	3/22/22	16:06	5000	4760	95	90	110
Magnesium	3/22/22	16:06	5000	5080	102	90	110
Manganese	3/22/22	16:06	5000	4990	100	90	110
Nickel	3/22/22	16:06	5000	4860	97	90	110
Potassium	3/22/22	16:06	0.1	0.106	106	90	110
Selenium	3/22/22	16:06	5000	4920	98	90	110
Silver	3/22/22	16:06	500.0	519.0	104	90	110
Sodium	3/22/22	16:06	0.1	0.109	109	90	110
Thallium	3/22/22	16:06	5000	4820	96	90	110
Vanadium	3/22/22	16:06	5000	5000	100	90	110
Zinc	3/22/22	16:06	5000	4820	96	90	110

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

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1122035

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	3/22/22	16:14	500.0	510.0	102	90	110
Antimony	3/22/22	16:14	500.0	513.0	103	90	110
Arsenic	3/22/22	16:14	500.0	487.0	97	90	110
Barium	3/22/22	16:14	500.0	496.0	99	90	110
Beryllium	3/22/22	16:14	50.0	46.10	92	90	110
Cadmium	3/22/22	16:14	50.0	45.80	92	90	110
Calcium	3/22/22	16:14	500.0	522.0	104	90	110
Chromium	3/22/22	16:14	500.0	511.0	102	90	110
Cobalt	3/22/22	16:14	500.0	512.0	102	90	110
Copper	3/22/22	16:14	500.0	523.0	105	90	110
Iron	3/22/22	16:14	500.0	525.0	105	90	110
Lead	3/22/22	16:14	500.0	515.0	103	90	110
Magnesium	3/22/22	16:14	500.0	549.0	110	90	110
Manganese	3/22/22	16:14	500.0	531.0	106	90	110
Nickel	3/22/22	16:14	500.0	509.0	102	90	110
Potassium	3/22/22	16:14	0.01	0.011	110	90	110
Selenium	3/22/22	16:14	500.0	484.0	97	90	110
Silver	3/22/22	16:14	50.0	46.60	93	90	110
Sodium	3/22/22	16:14	0.01	0.0103	103	90	110
Thallium	3/22/22	16:14	500.0	534.0	107	90	110
Vanadium	3/22/22	16:14	500.0	512.0	102	90	110
Zinc	3/22/22	16:14	500.0	490.0	98	90	110

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

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1122034

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	3/22/22	16:06	5000	5000	100	90	110
Antimony	3/22/22	16:06	5000	4870	97	90	110
Arsenic	3/22/22	16:06	5000	5100	102	90	110
Barium	3/22/22	16:06	5000	4570	91	90	110
Beryllium	3/22/22	16:06	500.0	500.0	100	90	110
Cadmium	3/22/22	16:06	500.0	497.0	99	90	110
Calcium	3/22/22	16:06	5000	5010	100	90	110
Chromium	3/22/22	16:06	5000	4940	99	90	110
Cobalt	3/22/22	16:06	5000	4580	92	90	110
Copper	3/22/22	16:06	5000	4700	94	90	110
Iron	3/22/22	16:06	5000	4870	97	90	110
Lead	3/22/22	16:06	5000	4760	95	90	110
Magnesium	3/22/22	16:06	5000	5080	102	90	110
Manganese	3/22/22	16:06	5000	4990	100	90	110
Nickel	3/22/22	16:06	5000	4860	97	90	110
Potassium	3/22/22	16:06	0.1	0.106	106	90	110
Selenium	3/22/22	16:06	5000	4920	98	90	110
Silver	3/22/22	16:06	500.0	519.0	104	90	110
Sodium	3/22/22	16:06	0.1	0.109	109	90	110
Thallium	3/22/22	16:06	5000	4820	96	90	110
Vanadium	3/22/22	16:06	5000	5000	100	90	110
Zinc	3/22/22	16:06	5000	4820	96	90	110

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

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1122035

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Aluminum	3/22/22	16:14	500.0	510.0	102	90	110
Antimony	3/22/22	16:14	500.0	513.0	103	90	110
Arsenic	3/22/22	16:14	500.0	487.0	97	90	110
Barium	3/22/22	16:14	500.0	496.0	99	90	110
Beryllium	3/22/22	16:14	50.0	46.10	92	90	110
Cadmium	3/22/22	16:14	50.0	45.80	92	90	110
Calcium	3/22/22	16:14	500.0	522.0	104	90	110
Chromium	3/22/22	16:14	500.0	511.0	102	90	110
Cobalt	3/22/22	16:14	500.0	512.0	102	90	110
Copper	3/22/22	16:14	500.0	523.0	105	90	110
Iron	3/22/22	16:14	500.0	525.0	105	90	110
Lead	3/22/22	16:14	500.0	515.0	103	90	110
Magnesium	3/22/22	16:14	500.0	549.0	110	90	110
Manganese	3/22/22	16:14	500.0	531.0	106	90	110
Nickel	3/22/22	16:14	500.0	509.0	102	90	110
Potassium	3/22/22	16:14	0.01	0.011	110	90	110
Selenium	3/22/22	16:14	500.0	484.0	97	90	110
Silver	3/22/22	16:14	50.0	46.60	93	90	110
Sodium	3/22/22	16:14	0.01	0.0103	103	90	110
Thallium	3/22/22	16:14	500.0	534.0	107	90	110
Vanadium	3/22/22	16:14	500.0	512.0	102	90	110
Zinc	3/22/22	16:14	500.0	490.0	98	90	110

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

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210467 Lab Sample ID: 1122121

ICAL Calibration #: 03232022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	3/23/22	10:10	3.0	3.08	103	90	110

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

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210467 Lab Sample ID: 1122123

ICAL Calibration #: 03232022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	3/23/22	10:32	3.0	3.04	101	90	110

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

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210467 Lab Sample ID: 1122120

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 03232022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	03/23/2022 09:35	0	U	0.020	0.080

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

CT LABORATORIES
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Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1122028

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	03/22/2022 14:04	0.035	U	84	84
Antimony	03/22/2022 14:04	0.019	U	6.0	6.0
Arsenic	03/22/2022 14:04	-1.32	U	7.6	7.6
Barium	03/22/2022 14:04	-0.109	U	2.1	2.1
Beryllium	03/22/2022 14:04	-0.019	U	0.72	0.72
Cadmium	03/22/2022 14:04	-0.058	U	1.1	1.1
Calcium	03/22/2022 14:04	0.021	U	120	120
Chromium	03/22/2022 14:04	0	U	2.9	2.9
Cobalt	03/22/2022 14:04	0.054	U	1.8	1.8
Copper	03/22/2022 14:04	0.007	U	5.2	5.2
Iron	03/22/2022 14:04	-0.683	U	120	120
Lead	03/22/2022 14:04	-1.03	U	3.2	3.2
Magnesium	03/22/2022 14:04	-0.019	U	150	150
Manganese	03/22/2022 14:04	-0.012	U	2.8	2.8
Nickel	03/22/2022 14:04	0.182	U	2.4	2.4
Potassium	03/22/2022 14:04	0.122	U	1400	1400
Selenium	03/22/2022 14:04	0.149	U	10	10
Silver	03/22/2022 14:04	-0.387	U	7.2	7.2
Sodium	03/22/2022 14:04	0.025	U	1300	1300
Thallium	03/22/2022 14:04	-0.098	U	8.8	8.8
Vanadium	03/22/2022 14:04	0.148	U	2.1	2.1
Zinc	03/22/2022 14:04	0.035	U	2.7	2.7

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

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210467 Lab Sample ID: 1122122

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 03232022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	03/23/2022 10:16	0	U	0.020	0.080

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

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210467 Lab Sample ID: 1122124

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 03232022 Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	03/23/2022 10:39	0	U	0.020	0.080

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

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1122036

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	03/22/2022 16:21	-0.052	U	84	84
Antimony	03/22/2022 16:21	1.73	U	6.0	6.0
Arsenic	03/22/2022 16:21	0.162	U	7.6	7.6
Barium	03/22/2022 16:21	0.021	U	2.1	2.1
Beryllium	03/22/2022 16:21	-0.034	U	0.72	0.72
Cadmium	03/22/2022 16:21	-0.052	U	1.1	1.1
Calcium	03/22/2022 16:21	0.078	U	120	120
Chromium	03/22/2022 16:21	-0.046	U	2.9	2.9
Cobalt	03/22/2022 16:21	-0.034	U	1.8	1.8
Copper	03/22/2022 16:21	0.098	U	5.2	5.2
Iron	03/22/2022 16:21	-2.66	U	120	120
Lead	03/22/2022 16:21	-1.78	U	3.2	3.2
Magnesium	03/22/2022 16:21	-0.05	U	150	150
Manganese	03/22/2022 16:21	-0.001	U	2.8	2.8
Nickel	03/22/2022 16:21	-0.034	U	2.4	2.4
Potassium	03/22/2022 16:21	0.03	U	1400	1400
Selenium	03/22/2022 16:21	2.10	U	10	10
Silver	03/22/2022 16:21	-0.532	U	7.2	7.2
Sodium	03/22/2022 16:21	0.005	U	1300	1300
Thallium	03/22/2022 16:21	-0.102	U	8.8	8.8
Vanadium	03/22/2022 16:21	0.229	U	2.1	2.1
Zinc	03/22/2022 16:21	0.173	U	2.7	2.7

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

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210467 Lab Sample ID: 1121156

Analytical Prep Batch # 94697 Preparation Date/Time: 03/22/2022 12:50

ICAL Calibration #: 03232022 Concentration Units: mg/kg

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	03/23/2022 09:48	-0.000042	U	0.0027	0.00415

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

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1121151

Analytical Prep Batch # 94695 Preparation Date/Time: 03/21/2022 12:25

ICAL Calibration #: Concentration Units: mg/kg

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	03/22/2022 15:13	0.052	U	2.1	10
Antimony	03/22/2022 15:13	-0.018	U	0.15	0.50
Arsenic	03/22/2022 15:13	-0.0128	U	0.19	0.50
Barium	03/22/2022 15:13	-0.00358	U	0.052	0.25
Beryllium	03/22/2022 15:13	-0.000125	U	0.018	0.10
Cadmium	03/22/2022 15:13	-0.00313	U	0.027	0.13
Calcium	03/22/2022 15:13	0.202	U	2.9	13
Chromium	03/22/2022 15:13	0.000925	U	0.071	0.25
Cobalt	03/22/2022 15:13	-0.0009	U	0.045	0.25
Copper	03/22/2022 15:13	0.0358	U	0.13	0.25
Iron	03/22/2022 15:13	0.204	U	3.0	7.5
Lead	03/22/2022 15:13	-0.0200	U	0.078	0.25
Magnesium	03/22/2022 15:13	0.04	U	3.7	13
Manganese	03/22/2022 15:13	0.00115	U	0.070	0.25
Nickel	03/22/2022 15:13	-0.000275	U	0.060	0.25
Potassium	03/22/2022 15:13	0.0109	U	34	125
Selenium	03/22/2022 15:13	0.00845	U	0.25	0.50
Silver	03/22/2022 15:13	-0.0122	U	0.18	0.50
Sodium	03/22/2022 15:13	0.00148	U	32	125
Thallium	03/22/2022 15:13	0.00563	U	0.22	0.50
Vanadium	03/22/2022 15:13	0.00588	U	0.051	0.25
Zinc	03/22/2022 15:13	0.0117	U	0.066	0.25

** Detection Limit only reported if value was less than the control limit.

***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1121151

Analytical Prep Batch # 94695 Preparation Date/Time: 03/21/2022 12:25

ICAL Calibration #: Concentration Units: mg/kg

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	03/22/2022 15:13	0.052	U	2.1	10
Antimony	03/22/2022 15:13	-0.018	U	0.15	0.50
Arsenic	03/22/2022 15:13	-0.0128	U	0.19	0.50
Barium	03/22/2022 15:13	-0.00358	U	0.052	0.25
Beryllium	03/22/2022 15:13	-0.000125	U	0.018	0.10
Cadmium	03/22/2022 15:13	-0.00313	U	0.027	0.13
Calcium	03/22/2022 15:13	0.202	U	2.9	13
Chromium	03/22/2022 15:13	0.000925	U	0.071	0.25
Cobalt	03/22/2022 15:13	-0.0009	U	0.045	0.25
Copper	03/22/2022 15:13	0.0358	U	0.13	0.25
Iron	03/22/2022 15:13	0.204	U	3.0	7.5
Lead	03/22/2022 15:13	-0.0200	U	0.078	0.25
Magnesium	03/22/2022 15:13	0.04	U	3.7	13
Manganese	03/22/2022 15:13	0.00115	U	0.070	0.25
Nickel	03/22/2022 15:13	-0.000275	U	0.060	0.25
Potassium	03/22/2022 15:13	0.0109	U	34	125
Selenium	03/22/2022 15:13	0.00845	U	0.25	0.50
Silver	03/22/2022 15:13	-0.0122	U	0.18	0.50
Sodium	03/22/2022 15:13	0.00148	U	32	125
Thallium	03/22/2022 15:13	0.00563	U	0.22	0.50
Vanadium	03/22/2022 15:13	0.00588	U	0.051	0.25
Zinc	03/22/2022 15:13	0.0117	U	0.066	0.25

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

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

SDG No.: 168330

Analytical Run #: 210424 Lab Sample ID: 1121151

Analytical Prep Batch # 94695 Preparation Date/Time: 03/21/2022 12:25

ICAL Calibration #: Concentration Units: mg/kg

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Aluminum	03/22/2022 15:13	0.052	U	2.1	10
Antimony	03/22/2022 15:13	-0.018	U	0.15	0.50
Arsenic	03/22/2022 15:13	-0.0128	U	0.19	0.50
Barium	03/22/2022 15:13	-0.00358	U	0.052	0.25
Beryllium	03/22/2022 15:13	-0.000125	U	0.018	0.10
Cadmium	03/22/2022 15:13	-0.00313	U	0.027	0.13
Calcium	03/22/2022 15:13	0.202	U	2.9	13
Chromium	03/22/2022 15:13	0.000925	U	0.071	0.25
Cobalt	03/22/2022 15:13	-0.0009	U	0.045	0.25
Copper	03/22/2022 15:13	0.0358	U	0.13	0.25
Iron	03/22/2022 15:13	0.204	U	3.0	7.5
Lead	03/22/2022 15:13	-0.0200	U	0.078	0.25
Magnesium	03/22/2022 15:13	0.04	U	3.7	13
Manganese	03/22/2022 15:13	0.00115	U	0.070	0.25
Nickel	03/22/2022 15:13	-0.000275	U	0.060	0.25
Potassium	03/22/2022 15:13	0.0109	U	34	125
Selenium	03/22/2022 15:13	0.00845	U	0.25	0.50
Silver	03/22/2022 15:13	-0.0122	U	0.18	0.50
Sodium	03/22/2022 15:13	0.00148	U	32	125
Thallium	03/22/2022 15:13	0.00563	U	0.22	0.50
Vanadium	03/22/2022 15:13	0.00588	U	0.051	0.25
Zinc	03/22/2022 15:13	0.0117	U	0.066	0.25

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

CT LABORATORIES
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Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: TETRA TECH-PWDF
ICP ID Number: TJA 6000
SDG No.: 168330
ICS Source: SPEX

Analytical Run #: 210424
Lab Sample ID: 1122029
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	03/22/2022 14:27	500000	488000	98	80	120
Antimony	03/22/2022 14:27	0	-2.51	0	-10	10
Arsenic	03/22/2022 14:27	0	4.91	0	-20	20
Barium	03/22/2022 14:27	0	1.32	0	-1.7	1.7
Beryllium	03/22/2022 14:27	0	0.37	0	-0.7	0.7
Cadmium	03/22/2022 14:27	0	0	0	-1.3	1.3
Calcium	03/22/2022 14:27	500000	484000	97	80	120
Chromium	03/22/2022 14:27	0	-5.10	0	-13	13
Cobalt	03/22/2022 14:27	0	-1.25	0	-2	2
Copper	03/22/2022 14:27	0	-0.459	0	-7	7
Iron	03/22/2022 14:27	500000	426000	85	80	120
Lead	03/22/2022 14:27	0	-0.827	0	-4.7	4.7
Magnesium	03/22/2022 14:27	500000	515000	103	80	120
Manganese	03/22/2022 14:27	0	-3.44	0	-7.3	7.3
Nickel	03/22/2022 14:27	0	-2.78	0	-7	7
Potassium	03/22/2022 14:27	0	0.308	0	-1320	1320
Selenium	03/22/2022 14:27	0	-7.86	0	-13	13
Silver	03/22/2022 14:27	0	-1.69	0	-7.3	7.3
Sodium	03/22/2022 14:27	0	-0.18	0	-480	480
Thallium	03/22/2022 14:27	0	-3.48	0	-7.3	7.3
Vanadium	03/22/2022 14:27	10000	9810	0	8000	12000
Zinc	03/22/2022 14:27	0	7.74	0	-20	20

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Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: TETRA TECH-PWDF
ICP ID Number: TJA 6000
SDG No.: 168330
ICS Source: SPEX, Ultra

Analytical Run #: 210424
Lab Sample ID: 1122030
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	03/22/2022 14:35	500000	516000	103	80	120
Antimony	03/22/2022 14:35	500.0	504.0	101	80	120
Arsenic	03/22/2022 14:35	500.0	502.0	100	80	120
Barium	03/22/2022 14:35	500.0	461.0	92	80	120
Beryllium	03/22/2022 14:35	500.0	457.0	91	80	120
Cadmium	03/22/2022 14:35	500.0	487.0	97	80	120
Calcium	03/22/2022 14:35	500000	514000	103	80	120
Chromium	03/22/2022 14:35	500.0	480.0	96	80	120
Cobalt	03/22/2022 14:35	500.0	462.0	92	80	120
Copper	03/22/2022 14:35	500.0	507.0	101	80	120
Iron	03/22/2022 14:35	500000	432000	86	80	120
Lead	03/22/2022 14:35	500.0	438.0	88	80	120
Magnesium	03/22/2022 14:35	500000	535000	107	80	120
Manganese	03/22/2022 14:35	500.0	497.0	99	80	120
Nickel	03/22/2022 14:35	500.0	449.0	90	80	120
Potassium	03/22/2022 14:35	0.05	0.0574	115	80	120
Selenium	03/22/2022 14:35	500.0	459.0	92	80	120
Silver	03/22/2022 14:35	500.0	494.0	99	80	120
Sodium	03/22/2022 14:35	0.05	0.0498	100	80	120
Thallium	03/22/2022 14:35	500.0	477.0	95	80	120
Vanadium	03/22/2022 14:35	500.0	490.0	98	80	120
Zinc	03/22/2022 14:35	500.0	499.0	100	80	120

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Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: TETRA TECH-PWDF
ICP ID Number: TJA 6000
SDG No.: 168330
ICS Source: SPEX, Ultra

Analytical Run #: 210424
Lab Sample ID: 1122030
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: ug/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	03/22/2022 14:35	500000	516000	103	80	120
Antimony	03/22/2022 14:35	500.0	504.0	101	80	120
Arsenic	03/22/2022 14:35	500.0	502.0	100	80	120
Barium	03/22/2022 14:35	500.0	461.0	92	80	120
Beryllium	03/22/2022 14:35	500.0	457.0	91	80	120
Cadmium	03/22/2022 14:35	500.0	487.0	97	80	120
Calcium	03/22/2022 14:35	500000	514000	103	80	120
Chromium	03/22/2022 14:35	500.0	480.0	96	80	120
Cobalt	03/22/2022 14:35	500.0	462.0	92	80	120
Copper	03/22/2022 14:35	500.0	507.0	101	80	120
Iron	03/22/2022 14:35	500000	432000	86	80	120
Lead	03/22/2022 14:35	500.0	438.0	88	80	120
Magnesium	03/22/2022 14:35	500000	535000	107	80	120
Manganese	03/22/2022 14:35	500.0	497.0	99	80	120
Nickel	03/22/2022 14:35	500.0	449.0	90	80	120
Potassium	03/22/2022 14:35	0.05	0.0574	115	80	120
Selenium	03/22/2022 14:35	500.0	459.0	92	80	120
Silver	03/22/2022 14:35	500.0	494.0	99	80	120
Sodium	03/22/2022 14:35	0.05	0.0498	100	80	120
Thallium	03/22/2022 14:35	500.0	477.0	95	80	120
Vanadium	03/22/2022 14:35	500.0	490.0	98	80	120
Zinc	03/22/2022 14:35	500.0	499.0	100	80	120

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5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description

PWDF-WS-01-031722

Lab Name: CT Laboratories
Contract: TETRA TECH-PWDF
Matrix: SOLID
SDG No.: 168330
% Solids for Sample: 100
Concentration Units: ug/L
Sample No: 1122072
Parent Sample No.: 1121147
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 210424
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 03/22/2022 Analysis Time: -------- 15:36

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Potassium	80-120	254		51.4	J	200	101		P

BDL = analyte concentration was below detection limit

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5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description

PWDF-WS-01-031722

Lab Name: CT Laboratories
Contract: TETRA TECH-PWDF
Matrix: SOLID
SDG No.: 168330
% Solids for Sample: 100
Concentration Units: ug/L
Sample No: 1122073
Parent Sample No.: 1121147
Analytical Prep Batch #:
Analytical Preparation Date/Time:
Analytical Run #: 210424
ICAL Calibration #:

Analysis Type: *Initial Analysis* Analysis Date: ----- 03/22/2022 Analysis Time: -------- 15:36

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M
Sodium	80-120	221	J	37.0	J	200	92		P

BDL = analyte concentration was below detection limit

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5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **PWDF-WS-01-031722**

Lab Name:	CT Laboratories	Contract:	TETRA TECH-PWDF
Matrix:	SOLID	SDG No.:	168330
% Solids for Sample:	100	Concentration Units:	ug/L
Sample No	1122074	Parent Sample No.:	1121147
Analytical Prep Batch #		Analytical Preparation Date/Time:	
Analytical Run #:	210424	ICAL Calibration #:	

Analysis Type: *Initial Analysis* Analysis Date: ----- 03/22/2022 Analysis Time: -------- 15:36

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Aluminum	80-120	16000		11900		4000	102		P	
Antimony	80-120	975		41.1		1000	93		P	
Arsenic	80-120	3870		BDL	U	4000	97		P	
Barium	80-120	3880		77.1		4000	95		P	
Beryllium	80-120	88.9		BDL	U	100	89		P	
Cadmium	80-120	82.0		BDL	U	100	82		P	
Calcium	80-120	410000		45500		400000	91		P	
Chromium	80-120	389		22.4		400	92		P	
Cobalt	80-120	885		4.95		1000	88		P	
Copper	80-120	489		45.8		500	89		P	
Iron	80-120	3330		1760		2000	78		P	*FAIL*
Lead	80-120	859		7.39		1000	85		P	
Magnesium	80-120	244000		62100		200000	91		P	
Manganese	80-120	1050		139		1000	91		P	
Nickel	80-120	872		9.37		1000	86		P	
Selenium	80-120	3540		BDL	U	4000	88		P	
Silver	80-120	88.7		BDL	U	100	89		P	
Thallium	80-120	3220		BDL	U	4000	80		P	
Vanadium	80-120	927		12.2		1000	91		P	

BDL = analyte concentration was below detection limit

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7-2

Sample No:

LCS

LABORATORY CONTROL SAMPLE - SOLID

Lab Name: CT Laboratories Contract TETRA TECH-PWDF

LCS Source: SPEX and Ultra SDG No.: 168330

Concentration Units: mg/kg

Analytical Run #: 210467 Sample No.:#: 1121157

Analytical Prep Batch #: 94697 Preparation Date/Time: 03/22/2022 12:50

ICAL Calibration #: 03232022

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

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Mercury	03/23/2022 10:23	82-124	0.085		0.083	102		CV

CT LABORATORIES
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7-2

Sample No:

LABORATORY CONTROL SAMPLE - SOLID

LCS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

LCS Source: SPEX and Ultra SDG No.: 168330

Concentration Units: mg/kg

Analytical Run #: 210424 Sample No.:#: 1121152

Analytical Prep Batch #: 94695 Preparation Date/Time: 03/21/2022 12:25

ICAL Calibration #:

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

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Aluminum	03/22/2022 14:58	74-119	98.8		100	99		P
Antimony	03/22/2022 14:58	79-114	24.5		25.0	98		P
Arsenic	03/22/2022 14:58	82-111	101		100	101		P
Barium	03/22/2022 14:58	83-113	98.5		100	98		P
Beryllium	03/22/2022 14:58	83-113	2.29		2.50	92		P
Cadmium	03/22/2022 14:58	82-113	2.50		2.50	100		P
Calcium	03/22/2022 14:58	81-116	5050		5000	101		P
Chromium	03/22/2022 14:58	85-113	9.45		10.0	94		P
Cobalt	03/22/2022 14:58	85-112	23.9		25.0	96		P
Copper	03/22/2022 14:58	81-117	11.8		12.5	94		P
Iron	03/22/2022 14:58	81-118	46.5		50.0	93		P
Lead	03/22/2022 14:58	81-112	23.9		25.0	96		P
Magnesium	03/22/2022 14:58	78-115	2480		2500	99		P
Manganese	03/22/2022 14:58	84-114	23.8		25.0	95		P
Nickel	03/22/2022 14:58	83-113	23.7		25.0	95		P
Potassium	03/22/2022 14:58	81-116	2.65		2.50	106		P
Selenium	03/22/2022 14:58	78-111	98.5		100	98		P
Silver	03/22/2022 14:58	82-112	2.25		2.50	90		P
Sodium	03/22/2022 14:58	83-118	2.48		2.50	99		P
Thallium	03/22/2022 14:58	83-111	93.0		100	93		P
Vanadium	03/22/2022 14:58	82-114	23.3		25.0	93		P
Zinc	03/22/2022 14:58	82-113	24.5		25.0	98		P

CT LABORATORIES
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7-2

Sample No:

LABORATORY CONTROL SAMPLE - SOLID

LCS

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

LCS Source: SPEX and Ultra SDG No.: 168330

Concentration Units: mg/kg

Analytical Run #: 210424 Sample No.:#: 1121226

Analytical Prep Batch #: 94695 Preparation Date/Time: 03/21/2022 12:25

ICAL Calibration #:

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

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Aluminum	03/22/2022 15:06	74-119	4.17		4.0	104		P
Antimony	03/22/2022 15:06	79-114	0.99		1.0	99		P
Arsenic	03/22/2022 15:06	82-111	4.06		4.0	102		P
Barium	03/22/2022 15:06	83-113	3.87		4.0	97		P
Beryllium	03/22/2022 15:06	83-113	0.0935		0.1	94		P
Cadmium	03/22/2022 15:06	82-113	0.0902		0.1	90		P
Calcium	03/22/2022 15:06	81-116	199		200	100		P
Chromium	03/22/2022 15:06	85-113	0.397		0.4	99		P
Cobalt	03/22/2022 15:06	85-112	0.962		1.0	96		P
Copper	03/22/2022 15:06	81-117	0.477		0.5	95		P
Iron	03/22/2022 15:06	81-118	1.88		2.0	94		P
Lead	03/22/2022 15:06	81-112	0.96		1.0	96		P
Magnesium	03/22/2022 15:06	78-115	104		100	104		P
Manganese	03/22/2022 15:06	84-114	0.97		1.0	97		P
Nickel	03/22/2022 15:06	83-113	0.955		1.0	96		P
Potassium	03/22/2022 15:06	81-116	10.6		10.0	106		P
Selenium	03/22/2022 15:06	78-111	3.95		4.0	99		P
Silver	03/22/2022 15:06	82-112	0.0911		0.1	91		P
Sodium	03/22/2022 15:06	83-118	9.8		10.0	98		P
Thallium	03/22/2022 15:06	83-111	3.75		4.0	94		P
Vanadium	03/22/2022 15:06	82-114	0.951		1.0	95		P
Zinc	03/22/2022 15:06	82-113	0.987		1.0	99		P

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7-2

Sample No:

LABORATORY CONTROL SAMPLE - SOLID

LCS

Lab Name: CT Laboratories Contract TETRA TECH-PWDF

LCS Source: SPEX and Ultra SDG No.: 168330

Concentration Units: mg/kg

Analytical Run #: 210467 Sample No.:#: 1121228

Analytical Prep Batch #: 94697 Preparation Date/Time: 03/22/2022 12:50

ICAL Calibration #:

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

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Mercury	03/23/2022 09:42	82-124	0.083		0.083	100		CV

CT LABORATORIES
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9

ICP SERIAL DILUTION

Sample Description

PWDF-WS-01-031722

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

Matrix: SOLID SDG No.: 168330

Concentration Units: mg/L

Sample No.: 1122069 Parent Sample No.: 1121147

LIMS Run #: 210424 ICAL Calibration #:.:

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

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Potassium	03/22/2022 15:28	51.4	U	170	U	100		P	*INVALID*

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9

ICP SERIAL DILUTION

Sample Description

PWDF-WS-01-031722

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

Matrix: SOLID SDG No.: 168330

Concentration Units: mg/L

Sample No.: 1122070 Parent Sample No.: 1121147

LIMS Run #: 210424 ICAL Calibration #:.:

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

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Sodium	03/22/2022 15:28	37.0	U	160	U	100		P	*INVALID*

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9

ICP SERIAL DILUTION

Sample Description

PWDF-WS-01-031722

Lab Name: CT Laboratories Contract: TETRA TECH-PWDF

Matrix: SOLID SDG No.: 168330

Concentration Units: ug/L

Sample No.: 1122071 Parent Sample No.: 1121147

LIMS Run #: 210424 ICAL Calibration #:.:

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

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Aluminum	03/22/2022 15:28	11900		14200		19		P	*FAIL*
Antimony	03/22/2022 15:28	41.1		52.5		28		P	*INVALID*
Arsenic	03/22/2022 15:28	BDL	U	0.95	U	0		P	*INVALID*
Barium	03/22/2022 15:28	77.1		92		19		P	*INVALID*
Beryllium	03/22/2022 15:28	BDL	U	0.09	U	0		P	*INVALID*
Cadmium	03/22/2022 15:28	BDL	U	0.14	J	0		P	*INVALID*
Calcium	03/22/2022 15:28	45500		49650		9		P	
Chromium	03/22/2022 15:28	22.4		29.95		34		P	*INVALID*
Cobalt	03/22/2022 15:28	4.95		6.7		35		P	*INVALID*
Copper	03/22/2022 15:28	45.8		57.5		26		P	*INVALID*
Iron	03/22/2022 15:28	1760		2075		18		P	*INVALID*
Lead	03/22/2022 15:28	7.39		6.25		15		P	*INVALID*
Magnesium	03/22/2022 15:28	62100		79000		27		P	*FAIL*
Manganese	03/22/2022 15:28	139		166		19		P	*INVALID*
Nickel	03/22/2022 15:28	9.37		11.5		23		P	*INVALID*
Selenium	03/22/2022 15:28	BDL	U	3.185	J	0		P	*INVALID*
Silver	03/22/2022 15:28	BDL	U	0.9	U	0		P	*INVALID*
Thallium	03/22/2022 15:28	BDL	U	1.1	U	0		P	*INVALID*
Vanadium	03/22/2022 15:28	12.2		13.7		12		P	*INVALID*
Zinc	03/22/2022 15:28	1400		1500		7		P	

ICP LINEAR RANGES (QUARTERLY)

Lab Name: CT Laboratories Contract: CH2M - JACOBS-NAPR

ICP ID Number: TA SDG No.: 167695

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

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PREPARATION LOG

Lab Name: CT Laboratories | Project: TETRA TECH-PWDF

Method: EPA 3050B | SDG No.: 168330

Preparation Batch #: 94695 | Preparation Date/Time: 03/21/2022 / 12:25

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1121147	Normal Sample	PWDF-WS-01-031722	SOIL	0.51
1121148	Normal Sample	PWDF-WS-02-031722	SOIL	0.52
1121149	Normal Sample	PWDF-WS-03-031722	SOIL	0.52
1121151	Method Blank		SOLID	2.00
1121152	Lab Control Spike		SOLID	2.00
1121226	Lab Control Spike		SOLID	2.0

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PREPARATION LOG

Lab Name: CT Laboratories | Project: TETRA TECH-PWDF

Method: EPA 7471A | SDG No.: 168330

Preparation Batch #: 94697 | Preparation Date/Time: 03/22/2022 / 12:50

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
1121147	Normal Sample	PWDF-WS-01-031722	SOIL	0.55
1121148	Normal Sample	PWDF-WS-02-031722	SOIL	0.57
1121149	Normal Sample	PWDF-WS-03-031722	SOIL	0.56
1121156	Method Blank		SOLID	0.60
1121157	Lab Control Spike		SOLID	0.60
1121228	Lab Control Spike		SOLID	0.60

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories | Contract: TETRA TECH-PWDF

Lab Code: CTL | SDG No.: 168330

Instrument ID Number: CETAC | Method Number: CV

Start & End Date: 03/23/2022 to 03/23/2022 | Analytical Run #: 210467

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1122119	ICV	1	3/23 09:29																X													
1122120	ICB	1	3/23 09:35																X													
1121228	LCSS	1	3/23 09:42																X													
1121156	MBS	1	3/23 09:48																X													
1121149	Initial	1	3/23 10:04																X													
1121148	Initial	1	3/23 10:07																X													
1122121	CCV	1	3/23 10:10																X													
1122122	CCB	1	3/23 10:16																X													
1121147	Initial	1	3/23 10:20																X													
1121157	LCSS	1	3/23 10:23																X													
1122123	CCV	1	3/23 10:32																X													
1122124	CCB	1	3/23 10:39																X													

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories | Contract: TETRA TECH-PWDF

Lab Code: CTL | SDG No.: 168330

Instrument ID Number: TJA | Method Number: P

Start & End Date: 03/22/2022 to 03/22/2022 | Analytical Run #: 210424

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
1122026	ICV	1	3/22 13:49	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1122027	ICVLL	1	3/22 13:56	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X			X		X			X	X
1122028	ICB	1	3/22 14:04	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1122029	ICSA	1	3/22 14:27	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1122030	ICSAB	1	3/22 14:35	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1122031	ICVLL	1	3/22 14:51																							X							
1121152	LCSS	1	3/22 14:58	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1121226	LCSS	1	3/22 15:06	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1121151	MBS	1	3/22 15:13	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1121147	Initial	1	3/22 15:21	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1122069	L	5	3/22 15:28																				X										
1122070	L	5	3/22 15:28																								X						
1122071	L	5	3/22 15:28	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1122072	PDSS	1	3/22 15:36																				X										
1122073	PDSS	1	3/22 15:36																								X						
1122074	PDSS	1	3/22 15:36	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X		X			X			X	X
1121148	Initial	1	3/22 15:43	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1121149	Initial	1	3/22 15:51	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1122034	CCV1	1	3/22 16:06	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1122035	CCV2	1	3/22 16:14	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X
1122036	CCB	1	3/22 16:21	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X		X	X		X			X	X

METALS
RAW DATA
DOCUMENTS

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Ag 328.068 {103}	03/23/2022 11:00:21	03/22/2022 13:34:30	Linear	1/Conc	-0.000004	0.000003	0.000000	1.000000	0.999121	0.000000	0.347942	1.159807
Ag 338.289 {100}	03/23/2022 11:00:21	03/22/2022 13:34:30	Linear	1/Conc	0.000036	0.000008	0.000000	1.000000	0.999429	0.000001	0.480600	1.601999
Al 167.079 {501}	03/23/2022 11:00:21	03/22/2022 12:44:35	Linear	1/Conc	0.000004	0.000003	0.000000	1.000000	0.998294	0.000001	0.332418	1.108060
Al 309.271 {109}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Conc	0.000208	0.000001	0.000000	1.000000	0.999935	0.000001	5.736113	19.120377
Al 396.152 { 85}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Var	0.000002	0.000002	0.000000	1.000000	0.999210	0.000026	3.224772	10.749240
As 193.759 {474}	03/23/2022 11:00:21	03/22/2022 12:44:35	Linear	1/Conc	0.000005	0.000001	0.000000	1.000000	0.999991	0.000000	2.630801	8.769335
As 197.262 {471}	03/23/2022 11:00:21	03/22/2022 12:52:28	Linear	1/Conc	-0.000001	0.000001	0.000000	1.000000	0.999911	0.000000	3.703974	12.346581
Ba 233.527 {445}	03/23/2022 11:00:21	03/22/2022 12:44:36	Linear	1/Conc	0.000001	0.000007	0.000000	1.000000	0.999970	0.000000	0.275005	0.916682
Ba 455.403 { 74}	03/23/2022 11:00:21	03/22/2022 12:52:28	Linear	1/Conc	-0.000049	0.000056	0.000000	1.000000	0.999727	0.000005	0.083668	0.278895
Ba 493.409 { 68}	03/23/2022 11:00:21	03/22/2022 13:34:30	Linear	1/Conc	-0.000229	0.000027	0.000000	1.000000	0.999914	0.000036	0.476328	1.587759
Be 313.042 {108}	03/23/2022 11:00:21	03/22/2022 12:44:36	Linear	1/Conc	0.000024	0.000080	0.000000	1.000000	0.999975	0.000001	0.010679	0.035596
Be 313.107 {108}	03/23/2022 11:00:21	03/22/2022 12:44:36	Linear	1/Conc	0.000005	0.000024	0.000000	1.000000	0.999995	0.000000	0.083877	0.279588
Ca 184.006 {483}	03/23/2022 11:00:21	03/22/2022 13:08:33	Linear	1/Conc	-0.000019	0.000002	0.000000	1.000000	0.998952	0.000038	1.105371	3.684568
Ca 315.887 {107}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Var	0.000038	0.000000	0.000000	1.000000	0.998332	0.000016	2.919381	9.731270
Ca 317.933 {106}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Conc	0.000275	0.000001	0.000000	1.000000	0.999839	0.000026	2.026464	6.754879
Ca 393.366 { 86}	03/23/2022 11:00:21	03/22/2022 12:44:36	Linear	1/Conc	0.000038	0.000173	0.000000	1.000000	0.999246	0.000072	0.021747	0.072491
Ca 396.847 { 85}	03/23/2022 11:00:21	03/22/2022 12:52:28	Linear	1/Conc	0.000016	0.000109	0.000000	1.000000	0.999513	0.000160	0.038251	0.127503
Cd 226.502 {449}	03/23/2022 11:00:21	03/22/2022 12:44:36	Linear	1/Var	-0.000001	0.000031	0.000000	1.000000	0.999877	0.000008	0.096404	0.321346
Cd 228.802 {447}	03/23/2022 11:00:21	03/22/2022 12:44:36	Linear	1/Conc	0.000007	0.000050	0.000000	1.000000	0.999923	0.000001	0.095377	0.317922
Co 228.616 {447}	03/23/2022 11:00:21	03/22/2022 12:52:28	Linear	1/Conc	0.000003	0.000022	0.000000	1.000000	0.999779	0.000002	0.153569	0.511896
Co 238.892 {141}	03/23/2022 11:00:21	03/22/2022 12:52:28	Linear	1/Var	-0.000001	0.000003	0.000000	1.000000	0.998991	0.000002	0.198002	0.660008
Cr 205.560 {464}	03/23/2022 11:00:21	03/22/2022 13:00:48	Linear	1/Var	-0.000004	0.000010	0.000000	1.000000	0.999490	0.000011	0.239250	0.797499
Cr 267.716 {126}	03/23/2022 11:00:21	03/22/2022 12:52:28	Linear	1/Conc	-0.000000	0.000002	0.000000	1.000000	0.999499	0.000001	0.339760	1.132535
Cu 223.008 {451}	03/23/2022 11:00:21	03/22/2022 12:52:28	Linear	1/Conc	0.000001	0.000005	0.000000	1.000000	0.999679	0.000002	0.690456	2.301519
Cu 224.700 {450}	03/23/2022 11:00:21	03/22/2022 13:00:48	Linear	1/Conc	-0.000001	0.000008	0.000000	1.000000	0.999528	0.000013	0.278565	0.928551
Cu 324.754 {104}	03/23/2022 11:00:21	03/22/2022 13:00:48	Linear	1/Conc	0.002369	0.000002	0.000000	1.000000	0.998747	0.000005	1.283693	4.278977
Cu 327.396 {103}	03/23/2022 11:00:21	03/22/2022 13:00:48	Linear	1/Conc	0.000001	0.000001	0.000000	1.000000	0.999709	0.000001	3.210453	10.701509
Fe 234.349 {144}	03/23/2022 11:00:21	03/22/2022 13:08:33	Curvili	1/Conc	0.000024	0.000001	0.000000	1.000000	0.999935	0.000004	0.463600	1.545334
Fe 239.562 {140}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Conc	0.000005	0.000001	0.000000	1.000000	0.998759	0.000069	1.742909	5.809697
Fe 259.940 {129}	03/23/2022 11:00:21	03/22/2022 13:26:34	Curvili	1/Var	-0.000000	0.000003	0.000000	1.000000	0.998790	0.000008	0.714451	2.381503
Mg 202.582 {466}	03/23/2022 11:00:21	03/22/2022 13:26:34	Curvili	1/Conc	-0.000006	0.000001	0.000000	1.000000	0.999957	0.000021	1.857899	6.192996
Mg 279.079 {121}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.999804	0.000002	13.183103	43.943675
Mg 280.270 {120}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Conc	0.000042	0.000042	0.000000	1.000000	0.997898	0.000130	0.011284	0.037612
Mn 257.610 {131}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Conc	-0.000001	0.000011	0.000000	1.000000	0.999044	0.000004	0.037249	0.124163
Mn 259.373 {130}	03/23/2022 11:00:21	03/22/2022 13:00:48	Linear	None	0.000544	0.000011	0.000000	1.000000	1.000000	0.000483	0.163707	0.545690
Mo 202.030 {466}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Var	0.000007	0.000007	0.000000	1.000000	0.999510	0.000019	0.314316	1.047720
Mo 204.598 {464}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Conc	-0.000001	0.000004	0.000000	1.000000	0.999837	0.000001	0.503246	1.677488
Ni 221.647 {452}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Conc	0.000005	0.000012	0.000000	1.000000	0.999755	0.000012	0.318197	1.060657
Ni 231.604 {445}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Conc	-0.000005	0.000012	0.000000	1.000000	0.999743	0.000001	0.297411	0.991369
Pb 216.999 {455}	03/23/2022 11:00:21	03/22/2022 13:00:48	Curvili	1/Var	0.000002	0.000001	0.000000	1.000000	0.999536	0.000024	3.155246	10.517488
Pb 216.999 {456}	03/23/2022 11:00:21	03/22/2022 13:00:48	Curvili	1/Var	0.000002	0.000000	0.000000	1.000000	0.999511	0.000008	9.265208	30.884028
Pb 220.353 {153}	03/23/2022 11:00:21	03/22/2022 13:00:48	Linear	1/Var	0.000001	0.000000	0.000000	1.000000	0.998732	0.000001	1.806777	6.022591
Pb 220.353 {453}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Conc	0.000009	0.000002	0.000000	1.000000	0.999585	0.000001	1.625223	5.417408
Sb 206.833 {463}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Var	-0.000002	0.000002	0.000000	1.000000	0.999733	0.000012	1.467246	4.890820

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	OK.	1.000000	0.000000	1	0
	Ag 338.289 {100}	OK.	1.000000	0.000000	1	0
	Al 167.079 {501}	OK.	1.000000	0.000000	1	0
	Al 309.271 {109}	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	OK.	1.000000	0.000000	1	0
	As 193.759 {474}	OK.	1.000000	0.000000	1	0
	As 197.262 {471}	OK.	1.000000	0.000000	1	0
	Ba 233.527 {445}	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	OK.	1.000000	0.000000	1	0
	Ba 493.409 { 68}	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	OK.	1.000000	0.000000	1	0
	Be 313.107 {108}	OK.	1.000000	0.000000	1	0
	Ca 184.006 {483}	OK.	1.000000	0.000000	1	0
	Ca 315.887 {107}	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	OK.	1.000000	0.000000	1	0
	Ca 393.366 { 86}	OK.	1.000000	0.000000	1	0
	Ca 396.847 { 85}	OK.	1.000000	0.000000	1	0
	Cd 226.502 {449}	OK.	1.000000	0.000000	1	0
	Cd 228.802 {447}	OK.	1.000000	0.000000	1	0
	Co 228.616 {447}	OK.	1.000000	0.000000	1	0
	Co 238.892 {141}	OK.	1.000000	0.000000	1	0
	Cr 205.560 {464}	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	OK.	1.000000	0.000000	1	0
	Cu 223.008 {451}	OK.	1.000000	0.000000	1	0
	Cu 224.700 {450}	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}	OK.	1.000000	0.000000	1	0
	Cu 327.396 {103}	OK.	1.000000	0.000000	1	0
	Fe 234.349 {144}	OK.	1.000000	0.000000	1	0
	Fe 239.562 {140}	OK.	1.000000	0.000000	1	0
	Fe 259.940 {129}	OK.	1.000000	0.000000	1	0
	Mg 202.582 {466}	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	OK.	1.000000	0.000000	1	0
	Mg 280.270 {120}	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	OK.	1.000000	0.000000	1	0
	Mn 259.373 {130}	OK.	1.000000	0.000000	1	0
	Mo 202.030 {466}	OK.	1.000000	0.000000	1	0
	Mo 204.598 {464}	OK.	1.000000	0.000000	1	0
	Ni 221.647 {452}	OK.	1.000000	0.000000	1	0
	Ni 231.604 {445}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {455}	OK.	1.000000	0.000000	1	0
	Pb 216.999 {456}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {153}	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	OK.	1.000000	0.000000	1	0

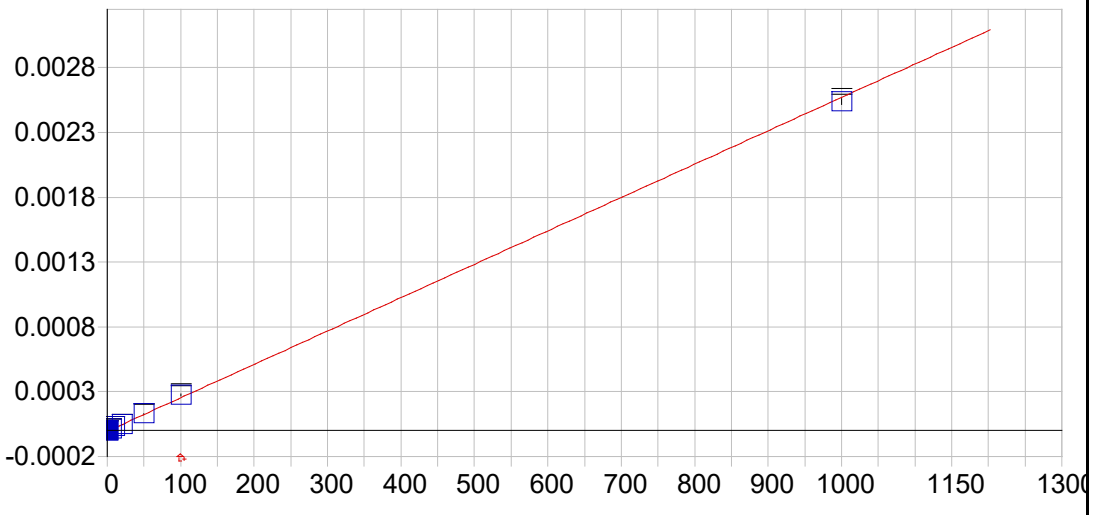
Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL
Sb 217.581 {455}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Conc	0.000005	0.000002	0.000000	1.000000	0.999844	0.000000	1.518020	5.060068
Se 196.090 {472}	03/23/2022 11:00:21	03/22/2022 12:52:29	Curvili	1/Conc	0.000003	0.000001	-0.000000	1.000000	0.999985	0.000000	2.081793	6.939311
Se 206.279 {463}	03/23/2022 11:00:21	03/22/2022 12:52:29	Curvili	1/Conc	0.000002	0.000000	-0.000000	1.000000	0.999995	0.000000	11.017672	36.725574
Tl 190.856 {476}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Conc	0.000001	0.000002	0.000000	1.000000	0.999437	0.000001	1.260350	4.201167
Tl 190.856 {477}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Var	0.000004	0.000001	0.000000	1.000000	0.998459	0.000012	2.379388	7.931292
V 290.882 {116}	03/23/2022 11:00:21	03/22/2022 12:52:29	Curvili	1/Var	0.000017	0.000002	-0.000000	1.000000	0.999951	0.000003	1.072765	3.575883
V 292.402 {115}	03/23/2022 11:00:21	03/22/2022 12:52:29	Linear	1/Conc	0.000002	0.000005	0.000000	1.000000	0.999638	0.000002	0.290387	0.967958
Zn 206.200 {463}	03/23/2022 11:00:21	03/22/2022 13:00:48	Linear	1/Var	0.000031	0.000016	0.000000	1.000000	0.997976	0.000031	0.158744	0.529146
Zn 213.856 {457}	03/23/2022 11:00:21	03/22/2022 12:44:37	Linear	1/Conc	0.000006	0.000041	0.000000	1.000000	0.999751	0.000004	0.072812	0.242706
Y 224.306 {450}*	03/23/2022 11:00:21	03/22/2022 11:45:30	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Y 324.228 {104}*	03/23/2022 11:00:21	03/22/2022 11:45:30	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Y 371.030 { 91}*	03/23/2022 11:00:21	03/22/2022 11:45:30	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000
Na 330.237 {102}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Var	0.000003	0.000009	0.000000	1.000000	0.999966	0.000006	0.407735	1.359116
Na 588.995 { 57}	03/23/2022 11:00:21	03/22/2022 13:08:33	Linear	1/Conc	2017.8935	3937.3253	0.000000	1.000000	0.999690	46.188572	0.002635	0.008784
Na 589.592 { 57}	03/23/2022 11:00:21	03/22/2022 13:08:33	Linear	1/Conc	52.841384	1865.2261	0.000000	1.000000	0.999782	18.342496	0.003849	0.012831
Si 212.412 {458}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Var	0.000127	0.000004	0.000000	1.000000	0.991776	0.000269	0.749031	2.496771
Si 251.611 {134}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Var	0.000020	0.000001	0.000000	1.000000	0.999144	0.000008	3.339604	11.132012
Ti 323.452 {104}	03/23/2022 11:00:21	03/22/2022 12:52:30	Linear	1/Conc	0.000149	0.000008	0.000000	1.000000	0.999903	0.000001	0.502285	1.674284
Ti 334.941 {101}	03/23/2022 11:00:21	03/22/2022 12:52:30	Linear	1/Conc	-0.000002	0.000005	0.000000	1.000000	0.999848	0.000001	0.534066	1.780221
Sr 407.771 { 83}	03/23/2022 11:00:21	03/22/2022 12:52:30	Linear	1/Conc	0.000056	0.000092	0.000000	1.000000	0.999093	0.000015	0.052384	0.174614
Sr 421.552 { 80}	03/23/2022 11:00:21	03/22/2022 12:52:30	Linear	1/Conc	0.000011	0.000128	0.000000	1.000000	0.999770	0.000011	0.039975	0.133250
Sn 189.989 {477}	03/23/2022 11:00:21	03/22/2022 12:52:30	Linear	1/Var	0.000002	0.000004	0.000000	1.000000	0.999300	0.000026	0.485549	1.618498
Sn 189.989 {478}	03/23/2022 11:00:21	03/22/2022 12:52:30	Linear	1/Conc	0.000000	0.000001	0.000000	1.000000	0.999756	0.000000	1.558711	5.195702
B 249.678 {135}	03/23/2022 11:00:21	03/22/2022 12:52:30	Linear	1/Conc	-0.000001	0.000002	0.000000	1.000000	0.999687	0.000001	0.545361	1.817869
B 249.773 {135}	03/23/2022 11:00:21	03/22/2022 12:52:30	Linear	1/Conc	0.000002	0.000003	0.000000	1.000000	0.999645	0.000001	0.270250	0.900832
Li 610.353 { 55}	03/23/2022 11:00:21	03/22/2022 12:52:30	Linear	1/Conc	-0.000004	0.000001	0.000000	1.000000	0.998544	0.000001	19.289189	64.297296
Li 670.784 { 50}	03/23/2022 11:00:21	03/22/2022 12:52:30	Curvili	1/Conc	-0.000050	0.000023	-0.000000	1.000000	0.999998	0.000001	0.474546	1.581819
K 766.490 { 44}	03/23/2022 11:00:21	03/22/2022 13:08:33	Linear	1/Conc	0.000066	0.000911	0.000000	1.000000	0.999757	0.000009	0.011978	0.039925
K 769.896 { 44}	03/23/2022 11:00:21	03/22/2022 13:26:34	Linear	1/Conc	-37.816883	160.95309	0.000000	1.000000	0.999661	5.701463	0.034135	0.113785
P 177.495 {489}	03/23/2022 11:00:21	03/22/2022 13:08:33	Linear	1/Conc	-0.000004	0.000001	0.000000	1.000000	0.998624	0.000017	2.000037	6.666789
S 182.034 {485}	03/23/2022 11:00:21	03/22/2022 13:26:34	Curvili	1/Var	0.000007	0.000000	0.000000	1.000000	0.999410	0.000011	3.340223	11.134078
Hg 184.950 {482}	03/23/2022 11:00:21	03/22/2022 12:44:38	Linear	1/Conc	0.000002	0.000003	0.000000	1.000000	1.000000	0.000000	0.559003	1.863344
Ce 404.076 { 83}	03/23/2022 11:00:21	03/22/2022 12:44:38	Linear	1/Conc	0.000018	0.000001	0.000000	1.000000	1.000000	0.000000	7.076566	23.588552

	Element, Wavelength and Order	Status	Reslope		QC Norm	
			Slope	Y-int	Slope factor	Offset
	Sb 217.581 {455}	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	OK.	1.000000	0.000000	1	0
	Se 206.279 {463}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {476}	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	OK.	1.000000	0.000000	1	0
	V 290.882 {116}	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	OK.	1.000000	0.000000	1	0
	Zn 206.200 {463}	OK.	1.000000	0.000000	1	0
	Zn 213.856 {457}	OK.	1.000000	0.000000	1	0
	Y 224.306 {450}*	Warnin	1.000000	0.000000	1	0
	Y 324.228 {104}*	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	Warnin	1.000000	0.000000	1	0
	Na 330.237 {102}	OK.	1.000000	0.000000	1	0
	Na 588.995 { 57}	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	OK.	1.000000	0.000000	1	0
	Si 212.412 {458}	OK.	1.000000	0.000000	1	0
	Si 251.611 {134}	OK.	1.000000	0.000000	1	0
	Ti 323.452 {104}	OK.	1.000000	0.000000	1	0
	Ti 334.941 {101}	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	OK.	1.000000	0.000000	1	0
	Sr 421.552 { 80}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {477}	OK.	1.000000	0.000000	1	0
	Sn 189.989 {478}	OK.	1.000000	0.000000	1	0
	B 249.678 {135}	OK.	1.000000	0.000000	1	0
	B 249.773 {135}	OK.	1.000000	0.000000	1	0
	Li 610.353 { 55}	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	OK.	1.000000	0.000000	1	0
	K 769.896 { 44}	OK.	1.000000	0.000000	1	0
	P 177.495 {489}	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	OK.	1.000000	0.000000	1	0
	Hg 184.950 {482}	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	OK.	1.000000	0.000000	1	0

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	1	Ce	-0.007526	0.000000	No
Ag 338.289 {100}	☒	1	Fe	0.000097	0.000000	No
Al 167.079 {501}	☒	None				
Al 309.271 {109}	☒	None				
Al 396.152 { 85}	☒	None				
As 193.759 {474}	☒	1	Al	0.001376	0.000000	No
As 197.262 {471}	☒	1	Al	0.000027	0.000000	No
Ba 233.527 {445}	☒	1	Fe	0.000020	0.000000	No
Ba 455.403 { 74}	☒	1	Fe	0.000002	0.000000	No
Ba 493.409 { 68}	☒	1	Fe	0.000009	0.000000	No
Be 313.042 {108}	☒	1	Fe	0.000004	0.000000	No
Be 313.107 {108}	☒	1	Fe	0.000004	0.000000	No
Ca 184.006 {483}	☒	None				
Ca 315.887 {107}	☒	1	Fe	0.000000	0.000000	No
Ca 317.933 {106}	☒	None				
Ca 393.366 { 86}	☒	None				
Ca 396.847 { 85}	☒	None				
Cd 226.502 {449}	☒	1	Fe	0.000095	0.000000	No
Cd 228.802 {447}	☒	1	Fe	-0.000000	0.000000	No
Co 228.616 {447}	☒	4	Fe	0.000004	0.000000	No
			Ba	-0.001175	0.000000	No
			Ti	0.002165	0.000000	No
			Ce	-0.000069	0.000000	No
Co 238.892 {141}	☒	1	Fe	0.000226	0.000000	No
Cr 205.560 {464}	☒	1	Fe	0.000000	0.000000	No
Cr 267.716 {126}	☒	4	Fe	0.000005	0.000000	No
			Mn	0.000157	0.000000	No
			Ti	0.000100	0.000000	No
			V	-0.000002	0.000000	No
Cu 223.008 {451}	☒	2	Fe	-0.000017	0.000000	No
			Mo	0.005000	0.000000	No
Cu 224.700 {450}	☒	2	Fe	0.003134	0.000000	No
			Ni	-0.007040	0.000000	No
Cu 324.754 {104}	☒	1	Fe	0.000308	0.000000	No
Cu 327.396 {103}	☒	2	Fe	-0.000009	0.000000	No
			Mo	-0.000319	0.000000	No
Fe 234.349 {144}	☒	None				
Fe 239.562 {140}	☒	None				
Fe 259.940 {129}	☒	None				
Mg 202.582 {466}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 280.270 {120}	☒	None				
Mn 257.610 {131}	☒	1	Al	-0.000032	0.000000	No
Mn 259.373 {130}	☒	1	Fe	0.001120	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mo 202.030 {466}	☒	1	Fe	-0.000014	0.000000	No
Mo 204.598 {464}	☒	1	Fe	0.000052	0.000000	No
Ni 221.647 {452}	☒	2	Ca	-0.000003	0.000000	No
			Mg	-0.000003	0.000000	No
Ni 231.604 {445}	☒	6	Fe	-0.000045	0.000000	No
			Co	-0.000134	0.000000	No
			Mo	0.000840	0.000000	No
			Al	0.000003	0.000000	No
			Mn	0.000019	0.000000	No
			Be	-0.001918	0.000000	No
Pb 216.999 {455}	☒	3	Al	0.001866	0.000000	No
			Na	0.000000	0.000000	No
			Fe	0.002996	0.000000	No
Pb 216.999 {456}	☒	1	Al	0.004022	0.000000	No
Pb 220.353 {153}	☒	1	Fe	-0.000401	0.000000	No
Pb 220.353 {453}	☒	4	Si	0.000000	0.000000	No
			Al	-0.000023	0.000000	No
			Ni	0.000106	0.000000	No
			Mo	-0.001644	0.000000	No
Sb 206.833 {463}	☒	3	Fe	-0.000097	0.000000	No
			Cr	0.000000	0.000000	No
			Ce	0.005500	0.000000	No
Sb 217.581 {455}	☒	2	Fe	-0.000041	0.000000	No
			Ni	0.000133	0.000000	No
Se 196.090 {472}	☒	1	Fe	-0.000265	0.000000	No
Se 206.279 {463}	☒	1	Fe	0.000965	0.000000	No
Tl 190.856 {476}	☒	1	Fe	-0.000124	0.000000	No
Tl 190.856 {477}	☒	1	Fe	-0.000083	0.000000	No
V 290.882 {116}	☒	1	Fe	0.000207	0.000000	No
V 292.402 {115}	☒	6	Fe	0.000045	0.000000	No
			Cr	-0.000051	0.000000	No
			Al	0.000000	0.000000	No
			Ti	0.000420	0.000000	No
			Mo	-0.000481	0.000000	No
			Cu	-0.003767	0.000000	No
Zn 206.200 {463}	☒	1	Fe	0.000032	0.000000	No
Zn 213.856 {457}	☒	5	Fe	0.000131	0.000000	No
			Mn	0.000094	0.000000	No
			Ni	0.004500	0.000000	No
			Ti	-0.000307	0.000000	No
			Mo	0.000034	0.000000	No
Y 224.306 {450}*	☒	None				
Y 324.228 {104}*	☒	None				
Y 371.030 { 91}*	☒	None				

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Na 330.237 {102}	☒	1	Sr	-0.002100	0.000000	No
Na 588.995 { 57}	☒	1	Fe	0.000000	0.000000	No
Na 589.592 { 57}	☒	1	Fe	0.000001	0.000000	No
Si 212.412 {458}	☒	1	Fe	-0.000007	0.000000	No
Si 251.611 {134}	☒	1	Fe	-0.000177	0.000000	No
Ti 323.452 {104}	☒	2	Fe	0.000034	0.000000	No
			Ce	0.000123	0.000000	No
Ti 334.941 {101}	☒	1	Fe	0.000106	0.000000	No
Sr 407.771 { 83}	☒	1	Fe	0.000036	0.000000	No
Sr 421.552 { 80}	☒	1	Ca	0.000013	0.000000	No
Sn 189.989 {477}	☒	1	Fe	0.000029	0.000000	No
Sn 189.989 {478}	☒	1	Fe	-0.000018	0.000000	No
B 249.678 {135}	☒	1	Fe	-0.000006	0.000000	No
B 249.773 {135}	☒	1	Fe	0.000648	0.000000	No
Li 610.353 { 55}	☒	1	Fe	-0.000109	0.000000	No
Li 670.784 { 50}	☒	1	Fe	0.000012	0.000000	No
K 766.490 { 44}	☒	1	Fe	0.000003	0.000000	No
K 769.896 { 44}	☒	1	Fe	0.000001	0.000000	No
P 177.495 {489}	☒	None				
S 182.034 {485}	☒	2	Mn	0.002145	0.000000	No
			Fe	0.000008	0.000000	No
Hg 184.950 {482}	☒	1	Fe	-0.000000	0.000000	No
Ce 404.076 { 83}	☒	1	Fe	0.000227	0.000000	No

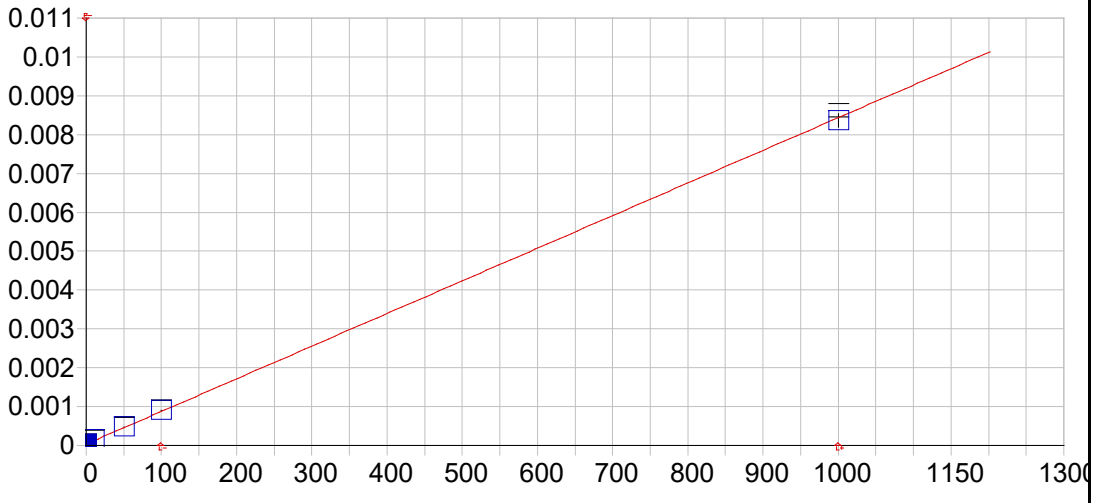


Ag 328.068 {103}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999121	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.347942		
Predicted MQL:	1.159807		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00056	-.001	.000	-.00000	.000	1
CalStd8=100	100.00	107.83	7.83	7.83	.00027	.000	1
CalStd4=5	5.0000	5.7726	.773	15.5	.00001	.000	1
CalStd5=10	10.000	13.383	3.38	33.8	.00003	.000	1
CalStd3=1	1.0000	.99950	-.001	-.050	-.00000	.000	1
CalStd6=20	20.000	19.584	-.416	-2.08	.00005	.000	1
CalStd7=50	50.000	51.340	1.34	2.68	.00013	.000	1
Ag Ba 1000,	1000.0	987.09	-12.9	-1.29	.00254	.000	1

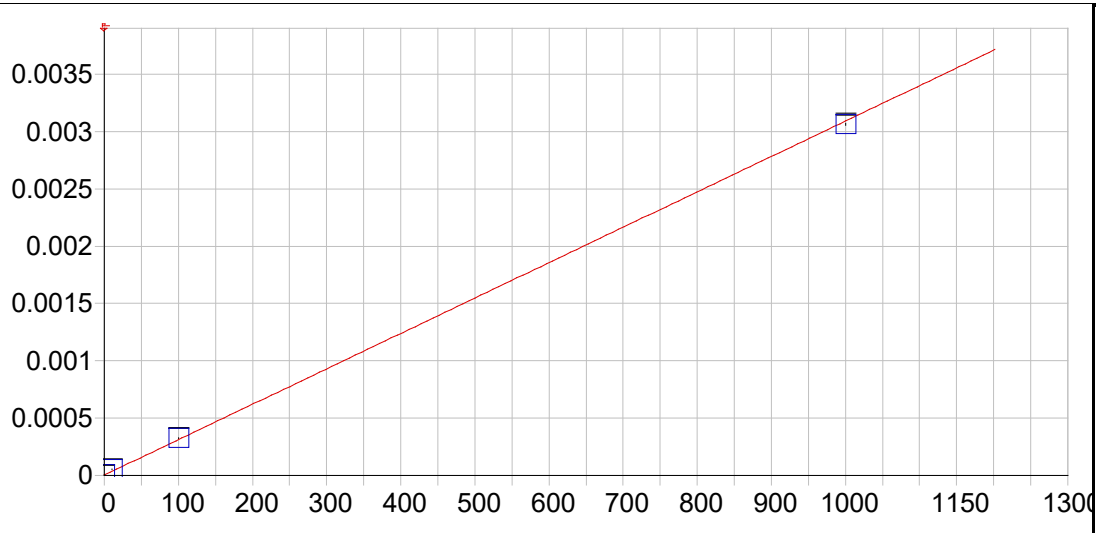


Ag 338.289 {100}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000036	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999429	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.480600		
Predicted MQL:	1.601999		

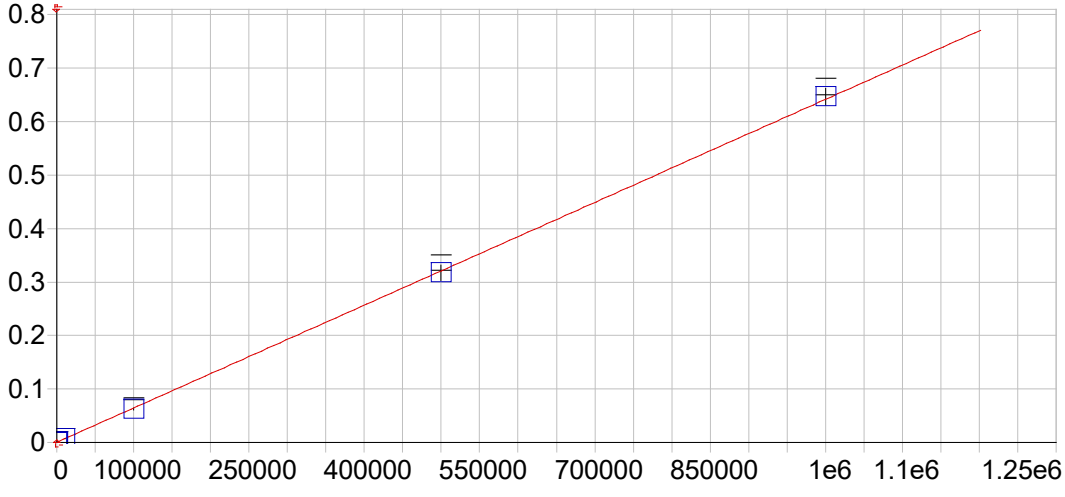
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00390	-.004	.000	.00004	.000	1
Ag Ba 1000,	1000.0	991.39	-8.61	-.861	.00836	.000	1
CalStd5=10	10.000	13.251	3.25	32.5	.00015	.000	1
CalStd7=50	50.000	52.005	2.00	4.01	.00047	.000	1
CalStd8=100	100.00	103.36	3.36	3.36	.00090	.000	1



Al 167.079 {501}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000004		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998294		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.332418				
Predicted MQL:	1.108060				

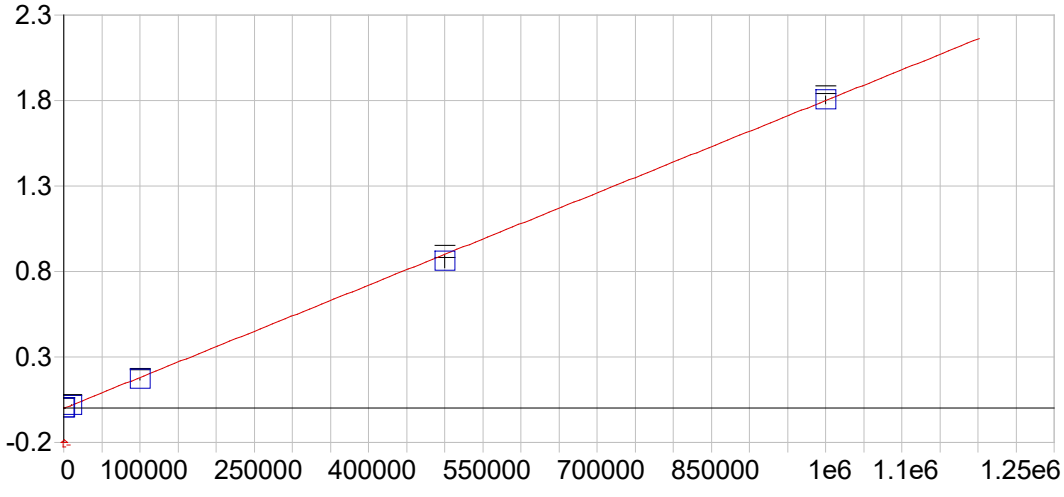
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00624	-.006	.000	.00000	.000	1
CalStd9=100	1000.0	990.13	-9.87	-.987	.00306	.000	1
CalStd5=10	10.000	15.951	5.95	59.5	.00005	.000	1
CalStd8=100	100.00	103.92	3.92	3.92	.00032	.000	1



Al 309.271 {109}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000208		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999935		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	5.736113				
Predicted MQL:	19.120377				

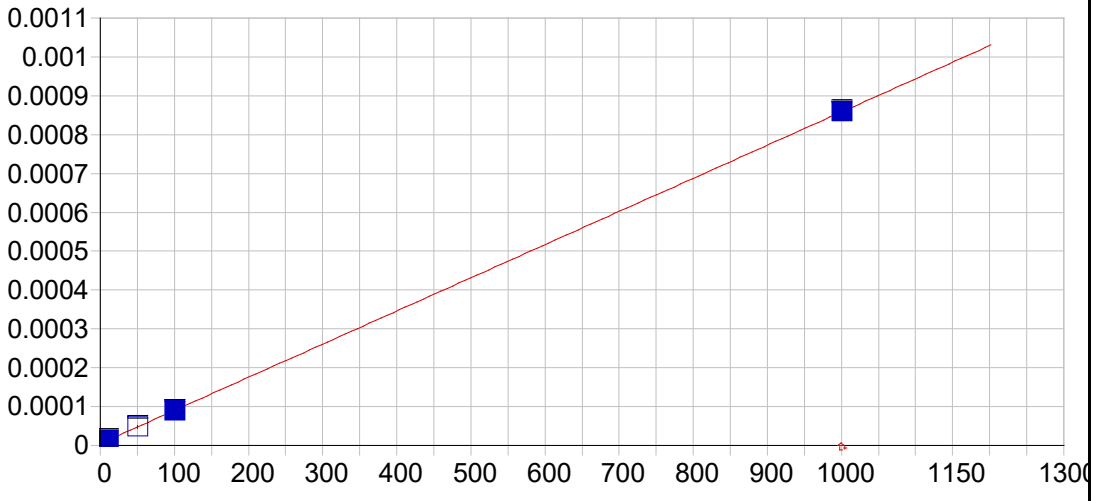
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00226	.002	.000	.00021	.000	1
CalStd9=100	1000.0	1091.9	91.9	9.19	.00091	.000	1
CalStd5=10	10.000	6.1333	-3.87	-38.7	.00021	.000	1
CalStd8=100	100.00	107.28	7.28	7.28	.00028	.000	1
CalStd10=10	10000.	10261.	261.	2.61	.00679	.000	1
CalStd13=10	100000.	97224.	-2780.	-2.78	.06256	.001	1
CalStd14=50	500000.	494740.	-5260.	-1.05	.31749	.014	1
CalibStd15=	1000000.	1007700.	7680.	.768	.64645	.016	1



Al 396.152 { 85}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999210		Status:	OK.	
Std Error of Est:	0.000026				
Predicted MDL:	3.224772				
Predicted MQL:	10.749240				

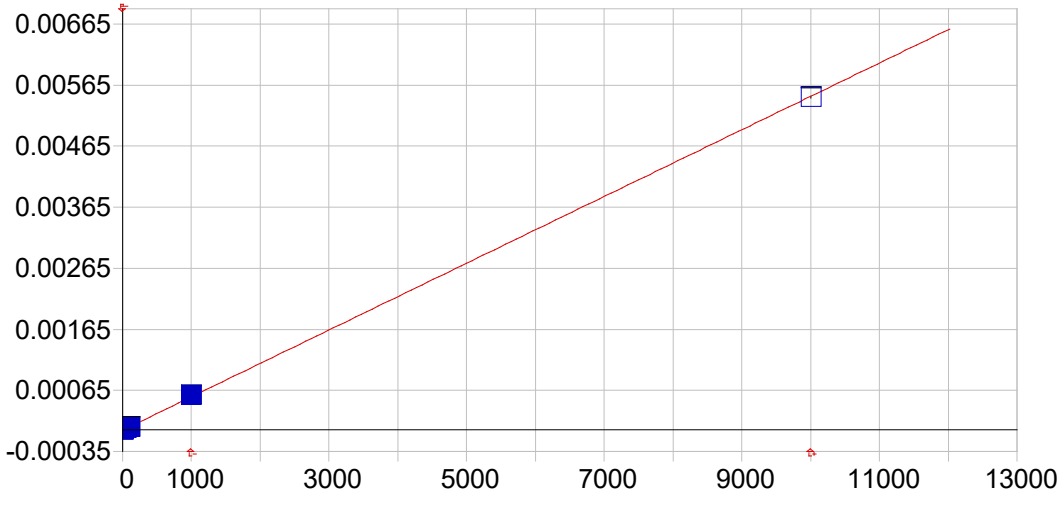
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.89156	-.892	.000	.00000	.000	1
CalStd14=50	500000.	476990.	-23000.	-4.60	.85856	.036	1
CalStd13=10	100000.	93842.	-6160.	-6.16	.16891	.004	1
CalStd10=10	10000.	10065.	65.0	.650	.01812	.000	1
CalStd9=100	1000.0	1081.8	81.8	8.18	.00195	.000	1
CalibStd15=	1000000.	1002400.	2370.	.237	1.8042	.024	1



As 193.759 {474}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999991		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	2.630801				
Predicted MQL:	8.769335				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00006	-.000	.000	.00000	.000	1
CalStd9=100	1000.0	1001.1	1.14	.114	.00086	.000	1
CalStd7=50	50.000	49.972	-.028	-.056	.00005	.000	1
CalStd5=10	10.000	10.185	.185	1.85	.00001	.000	1
CalStd8=100	100.00	98.702	-1.30	-1.30	.00009	.000	1

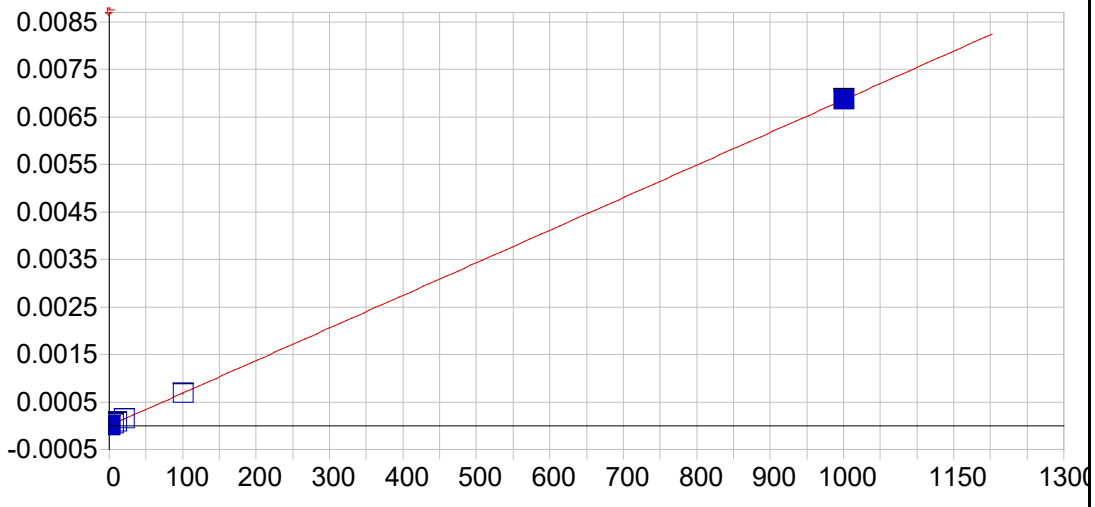


As 197.262 {471}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999911	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.703974		
Predicted MQL:	12.346581		

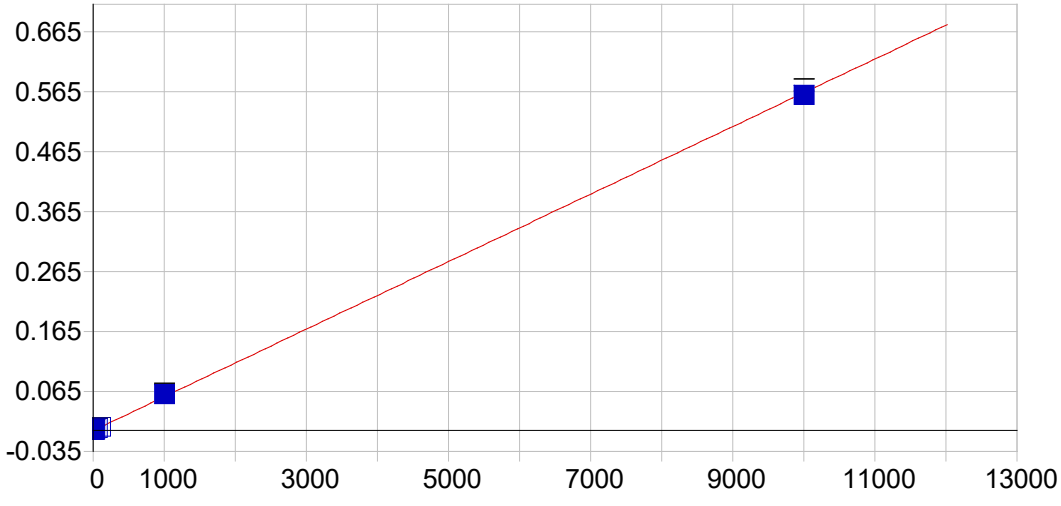
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00103	-.001	.000	-.00000	.000	1
CalStd9=100	1000.0	1036.1	36.1	3.61	.00057	.000	1
CalStd7=50	50.000	47.225	-2.78	-5.55	.00002	.000	1
CalStd5=10	10.000	11.648	1.65	16.5	.00001	.000	1
CalStd8=100	100.00	96.080	-3.92	-3.92	.00005	.000	1
CalStd10=10	10000.	9969.0	-31.0	-.310	.00545	.000	1



Ba 233.527 {445}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000007		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999970		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.275005				
Predicted MQL:	0.916682				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00004	.000	.000	.00000	.000	1
CalStd5=10	10.000	10.268	.268	2.68	.00007	.000	1
CalStd6=20	20.000	20.671	.671	3.35	.00014	.000	1
CalStd8=100	100.00	98.717	-1.28	-1.28	.00068	.000	1
CalStd4=5	5.0000	5.1850	.185	3.70	.00004	.000	1
CalStd9=100	1000.0	1000.3	.284	.028	.00686	.000	1
CalStd3=1	1.0000	.87591	-.124	-12.4	.00001	.000	1

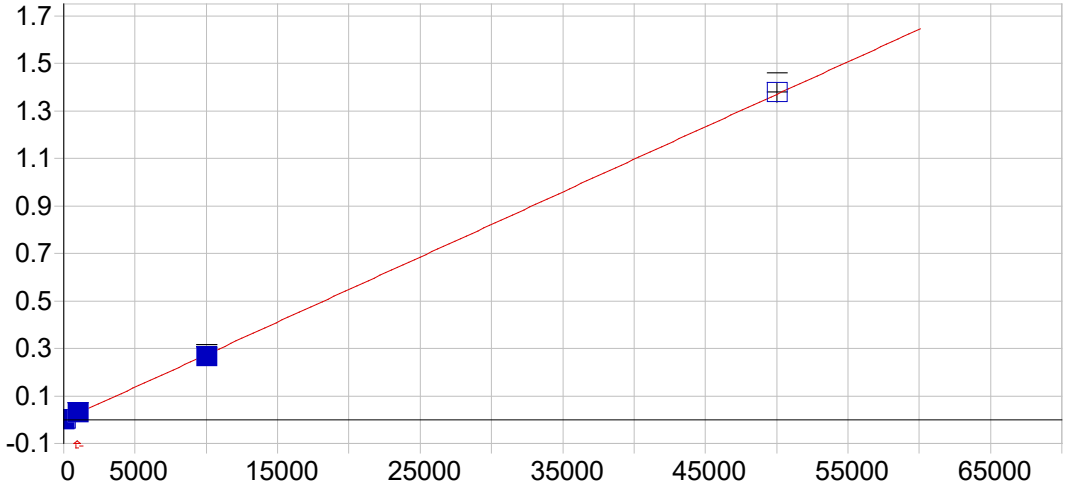


Ba 455.403 { 74}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000049	Re-Slope:	1.000000
A1 (Gain):	0.000056	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999727	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.083668		
Predicted MQL:	0.278895		

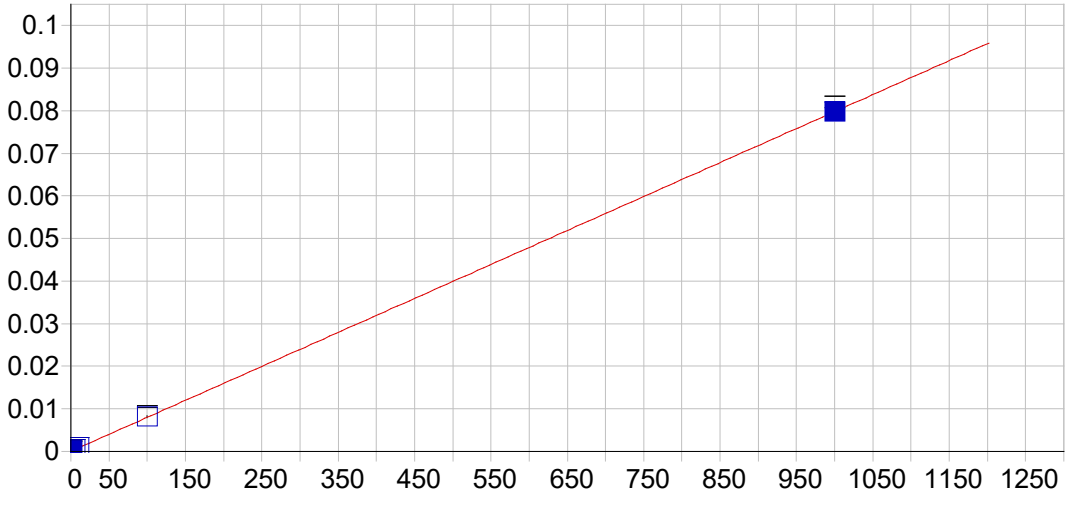
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00066	-.001	.000	-.00005	.000	1
CalStd7=50	50.000	53.319	3.32	6.64	.00295	.000	1
CalStd5=10	10.000	10.924	.924	9.24	.00057	.000	1
CalStd6=20	20.000	22.196	2.20	11.0	.00120	.000	1
CalStd8=100	100.00	105.11	5.11	5.11	.00587	.000	1
CalStd4=5	5.0000	5.6091	.609	12.2	.00027	.000	1
CalStd9=100	1000.0	1067.6	67.6	6.76	.06005	.002	1
CalStd3=1	1.0000	1.1562	.156	15.6	.00002	.000	1
CalStd10=10	10000.	9920.1	-79.9	-.799	.55841	.010	1



Ba 493.409 { 68}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000229		Re-Slope:	1.000000	
A1 (Gain):	0.000027		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999914		Status:	OK.	
Std Error of Est:	0.000036				
Predicted MDL:	0.476328				
Predicted MQL:	1.587759				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00517	-.005	.000	-.00023	.000	1
CalStd9=100	1000.0	1045.3	45.3	4.53	.02841	.001	1
CalStd8=100	100.00	102.90	2.90	2.90	.00259	.000	1
Ag Ba 1000,	50000.	50223.	223.	.447	1.3758	.040	1
CalStd10=10	10000.	9728.5	-272.	-2.72	.26631	.007	1

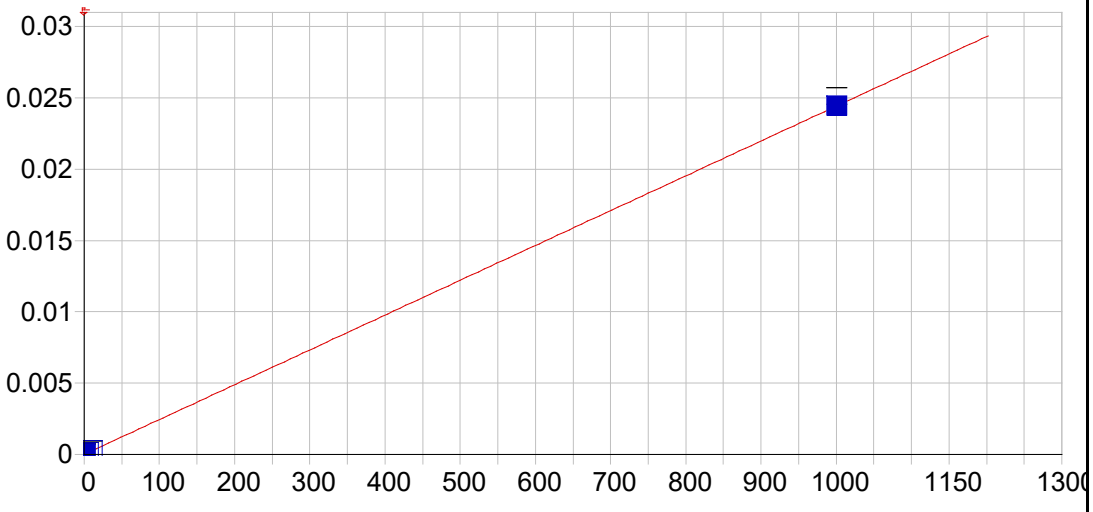


Be 313.042 {108}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000024	Re-Slope:	1.000000
A1 (Gain):	0.000080	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999975	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.010679		
Predicted MQL:	0.035596		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00003	-.000	.000	.00002	.000	1
CalStd5=10	10.000	10.583	.583	5.83	.00087	.000	1
CalStd8=100	100.00	101.35	1.35	1.35	.00811	.000	1
CalStd2=0.5	.50000	.49390	-.006	-1.22	.00006	.000	1
CalStd4=5	5.0000	5.0522	.052	1.04	.00043	.000	1
CalStd9=100	1000.0	998.02	-1.98	-.198	.07965	.001	1
CalStd3=1	1.0000	1.0016	.002	.157	.00010	.000	1

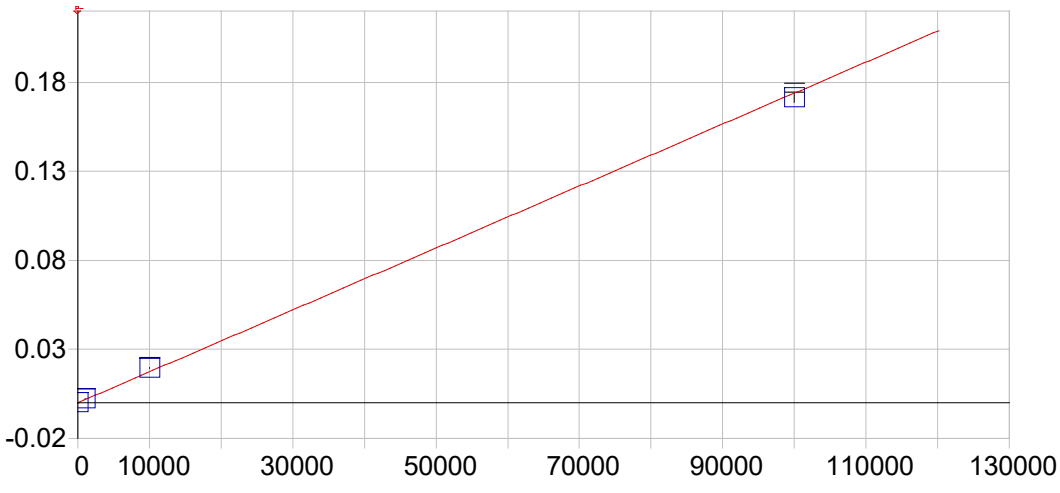


Be 313.107 {108}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000024	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.083877		
Predicted MQL:	0.279588		

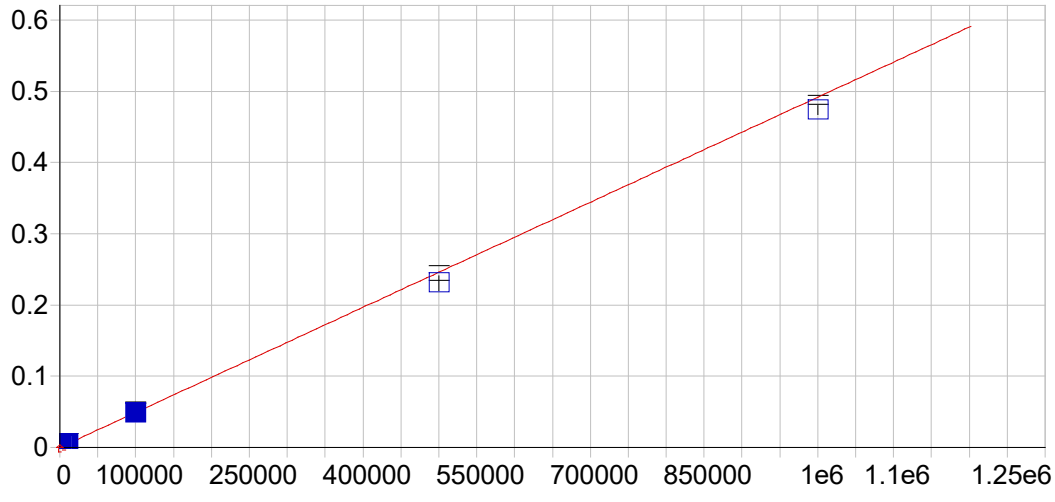
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00001	.000	.000	.00001	.000	1
CalStd5=10	10.000	10.061	.061	.614	.00025	.000	1
CalStd2=0.5	.50000	.45838	-.042	-8.32	.00002	.000	1
CalStd4=5	5.0000	5.1655	.165	3.31	.00013	.000	1
CalStd9=100	1000.0	999.79	-.208	-.021	.02442	.001	1
CalStd3=1	1.0000	1.0224	.022	2.24	.00003	.000	1



Ca 184.006 {483}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000019		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998952		Status:	OK.	
Std Error of Est:	0.000038				
Predicted MDL:	1.105371				
Predicted MQL:	3.684568				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.33978	-.340	.000	-.00002	.000	1
CalStd10=10	10000.	11259.	1260.	12.6	.01956	.000	1
CalStd13=10	100000.	98513.	-1490.	-1.49	.17134	.002	1
CalStd9=100	1000.0	1228.8	229.	22.9	.00212	.000	1

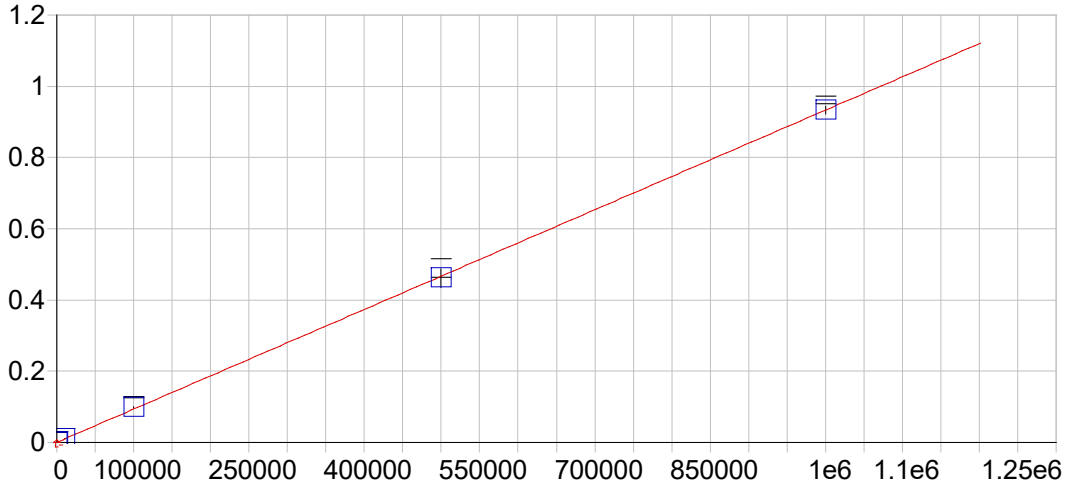


Ca 315.887 {107}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000038	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998332	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	2.919381		
Predicted MQL:	9.731270		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.2480	-3.25	.000	.00004	.000	1
CalStd10=10	10000.	10570.	570.	5.70	.00523	.000	1
CalStd13=10	100000.	97498.	-2500.	-2.50	.04797	.001	1
CalStd14=50	500000.	469110.	-30900.	-6.18	.23068	.011	1
CalStd9=100	1000.0	1123.8	124.	12.4	.00059	.000	1
CalibStd15=	1000000.	962840.	-37200.	-3.72	.47341	.006	1

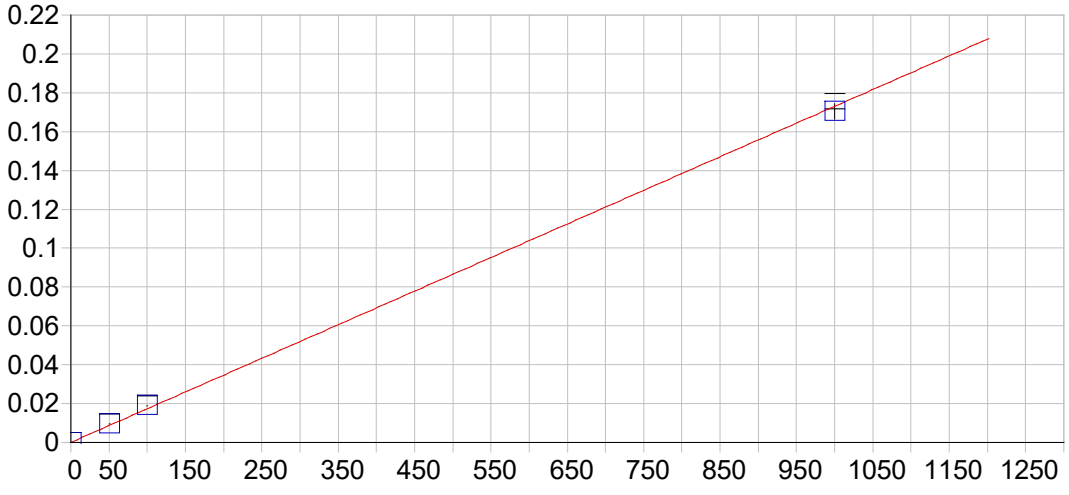


Ca 317.933 {106}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000275	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999839	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	2.026464		
Predicted MQL:	6.754879		

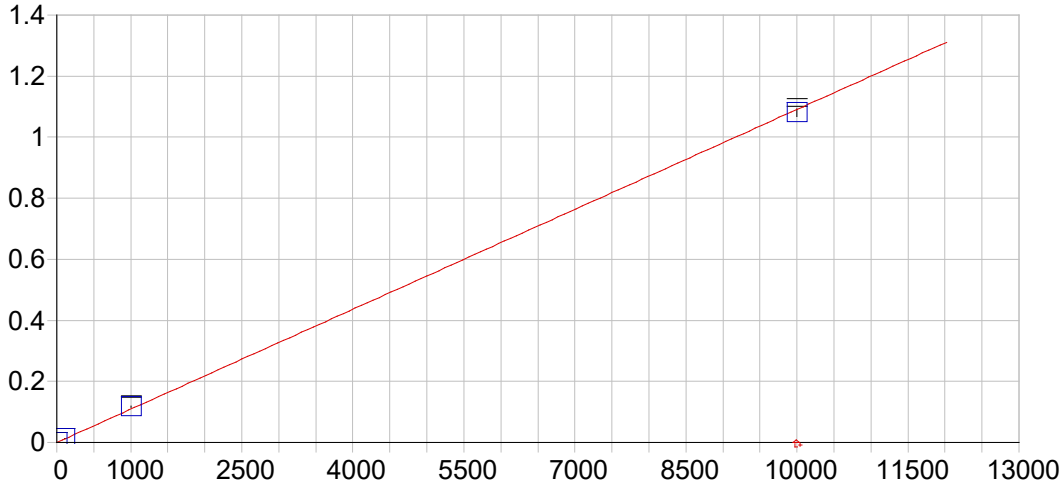
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.39780	-.398	.000	.00027	.000	1
CalStd10=10	10000.	11381.	1380.	13.8	.01089	.000	1
CalStd13=10	100000.	104560.	4560.	4.56	.09783	.002	1
CalStd14=50	500000.	494070.	-5930.	-1.19	.46126	.026	1
CalStd9=100	1000.0	1226.2	226.	22.6	.00142	.000	1
CalibStd15=	1000000.	999760.	-238.	-.024	.93308	.011	1



Ca 393.366 { 86}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000038		Re-Slope:	1.000000	
A1 (Gain):	0.000173		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999246		Status:	OK.	
Std Error of Est:	0.000072				
Predicted MDL:	0.021747				
Predicted MQL:	0.072491				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00944	-.009	.000	.00004	.000	1
CalStd9=100	1000.0	984.98	-15.0	-1.50	.17041	.004	1
CalStd8=100	100.00	109.65	9.65	9.65	.01900	.000	1
CalStd7=50	50.000	55.365	5.36	10.7	.00961	.000	1

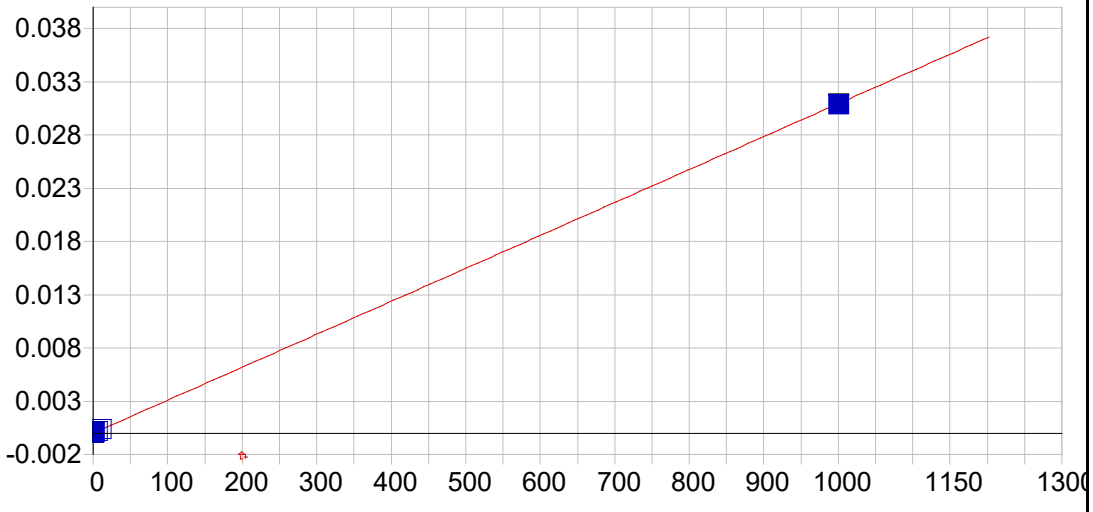


Ca 396.847 { 85}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000016	Re-Slope:	1.000000
A1 (Gain):	0.000109	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999513	Status:	OK.
Std Error of Est:	0.000160		
Predicted MDL:	0.038251		
Predicted MQL:	0.127503		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.02747	-.027	.000	.00001	.000	1
CalStd10=10	10000.	9904.9	-95.1	-.951	1.0804	.013	1
CalStd8=100	100.00	121.00	21.0	21.0	.01321	.000	1
CalStd9=100	1000.0	1074.1	74.1	7.41	.11718	.003	1

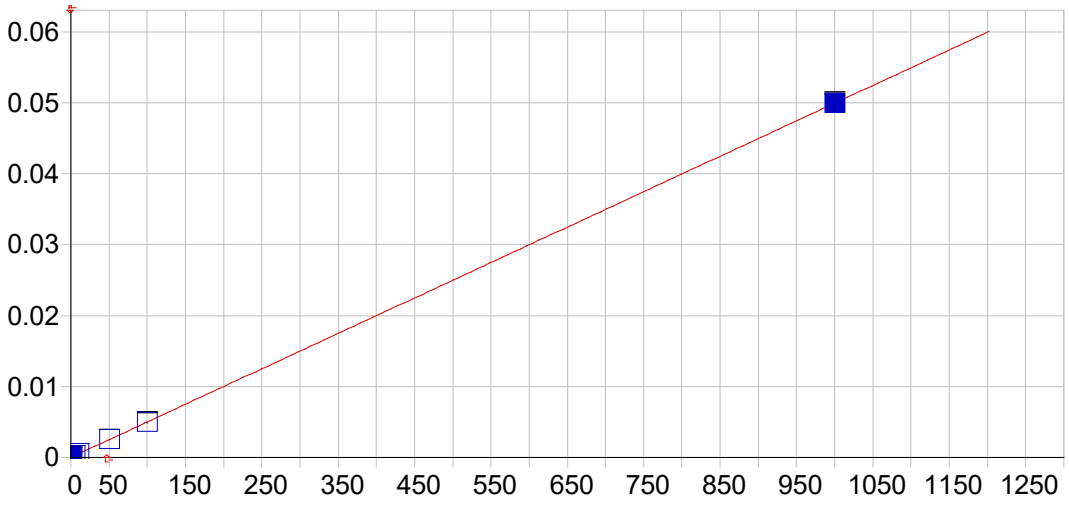


Cd 226.502 {449}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000031	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999877	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.096404		
Predicted MQL:	0.321346		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.07924	-.079	.000	-.00000	.000	1
CalStd3=1	1.0000	.95373	-.046	-4.63	.00003	.000	1
CalStd2=0.5	.50000	.38370	-.116	-23.3	.00001	.000	1
CalStd4=5	5.0000	4.9944	-.006	-.113	.00015	.000	1
CalStd5=10	10.000	10.603	.603	6.03	.00033	.000	1
CalStd9=100	1000.0	996.54	-3.46	-.346	.03085	.000	1

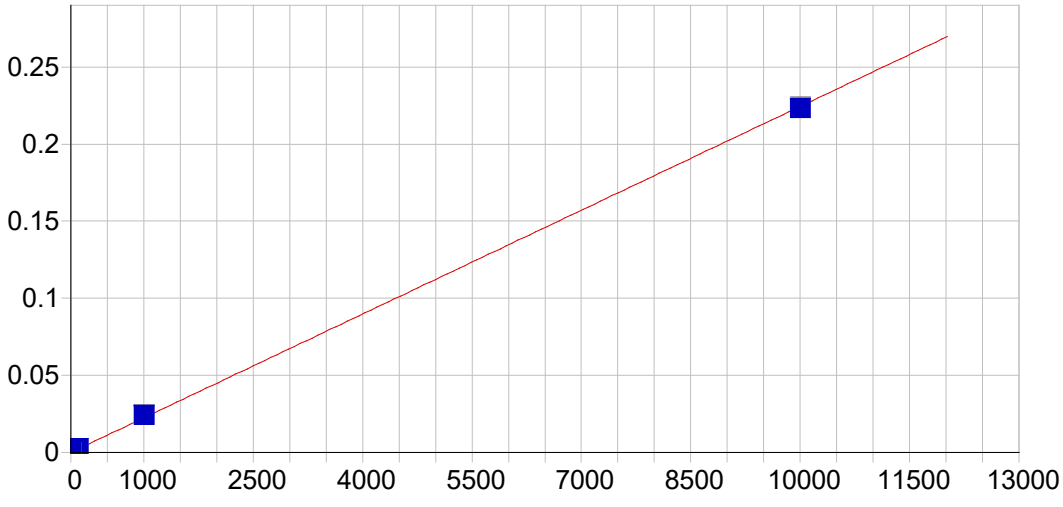


Cd 228.802 {447}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000050	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999923	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.095377		
Predicted MQL:	0.317922		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00019	-.000	.000	.00001	.000	1
CalStd7=50	50.000	50.695	.695	1.39	.00254	.000	1
CalStd3=1	1.0000	1.0777	.078	7.77	.00006	.000	1
CalStd2=0.5	.50000	.57554	.076	15.1	.00004	.000	1
CalStd4=5	5.0000	5.1572	.157	3.14	.00026	.000	1
CalStd8=100	100.00	98.685	-1.32	-1.32	.00493	.000	1
CalStd5=10	10.000	11.139	1.14	11.4	.00056	.000	1
CalStd9=100	1000.0	999.17	-.830	-.083	.04990	.000	1

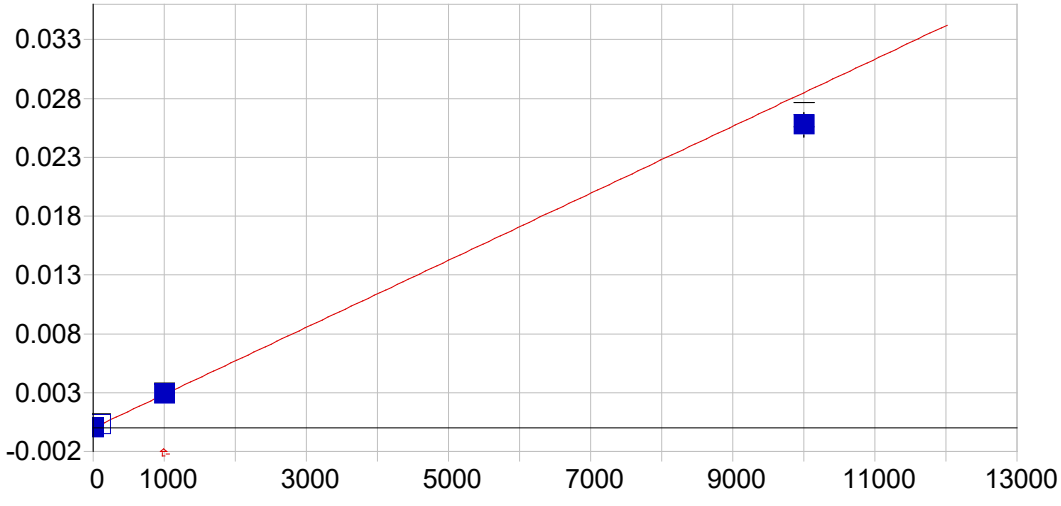


Co 228.616 {447}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000022	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999779	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.153569		
Predicted MQL:	0.511896		

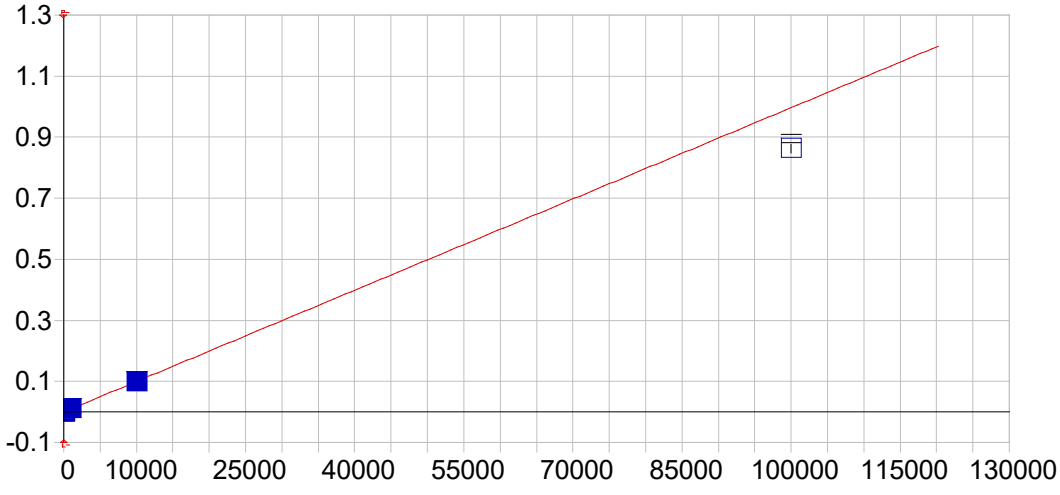
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00044	-.000	.000	.00000	.000	1
CalStd7=50	50.000	53.859	3.86	7.72	.00121	.000	1
CalStd5=10	10.000	11.147	1.15	11.5	.00025	.000	1
CalStd4=5	5.0000	5.3120	.312	6.24	.00012	.000	1
CalStd8=100	100.00	105.39	5.39	5.39	.00237	.000	1
CalStd9=100	1000.0	1060.8	60.8	6.08	.02383	.000	1
CalStd3=1	1.0000	1.0793	.079	7.93	.00003	.000	1
CalStd10=10	10000.	9928.5	-71.5	-.715	.22330	.001	1



Co 238.892 {141}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	-0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998991		Status:	OK.	
Std Error of Est:	0.000002				
Predicted MDL:	0.198002				
Predicted MQL:	0.660008				

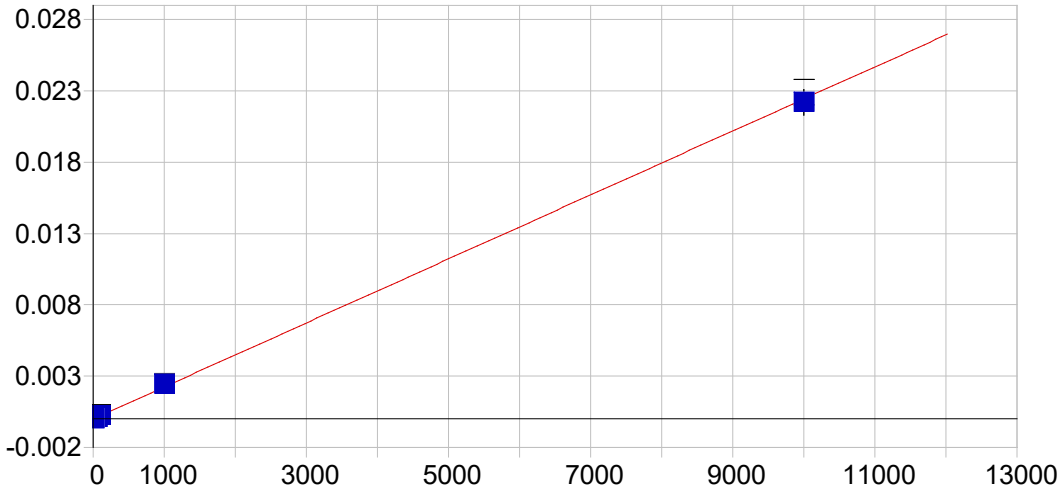
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00824	-.008	.000	-.00000	.000	1
CalStd9=100	1000.0	1006.6	6.64	.664	.00287	.000	1
CalStd10=10	10000.	9039.2	-961.	-9.61	.02575	.001	1
CalStd8=100	100.00	105.23	5.23	5.23	.00030	.000	1



Cr 205.560 {464}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	-0.000004		Re-Slope:	1.000000	
A1 (Gain):	0.000010		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999490		Status:	OK.	
Std Error of Est:	0.000011				
Predicted MDL:	0.239250				
Predicted MQL:	0.797499				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.21969	-.220	.000	-.00001	.000	1
CalStd5=10	10.000	10.569	.569	5.69	.00010	.000	1
CalStd7=50	50.000	52.555	2.56	5.11	.00052	.000	1
CalStd9=100	1000.0	1050.8	50.8	5.08	.01047	.000	1
CalStd8=100	100.00	103.21	3.21	3.21	.00102	.000	1
CalStd4=5	5.0000	4.9561	-.044	-.878	.00005	.000	1
CalStd3=1	1.0000	.84547	-.155	-15.5	.00000	.000	1
CalStd10=10	10000.	9862.9	-137.	-1.37	.09828	.000	1
CalStd12=10	100000.	86548.	-13500.	-13.5	.86246	.014	1

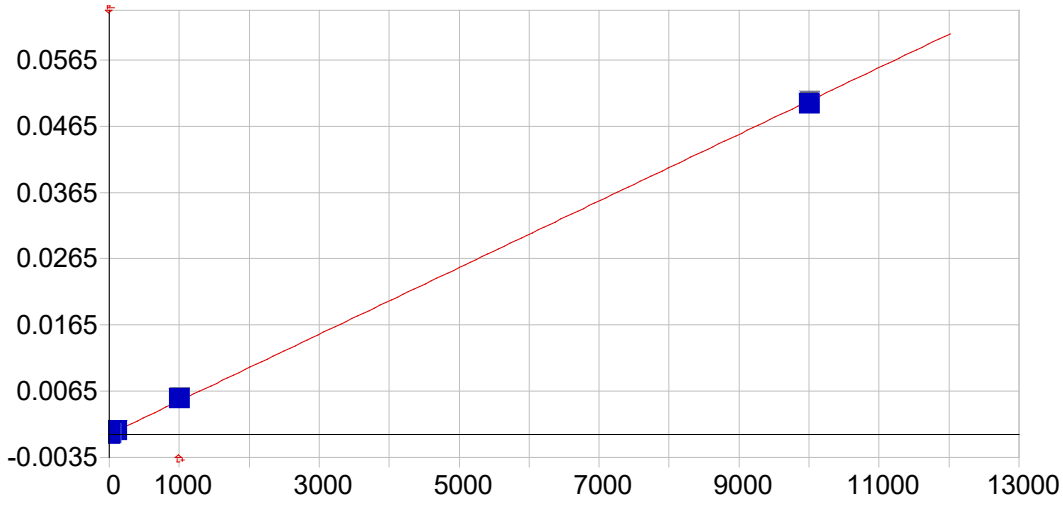


Cr 267.716 {126}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999499	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.339760		
Predicted MQL:	1.132535		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00252	-.003	.000	-.00000	.000	1
CalStd5=10	10.000	11.209	1.21	12.1	.00002	.000	1
CalStd7=50	50.000	54.197	4.20	8.39	.00012	.000	1
CalStd9=100	1000.0	1088.8	88.8	8.88	.00244	.000	1
CalStd8=100	100.00	112.74	12.7	12.7	.00025	.000	1
CalStd4=5	5.0000	5.4663	.466	9.33	.00001	.000	1
CalStd10=10	10000.	9892.6	-107.	-1.07	.02220	.001	1

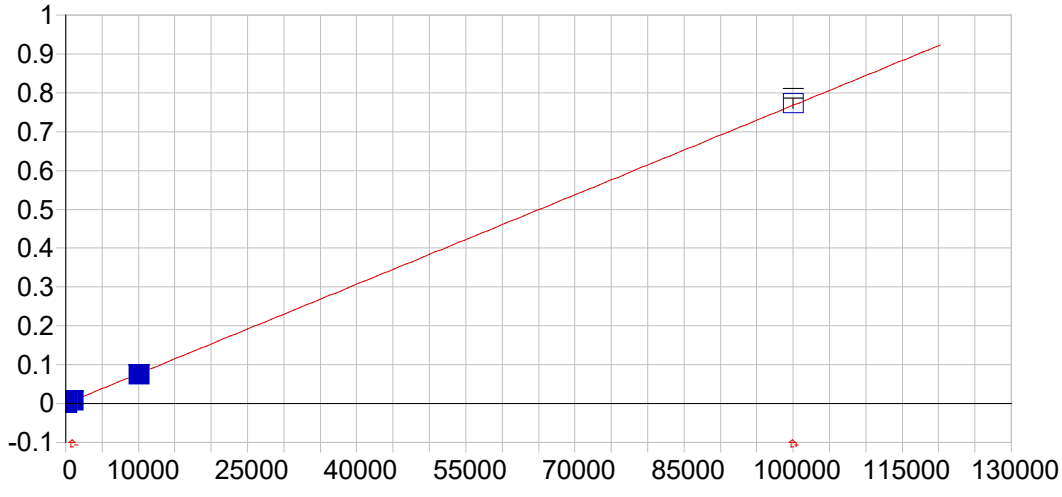


Cu 223.008 {451}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999679	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.690456		
Predicted MQL:	2.301519		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00423	-.004	.000	.00000	.000	1
CalStd9=100	1000.0	1072.6	72.6	7.26	.00542	.000	1
CalStd8=100	100.00	107.28	7.28	7.28	.00054	.000	1
CalStd6=20	20.000	23.320	3.32	16.6	.00012	.000	1
CalStd5=10	10.000	11.202	1.20	12.0	.00006	.000	1
CalStd10=10	10000.	9915.6	-84.4	-.844	.05014	.000	1

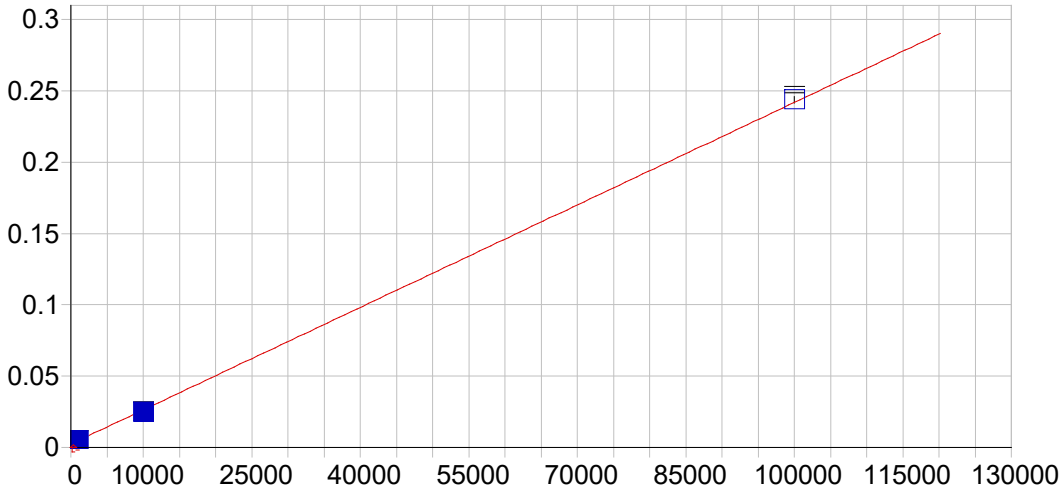


Cu 224.700 {450}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999528	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.278565		
Predicted MQL:	0.928551		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.04340	.043	.000	-.00000	.000	1
CalStd9=100	1000.0	967.56	-32.4	-3.24	.00740	.000	1
CalStd7=50	50.000	13.700	-36.3	-72.6	.00010	.000	1
CalStd8=100	100.00	34.885	-65.1	-65.1	.00026	.000	1
CalStd6=20	20.000	5.5886	-14.4	-72.1	.00004	.000	1
CalStd12=10	100000.	100600.	604.	.604	.77232	.013	1
CalStd10=10	10000.	9541.4	-459.	-4.59	.07295	.000	1

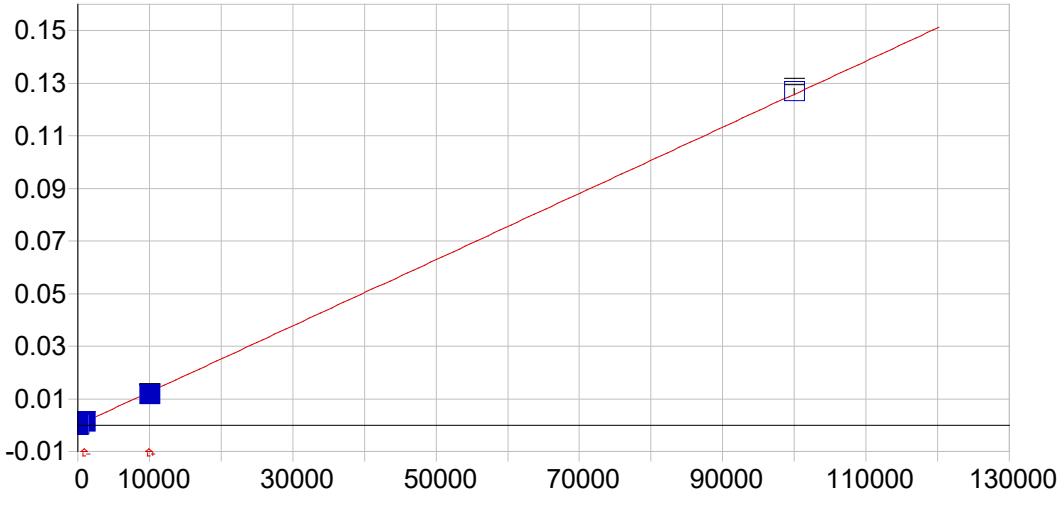


Cu 324.754 {104}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002369	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998747	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	1.283693		
Predicted MQL:	4.278977		

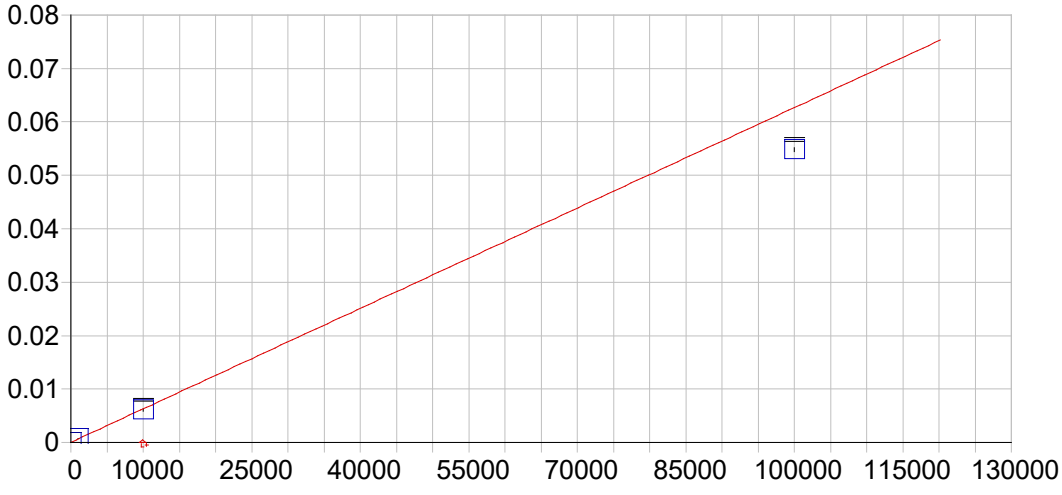
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.05734	.057	.000	.00237	.000	1
CalStd9=100	1000.0	939.21	-60.8	-6.08	.00462	.000	1
CalStd8=100	100.00	81.167	-18.8	-18.8	.00256	.000	1
CalStd10=10	10000.	9329.5	-670.	-6.70	.02473	.000	1
CalStd12=10	100000.	100830.	833.	.833	.24392	.002	1
CalStd5=10	10.000	-34.534	-44.5	-445.	.00229	.000	1
CalStd6=20	20.000	12.825	-7.18	-35.9	.00240	.000	1
CalStd7=50	50.000	19.285	-30.7	-61.4	.00242	.000	1



Cu 327.396 {103}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999709		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	3.210453				
Predicted MQL:	10.701509				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00517	-.005	.000	.00000	.000	1
CalStd6=20	20.000	21.154	1.15	5.77	.00003	.000	1
CalStd7=50	50.000	52.321	2.32	4.64	.00007	.000	1
CalStd8=100	100.00	99.291	-.709	-.709	.00013	.000	1
CalStd9=100	1000.0	997.35	-2.65	-.265	.00126	.000	1
CalStd10=10	10000.	9256.0	-744.	-7.44	.01164	.000	1
CalStd4=5	5.0000	9.2333	4.23	84.7	.00001	.000	1
CalStd5=10	10.000	11.593	1.59	15.9	.00002	.000	1
CalStd12=10	100000.	100740.	738.	.738	.12677	.001	1

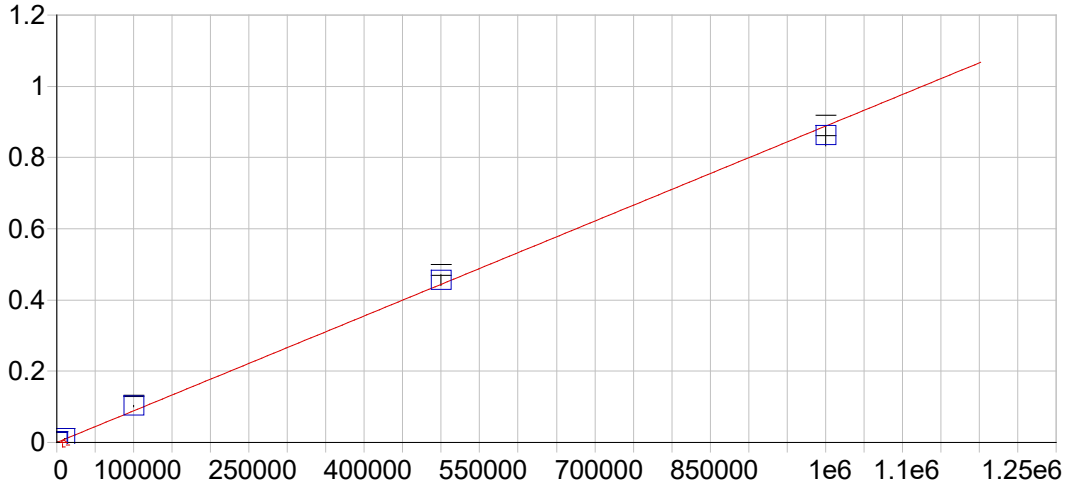


Fe 234.349 {144}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000024	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999935	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.463600		
Predicted MQL:	1.545334		

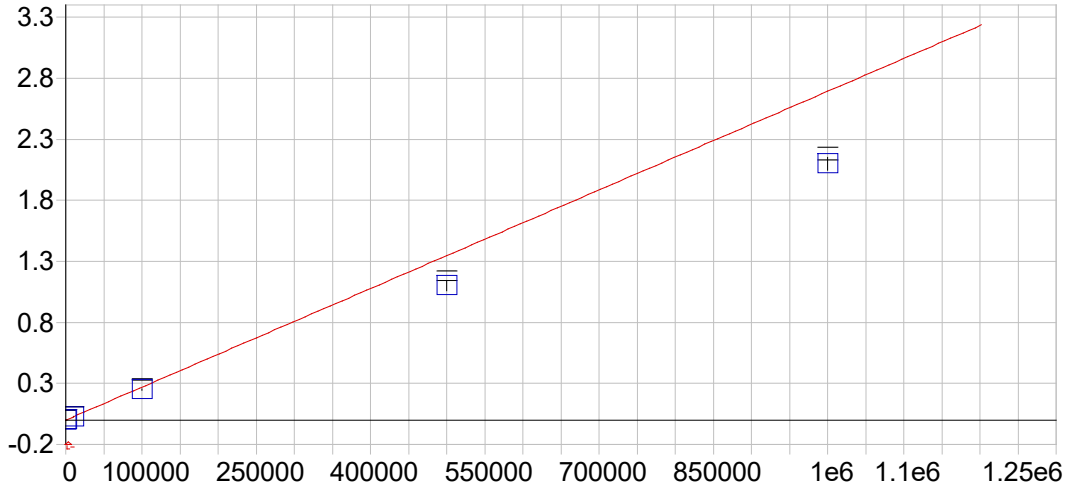
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.08955	-.090	.000	.00002	.000	1
CalStd10=10	10000.	9763.4	-237.	-2.37	.00614	.000	1
CalStd13=10	100000.	87408.	-12600.	-12.6	.05478	.000	1
CalStd9=100	1000.0	1099.2	99.2	9.92	.00071	.000	1



Fe 239.562 {140}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998759		Status:	OK.	
Std Error of Est:	0.000069				
Predicted MDL:	1.742909				
Predicted MQL:	5.809697				

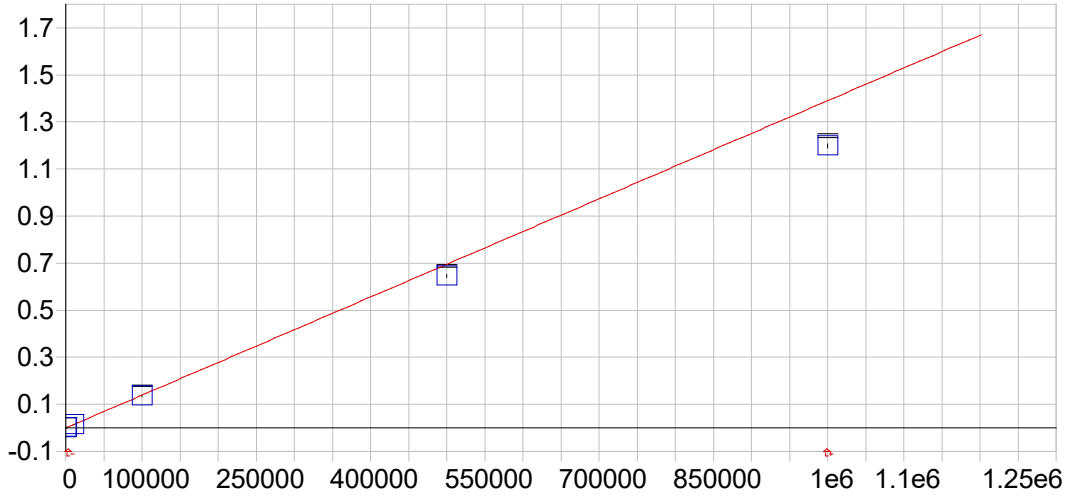
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.67783	-.678	.000	.00000	.000	1
CalStd10=10	10000.	12229.	2230.	22.3	.01086	.000	1
CalStd13=10	100000.	114630.	14600.	14.6	.10180	.002	1
CalStd14=50	500000.	513210.	13200.	2.64	.45575	.015	1
CalStd9=100	1000.0	1312.6	313.	31.3	.00117	.000	1
CalibStd15=	1000000.	969630.	-30400.	-3.04	.86107	.029	1



Fe 259.940 {129}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Var
A0 (Offset):	-0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998790		Status:	OK.	
Std Error of Est:	0.000008				
Predicted MDL:	0.714451				
Predicted MQL:	2.381503				

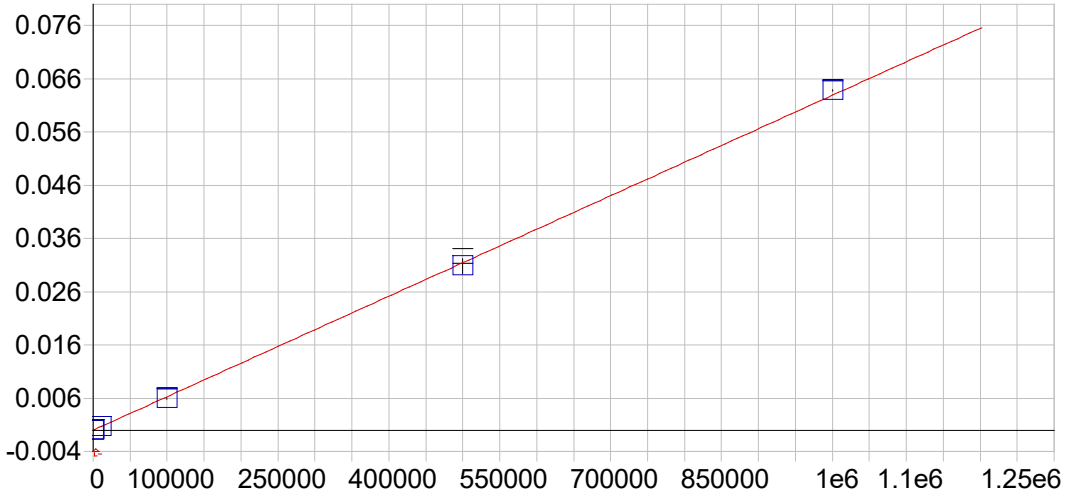
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.02755	-.028	.000	-.00000	.000	1
CalStd10=10	10000.	10061.	61.5	.615	.02709	.001	1
CalStd13=10	100000.	93356.	-6640.	-6.64	.25134	.005	1
CalStd14=50	500000.	408140.	-91900.	-18.4	1.0988	.038	1
CalStd9=100	1000.0	1080.0	80.0	8.00	.00291	.000	1
CalibStd15=	1000000.	779840.	-220000.	-22.0	2.0996	.052	1



Mg 202.582 {466}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	-0.000006		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999957		Status:	OK.	
Std Error of Est:	0.000021				
Predicted MDL:	1.857899				
Predicted MQL:	6.192996				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.26938	-.269	.000	-.00001	.000	1
CalStd13=10	100000.	98255.	-1750.	-1.75	.13661	.003	1
CalStd10=10	10000.	10805.	805.	8.05	.01502	.000	1
CalStd14=50	500000.	463790.	-36200.	-7.24	.64484	.005	1
CalStd9=100	1000.0	1192.9	193.	19.3	.00165	.000	1
CalibStd15=	1000000.	861370.	-139000.	-13.9	1.1976	.008	1

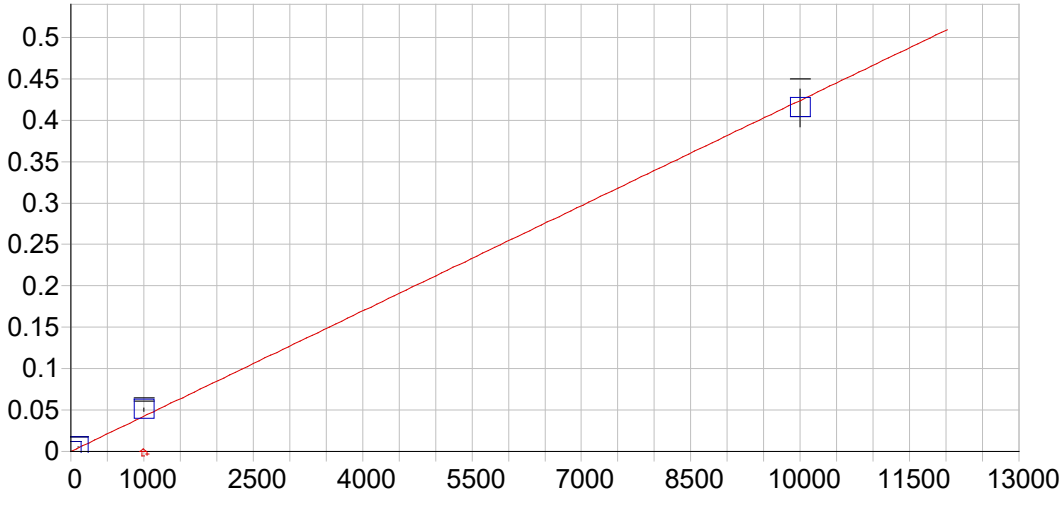


Mg 279.079 {121}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999804	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	13.183103		
Predicted MQL:	43.943675		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.03936	-.039	.000	.00000	.000	1
CalStd13=10	100000.	95068.	-4930.	-4.93	.00598	.000	1
CalStd10=10	10000.	10207.	207.	2.07	.00064	.000	1
CalStd14=50	500000.	490550.	-9450.	-1.89	.03086	.001	1
CalStd9=100	1000.0	1072.7	72.7	7.27	.00007	.000	1
CalibStd15=	1000000.	1014100.	14100.	1.41	.06380	.000	1

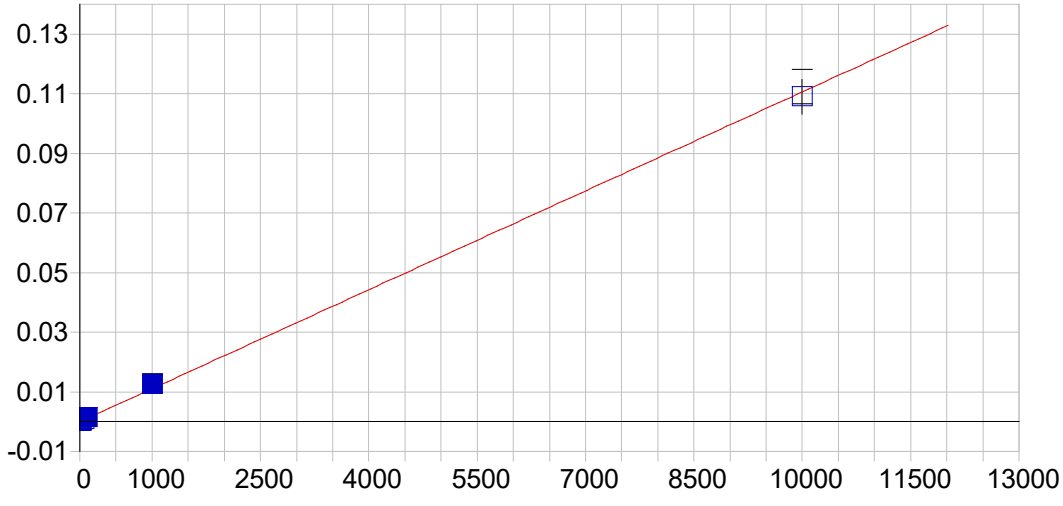


Mg 280.270 {120}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000042	Re-Slope:	1.000000
A1 (Gain):	0.000042	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997898	Status:	OK.
Std Error of Est:	0.000130		
Predicted MDL:	0.011284		
Predicted MQL:	0.037612		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.04073	-.041	.000	.00004	.000	1
CalStd9=100	1000.0	1191.1	191.	19.1	.05053	.002	1
CalStd10=10	10000.	9785.1	-215.	-2.15	.41483	.023	1
CalStd8=100	100.00	123.77	23.8	23.8	.00529	.000	1

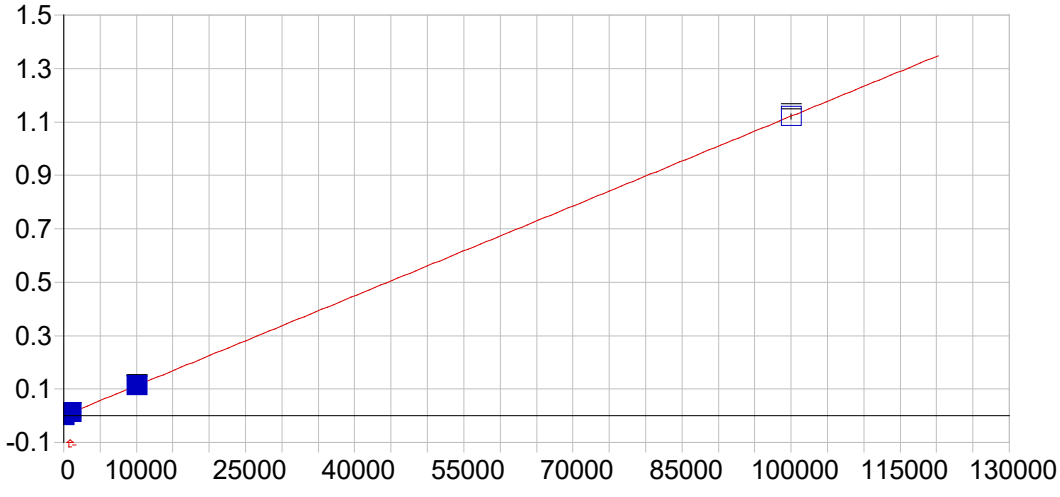


Mn 257.610 {131}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000011	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999044	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.037249		
Predicted MQL:	0.124163		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00477	-.005	.000	-.00000	.000	1
CalStd5=10	10.000	11.992	1.99	19.9	.00013	.000	1
CalStd7=50	50.000	56.474	6.47	12.9	.00062	.000	1
CalStd6=20	20.000	23.733	3.73	18.7	.00026	.000	1
CalStd8=100	100.00	116.70	16.7	16.7	.00129	.000	1
CalStd4=5	5.0000	5.8307	.831	16.6	.00006	.000	1
CalStd9=100	1000.0	1119.6	120.	12.0	.01238	.000	1
CalStd10=10	10000.	9850.6	-149.	-1.49	.10894	.006	1

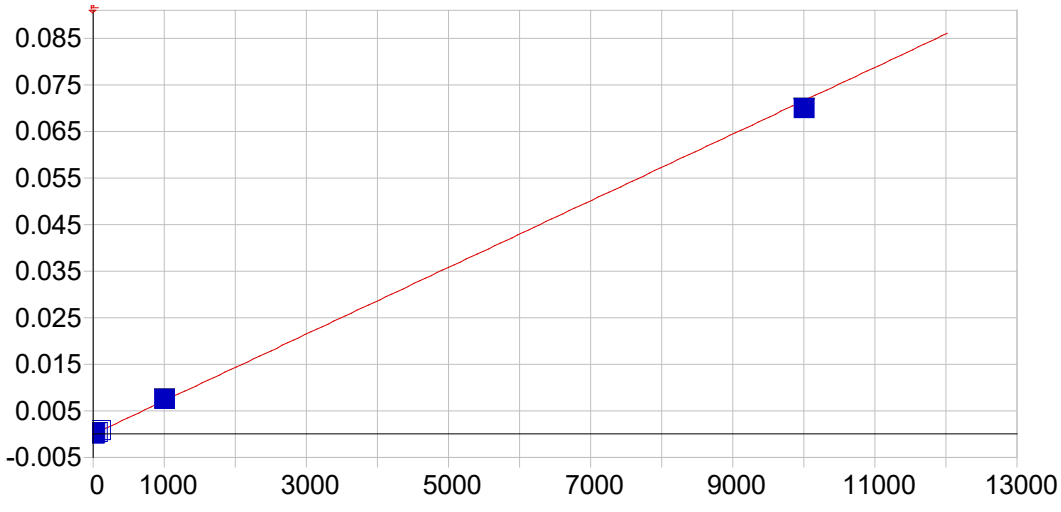


Mn 259.373 {130}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000544	Re-Slope:	1.000000
A1 (Gain):	0.000011	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000483		
Predicted MDL:	0.163707		
Predicted MQL:	0.545690		

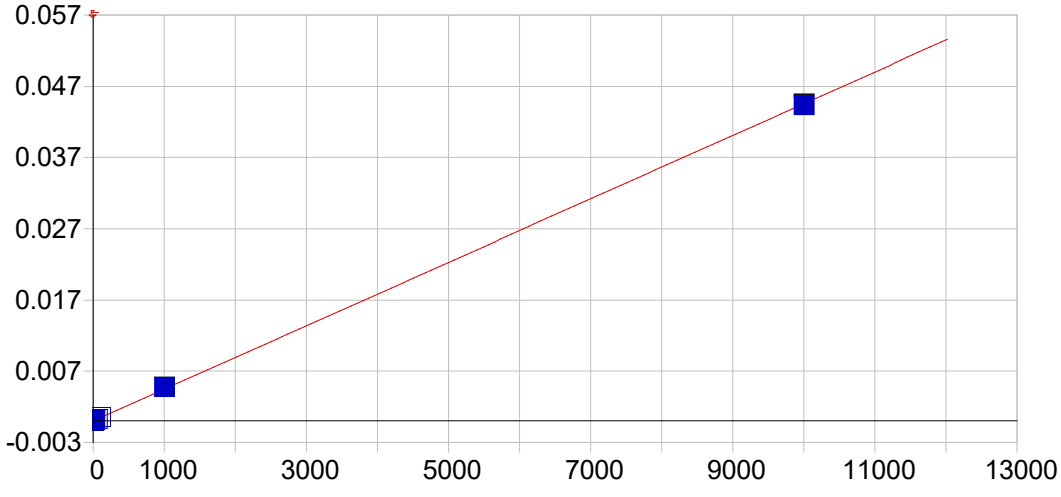
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-48.697	-48.7	.000	-.00000	.000	1
CalStd10=10	10000.	10027.	26.9	.269	.11304	.002	1
CalStd9=100	1000.0	1024.7	24.7	2.47	.01204	.000	1
CalStd12=10	100000.	99997.	-2.94	-.003	1.1212	.010	1



Mo 202.030 {466}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000007		Re-Slope:	1.000000	
A1 (Gain):	0.000007		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999510		Status:	OK.	
Std Error of Est:	0.000019				
Predicted MDL:	0.314316				
Predicted MQL:	1.047720				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.69510	-.695	.000	.00000	.000	1
CalStd7=50	50.000	51.657	1.66	3.31	.00038	.000	1
CalStd6=20	20.000	20.808	.808	4.04	.00016	.000	1
CalStd5=10	10.000	9.7266	-.273	-2.73	.00008	.000	1
CalStd8=100	100.00	101.43	1.43	1.43	.00073	.000	1
CalStd4=5	5.0000	4.7518	-.248	-4.96	.00004	.000	1
CalStd9=100	1000.0	1039.4	39.4	3.94	.00745	.000	1
CalStd10=10	10000.	9756.3	-244.	-2.44	.06984	.000	1

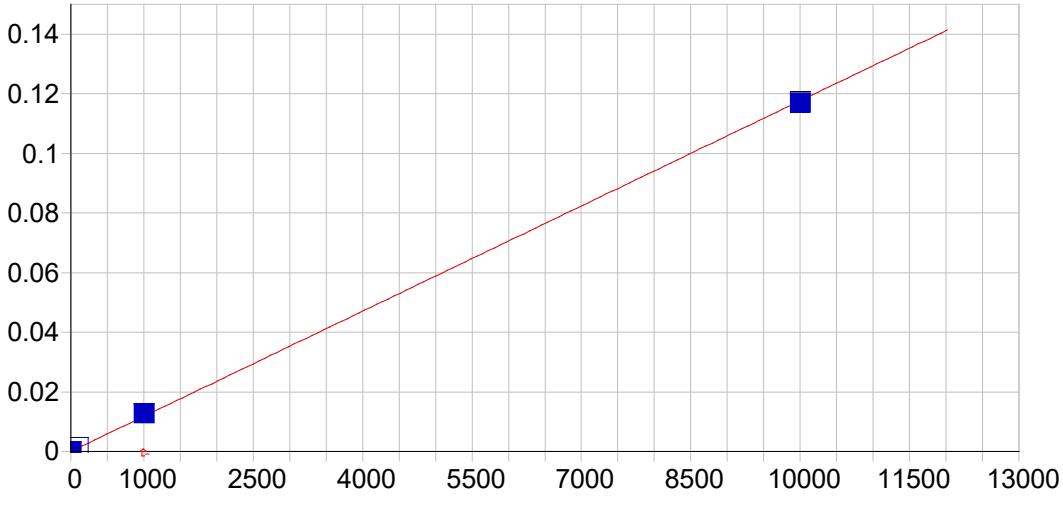


Mo 204.598 {464}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999837	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.503246		
Predicted MQL:	1.677488		

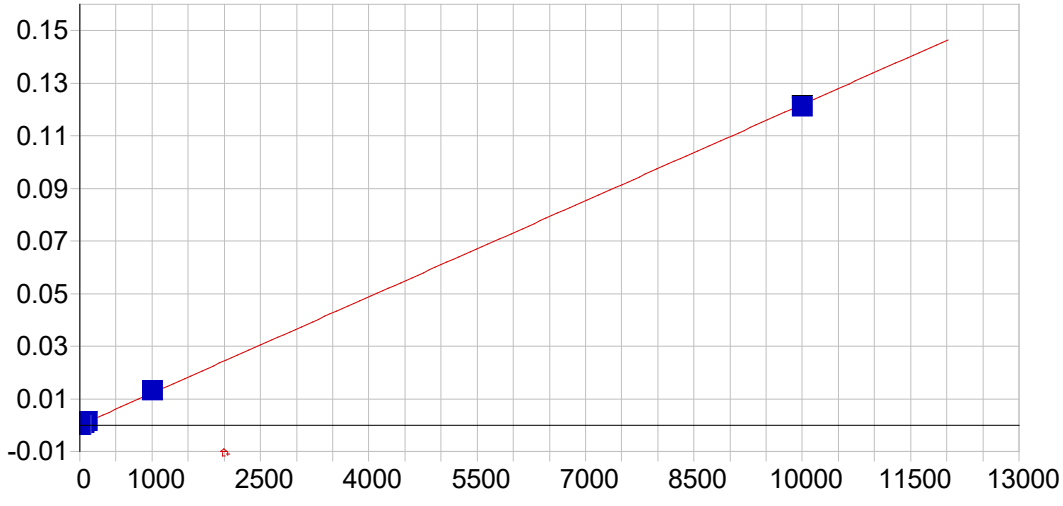
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00085	-.001	.000	-.00000	.000	1
CalStd7=50	50.000	52.385	2.39	4.77	.00023	.000	1
CalStd6=20	20.000	21.370	1.37	6.85	.00009	.000	1
CalStd5=10	10.000	10.617	.617	6.17	.00005	.000	1
CalStd8=100	100.00	102.72	2.72	2.72	.00046	.000	1
CalStd4=5	5.0000	4.5896	-.410	-8.21	.00002	.000	1
CalStd9=100	1000.0	1054.0	54.0	5.40	.00470	.000	1
CalStd10=10	10000.	9939.3	-60.7	-.607	.04430	.000	1



Ni 221.647 {452}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000012		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999755		Status:	OK.	
Std Error of Est:	0.000012				
Predicted MDL:	0.318197				
Predicted MQL:	1.060657				

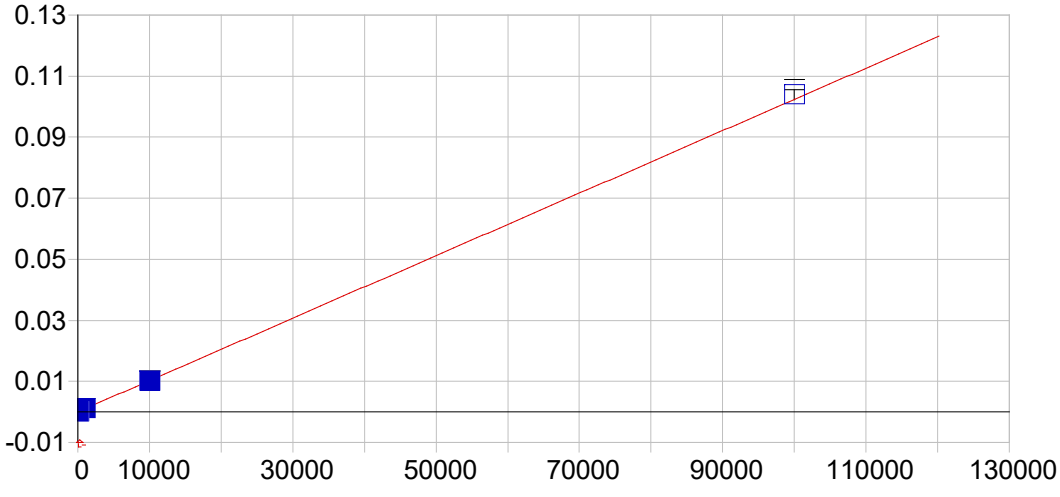
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01162	-.012	.000	.00001	.000	1
CalStd10=10	10000.	9926.6	-73.4	-.734	.11678	.000	1
CalStd8=100	100.00	105.57	5.57	5.57	.00125	.000	1
CalStd9=100	1000.0	1067.8	67.8	6.78	.01257	.000	1



Ni 231.604 {445}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000012		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999743		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	0.297411				
Predicted MQL:	0.991369				

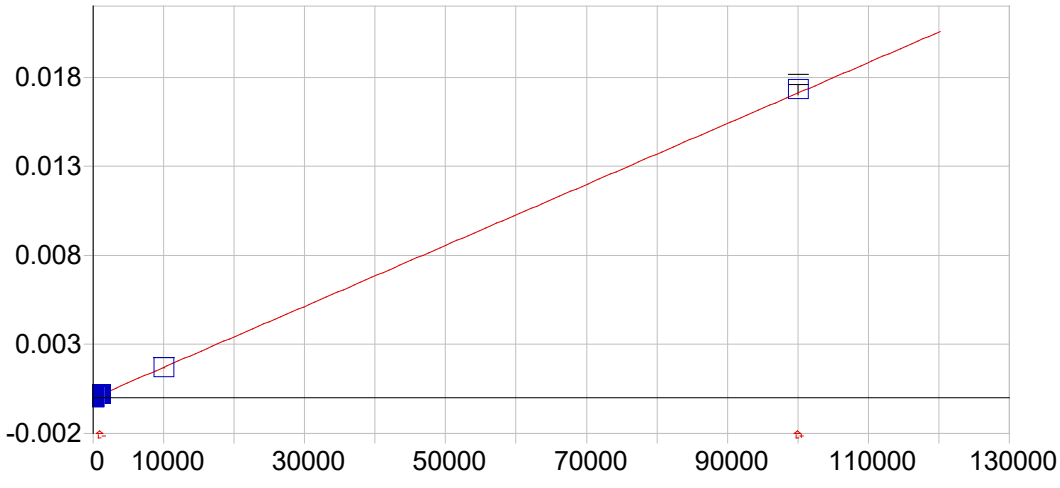
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00035	-.000	.000	-.00000	.000	1
CalStd7=50	50.000	54.089	4.09	8.18	.00066	.000	1
CalStd5=10	10.000	11.584	1.58	15.8	.00014	.000	1
CalStd8=100	100.00	105.51	5.51	5.51	.00128	.000	1
CalStd4=5	5.0000	5.3927	.393	7.85	.00006	.000	1
CalStd9=100	1000.0	1065.1	65.1	6.51	.01296	.000	1
CalStd3=1	1.0000	.91861	-.081	-8.14	.00001	.000	1
CalStd10=10	10000.	9923.5	-76.5	-.765	.12105	.000	1



Pb 216.999 {455}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Var
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999536		Status:	OK.	
Std Error of Est:	0.000024				
Predicted MDL:	3.155246				
Predicted MQL:	10.517488				

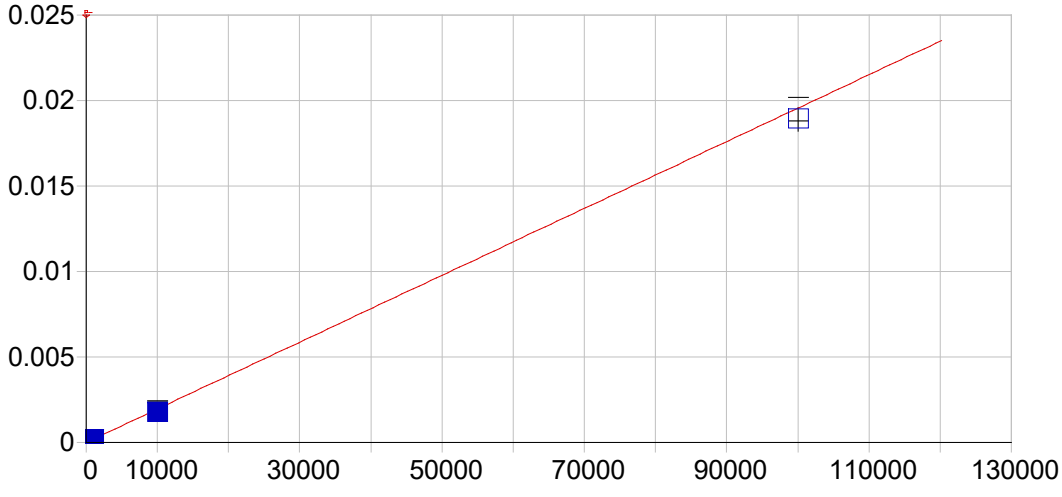
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-3.5939	-3.59	.000	-.00000	.000	1
CalStd9=100	1000.0	1053.5	53.5	5.35	.00109	.000	1
CalStd10=10	10000.	9757.1	-243.	-2.43	.01002	.000	1
CalStd8=100	100.00	103.03	3.03	3.03	.00011	.000	1
CalStd5=10	10.000	8.5896	-1.41	-14.1	.00001	.000	1
CalStd12=10	100000.	101430.	1430.	1.43	.10384	.002	1



Pb 216.999 {456}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Var
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999511		Status:	OK.	
Std Error of Est:	0.000008				
Predicted MDL:	9.265208				
Predicted MQL:	30.884028				

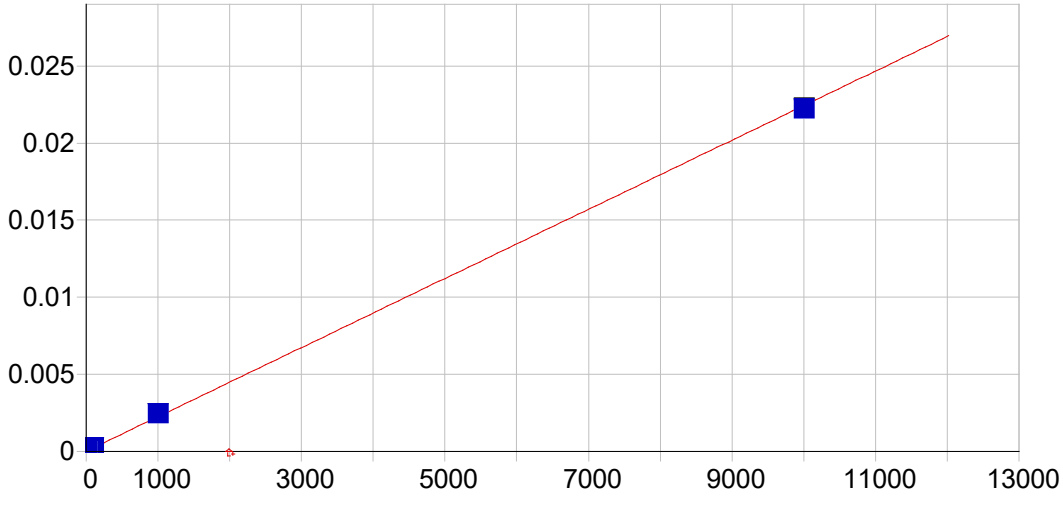
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-16.416	-16.4	.000	-.00000	.000	1
CalStd9=100	1000.0	1059.8	59.8	5.98	.00018	.000	1
CalStd10=10	10000.	9836.3	-164.	-1.64	.00169	.000	1
CalStd8=100	100.00	93.866	-6.13	-6.13	.00002	.000	1
CalStd5=10	10.000	-3.0127	-13.0	-130.	.00000	.000	1
CalStd12=10	100000.	101100.	1100.	1.10	.01730	.000	1



Pb 220.353 {153}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000001		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998732		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	1.806777				
Predicted MQL:	6.022591				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.1286	-1.13	.000	.00000	.000	1
CalStd9=100	1000.0	1022.7	22.7	2.27	.00020	.000	1
CalStd10=10	10000.	8955.7	-1040.	-10.4	.00175	.000	1
CalStd8=100	100.00	105.45	5.45	5.45	.00002	.000	1
CalStd12=10	100000.	96667.	-3330.	-3.33	.01890	.001	1

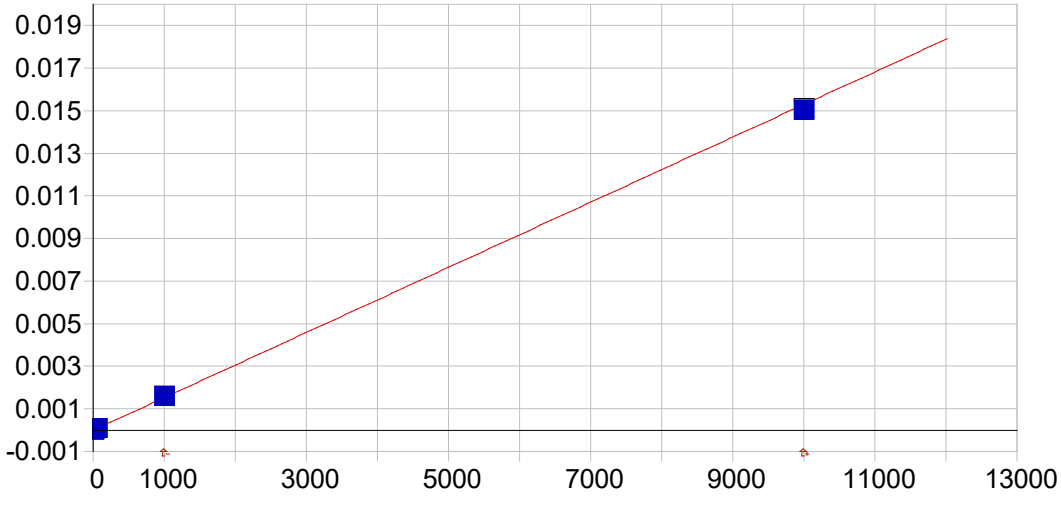


Pb 220.353 {453}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999585	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.625223		
Predicted MQL:	5.417408		

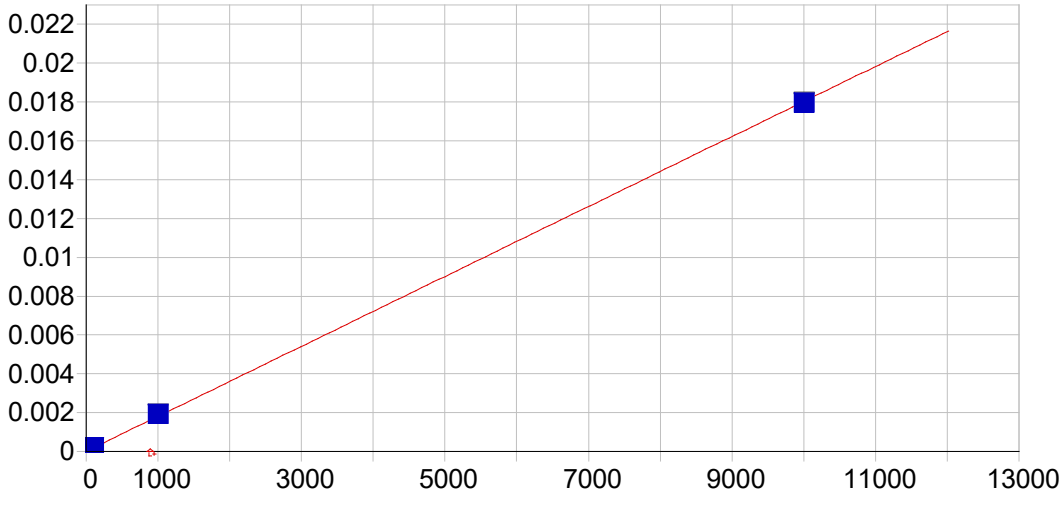
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00052	-.001	.000	.00001	.000	1
CalStd5=10	10.000	11.476	1.48	14.8	.00004	.000	1
CalStd8=100	100.00	106.74	6.74	6.74	.00025	.000	1
CalStd4=5	5.0000	4.0544	-.946	-18.9	.00002	.000	1
CalStd9=100	1000.0	1086.5	86.5	8.65	.00244	.000	1
CalStd10=10	10000.	9906.2	-93.8	-.938	.02218	.000	1



Sb 206.833 {463}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	-0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999733		Status:	OK.	
Std Error of Est:	0.000012				
Predicted MDL:	1.467246				
Predicted MQL:	4.890820				

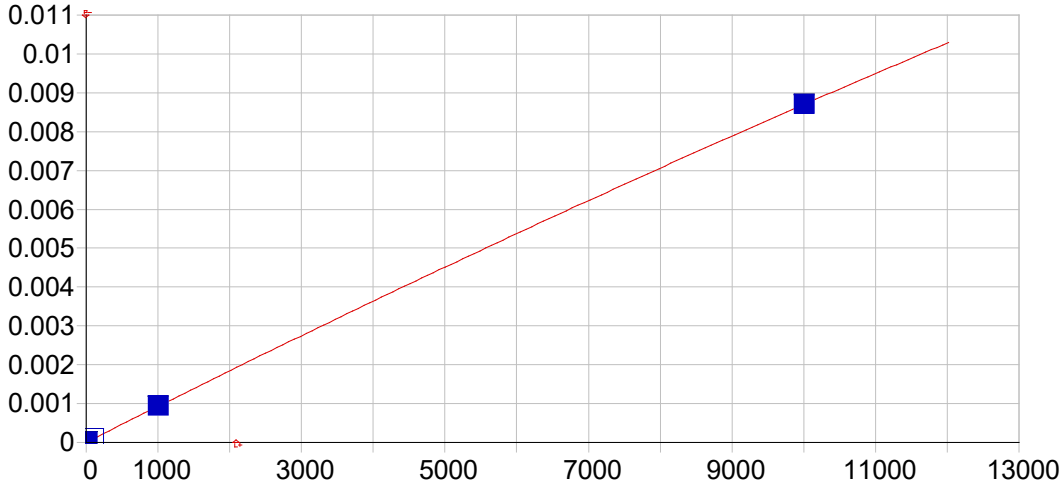
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.5122	-1.51	.000	-.00000	.000	1
CalStd9=100	1000.0	1029.4	29.4	2.94	.00158	.000	1
CalStd5=10	10.000	9.3489	-.651	-6.51	.00001	.000	1
CalStd7=50	50.000	50.943	.943	1.89	.00008	.000	1
CalStd10=10	10000.	9827.4	-173.	-1.73	.01503	.000	1



Sb 217.581 {455}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000005		Re-Slope:	1.000000	
A1 (Gain):	0.000002		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999844		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	1.518020				
Predicted MQL:	5.060068				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00265	-.003	.000	.00001	.000	1
CalStd9=100	1000.0	1048.4	48.4	4.84	.00189	.000	1
CalStd6=20	20.000	20.953	.953	4.76	.00004	.000	1
CalStd5=10	10.000	12.368	2.37	23.7	.00003	.000	1
CalStd8=100	100.00	102.73	2.73	2.73	.00019	.000	1
CalStd4=5	5.0000	5.8758	.876	17.5	.00002	.000	1
CalStd10=10	10000.	9944.7	-55.3	-.553	.01793	.000	1

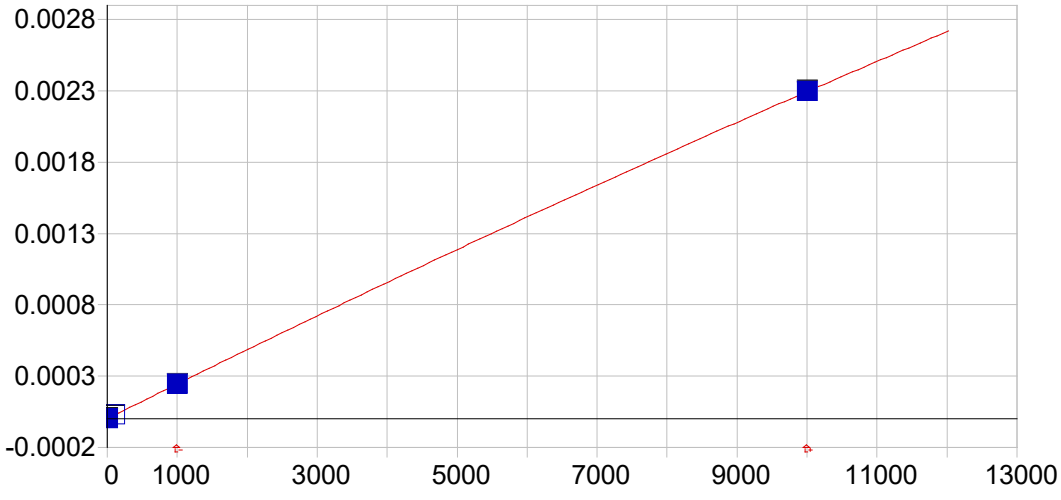


Se 196.090 {472}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.081793		
Predicted MQL:	6.939311		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00166	-.002	.000	.00000	.000	1
CalStd9=100	1000.0	998.45	-1.55	-.155	.00093	.000	1
CalStd5=10	10.000	11.706	1.71	17.1	.00001	.000	1
CalStd8=100	100.00	99.665	-.335	-.335	.00010	.000	1
CalStd10=10	10000.	10000.	.179	.002	.00869	.000	1

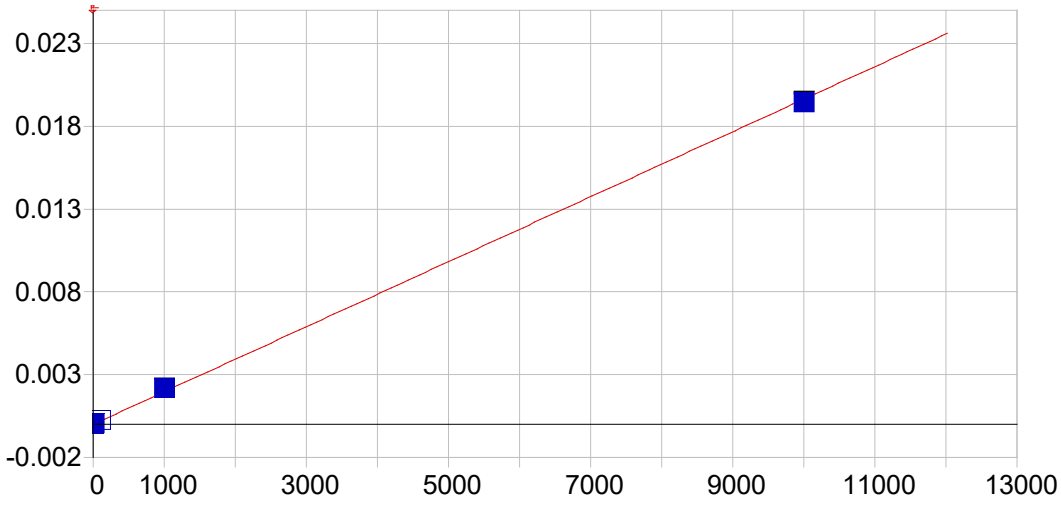


Se 206.279 {463}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	11.017672		
Predicted MQL:	36.725574		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00253	-.003	.000	.00000	.000	1
CalStd9=100	1000.0	996.84	-3.16	-.316	.00024	.000	1
CalStd10=10	10000.	10000.	.326	.003	.00230	.000	1
CalStd8=100	100.00	102.85	2.85	2.85	.00003	.000	1

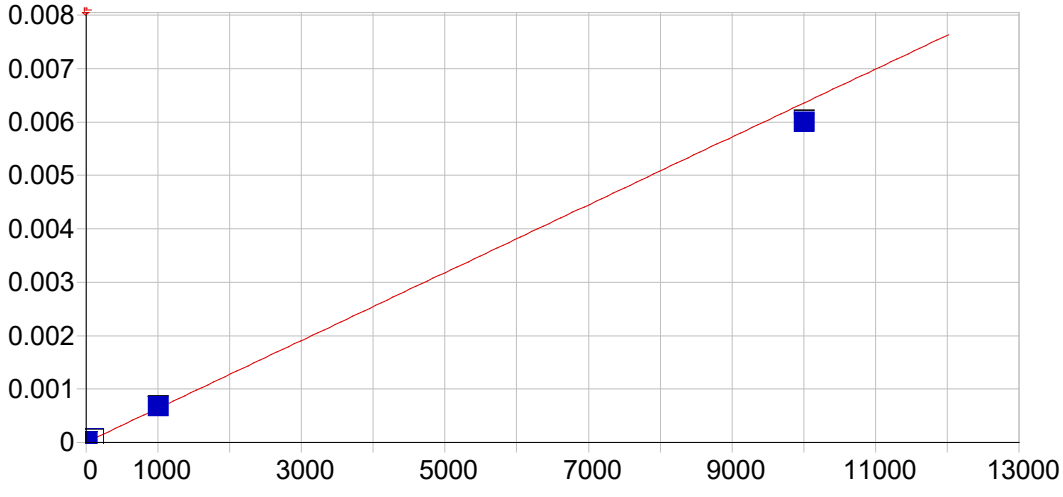


Tl 190.856 {476}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999437	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.260350		
Predicted MQL:	4.201167		

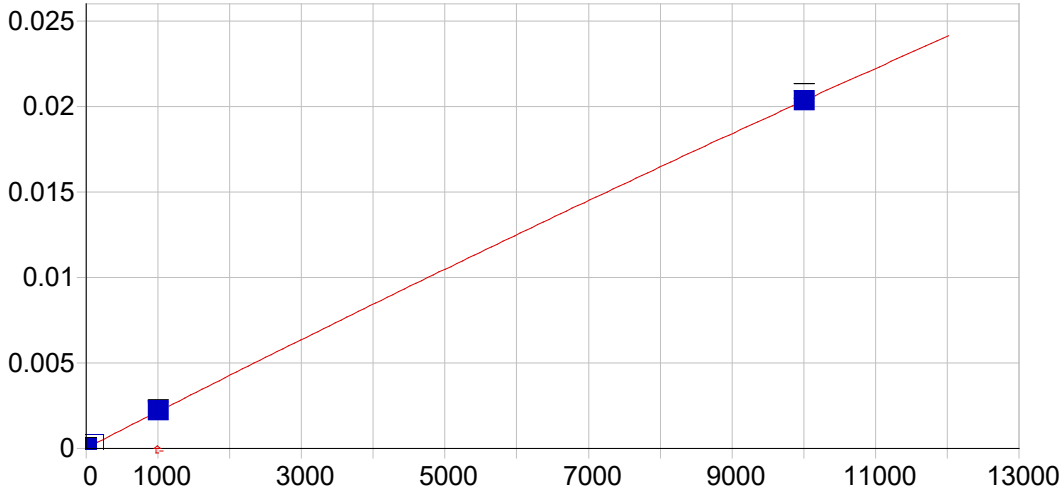
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00353	-.004	.000	.00000	.000	1
CalStd9=100	1000.0	1100.1	100.	10.0	.00216	.000	1
CalStd8=100	100.00	109.95	9.95	9.95	.00022	.000	1
CalStd5=10	10.000	11.649	1.65	16.5	.00002	.000	1
CalStd10=10	10000.	9888.3	-112.	-1.12	.01941	.000	1



Tl 190.856 {477}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000004		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998459		Status:	OK.	
Std Error of Est:	0.000012				
Predicted MDL:	2.379388				
Predicted MQL:	7.931292				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.4025	-2.40	.000	.00000	.000	1
CalStd9=100	1000.0	1052.5	52.5	5.25	.00067	.000	1
CalStd8=100	100.00	99.995	-.005	-.005	.00007	.000	1
CalStd5=10	10.000	9.6650	-.335	-3.35	.00001	.000	1
CalStd10=10	10000.	9436.7	-563.	-5.63	.00600	.000	1

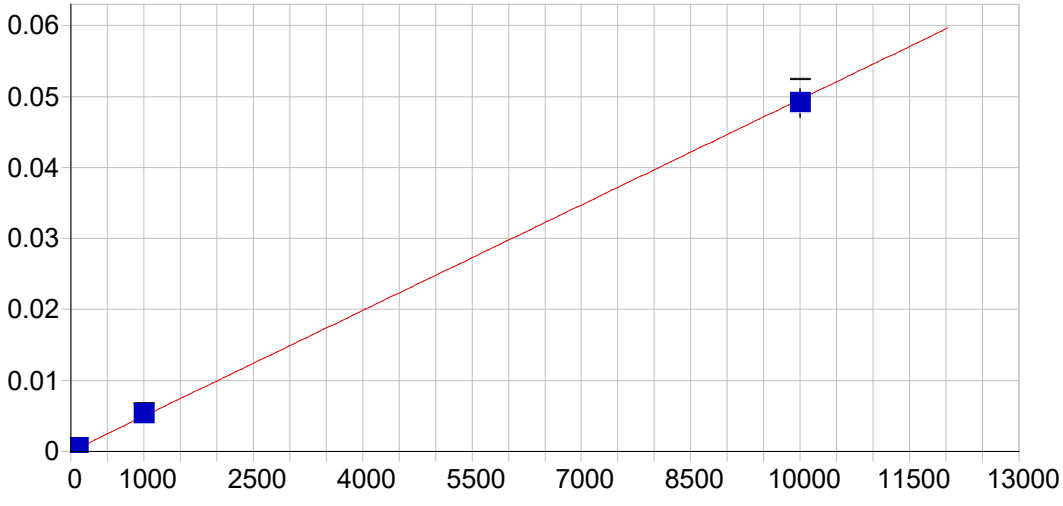


V 290.882 {116}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000017	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	1.072765		
Predicted MQL:	3.575883		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.43276	.433	.000	.00002	.000	1
CalStd9=100	1000.0	1016.2	16.2	1.62	.00219	.000	1
CalStd10=10	10000.	9990.1	-9.91	-.099	.02032	.000	1
CalStd8=100	100.00	99.551	-.449	-.449	.00023	.000	1

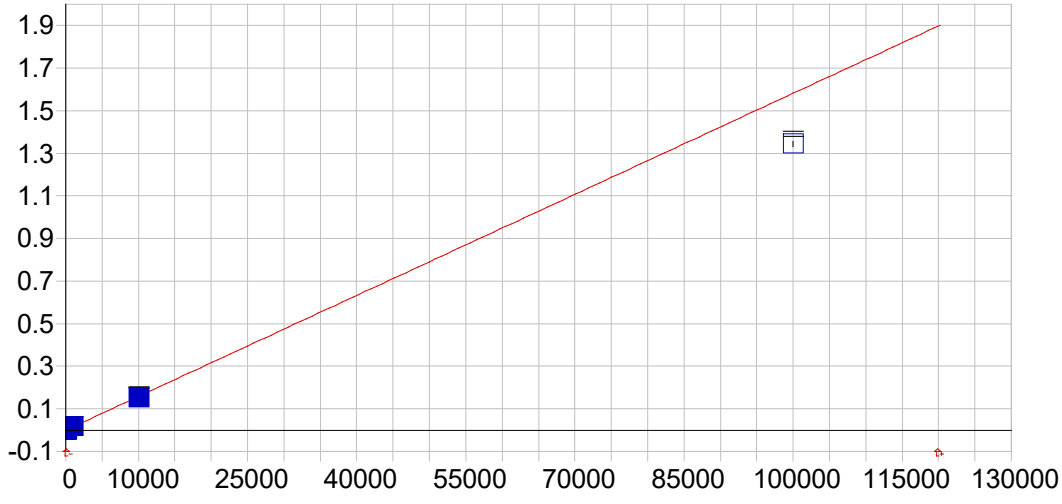


V 292.402 {115}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999638	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.290387		
Predicted MQL:	0.967958		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00473	-.005	.000	.00000	.000	1
CalStd7=50	50.000	53.545	3.55	7.09	.00027	.000	1
CalStd9=100	1000.0	1072.9	72.9	7.29	.00531	.000	1
CalStd6=20	20.000	22.561	2.56	12.8	.00011	.000	1
CalStd5=10	10.000	11.006	1.01	10.1	.00006	.000	1
CalStd8=100	100.00	111.00	11.0	11.0	.00055	.000	1
CalStd10=10	10000.	9909.0	-91.0	-.910	.04897	.002	1

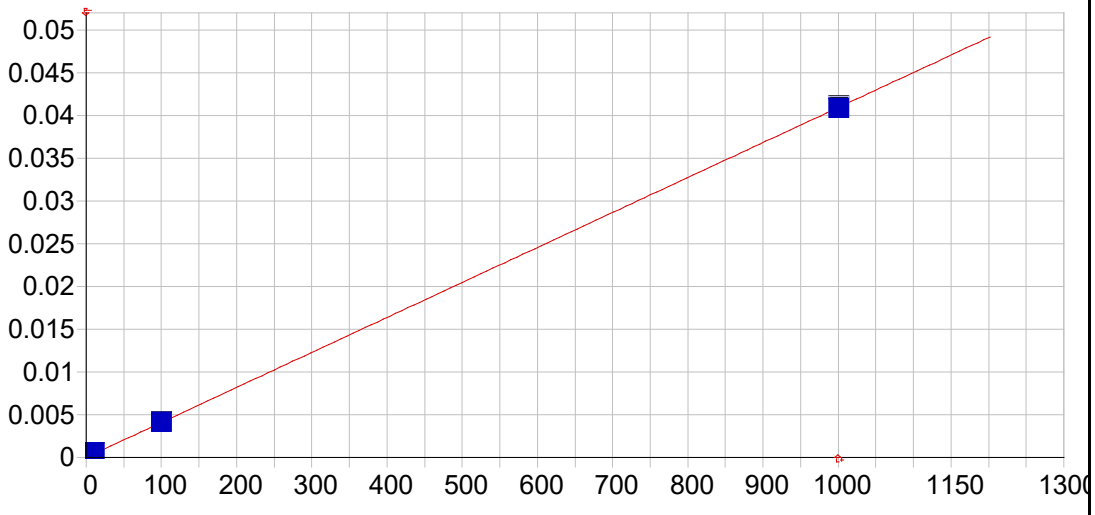


Zn 206.200 {463}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000031	Re-Slope:	1.000000
A1 (Gain):	0.000016	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997976	Status:	OK.
Std Error of Est:	0.000031		
Predicted MDL:	0.158744		
Predicted MQL:	0.529146		

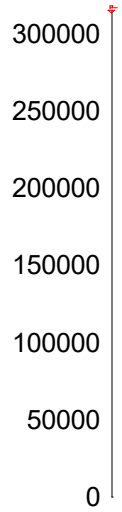
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	9676.3	-324.	-3.24	.15311	.001	1
Blank	.00000	-1.9776	-1.98	.000	-.00000	.000	1
CalStd9=100	1000.0	1038.1	38.1	3.81	.01645	.000	1
CalStd12=10	100000.	84912.	-15100.	-15.1	1.3433	.012	1
CalStd5=10	10.000	10.184	.184	1.84	.00019	.000	1
CalStd8=100	100.00	101.31	1.31	1.31	.00163	.000	1



Zn 213.856 {457}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000006		Re-Slope:	1.000000	
A1 (Gain):	0.000041		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999751		Status:	OK.	
Std Error of Est:	0.000004				
Predicted MDL:	0.072812				
Predicted MQL:	0.242706				

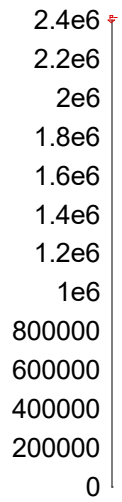
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00231	-.002	.000	.00001	.000	1
CalStd9=100	1000.0	997.84	-2.16	-.216	.04102	.000	1
CalStd5=10	10.000	12.350	2.35	23.5	.00051	.000	1
CalStd8=100	100.00	99.818	-.182	-.182	.00411	.000	1



Y 224.306 {450}*

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

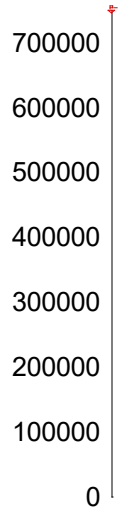
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	298690.	1440.	1



Y 324.228 {104}*

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

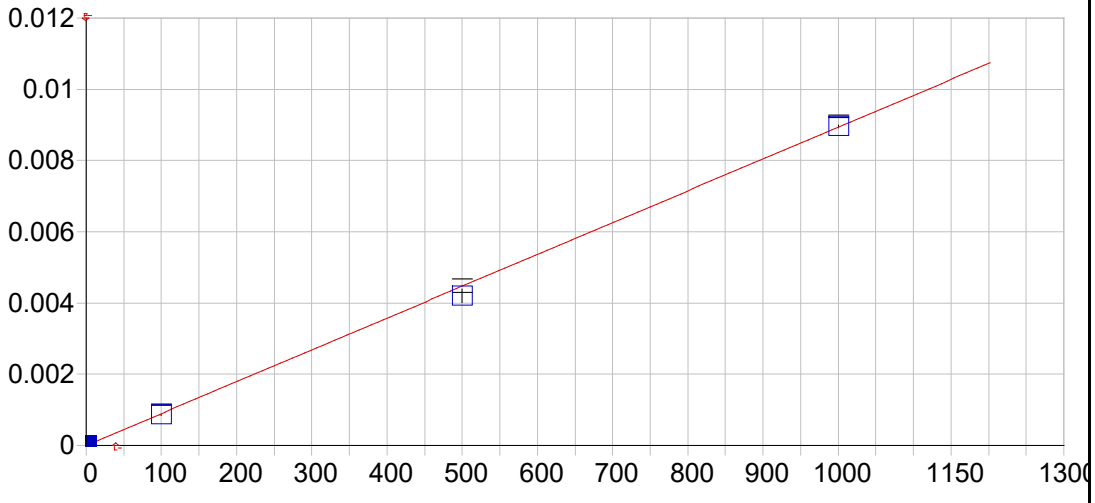
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	2187700.	59700.	1



Y 371.030 { 91}*

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

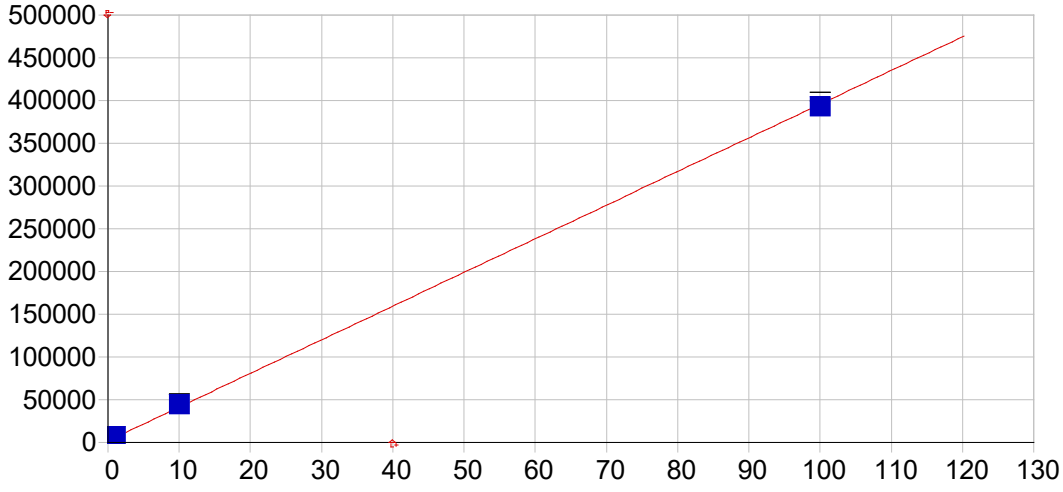
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	676770.	8510.	1



Na 330.237 {102}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000003		Re-Slope:	1.000000	
A1 (Gain):	0.000009		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999966		Status:	OK.	
Std Error of Est:	0.000006				
Predicted MDL:	0.407735				
Predicted MQL:	1.359116				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.03460	.035	.000	.00000	.000	1
CalStd13=10	100.00	96.680	-3.32	-3.32	.00087	.000	1
CalibStd15=	1000.0	1001.6	1.61	.161	.00895	.000	1
CalStd14=50	500.00	469.16	-30.8	-6.17	.00419	.000	1

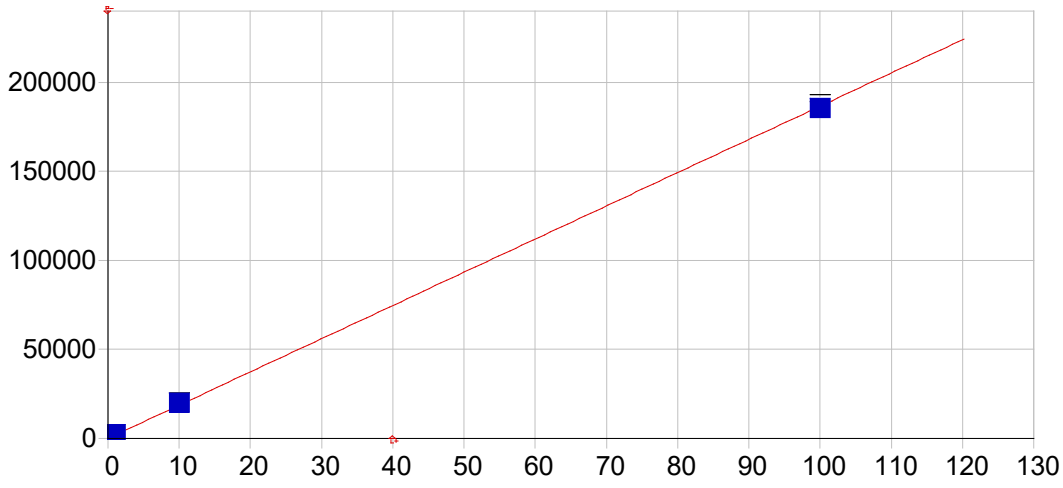


Na 588.995 { 57}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	2017.893573	Re-Slope:	1.000000
A1 (Gain):	3937.325304	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999690	Status:	OK.
Std Error of Est:	46.188572		
Predicted MDL:	0.002635		
Predicted MQL:	0.008784		

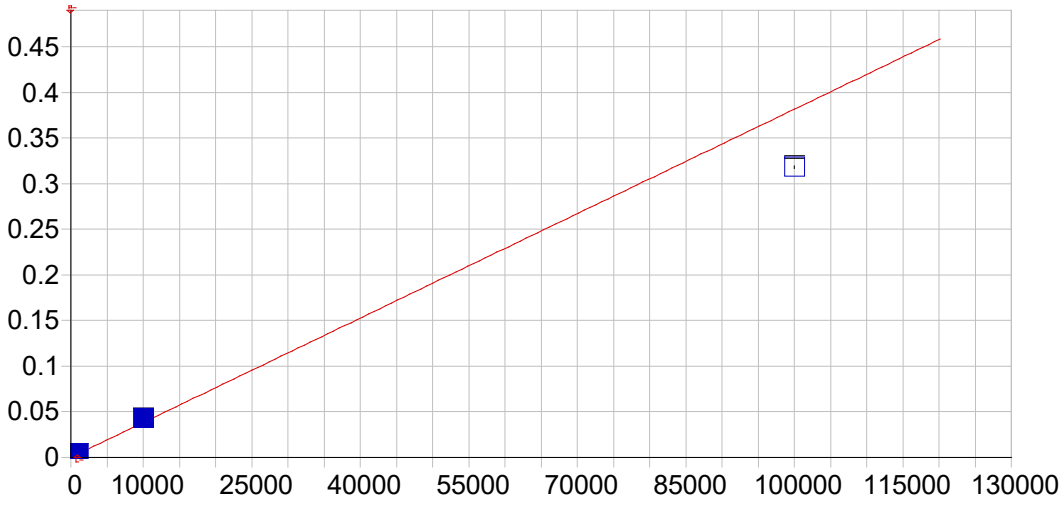
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00018	-.000	.000	2017.2	17.7	1
CalStd9=100	1.0000	1.1147	.115	11.5	6407.7	45.7	1
CalStd10=10	10.000	10.700	.700	7.00	44156.	356.	1
CalStd13=10	100.00	99.185	-.815	-.815	392620.	4860.	1



Na 589.592 { 57}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	52.841384		Re-Slope:	1.000000	
A1 (Gain):	1865.226182		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999782		Status:	OK.	
Std Error of Est:	18.342496				
Predicted MDL:	0.003849				
Predicted MQL:	0.012831				

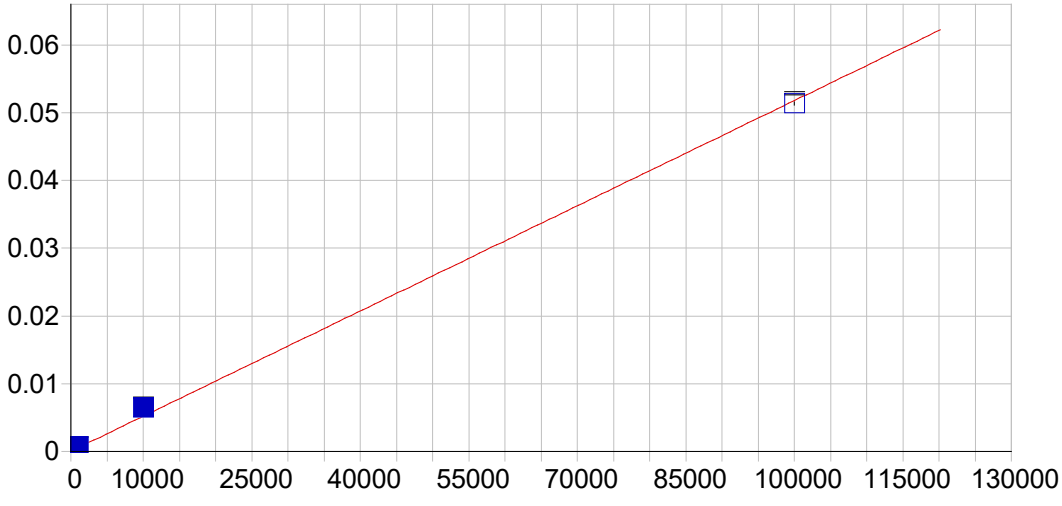
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00016	-.000	.000	52.550	5.89	1
CalStd9=100	1.0000	1.1057	.106	10.6	2116.7	23.4	1
CalStd10=10	10.000	10.571	.571	5.71	19786.	161.	1
CalStd13=10	100.00	99.323	-.677	-.677	185460.	2010.	1



Si 212.412 {458}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var
A0 (Offset):	0.000127		Re-Slope:	1.000000	
A1 (Gain):	0.000004		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.991776		Status:	OK.	
Std Error of Est:	0.000269				
Predicted MDL:	0.749031				
Predicted MQL:	2.496771				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.9169	-2.92	.000	.00012	.000	1
CalStd9=100	1000.0	1058.4	58.4	5.84	.00416	.000	1
CalibStd15=	100000.	83255.	-16700.	-16.7	.31772	.001	1
CalStd10=10	10000.	11177.	1180.	11.8	.04276	.000	1

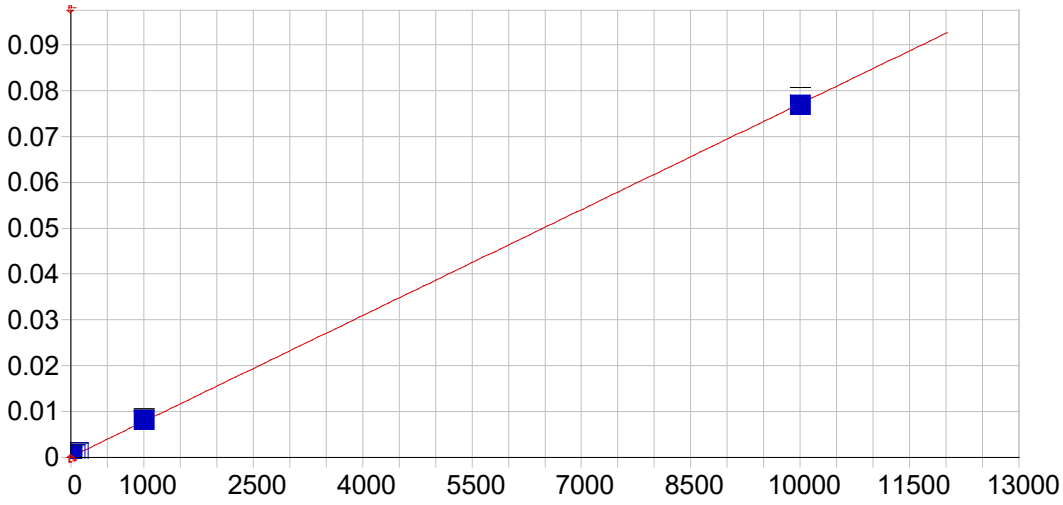


Si 251.611 {134}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000020	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999144	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	3.339604		
Predicted MQL:	11.132012		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.19896	-.199	.000	.00002	.000	1
CalStd9=100	1000.0	1166.2	166.	16.6	.00062	.000	1
CalibStd15=	100000.	99179.	-821.	-.821	.05136	.000	1
CalStd10=10	10000.	12267.	2270.	22.7	.00637	.000	1

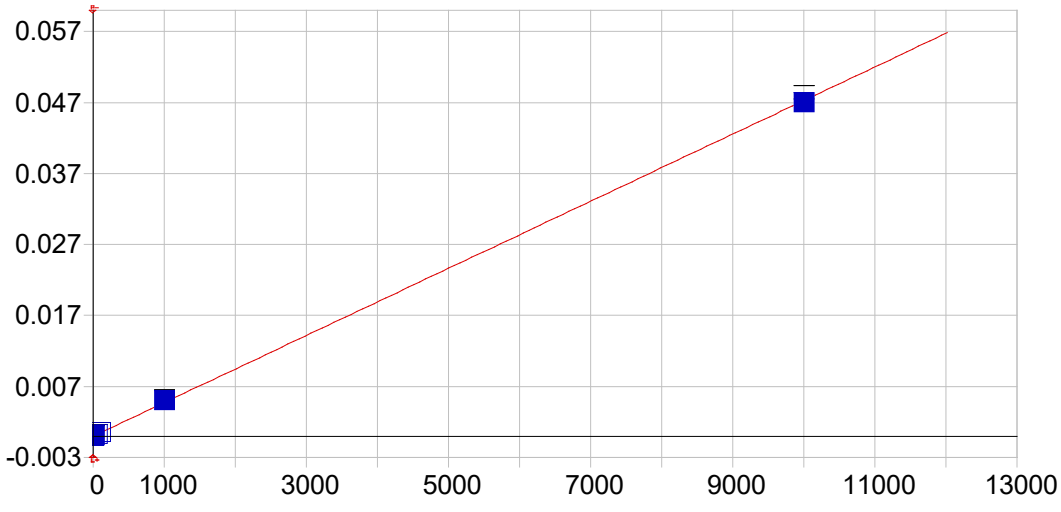


Ti 323.452 {104}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000149	Re-Slope:	1.000000
A1 (Gain):	0.000008	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999903	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.502285		
Predicted MQL:	1.674284		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00235	-.002	.000	.00015	.000	1
CalStd5=10	10.000	10.398	.398	3.98	.00023	.000	1
CalStd8=100	100.00	103.05	3.05	3.05	.00094	.000	1
CalStd9=100	1000.0	1034.3	34.3	3.43	.00811	.000	1
CalStd10=10	10000.	9957.1	-42.9	-.429	.07679	.002	1
CalStd7=50	50.000	53.605	3.60	7.21	.00056	.000	1
CalStd4=5	5.0000	6.4841	1.48	29.7	.00020	.000	1

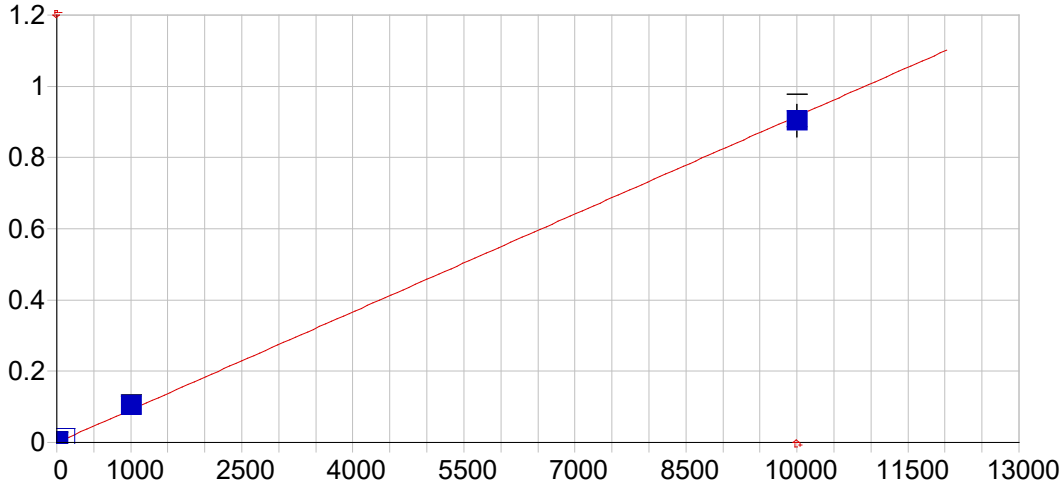


Ti 334.941 {101}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999848	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.534066		
Predicted MQL:	1.780221		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00134	-.001	.000	-.00000	.000	1
CalStd5=10	10.000	10.460	.460	4.60	.00005	.000	1
CalStd8=100	100.00	104.61	4.61	4.61	.00049	.000	1
CalStd9=100	1000.0	1051.4	51.4	5.14	.00497	.000	1
CalStd10=10	10000.	9940.5	-59.5	-.595	.04701	.001	1
CalStd7=50	50.000	52.657	2.66	5.31	.00025	.000	1
CalStd4=5	5.0000	5.3836	.384	7.67	.00002	.000	1

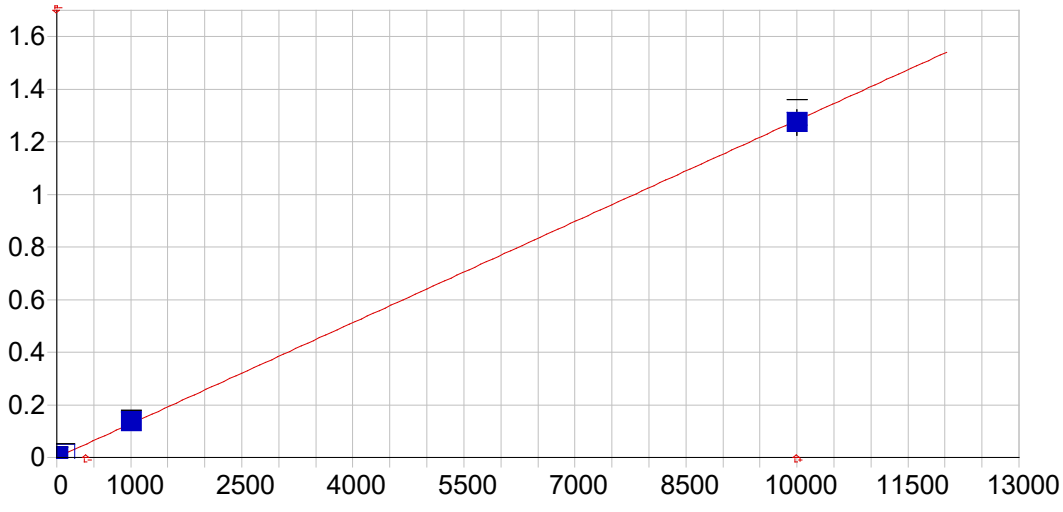


Sr 407.771 { 83}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000056	Re-Slope:	1.000000
A1 (Gain):	0.000092	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999093	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	0.052384		
Predicted MQL:	0.174614		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00058	-.001	.000	.00006	.000	1
CalStd3=1	1.0000	1.0770	.077	7.70	.00015	.000	1
CalStd4=5	5.0000	5.7765	.776	15.5	.00059	.000	1
CalStd5=10	10.000	11.361	1.36	13.6	.00110	.000	1
CalStd8=100	100.00	109.99	9.99	9.99	.01013	.000	1
CalStd9=100	1000.0	1129.9	130.	13.0	.10355	.003	1
CalStd10=10	10000.	9857.9	-142.	-1.42	.90299	.046	1

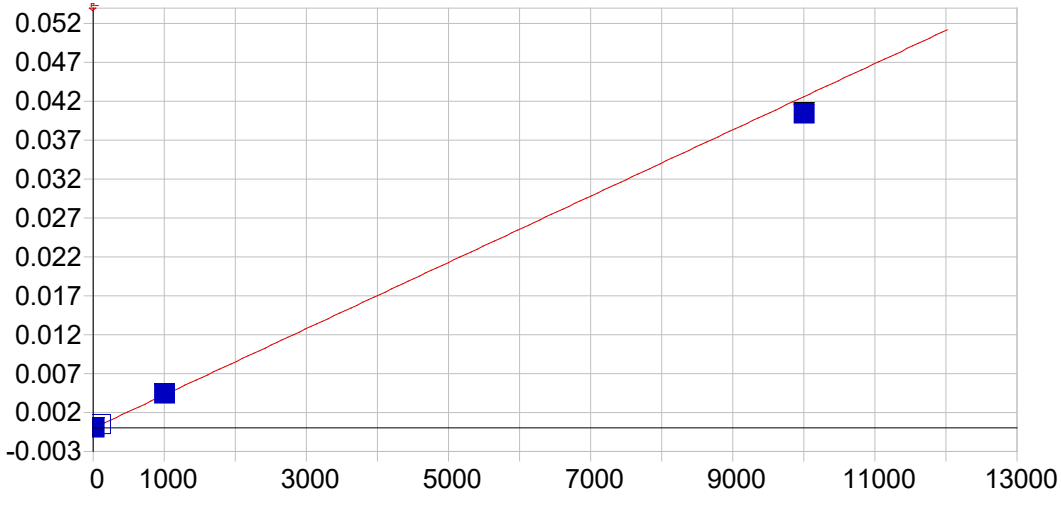


Sr 421.552 { 80}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000128	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999770	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.039975		
Predicted MQL:	0.133250		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00031	-.000	.000	.00001	.000	1
CalStd3=1	1.0000	1.0568	.057	5.68	.00015	.000	1
CalStd4=5	5.0000	5.4137	.414	8.27	.00071	.000	1
CalStd5=10	10.000	10.701	.701	7.01	.00138	.000	1
CalStd8=100	100.00	103.96	3.96	3.96	.01333	.000	1
CalStd9=100	1000.0	1066.0	66.0	6.60	.13662	.003	1
CalStd10=10	10000.	9928.8	-71.2	-.712	1.2724	.049	1

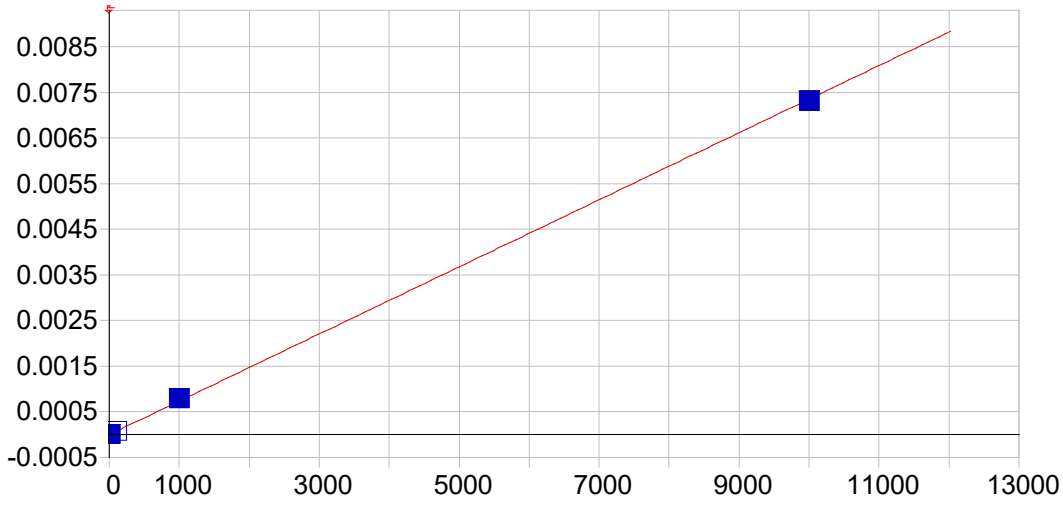


Sn 189.989 {477}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999300	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	0.485549		
Predicted MQL:	1.618498		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.42565	-.426	.000	.00000	.000	1
CalStd10=10	10000.	9481.1	-519.	-5.19	.04040	.000	1
CalStd9=100	1000.0	1026.6	26.6	2.66	.00438	.000	1
CalStd8=100	100.00	102.33	2.33	2.33	.00044	.000	1
CalStd5=10	10.000	10.159	.159	1.59	.00005	.000	1

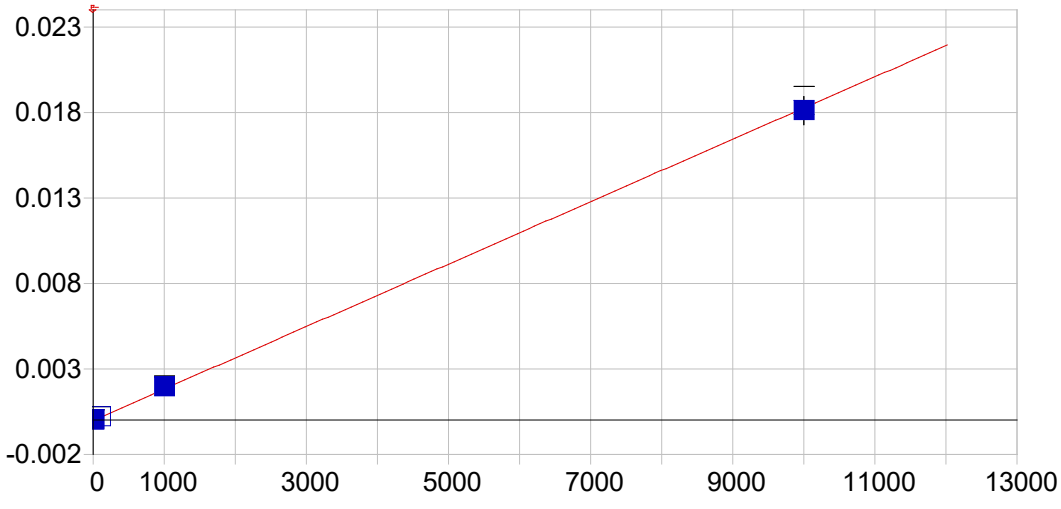


Sn 189.989 {478}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999756	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.558711		
Predicted MQL:	5.195702		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00189	-.002	.000	.00000	.000	1
CalStd10=10	10000.	9926.9	-73.1	-.731	.00730	.000	1
CalStd9=100	1000.0	1068.1	68.1	6.81	.00079	.000	1
CalStd8=100	100.00	104.19	4.19	4.19	.00008	.000	1
CalStd5=10	10.000	10.859	.859	8.59	.00001	.000	1

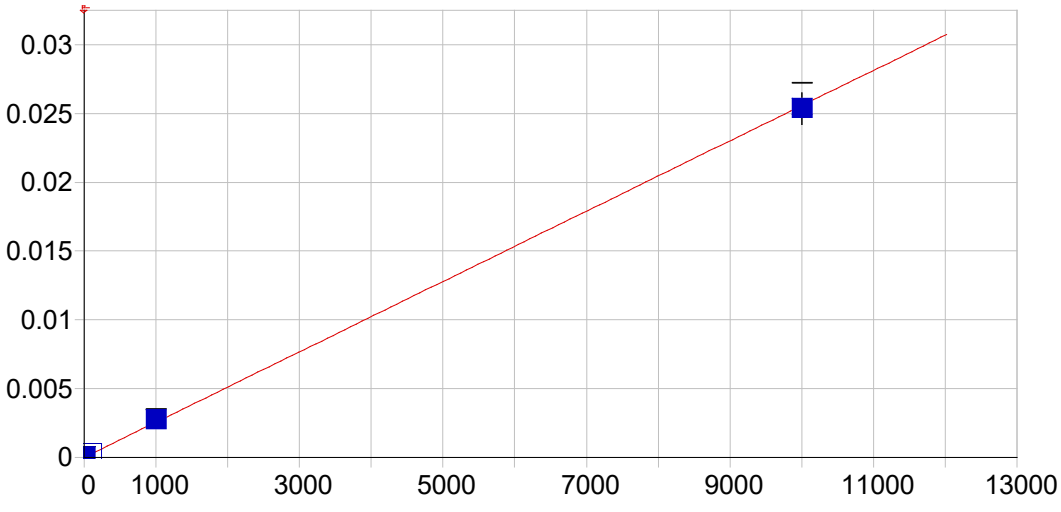


B 249.678 {135}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999687	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.545361		
Predicted MQL:	1.817869		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00334	-.003	.000	-.00000	.000	1
CalStd8=100	100.00	110.18	10.2	10.2	.00020	.000	1
CalStd5=10	10.000	11.701	1.70	17.0	.00002	.000	1
CalStd9=100	1000.0	1070.3	70.3	7.03	.00195	.000	1
CalStd10=10	10000.	9917.8	-82.2	-.822	.01811	.001	1

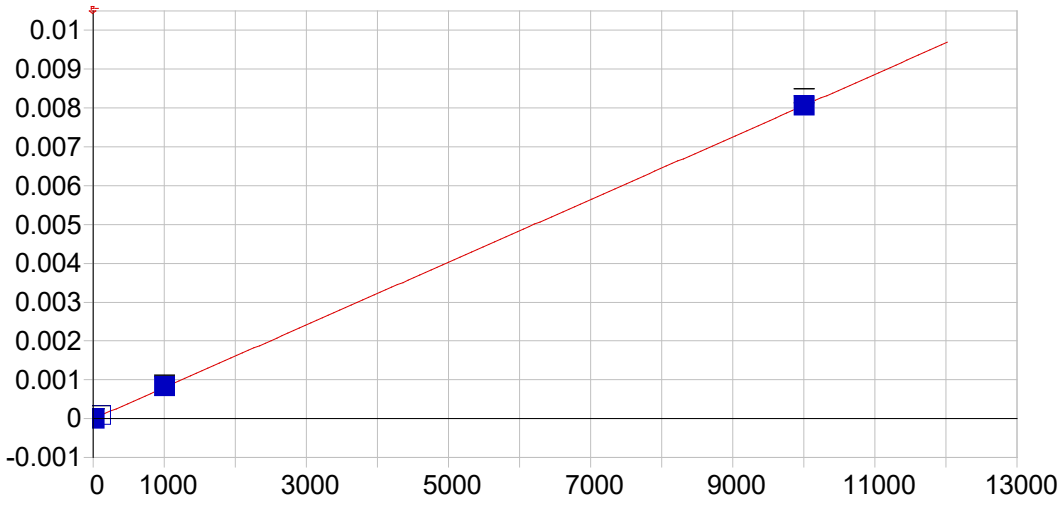


B 249.773 {135}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999645	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.270250		
Predicted MQL:	0.900832		

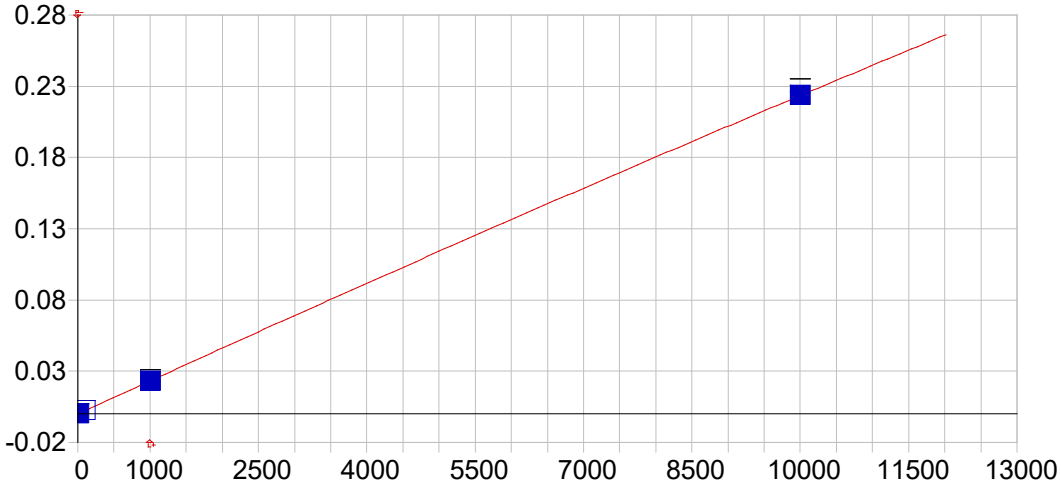
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00332	-.003	.000	.00000	.000	1
CalStd8=100	100.00	110.62	10.6	10.6	.00028	.000	1
CalStd5=10	10.000	11.590	1.59	15.9	.00003	.000	1
CalStd9=100	1000.0	1075.8	75.8	7.58	.00275	.000	1
CalStd10=10	10000.	9912.0	-88.0	-.880	.02536	.001	1



Li 610.353 { 55}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000004		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998544		Status:	OK.	
Std Error of Est:	0.000001				
Predicted MDL:	19.289189				
Predicted MQL:	64.297296				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01740	.017	.000	-.00000	.000	1
CalStd5=10	10.000	-7.7791	-17.8	-178.	-.00001	.000	1
CalStd8=100	100.00	101.15	1.15	1.15	.00008	.000	1
CalStd9=100	1000.0	1027.6	27.6	2.76	.00082	.000	1
CalStd10=10	10000.	9989.1	-10.9	-.109	.00805	.000	1

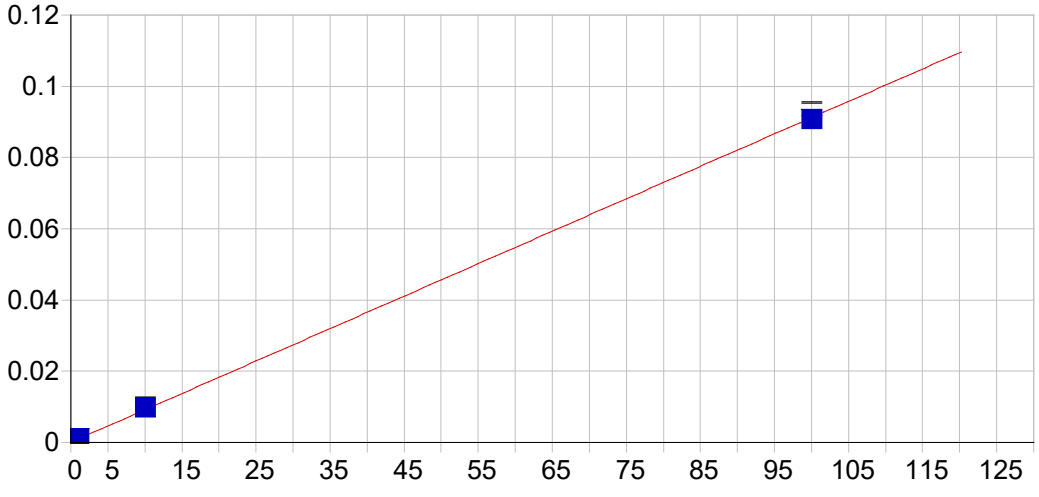


Li 670.784 { 50}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	-0.000050	Re-Slope:	1.000000
A1 (Gain):	0.000023	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.474546		
Predicted MQL:	1.581819		

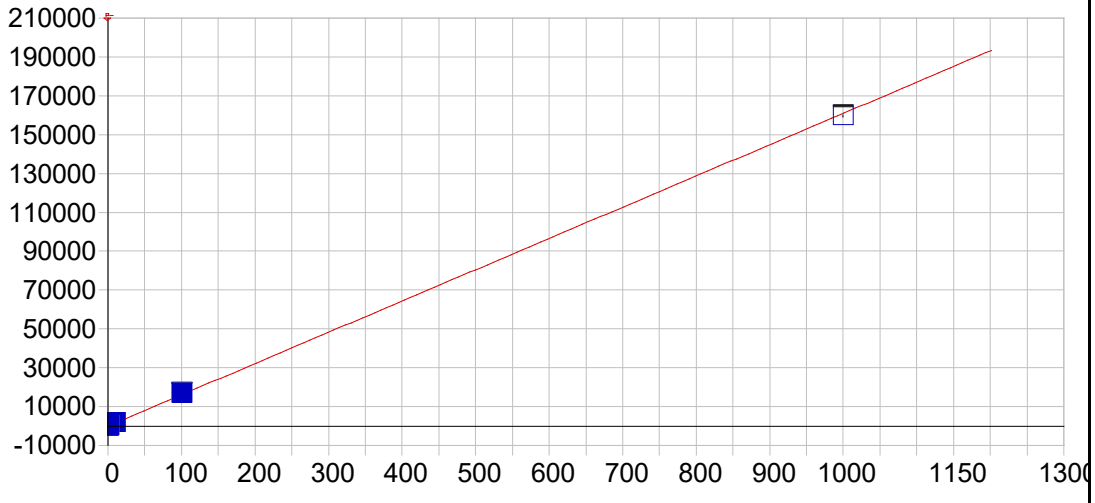
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00024	-.000	.000	-.00005	.000	1
CalStd5=10	10.000	10.395	.395	3.95	.00019	.000	1
CalStd8=100	100.00	98.315	-1.69	-1.69	.00224	.000	1
CalStd9=100	1000.0	1001.4	1.43	.143	.02320	.001	1
CalStd10=10	10000.	9999.9	-.136	-.001	.22347	.004	1



K 766.490 { 44}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000066		Re-Slope:	1.000000	
A1 (Gain):	0.000911		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999757		Status:	OK.	
Std Error of Est:	0.000009				
Predicted MDL:	0.011978				
Predicted MQL:	0.039925				

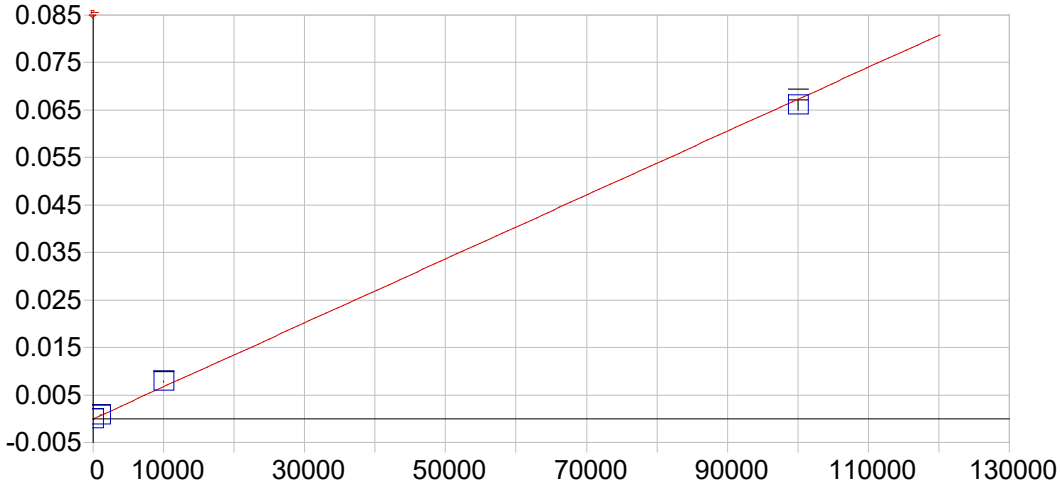
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00020	-.000	.000	.00007	.000	1
CalStd9=100	1.0000	1.1586	.159	15.9	.00112	.000	1
CalStd10=10	10.000	10.497	.497	4.97	.00966	.000	1
CalStd13=10	100.00	99.344	-.656	-.656	.09089	.002	1



K 769.896 { 44}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-37.816883		Re-Slope:	1.000000	
A1 (Gain):	160.953094		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999661		Status:	OK.	
Std Error of Est:	5.701463				
Predicted MDL:	0.034135				
Predicted MQL:	0.113785				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00060	-.001	.000	-37.914	3.84	1
CalStd10=10	10.000	11.459	1.46	14.6	1808.1	15.8	1
CalibStd15=	1000.0	992.49	-7.51	-.751	159710.	513.	1
CalStd13=10	100.00	105.63	5.63	5.63	16980.	143.	1
CalStd9=100	1.0000	1.4086	.409	40.9	189.06	4.56	1

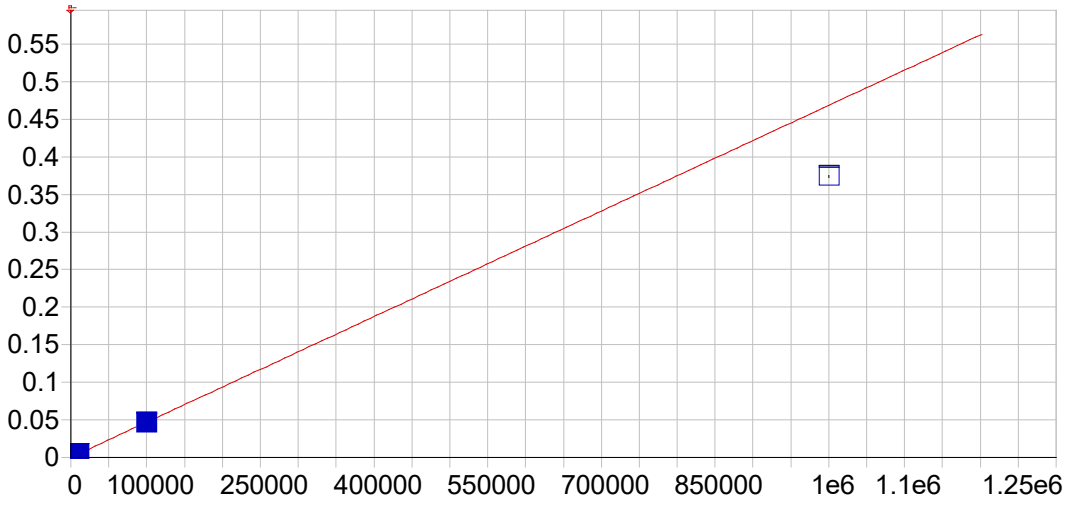


P 177.495 {489}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998624	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	2.000037		
Predicted MQL:	6.666789		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.21182	-.212	.000	-.00000	.000	1
CalStd10=10	10000.	11651.	1650.	16.5	.00784	.000	1
CalStd13=10	100000.	98285.	-1710.	-1.71	.06612	.001	1
CalStd9=100	1000.0	1063.9	63.9	6.39	.00071	.000	1

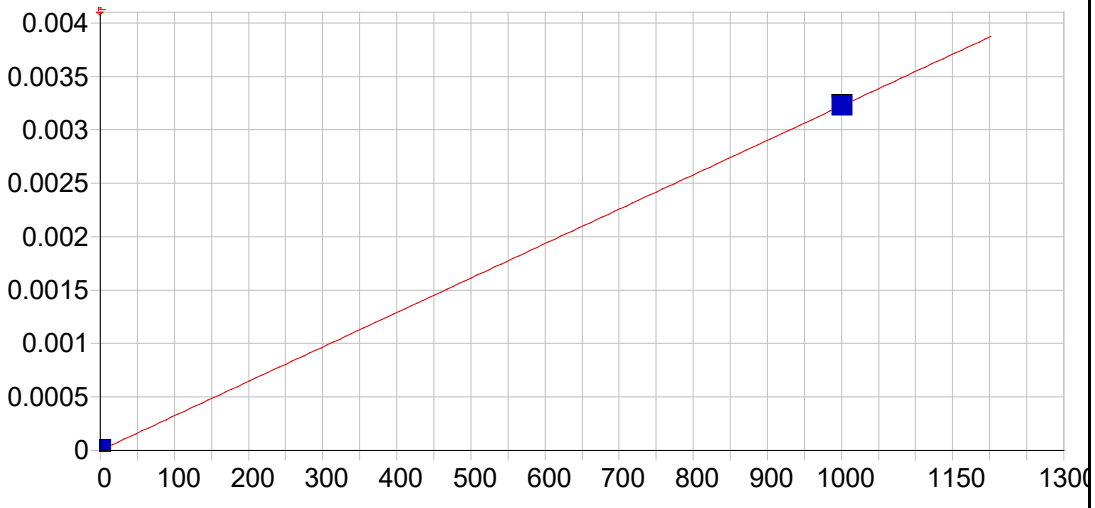


S 182.034 {485}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999410	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	3.340223		
Predicted MQL:	11.134078		

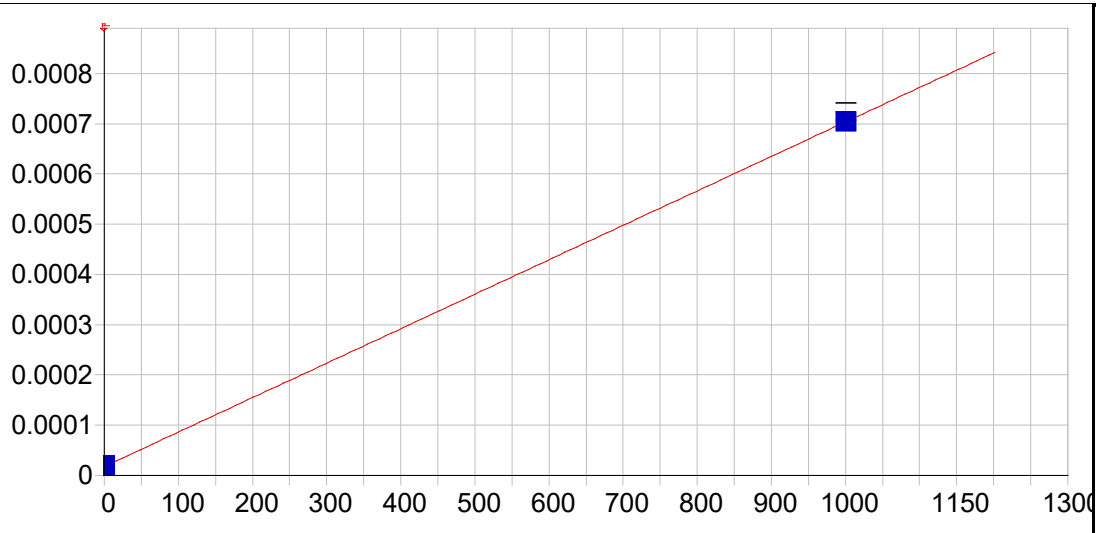
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	2.6135	2.61	.000	.00001	.000	1
CalStd9=100	1000.0	956.44	-43.6	-4.36	.00046	.000	1
CalStd10=10	10000.	10356.	356.	3.56	.00487	.000	1
CalibStd15=	1000000.	798050.	-202000.	-20.2	.37392	.001	1
CalStd13=10	100000.	97379.	-2620.	-2.62	.04563	.001	1



Hg 184.950 {482}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000002		Re-Slope:	1.000000	
A1 (Gain):	0.000003		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.559003				
Predicted MQL:	1.863344				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00000	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00322	.000	1



Ce 404.076 { 83}

Date of Fit:	03/23/2022 11:00:21	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000018		Re-Slope:	1.000000	
A1 (Gain):	0.000001		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	7.076566				
Predicted MQL:	23.588552				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00002	.000	1
CalStd9=100	1000.0	1000.0	.000	.000	.00070	.000	1

Sample Name: Blank Acquired: 03/22/2022 11:37:54 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Ca3158	Ca3933	Ca3968
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**	**.000**	**-.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	24.3	7.35	40.4	2.32	741.	24.3	202.	131.	5.37	5.32	5.21	7.19	9.30

Elem	Cd2265	Cd2288	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**-.000**	**-.000**	**-.000**	**.000**	**.000**	**.000**	**-.000**	**-.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	42.5	37.7	37.2	59.7	38.5	20.3	240.	3.27	25.1	938.	58.0	1190.	2.74

Elem	Mn2576	Mo2020	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**-.000**	**-.000**	**.000**	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**-.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	109.	117.	37.9	48.8	170.	18.5	36.7	23.3	54.9	161.	144.	49.6	1800.

Elem	Zn2138	Na3302	Na5889	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**2020.**	**52.6**	**.000**	**-37.9**
Stddev	.000	.000	18.	5.9	.000	3.8
%RSD	31.0	49.7	.876	11.2	7.64	10.1

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**298690.**	**2187700.**	**676770.**
Stddev	1438.	59663.	8511.
%RSD	.48137	2.7272	1.2576

Sample Name: CalStd2=0.5 Acquired: 03/22/2022 11:45:33 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Be3130	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**
Stddev	.000	.000	.000
%RSD	5.27	22.8	3.80

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**295770.**	**2157000.**	**674640.**
Stddev	963.	98361.	10855.
%RSD	.32558	4.5600	1.6090

Sample Name: CalStd3=1 Acquired: 03/22/2022 11:53:10 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	36.9	22.1	1.10	6.12	4.67	4.10	31.3	78.3

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**294880.**	**2167900.**	**693620.**
Stddev	4042.	20017.	54196.
%RSD	1.3707	.92330	7.8135

Sample Name: CalStd4=5 Acquired: 03/22/2022 12:00:47 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	7.96	2.90	2.64	2.42	3.39	2.64	1.41	4.51	2.38	3.37	5.68	11.2	9.36

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**298110.**	**2165900.**	**654080.**
Stddev	1814.	47361.	20960.
%RSD	.60860	2.1867	3.2044

Sample Name: CalStd5=10 Acquired: 03/22/2022 12:08:23 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Be3130	Cd2265	Cd2288	Co2286	Cr2055	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**	**.000**	**.001**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.99	6.07	1.51	4.17	16.6	29.9	1.28	.532	.906	.734	1.11	2.29	3.36

Elem	Cu2230	Mn2576	Mo2020	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.001**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.17	.820	1.64	3.04	67.8	11.8	17.3	7.24	9.72	6.65	3.00	.513	.460

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**294580.**	**2157200.**	**688680.**
Stddev	1047.	16317.	29636.
%RSD	.35545	.75641	4.3033

Sample Name: CalStd6=20 Acquired: 03/22/2022 12:15:57 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ba2335	Cu2230	Mn2576	Mo2020	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000
%RSD	1.44	2.72	3.32	1.24	2.17	5.36	1.09

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**297210.**	**2160100.**	**672620.**
Stddev	1680.	11162.	7024.
%RSD	.56512	.51671	1.0443

Sample Name: CalStd7=50 Acquired: 03/22/2022 12:23:28 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	As1937	As1972	Ca3933	Cd2288	Co2286	Cr2055	Cr2677	Mn2576	Mo2020	Ni2316	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.000**	**.000**	**.010**	**.003**	**.001**	**.001**	**.000**	**.001**	**.000**	**.001**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	1.92	1.17	5.61	7.39	.632	.585	.558	1.13	.981	1.31	.702	.396	2.73

Elem	V_2924
Units	Cts/S
Avg	**.000**
Stddev	.000
%RSD	1.33

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**295960.**	**2196800.**	**665400.**
Stddev	779.	45166.	5566.
%RSD	.26313	2.0560	.83641

Sample Name: CalStd8=100 Acquired: 03/22/2022 12:30:49 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al1670	Al3092	As1937	As1972	Ba2335	Ba4934	Be3130	Ca3933	Ca3968	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.001**	**.000**	**.000**	**.000**	**.000**	**.001**	**.003**	**.008**	**.019**	**.013**	**.005**	**.002**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	2.68	.735	1.17	1.10	2.63	4.29	1.47	1.06	2.98	.675	.813	1.72	1.54

Elem	Co2388	Cr2055	Cr2677	Cu2230	Mg2802	Mn2576	Mo2020	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.001**	**.000**	**.001**	**.005**	**.001**	**.001**	**.001**	**.001**	**.000**	**.000**	**.000**	**.000**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	3.02	1.17	2.66	1.81	3.03	3.03	1.06	1.25	1.68	6.16	3.09	1.19	2.04

Elem	Se2062	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.000**	**.000**	**.001**	**.002**	**.004**
Stddev	.000	.000	.000	.000	.000
%RSD	6.22	.725	2.97	1.58	1.44

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**296210.**	**2089300.**	**669210.**
Stddev	2336.	62276.	6116.
%RSD	.78849	2.9808	.91390

Sample Name: CalStd9=1000 Acquired: 03/22/2022 12:37:59 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al1670	Al3092	Al3961	As1937	As1972	Ba2335	Ba4934	Be3130	Ca3158	Ca3933	Ca3968	Cd2265	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.003**	**.001**	**.002**	**.001**	**.001**	**.007**	**.028**	**.080**	**.001**	**.170**	**.117**	**.031**	**.050**
Stddev	.000	.000	.000	.000	.000	.000	.001	.001	.000	.004	.003	.000	.000
%RSD	.275	1.90	2.36	.289	.605	.299	2.49	1.65	2.06	2.34	2.47	.235	.293

Elem	Co2286	Co2388	Cr2055	Cr2677	Cu2230	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.024**	**.003**	**.010**	**.002**	**.005**	**.001**	**.001**	**.003**	**.002**	**.000**	**.051**	**.012**	**.007**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002	.000	.000
%RSD	.325	1.78	.360	1.74	.303	1.54	2.24	2.18	.452	2.32	3.91	1.65	.246

Elem	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.013**	**.013**	**.000**	**.002**	**.002**	**.002**	**.001**	**.000**	**.002**	**.005**	**.016**	**.041**	**6410.**
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	46.
%RSD	.362	.415	.559	.206	.401	.572	.377	.604	.178	1.65	.297	.233	.713

Elem	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S
Avg	**2120.**	**.001**	**189.**
Stddev	23.	.000	5.
%RSD	1.10	1.87	2.41

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**295020.**	**2150500.**	**668960.**
Stddev	928.	26895.	14032.
%RSD	.31448	1.2507	2.0976

Sample Name: CalStd10=10000 Acquired: 03/22/2022 12:44:42 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	As1972	Ba4934	Ca3158	Ca3968	Co2286	Co2388	Cr2055	Cr2677	Cu2230
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.007**	**.018**	**.005**	**.266**	**.005**	**1.08**	**.223**	**.026**	**.098**	**.022**	**.050**
Stddev	.000	.000	.000	.007	.000	.01	.001	.001	.000	.001	.000
%RSD	2.21	2.06	.251	2.48	1.95	1.16	.314	4.02	.200	3.95	.231

Elem	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Mg2802	Mn2576	Mo2020	Ni2216	Ni2316	Pb2169
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.006**	**.011**	**.027**	**.015**	**.001**	**.415**	**.109**	**.070**	**.117**	**.121**	**.002**
Stddev	.000	.000	.001	.000	.000	.023	.006	.000	.000	.000	.000
%RSD	3.95	2.20	2.04	.241	1.80	5.44	5.31	.195	.352	.366	.271

Elem	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Na5889	Na5895	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.022**	**.015**	**.018**	**.009**	**.002**	**.019**	**.049**	**.153**	**44200.**	**19800.**	**.010**
Stddev	.000	.000	.000	.000	.000	.000	.002	.001	356.	161.	.000
%RSD	.271	.320	.179	.154	.241	.321	3.99	.442	.807	.812	1.87

Elem	K_7698
Units	Cts/S
Avg	**1810.**
Stddev	16.
%RSD	.873

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**287630.**	**2166700.**	**669440.**
Stddev	831.	129560.	8300.
%RSD	.28879	5.9799	1.2399

Sample Name: CalStd12=100K Acquired: 03/22/2022 12:52:34 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Cr2055	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S
Avg	**.862**	**.017**	**1.34**
Stddev	.014	.000	.01
%RSD	1.65	1.64	.873

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**286950.**	**2100700.**	**670180.**
Stddev	2342.	66811.	4459.
%RSD	.81620	3.1803	.66540

Sample Name: CalStd13=100000 Acquired: 03/22/2022 13:00:52 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2343	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	Na5889
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.063**	**.169**	**.048**	**.055**	**.102**	**.251**	**.137**	**.006**	**.001**	**393000.**
Stddev	.001	.004	.001	.000	.002	.005	.003	.000	.000	4860.
%RSD	2.28	2.37	1.81	.590	2.11	1.87	2.06	1.81	2.06	1.24

Elem	Na5895	K_7664	K_7698
Units	Cts/S	Cts/S	Cts/S
Avg	**185000.**	**.091**	**17000.**
Stddev	2010.	.002	143.
%RSD	1.09	2.03	.845

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**279800.**	**2052300.**	**659450.**
Stddev	3452.	25554.	8423.
%RSD	1.2336	1.2451	1.2772

Sample Name: CalStd14=500000 Acquired: 03/22/2022 13:08:38 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.317**	**.859**	**.231**	**.456**	**1.10**	**.645**	**.031**	**.004**
Stddev	.014	.036	.011	.015	.04	.005	.001	.000
%RSD	4.54	4.14	4.60	3.35	3.50	.788	4.49	4.47

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**252170.**	**644600.**
Stddev	1176.	30200.
%RSD	.46647	4.6851

Sample Name: CalibStd15=1000k Acquired: 03/22/2022 13:17:29 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Al3092	Al3961	Ca3158	Fe2395	Fe2599	Mg2025	Mg2790	Na3302	K_7698
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.646**	**1.80**	**.473**	**.861**	**2.10**	**1.20**	**.064**	**.009**	**160000.**
Stddev	.016	.02	.006	.029	.05	.01	.000	.000	513.
%RSD	2.43	1.30	1.35	3.33	2.48	.692	.206	.370	.321

Int. Std.	Y_2243	Y_3710
Units	Cts/S	Cts/S
Avg	**232840.**	**580960.**
Stddev	725.	1976.
%RSD	.31122	.34011

Sample Name: Ag Ba 1000, 50000 Acquired: 03/22/2022 13:26:38 Type: Cal
Method: DOD Calibration Updated 060614(v4946) Mode: IR Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Ba4934
Units	Cts/S	Cts/S	Cts/S
Avg	**.003**	**.008**	**1.38**
Stddev	.000	.000	.04
%RSD	.889	2.07	2.94

Int. Std.	Y_3242	Y_3710
Units	Cts/S	Cts/S
Avg	**2164200.**	**666240.**
Stddev	16226.	13456.
%RSD	.74974	2.0197

Sample Name: icv Acquired: 03/22/2022 13:49:31 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	Al3961	As1972	Ba2335	Ba4934	Be3130	Ca3158	Ca3968	Cd2265	Cd2288	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**48.3**	**12500.**	**11900.**	**2050.**	**1890.**	**2040.**	**48.2**	**10900.**	**9800.**	**47.1**	**51.1**	**509.**
Stddev	.4	257.	238.	14.	13.	37.	.1	243.	612.	.3	.4	3.
%RSD	.861	2.06	2.00	.685	.702	1.79	.263	2.24	6.24	.699	.855	.611
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Cr2055	Cr2677	Cu2230	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**204.**	**205.**	**243.**	**5020.**	**5130.**	**10800.**	**10300.**	**518.**	**552.**	**504.**	**500.**	**511.**
Stddev	2.	.	2.	11.	106.	65.	217.	1.	4.	3.	1.	2.
%RSD	.845	.178	.743	.210	2.07	.598	2.10	.184	.759	.627	.289	.298
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138	Na3302	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**1960.**	**1980.**	**1980.**	**505.**	**515.**	**507.**	**105.**	**104.**	**110.**
Stddev	17.	23.	11.	1.	4.	4.	2.	2.	.
%RSD	.850	1.15	.553	.203	.694	.762	1.74	1.93	.251
Check ?	None	None	None	None	None	None	None	None	None
Value									
Range									

Sample Name: icv Acquired: 03/22/2022 13:49:31 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**282430.**	**2091900.**	**651440.**
Stddev	912.	7710.	11851.
%RSD	.32278	.36853	1.8192

Sample Name: ICVLL Acquired: 03/22/2022 13:56:52 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	F **23.6**	**1180.**	**1250.**	**56.2**	**30.7**	**11.9**	**1650.**	**1420.**	**1570.**	**15.0**	**32.1**	**31.9**	**33.3**
Stddev	.4	17.	47.	1.9	.7	.1	55.	52.	48.	.2	.4	.1	1.3
%RSD	1.73	1.42	3.77	3.42	2.36	.802	3.32	3.65	3.08	1.04	1.28	.411	3.84
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	60.0												
Range	-30.0%												

Elem	Fe2343	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L
Avg	**998.**	**1680.**	**32.9**	**32.2**	**31.3**	**30.0**	**62.3**	**59.2**	**60.8**	**32.0**	**31.2**	**6.31**	**6.26**
Stddev	10.	44.	.4	1.0	.4	.8	1.3	1.5	1.9	.3	.5	.01	.01
%RSD	.982	2.60	1.15	3.00	1.17	2.56	2.10	2.47	3.17	1.05	1.52	.242	.209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	K_7698
Units	mg/L	mg/L
Avg	**3.19**	**3.48**
Stddev	.10	.02
%RSD	3.19	.530
Check ?	Chk Pass	Chk Pass
Value		
Range		

Sample Name: ICVLL Acquired: 03/22/2022 13:56:52 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**290570.**	**2126600.**	**673530.**
Stddev	1681.	23480.	20500.
%RSD	.57855	1.1041	3.0437

Sample Name: icb Acquired: 03/22/2022 14:04:32 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.387**	**.035**	**-1.32**	**-.109**	**-.019**	**.084**	**.021**	**-.058**	**.054**	**.000**	**.007**	**-.683**	**-.019**
Stddev	.189	.118	2.26	.107	.011	.026	.038	.050	.063	.159	.471	1.01	.019
%RSD	48.7	334.	171.	97.9	56.6	30.4	183.	86.3	117.	54700.	6660.	148.	99.4
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.012**	**-.691**	**.182**	**-1.03**	**.019**	**.149**	**-.098**	**.148**	**.035**	**.017**	**.025**	**.108**	**.122**
Stddev	.031	.067	.105	1.53	1.03	.991	1.14	.166	.023	.006	.002	.014	.026
%RSD	251.	9.62	57.8	148.	5550.	667.	1160.	112.	64.9	33.7	7.12	13.0	21.6
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**293280.**	**2186900.**	**687850.**
Stddev	1444.	19986.	38688.
%RSD	.49221	.91390	5.6245

Sample Name: MRL/LLOQ Acquired: 03/22/2022 14:19:48 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	F **8.88**	**396.**	**18.8**	**9.64**	**3.86**	**482.**	**526.**	**4.93**	**10.3**	**10.4**	**11.1**	**318.**	**550.**
Stddev	.25	.	2.3	.30	.03	6.	7.	.03	.2	.2	.4	4.	5.
%RSD	2.82	.105	11.9	3.08	.850	1.27	1.37	.535	2.15	2.14	4.07	1.11	.828
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	20.0												
Range	-30.0%												

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**10.7**	**9.81**	**10.3**	**10.2**	**20.1**	**20.5**	**20.0**	**10.5**	**10.3**	**2.06**	**2.05**	**1.09**	**1.16**
Stddev	.0	.31	.2	1.0	1.3	1.8	.6	.1	.1	.01	.01	.02	.03
%RSD	.424	3.16	2.20	9.61	6.64	8.79	3.21	1.35	.814	.267	.261	2.03	2.34
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**292300.**	**2150500.**	**655530.**
Stddev	867.	25595.	7866.
%RSD	.29661	1.1902	1.1999

Sample Name: ICSA Acquired: 03/22/2022 14:27:16 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-1.69**	**514000.**	**488000.**	**4.91**	**1.32**	**.370**	**484000.**	**.000**	**-1.25**	**-5.10**	**-.459**
Stddev	1.77	9190.	10000.	12.2	.79	.115	29300.	1.76	.27	.82	.456
%RSD	105.	1.79	2.05	249.	59.9	31.1	6.06	778000.	21.4	16.2	99.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**542000.**	**426000.**	**477000.**	**515000.**	**-3.44**	**-2.10**	**-2.78**	**-.827**	**-2.51**	**-7.86**	**-3.48**
Stddev	17200.	16400.	5170.	8320.	.49	.95	1.04	1.67	1.61	7.86	6.35
%RSD	3.17	3.84	1.08	1.62	14.2	45.1	37.5	202.	64.1	100.	182.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**9810.**	**7.74**	**.115**	**-.180**	**-.891**	**.308**
Stddev	65.	2.42	.004	.011	.030	.015
%RSD	.659	31.2	3.78	6.31	3.41	4.82
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA Acquired: 03/22/2022 14:27:16 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**256940.**	**1935000.**	**631970.**
Stddev	1580.	5580.	10131.
%RSD	.61481	.28835	1.6031

Sample Name: ICSAB Acquired: 03/22/2022 14:35:49 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al3092	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2288	Co2286	Cr2055	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**494.**	**529000.**	**516000.**	**502.**	**461.**	**457.**	**514000.**	**487.**	**462.**	**487.**	**480.**
Stddev	4.	4900.	1810.	24.	7.	6.	3270.	7.	7.	7.	6.
%RSD	.739	.925	.352	4.78	1.57	1.30	.635	1.52	1.48	1.41	1.22
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Cu2230	Fe2395	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**507.**	**554000.**	**432000.**	**491000.**	**535000.**	**497.**	**481.**	**449.**	**438.**	**504.**	**459.**
Stddev	7.	14800.	7260.	6650.	5930.	6.	9.	7.	8.	5.	10.
%RSD	1.38	2.67	1.68	1.35	1.11	1.23	1.86	1.55	1.88	1.06	2.14
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na3302	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**477.**	**490.**	**439.**	**499.**	**49.8**	**55.1**	**57.4**
Stddev	6.	7.	8.	8.	.7	.6	.3
%RSD	1.27	1.47	1.85	1.63	1.46	1.08	.497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB Acquired: 03/22/2022 14:35:49 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**256810.**	**1926800.**	**628990.**
Stddev	1092.	17556.	6478.
%RSD	.42526	.91113	1.0299

Sample Name: ICVLL ag Acquired: 03/22/2022 14:51:21 Type: Unk
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9.47**	**4.15**	**-.718**	**.266**	**.003**	**7.72**	**8.43**	**-.093**	**-.008**	**.188**	**1.70**	**38.7**	**4.15**
Stddev	.69	.19	3.50	.280	.009	.15	.16	.126	.101	.163	.54	7.2	.10
%RSD	7.28	4.57	488.	105.	290.	1.99	1.90	136.	1300.	86.4	32.0	18.7	2.36

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**.247**	**-.252**	**.042**	**-1.15**	**1.11**	**.283**	**-1.06**	**.343**	**1.68**	**.019**	**.033**	**.094**	**.183**
Stddev	.030	.331	.281	1.32	1.27	1.36	.17	.122	.03	.003	.006	.013	.025
%RSD	12.3	131.	667.	115.	115.	482.	15.8	35.7	1.96	16.2	19.3	13.9	13.7

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**292080.**	**2155600.**	**658080.**
Stddev	966.	32997.	4834.
%RSD	.33070	1.5308	.73460

Sample Name: lcss94695 Acquired: 03/22/2022 14:58:56 Type: Unk
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2265	Cd2288	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**90.0**	**101.**	**4230.**	**3950.**	**4020.**	**3940.**	**91.7**	**202000.**	**89.1**	**100.**	**954.**
Stddev	5.5	1.	22.	16.	23.	23.	5.6	530.	.3	.	2.
%RSD	6.06	.577	.510	.400	.577	.575	6.12	.262	.287	.263	.194

Elem	Cr2055	Cr2677	Cu2230	Fe2343	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2068
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**392.**	**378.**	**472.**	**1860.**	**103000.**	**99300.**	**951.**	**2030.**	**946.**	**957.**	**980.**
Stddev	3.	23.	3.	116.	625.	249.	58.	9.	2.	1.	5.
%RSD	.640	5.96	.573	6.25	.607	.251	6.09	.437	.247	.080	.557

Elem	Se2062	Tl1908	V_2924	Zn2062	Zn2138	Na3302	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**3940.**	**3720.**	**931.**	**963.**	**979.**	**99.1**	**102.**	**106.**
Stddev	30.	14.	57.	2.	4.	.8	.	.
%RSD	.754	.381	6.17	.214	.360	.807	.281	.371

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**269410.**	**2059600.**	**640480.**
Stddev	1439.	131170.	1168.
%RSD	.53393	6.3687	.18240

Sample Name: lcsds94695 Acquired: 03/22/2022 15:06:19 Type: Unk
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2265	Cd2288	Co2286	Cr2055
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**91.1**	**4170.**	**3870.**	**4060.**	**3870.**	**93.5**	**199000.**	**90.2**	**101.**	**962.**	**397.**
Stddev	1.1	35.	25.	82.	25.	.8	1710.	1.6	2.	18.	8.
%RSD	1.23	.840	.657	2.01	.649	.808	.859	1.77	1.76	1.87	2.03

Elem	Cr2677	Cu2230	Fe2343	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2068	Se2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**385.**	**477.**	**1880.**	**104000.**	**97900.**	**970.**	**2050.**	**955.**	**960.**	**990.**	**3950.**
Stddev	3.	8.	14.	2020.	648.	8.	37.	18.	16.	18.	85.
%RSD	.827	1.69	.757	1.95	.662	.834	1.79	1.90	1.62	1.86	2.15

Elem	Tl1908	V_2924	Zn2062	Zn2138	Na3302	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**3750.**	**951.**	**970.**	**987.**	**97.5**	**99.6**	**106.**
Stddev	67.	8.	18.	19.	.9	.8	.
%RSD	1.79	.885	1.83	1.92	.966	.840	.332

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**268430.**	**2026200.**	**649910.**
Stddev	2818.	19819.	6784.
%RSD	1.0499	.97814	1.0438

Sample Name: mbs94695 Acquired: 03/22/2022 15:13:41 Type: Unk
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.489**	**2.08**	**-.511**	**-.143**	**-.005**	**7.35**	**8.06**	**-.125**	**-.036**	**.037**	**1.43**	**8.17**	**1.60**
Stddev	.131	.22	2.16	.322	.011	2.06	2.26	.060	.162	.318	.31	.40	.20
%RSD	26.8	10.4	422.	225.	197.	28.0	28.0	47.7	455.	849.	21.9	4.92	12.2

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**.046**	**-.444**	**-.011**	**-.801**	**-.720**	**.338**	**.225**	**.235**	**.469**	**.042**	**.059**	**.230**	**.437**
Stddev	.031	.454	.258	.891	1.39	1.28	.976	.224	.053	.005	.003	.011	.017
%RSD	67.4	102.	2330.	111.	193.	377.	434.	95.4	11.3	12.7	5.74	4.94	3.80

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**292380.**	**2173500.**	**659910.**
Stddev	1393.	15640.	7368.
%RSD	.47638	.71960	1.1165

Sample Name: 1121147 Acquired: 03/22/2022 15:21:19 Type: Unk
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230	Fe2343
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.937**	**12500.**	**11900.**	**-2.66**	**77.1**	**-.585**	**45500.**	**.133**	**4.95**	**22.4**	**45.8**	**1760.**
Stddev	.152	65.	67.	2.40	.4	.011	399.	.101	.11	.4	.7	17.
%RSD	16.2	.519	.565	90.0	.535	1.84	.877	76.0	2.24	1.63	1.51	.969

Elem	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**62100.**	**60600.**	**139.**	**2.40**	**9.37**	**7.39**	**41.1**	**-.052**	**-3.06**	**12.2**	**1400.**	**36.9**
Stddev	212.	442.	1.	.04	.38	.55	.8	1.79	.70	.2	4.	.1
%RSD	.342	.730	1.08	1.80	4.02	7.41	1.88	3470.	22.9	2.02	.300	.257

Elem	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L
Avg	**37.0**	**51.4**	**55.4**
Stddev	.1	.3	.2
%RSD	.266	.535	.286

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**288100.**	**2117600.**	**659260.**
Stddev	147.	18436.	2217.
%RSD	.05086	.87058	.33628

Sample Name: I1121147 Acquired: 03/22/2022 15:28:42 Type: Unk
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al3092	Al3961	As1937	Ba2335	Be3130	Ca3158	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.414**	**3000.**	**2840.**	**-.007**	**18.4**	**-.154**	**11000.**	**9930.**	**.028**	**1.34**	**5.99**	**11.5**
Stddev	.112	118.	102.	2.28	.6	.013	390.	352.	.065	.06	.36	.5
%RSD	27.1	3.95	3.60	31800.	3.19	8.56	3.56	3.54	231.	4.32	5.99	4.69

Elem	Fe2343	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**415.**	**15800.**	**14500.**	**33.2**	**.068**	**2.30**	**1.25**	**10.5**	**.637**	**-.428**	**2.74**	**304.**
Stddev	20.	287.	563.	1.5	.186	.17	1.10	.4	1.09	1.35	.21	6.
%RSD	4.83	1.82	3.87	4.59	274.	7.55	87.9	3.90	171.	315.	7.69	1.81

Elem	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**300.**	**8.86**	**8.78**	**12.1**	**12.9**
Stddev	5.	.08	.07	.4	.1
%RSD	1.80	.947	.846	3.08	1.00

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**289640.**	**2160500.**	**657880.**
Stddev	2237.	95640.	17855.
%RSD	.77242	4.4268	2.7141

Sample Name: pdss1121147 Acquired: 03/22/2022 15:36:27 Type: Unk
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	Al3961	As1972	Ba4934	Be3130	Ca3158	Cd2265	Cd2288	Co2286
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**88.7**	**139.**	**16000.**	**15200.**	**3870.**	**3880.**	**88.9**	**410000.**	**82.0**	**95.6**	**885.**
Stddev	.2	3.	346.	308.	21.	77.	.4	10300.	.1	.1	1.
%RSD	.280	2.23	2.16	2.03	.532	1.98	.437	2.51	.113	.107	.080

Elem	Cr2055	Cr2677	Cu2230	Fe2343	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2068
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**394.**	**389.**	**489.**	**3330.**	**244000.**	**246000.**	**1050.**	**1980.**	**872.**	**859.**	**975.**
Stddev	1.	2.	2.	17.	987.	6170.	5.	2.	1.	3.	6.
%RSD	.248	.514	.331	.495	.404	2.51	.455	.078	.094	.355	.594

Elem	Se2062	Tl1908	V_2924	Zn2062	Na3302	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
Avg	**3540.**	**3220.**	**927.**	**1900.**	**221.**	**242.**	**254.**
Stddev	9.	7.	3.	6.	5.	5.	2.
%RSD	.251	.220	.306	.328	2.30	2.10	.625

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**258210.**	**1928200.**	**640310.**
Stddev	916.	5644.	16792.
%RSD	.35477	.29272	2.6225

Sample Name: 1121148 Acquired: 03/22/2022 15:43:49 Type: Unk
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Ag3382	Al3092	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.855**	**175.**	**14900.**	**14000.**	**1.88**	**97.0**	**-1.58**	**39100.**	**-.177**	**10.6**	**26.0**	**21.2**
Stddev	.164	3.	173.	150.	2.24	.2	.03	428.	.103	.1	.5	.5
%RSD	19.1	1.72	1.17	1.08	119.	.237	1.96	1.10	58.1	.809	1.99	2.33

Elem	Fe2343	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1090.**	**50700.**	**49700.**	**93.8**	**1.46**	**9.69**	**5.87**	**15.0**	**.822**	**-4.83**	**14.1**	**513.**
Stddev	11.	77.	516.	.8	.22	.07	1.30	1.2	1.69	1.24	.3	2.
%RSD	.989	.152	1.04	.839	14.9	.767	22.1	7.76	205.	25.7	2.47	.358

Elem	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**497.**	**5.86**	**5.85**	**78.2**	**85.0**
Stddev	1.	.01	.02	.8	.1
%RSD	.128	.186	.298	1.06	.158

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**290950.**	**2150500.**	**663370.**
Stddev	1065.	20776.	6412.
%RSD	.36615	.96610	.96656

Sample Name: 1121149 Acquired: 03/22/2022 15:51:19 Type: Unk
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3158	Ca3968	Cd2265	Co2286	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.571**	**1630.**	**1980.**	**.136**	**79.2**	**-.783**	**6480.**	**6180.**	**1.95**	**6.32**	**8.88**	**62.7**
Stddev	.116	4.	10.	2.37	.3	.008	19.	63.	.05	.08	.46	.4
%RSD	20.2	.232	.518	1750.	.441	1.05	.289	1.03	2.37	1.31	5.16	.704

Elem	Fe2343	Mg2025	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**397.**	**37800.**	**37000.**	**30.4**	**1.21**	**3.01**	**17.3**	**52.4**	**1.99**	**-2.79**	**4.10**	**904.**
Stddev	3.	250.	115.	.2	.40	.35	1.6	1.1	1.45	1.12	.17	4.
%RSD	.866	.661	.311	.730	32.7	11.8	9.00	2.09	72.8	39.9	4.23	.474

Elem	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**866.**	**3.73**	**3.72**	**91.5**	**98.9**
Stddev	4.	.01	.02	.5	.5
%RSD	.490	.371	.471	.543	.482

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**290970.**	**2141300.**	**665150.**
Stddev	1538.	14806.	3595.
%RSD	.52877	.69147	.54042

Sample Name: ccv1 Acquired: 03/22/2022 16:06:35 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3382	Al3092	Al3961	As1972	Ba4934	Be3130	Ca3158	Ca3968	Cd2288	Co2286	Co2388	Cr2055	Cr2677
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**519.**	**5130.**	**5000.**	**5100.**	**4570.**	**500.**	**5130.**	**5010.**	**497.**	**4900.**	**4580.**	**5000.**	**4940.**
Stddev	8.	68.	58.	82.	89.	4.	45.	105.	8.	83.	37.	88.	50.
%RSD	1.50	1.33	1.16	1.61	1.95	.827	.878	2.09	1.70	1.69	.806	1.76	1.02
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Cu3247	Fe2343	Fe2599	Mg2025	Mg2790	Mn2576	Mo2020	Ni2216	Pb2169	Sb2068	Se2062	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**4700.**	**4930.**	**4870.**	**5260.**	**5080.**	**4990.**	**4920.**	**4860.**	**4760.**	**4870.**	**4920.**	**4820.**	**5000.**
Stddev	68.	38.	49.	100.	60.	43.	84.	79.	78.	82.	79.	75.	39.
%RSD	1.45	.768	.996	1.91	1.18	.853	1.71	1.63	1.63	1.69	1.61	1.56	.782
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Zn2062	Na3302	K_7664	K_7698
Units	ug/L	mg/L	mg/L	mg/L
Avg	**4820.**	**109.**	**99.5**	**106.**
Stddev	69.	1.	.9	.
%RSD	1.43	.762	.938	.170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				
Range				

Sample Name: ccv1 Acquired: 03/22/2022 16:06:35 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**279990.**	**2083300.**	**659150.**
Stddev	3217.	4362.	4968.
%RSD	1.1488	.20938	.75369

Sample Name: ccv2 Acquired: 03/22/2022 16:14:15 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	Al3092	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2055	Cr2677	Cu2230
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**46.6**	**491.**	**510.**	**487.**	**496.**	**46.1**	**478.**	**522.**	**45.8**	**512.**	**520.**	**511.**	**523.**
Stddev	1.6	5.	4.	5.	5.	1.7	1.	1.	.3	4.	5.	19.	5.
%RSD	3.34	1.05	.713	.931	.928	3.59	.168	.163	.710	.841	.872	3.66	.878
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Fe2343	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Na5889
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
Avg	**525.**	**549.**	**531.**	**511.**	**509.**	**515.**	**513.**	**484.**	**534.**	**512.**	**494.**	**490.**	**10.4**
Stddev	20.	19.	19.	5.	4.	5.	4.	7.	4.	18.	3.	4.	.0
%RSD	3.87	3.43	3.60	.975	.839	1.00	.876	1.44	.784	3.59	.619	.896	.178
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	Na5895	K_7664	K_7698
Units	mg/L	mg/L	mg/L
Avg	**10.3**	**10.1**	**11.0**
Stddev	.0	.0	.0
%RSD	.218	.334	.157
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Sample Name: ccv2 Acquired: 03/22/2022 16:14:15 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**289310.**	**2135500.**	**666280.**
Stddev	2244.	62388.	1749.
%RSD	.77553	2.9214	.26256

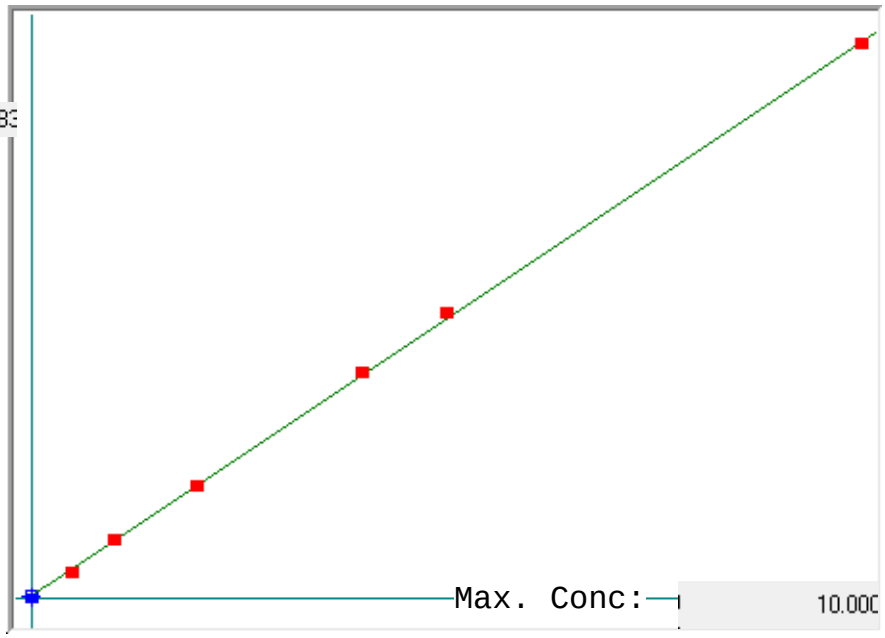
Sample Name: ccb Acquired: 03/22/2022 16:21:02 Type: QC
Method: DOD Calibration Updated 060614(v4946) Mode: CONC Corr. Factor: 1.000000
User: NAH ICP6500: Prep Batch: Post Digestion Dilution:
Comment:

Elem	Ag3280	Al1670	As1937	Ba2335	Be3130	Ca3933	Ca3968	Cd2265	Co2286	Cr2677	Cu2230	Fe2343	Mg2802
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.532**	**-.052**	**.162**	**.021**	**-.034**	**.112**	**.078**	**-.052**	**-.034**	**-.046**	**.098**	**-2.66**	**-.050**
Stddev	.241	.191	4.12	.181	.019	.026	.047	.105	.077	.311	.368	1.74	.057
%RSD	45.2	367.	2540.	850.	56.3	23.5	60.1	201.	229.	680.	375.	65.2	113.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Elem	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Na5889	Na5895	K_7664	K_7698
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
Avg	**-.001**	**-.514**	**-.034**	**-1.78**	**1.73**	**2.10**	**-.102**	**.229**	**.173**	**-.013**	**.005**	**.032**	**.030**
Stddev	.037	.339	.144	1.19	1.24	1.40	1.03	.178	.013	.008	.004	.008	.019
%RSD	2550.	66.1	419.	66.6	71.7	66.8	1010.	77.6	7.65	60.7	89.2	24.3	64.3
Check ?	None	None	None	None	None	None	None	None	None	None	None	None	None
Value													
Range													

Int. Std.	Y_2243	Y_3242	Y_3710
Units	Cts/S	Cts/S	Cts/S
Avg	**293170.**	**2257700.**	**676820.**
Stddev	2235.	94991.	5282.
%RSD	.76220	4.2074	.78046

Hg SOLID



A= 0.0000e+000

B= 1.3931e-004

C= -3.4873e-002

Rho= 0.9991501

Accept= Accepted

Accepted Date=

03/23/22 09:29

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
CALIBRATION BLANK	0.000	0.000	0.000	253	4.815	250	258	248	259	
0.5	0.500	0.470	-0.030	3621	0.9 %	3573	3619	3634	3660	
1.0	1.000	1.051	0.051	7793	1.0 %	7676	7769	7834	7894	
2.0	2.000	2.043	0.043	14915	1.6 %	14618	14790	15015	15237	
4.0	4.000	4.074	0.074	29497	1.5 %	28922	29289	29681	30096	
5.0	5.000	5.165	0.165	37323	1.2 %	36637	37233	37620	37804	
10.0	10.000	10.007	0.007	72083	0.9 %	71105	71906	72407	72915	

032322S

Method: Hg SOLID Operator: Admin Date of Analysis: 23 Mar 2022 09:03:30

Sample ID	Date	Element	Units	Extended ID	Mean
CALIBRATION BLANK	23 Mar 2022 09:07:23	Hg			254
0.5	23 Mar 2022 09:10:32	Hg			3622
1.0	23 Mar 2022 09:13:43	Hg			7793
2.0	23 Mar 2022 09:16:55	Hg			14915
4.0	23 Mar 2022 09:20:06	Hg			29497
5.0	23 Mar 2022 09:23:16	Hg			37324
10.0	23 Mar 2022 09:26:26	Hg			72083
ICV	23 Mar 2022 09:29:36	Hg			100.0% 3.001
ICB	23 Mar 2022 09:35:56	Hg			-0.002
LCSS	23 Mar 2022 09:42:14	Hg			1.983
MBS	23 Mar 2022 09:48:34	Hg			-0.001
1121147	23 Mar 2022 09:51:43	Hg		100	0.002
1119738	23 Mar 2022 09:58:01	Hg			0.204
1121148	23 Mar 2022 10:01:11	Hg		5	-0.002
1121149	23 Mar 2022 10:04:21	Hg			0.026
1121148	23 Mar 2022 10:07:30	Hg			-0.005
CCV	23 Mar 2022 10:10:41	Hg			102.7% 3.080
CCB	23 Mar 2022 10:16:59	Hg			-0.001
1121147	23 Mar 2022 10:20:08	Hg			0.195
LCSDS	23 Mar 2022 10:23:19	Hg			2.034
MSS1119738	23 Mar 2022 10:26:31	Hg			2.269
MSDS1119738	23 Mar 2022 10:29:40	Hg			2.012
CCV	23 Mar 2022 10:32:50	Hg			101.2% 3.036
CCB	23 Mar 2022 10:39:09	Hg			-0.002

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Method: Hg SOLID Operator: Admin Date of Analysis: 23 Mar 2022 09:03:30

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
CALIBRATION BLANK - 1	23 Mar 2022 09:07:23	Hg			250	-
CALIBRATION BLANK - 2	23 Mar 2022 09:07:23	Hg			258	-
CALIBRATION BLANK - 3	23 Mar 2022 09:07:23	Hg			248	-
CALIBRATION BLANK - 4	23 Mar 2022 09:07:23	Hg			259	-
0.5 - 1	23 Mar 2022 09:10:32	Hg			3573	-
0.5 - 2	23 Mar 2022 09:10:32	Hg			3619	-
0.5 - 3	23 Mar 2022 09:10:32	Hg			3634	-
0.5 - 4	23 Mar 2022 09:10:32	Hg			3660	-
1.0 - 1	23 Mar 2022 09:13:43	Hg			7676	-
1.0 - 2	23 Mar 2022 09:13:43	Hg			7769	-
1.0 - 3	23 Mar 2022 09:13:43	Hg			7834	-
1.0 - 4	23 Mar 2022 09:13:43	Hg			7894	-
2.0 - 1	23 Mar 2022 09:16:55	Hg			14618	-
2.0 - 2	23 Mar 2022 09:16:55	Hg			14790	-
2.0 - 3	23 Mar 2022 09:16:55	Hg			15015	-
2.0 - 4	23 Mar 2022 09:16:55	Hg			15237	-
4.0 - 1	23 Mar 2022 09:20:06	Hg			28922	-
4.0 - 2	23 Mar 2022 09:20:06	Hg			29289	-
4.0 - 3	23 Mar 2022 09:20:06	Hg			29681	-
4.0 - 4	23 Mar 2022 09:20:06	Hg			30096	-
5.0 - 1	23 Mar 2022 09:23:16	Hg			36637	-
5.0 - 2	23 Mar 2022 09:23:16	Hg			37233	-
5.0 - 3	23 Mar 2022 09:23:16	Hg			37620	-
5.0 - 4	23 Mar 2022 09:23:16	Hg			37804	-
10.0 - 1	23 Mar 2022 09:26:26	Hg			71105	-
10.0 - 2	23 Mar 2022 09:26:26	Hg			71906	-
10.0 - 3	23 Mar 2022 09:26:26	Hg			72407	-
10.0 - 4	23 Mar 2022 09:26:26	Hg			72915	-
ICV - 1	23 Mar 2022 09:29:36	Hg			21358	98.0% 2.941
ICV - 2	23 Mar 2022 09:29:36	Hg			21740	99.8% 2.994
ICV - 3	23 Mar 2022 09:29:36	Hg			21971	100.9% 3.026
ICV - 4	23 Mar 2022 09:29:36	Hg			22113	101.5% 3.046
ICB - 1	23 Mar 2022 09:35:56	Hg			222	-0.004
ICB - 2	23 Mar 2022 09:35:56	Hg			232	-0.003
ICB - 3	23 Mar 2022 09:35:56	Hg			245	-0.001
ICB - 4	23 Mar 2022 09:35:56	Hg			239	-0.002
LCSS - 1	23 Mar 2022 09:42:14	Hg			14160	1.938
LCSS - 2	23 Mar 2022 09:42:14	Hg			14408	1.972
LCSS - 3	23 Mar 2022 09:42:14	Hg			14626	2.003
LCSS - 4	23 Mar 2022 09:42:14	Hg			14752	2.020
MBS - 1	23 Mar 2022 09:48:34	Hg			232	-0.003
MBS - 2	23 Mar 2022 09:48:34	Hg			243	-0.001
MBS - 3	23 Mar 2022 09:48:34	Hg			240	-0.001
MBS - 4	23 Mar 2022 09:48:34	Hg			244	-0.001
1121147 - 1	23 Mar 2022 09:51:43	Hg		100	254	0.001
1121147 - 2	23 Mar 2022 09:51:43	Hg		100	262	0.002
1121147 - 3	23 Mar 2022 09:51:43	Hg		100	266	0.002
1121147 - 4	23 Mar 2022 09:51:43	Hg		100	270	0.003
1119738 - 1	23 Mar 2022 09:58:01	Hg			1681	0.199
1119738 - 2	23 Mar 2022 09:58:01	Hg			1708	0.203
1119738 - 3	23 Mar 2022 09:58:01	Hg			1715	0.204
1119738 - 4	23 Mar 2022 09:58:01	Hg			1756	0.210
1121148 - 1	23 Mar 2022 10:01:11	Hg		5	226	-0.003
1121148 - 2	23 Mar 2022 10:01:11	Hg		5	233	-0.002
1121148 - 3	23 Mar 2022 10:01:11	Hg		5	244	-0.001
1121148 - 4	23 Mar 2022 10:01:11	Hg		5	235	-0.002
1121149 - 1	23 Mar 2022 10:04:21	Hg			414	0.023
1121149 - 2	23 Mar 2022 10:04:21	Hg			430	0.025
1121149 - 3	23 Mar 2022 10:04:21	Hg			443	0.027
1121149 - 4	23 Mar 2022 10:04:21	Hg			453	0.028
1121148 - 1	23 Mar 2022 10:07:30	Hg			217	-0.005
1121148 - 2	23 Mar 2022 10:07:30	Hg			214	-0.005
1121148 - 3	23 Mar 2022 10:07:30	Hg			209	-0.006
1121148 - 4	23 Mar 2022 10:07:30	Hg			227	-0.003
CCV - 1	23 Mar 2022 10:10:41	Hg			22087	101.4% 3.042
CCV - 2	23 Mar 2022 10:10:41	Hg			22257	102.2% 3.066
CCV - 3	23 Mar 2022 10:10:41	Hg			22452	103.1% 3.093
CCV - 4	23 Mar 2022 10:10:41	Hg			22632	103.9% 3.118
CCB - 1	23 Mar 2022 10:16:59	Hg			243	-0.001
CCB - 2	23 Mar 2022 10:16:59	Hg			233	-0.002
CCB - 3	23 Mar 2022 10:16:59	Hg			243	-0.001
CCB - 4	23 Mar 2022 10:16:59	Hg			240	-0.001
1121147 - 1	23 Mar 2022 10:20:08	Hg			1621	0.191
1121147 - 2	23 Mar 2022 10:20:08	Hg			1639	0.193
1121147 - 3	23 Mar 2022 10:20:08	Hg			1654	0.196
1121147 - 4	23 Mar 2022 10:20:08	Hg			1676	0.199
LCSDS - 1	23 Mar 2022 10:23:19	Hg			14641	2.005
LCSDS - 2	23 Mar 2022 10:23:19	Hg			14781	2.024
LCSDS - 3	23 Mar 2022 10:23:19	Hg			14919	2.044

032322S DETAILED

Method: Hg SOLID Operator: Admin Date of Analysis: 23 Mar 2022 09:03:30

Sample ID	Date	Element	Units	Extended ID	µ Abs.	Conc.
LCSDS - 4	23 Mar 2022 10:23:19	Hg			15063	2.064
MSS1119738 - 1	23 Mar 2022 10:26:31	Hg			16126	2.212
MSS1119738 - 2	23 Mar 2022 10:26:31	Hg			16485	2.262
MSS1119738 - 3	23 Mar 2022 10:26:31	Hg			16758	2.300
MSS1119738 - 4	23 Mar 2022 10:26:31	Hg			16795	2.305
MSDS1119738 - 1	23 Mar 2022 10:29:40	Hg			14353	1.965
MSDS1119738 - 2	23 Mar 2022 10:29:40	Hg			14528	1.989
MSDS1119738 - 3	23 Mar 2022 10:29:40	Hg			14813	2.029
MSDS1119738 - 4	23 Mar 2022 10:29:40	Hg			15087	2.067
CCV - 1	23 Mar 2022 10:32:50	Hg			21633	99.3% 2.979
CCV - 2	23 Mar 2022 10:32:50	Hg			21966	100.8% 3.025
CCV - 3	23 Mar 2022 10:32:50	Hg			22209	102.0% 3.059
CCV - 4	23 Mar 2022 10:32:50	Hg			22375	102.7% 3.082
CCB - 1	23 Mar 2022 10:39:09	Hg			239	-0.002
CCB - 2	23 Mar 2022 10:39:09	Hg			240	-0.001
CCB - 3	23 Mar 2022 10:39:09	Hg			237	-0.002
CCB - 4	23 Mar 2022 10:39:09	Hg			238	-0.002

METALS
LOGBOOK
DOCUMENTS

MICP SOIL QSM Analytical Run
210424 on 3/23/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1122026						MICP SOIL QSM				
				ICV				0			
	1122027						MICP SOIL QSM				
				ICVLL				0			
	1122028						MICP SOIL QSM				
				ICB				0			
	1122029						MICP SOIL QSM				
				ICSA				0			
	1122030						MICP SOIL QSM				
				ICSAB				0			
	1122031						MICP SOIL QSM				
				ICVLL				0			
	1121152						ICP K QSM 5.0 6010D				
				LCSS				94695			
	1121152						ICP NA QSM 5.0 6010D				
				LCSS				94695			
	1121152						ICP QSM 5.0 6010D				
				LCSS				94695			
	1121226						ICP K QSM 5.0 6010D				
				LCSS				94695			
	1121226						ICP NA QSM 5.0 6010D				
				LCSS				94695			
	1121226						ICP QSM 5.0 6010D				
				LCSS				94695			
	1121151						ICP K QSM 5.0 6010D				
				MBS				94695			
	1121151						ICP NA QSM 5.0 6010D				
				MBS				94695			
	1121151						ICP QSM 5.0 6010D				
				MBS				94695			
168330	1121147		3/17/2022 16:03		TETRA TECH	PWDF	ICP K QSM 5.0 6010D		S	**4**	Y
		PWDF-WS-01-031722						94695			
168330	1121147		3/17/2022 16:03		TETRA TECH	PWDF	ICP NA QSM 5.0 6010D		S	**4**	Y
		PWDF-WS-01-031722						94695			
168330	1121147		3/17/2022 16:03		TETRA TECH	PWDF	ICP QSM 5.0 6010D		S	**4**	Y
		PWDF-WS-01-031722						94695			
	1122069						ICP K QSM 5.0 6010D				
				L 1121147							

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpFA68.tmp

MICP SOIL QSM Analytical Run
210424 on 3/23/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1122070							ICP NA QSM 5.0 6010D				
				L	1121147							
	1122071							ICP QSM 5.0 6010D				
				L	1121147							
	1122072							ICP K QSM 5.0 6010D				
				PDSS	1121147							
	1122073							ICP NA QSM 5.0 6010D				
				PDSS	1121147							
	1122074							ICP QSM 5.0 6010D				
				PDSS	1121147							
168330	1121148	3/17/2022	16:23			TETRA TECH	PWDF	ICP K QSM 5.0 6010D		S	4	Y
		PWDF-WS-02-031722							94695			
168330	1121148	3/17/2022	16:23			TETRA TECH	PWDF	ICP NA QSM 5.0 6010D		S	4	Y
		PWDF-WS-02-031722							94695			
168330	1121148	3/17/2022	16:23			TETRA TECH	PWDF	ICP QSM 5.0 6010D		S	4	Y
		PWDF-WS-02-031722							94695			
168330	1121149	3/17/2022	16:58			TETRA TECH	PWDF	ICP K QSM 5.0 6010D		S	4	Y
		PWDF-WS-03-031722							94695			
168330	1121149	3/17/2022	16:58			TETRA TECH	PWDF	ICP NA QSM 5.0 6010D		S	4	Y
		PWDF-WS-03-031722							94695			
168330	1121149	3/17/2022	16:58			TETRA TECH	PWDF	ICP QSM 5.0 6010D		S	4	Y
		PWDF-WS-03-031722							94695			
	1122034							MICP SOIL QSM				
				CCV1					0			
	1122035							MICP SOIL QSM				
				CCV2					0			
	1122036							MICP SOIL QSM				
				CCB					0			

33 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpFA68.tmp

MERCURY QSM SOIL 5.0 Analytical Run
210467 on 3/23/2022

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	1122119						MERCURY QSM SOIL 5.0				
				ICV				0			
	1122120						MERCURY QSM SOIL 5.0				
				ICB				0			
	1121228						MERCURY QSM 5.0				
				LCSS				94697			
	1121156						MERCURY QSM 5.0				
				MBS				94697			
168330	1121149		3/17/2022 16:58		TETRA TECH	PWDF	MERCURY QSM 5.0		S	4	Y
		PWDF-WS-03-031722						94697			
168330	1121148		3/17/2022 16:23		TETRA TECH	PWDF	MERCURY QSM 5.0		S	4	Y
		PWDF-WS-02-031722						94697			
	1122121						MERCURY QSM SOIL 5.0				
				CCV				0			
	1122122						MERCURY QSM SOIL 5.0				
				CCB				0			
168330	1121147		3/17/2022 16:03		TETRA TECH	PWDF	MERCURY QSM 5.0		S	4	Y
		PWDF-WS-01-031722						94697			
	1121157						MERCURY QSM 5.0				
				LCSS				94697			
	1122123						MERCURY QSM SOIL 5.0				
				CCV				0			
	1122124						MERCURY QSM SOIL 5.0				
				CCB				0			

12 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Distribution: C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpCCA7.tmp

PrepWrkSht2
on 3/23/2022

Prep Batch: **94695**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time		Due Date	SDG Level
	1121151	MBS	0	ICP QSM 5.0 6010D			SOLID				
	1121151	MBS	0	ICP K QSM 5.0 6010D			SOLID				
	1121151	MBS	0	ICP NA QSM 5.0 6010D			SOLID				
	1121152	LCSS	0	ICP NA QSM 5.0 6010D			SOLID				
	1121152	LCSS	0	ICP QSM 5.0 6010D			SOLID				
	1121152	LCSS	0	ICP K QSM 5.0 6010D			SOLID				
	1121226	LCSS	0	ICP QSM 5.0 6010D			SOLID				
	1121226	LCSS	0	ICP K QSM 5.0 6010D			SOLID				
	1121226	LCSS	0	ICP NA QSM 5.0 6010D			SOLID				
168330	1121147			ICP K QSM 5.0 6010D	TETRA TECH	PWDF-WS-01-031722	SOIL	3/17/22	16:03	3/23/22	4
	1121147			ICP NA QSM 5.0 6010D	TETRA TECH	PWDF-WS-01-031722	SOIL	3/17/22	16:03	3/23/22	4
	1121147			ICP QSM 5.0 6010D	TETRA TECH	PWDF-WS-01-031722	SOIL	3/17/22	16:03	3/23/22	4
	1121148			ICP QSM 5.0 6010D	TETRA TECH	PWDF-WS-02-031722	SOIL	3/17/22	16:23	3/23/22	4
	1121148			ICP K QSM 5.0 6010D	TETRA TECH	PWDF-WS-02-031722	SOIL	3/17/22	16:23	3/23/22	4
	1121148			ICP NA QSM 5.0 6010D	TETRA TECH	PWDF-WS-02-031722	SOIL	3/17/22	16:23	3/23/22	4
	1121149			ICP QSM 5.0 6010D	TETRA TECH	PWDF-WS-03-031722	SOIL	3/17/22	16:58	3/23/22	4
	1121149			ICP K QSM 5.0 6010D	TETRA TECH	PWDF-WS-03-031722	SOIL	3/17/22	16:58	3/23/22	4

PrepWrkSht2
on 3/23/2022

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
168330	1121149			ICP NA QSM 5.0 6010D	TETRA TECH	PWDF-WS-03-031722	SOIL	3/17/22 16:58	3/23/22	4

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

PrepWrkSht2
on 3/25/2022

Prep Batch: **94697**

Prepped By: _____

Date Prepped: _____

Date Entered: _____

Folder #	Order	QC Type	Link	Test	Client Company Name	Client Sample Description	Matrix	Sample Date / Time	Due Date	SDG Level
	1121156	MBS		MERCURY QSM 5.0			SOLID			
	1121157	LCSS		MERCURY QSM 5.0			SOLID			
	1121228	LCSS		MERCURY QSM 5.0			SOLID			
168330	1121147			MERCURY QSM 5.0	TETRA TECH	PWDF-WS-01-031722	SOIL	3/17/22 16:03	3/23/22	4
	1121148			MERCURY QSM 5.0	TETRA TECH	PWDF-WS-02-031722	SOIL	3/17/22 16:23	3/23/22	4
	1121149			MERCURY QSM 5.0	TETRA TECH	PWDF-WS-03-031722	SOIL	3/17/22 16:58	3/23/22	4

Control Spike/Control Spike Dup Reference Number:_____ Methanol Supplier/Lot #:_____

Notes:_____

Metals Digestion Bench Sheet

Program: QSM
*Matrix: SOIL

Prep Methods:
200.2= ICP/GFAA Liquids
3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA As & Se Liquids

Prep Batch #:	94695
Prep Method:	3050
Analyst:	NAH
Date:	03/21/2022
Start Time:	12:25

Prep Analyst: BMM
Balance ID: VOB01

End Date: 03/21/2022
End Time: 14:28

Reagent:	Ref. #
Nitric Acid:	AB.711
Hydrochloric Acid:	AB.707
Hydrogen Peroxide:	AB.709

Digestion Tube Lot #: 3591
Block Used: D1
Cell Position for Temp. Check: 59
Initial-DigestionTemp (ºC,corrected): 94
Final-Digestion Temp (ºC,corrected): 92

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
1121151	(MB)		2.00		50
1121152	(LCS)		2.00		50
1121147			0.51		50
1121148	**Comments:**		0.52		50
1121149			0.52		50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
	(DUP)				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
0.1	M15022
1	M15167
0.5	M15069
0.5	M15113

LCS Spike Amount (ml)	Spike Ref. #
0.1	M15022
1	M15167
0.5	M15069
0.5	M15113

Reviewed x

FMT12-03

Mercury Digestion Bench Sheet

(Prep Methods 7470A & 7471A)

CCV ID: M15319
ICV/LCSW ID: M15320

*Matrix: SOIL
Balance ID: VOB01

7470A= Hg Liquids
7471A= Hg Solids

Prep Batch #:	94697
Prep Method:	7471A
Analyst:	MDS
Date:	03/22/2022
Start Time:	12:50

End Date: 03/22/2022
End Time: 13:20

Digestion Tube Lot #: 10521010
Block Used: A
Cell Position for Temp. Check: B-3
Initial-DigestionTemp (ºC,corrected): 92.1
Final-Digestion Temp (ºC,corrected): 92.2
Additional KMnO4 added (ml):
Aqua Regia added (ml)
Calibration Stds: M15318

Reagent:	Ref. #
HNO3:	
H2SO4:	
NaCl/Hydrox.SO4:	M15324
KMnO4:	M15321
K2S2O8:	
Aqua-Regia:	M15323

Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
1121156	(MB)		0.60		25
1121157	(LCS)		0.60		25
1121228		LCSD	0.60		25
1121147	**Comments:**	LIMITED SAMPLE	0.55		25
1121148		LIMITED SAMPLE	0.57		25
1121149		LIMITED SAMPLE	0.56		25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
					25
	(DUP) if applicable				25
	(MS)	Parent Sample			25
	(MSD)				25
Leave >>	(DUP) if applicable				25
blank	(MS)	Parent Sample			25
	(MSD)				25
	(DUP) if applicable				25
	(MS)	Parent Sample			25
if N/A	(MSD)				25

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

A:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #
0.5	100	M15320

B:

Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #

Reviewed By/Date: X

iCAP 6000 / 6500 Data Review Checklist	Analysis Date: 3/22/22	Data File: [illegible]	Date of review: 3/23/22
Cal Std ID: M15293 LIMS # : 210424	Analyst: [illegible]	Reviewer: MOS	Approved? Yes / No

Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Prep Batch Check ✓

QC Parameters : 6010 / 200.7 / QSM / Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: r > 0.995 / r > 0.998	✓		✓		
2) ICV: 90-110% / 95-105%	✓		✓		
2) ICVLL: 70-130% / 80-120%	✓		✓		
3) ICB: < 3X IDL / <LOD / <LOQ	✓		✓		
4) ICSA: < ABS LOD	✓		✓		
5) ICSAB: 80-120%	✓		✓		
6) MRL: 70-130% / 80-120%					
7) MDL Check: >LOD					Very limited Sample
8) CCV1/CCB1 (CCV: 90-110%)	✓		✓		no MS, Dup, MSD.
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					[illegible]
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	Comments
Prep Batch ID#: 94695 Dig. Meth. 3050	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD or ≤ ½ RL	✓		✓		
Spiked samples in batch:					
a) 1121147 matrix = S	✓	✓	✓	✓	Fe, Zn "M"
b) matrix =					Lok
c) matrix =					MOS 3/23/22
PDS: ±15% / 20% / 25% Sample#:					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					
Prep Batch ID#: Dig. Meth.					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) matrix =					
b) matrix =					
c) matrix =					
PDS: ±15% / 20% / 25% Sample#:					

FORM #: FMT9-01.10-01.11-01
Rev. #: 3.0
Effective Date: 02/26/2020
Page 1 of 1

GFAA / FLAA / CVAA Data Review checklist		Method: 200.9	7000 series AA	245.1 & 245.2	245.7	7470a / 7471a
Instrumentation:	THERMO M SERIES AA		Hydra II Hg ANALYZER			
Analysis Date: 3/23/22	Data File: 032322S	Date Review: 3/23/22	Analyte: Hg			
Cal Std ID: M15318	LIMS # : 210967	Analyst: MDS	Reviewer:	Approved? Yes	No	

Prep Batch Check ✓

Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)

Calibration Parameters -	YES	NO	YES	NO	Comments:
1) Calibration linearity - r > 0.995	✓		✓		
2) ICV: 90-110% 95-105%	✓		✓		
2) ICVLL: 70-130% 80-120%					
3) ICB: <IDL / <LOD / <LOQ / <½ RL	✓		✓		
6) MRL: 70-130%					
7) CCV1/CCB1- (CCV: 90-110% / 80-120%)	✓		✓		
8) CCV2/CCB2 (CCB: <IDL / <LOD / <LOQ / <½ RL)					
9) CCV3/CCB3					
10) CCV4/CCB4					
11) CCV5/CCB5					
Preparation Batch Parameters	**YES**	**NO**	**YES**	**NO**	
Prep Batch ID#: 94697 Dig. Meth. 7471a	✓		✓		
LCS - generated limits or project specific limits	✓		✓		LCSD ok
MB - <LOD / <2.2X LOD / ≤ ½RL	✓		✓		
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
d)_____ matrix = _____					
e)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#_____					
MSA Performed? Yes No					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
d)_____ matrix = _____					
e)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#_____					
MSA Performed? Yes No					
Prep Batch ID#:_____ Dig. Meth._____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)_____ matrix = _____					
b)_____ matrix = _____					
c)_____ matrix = _____					
d)_____ matrix = _____					
e)_____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#_____					

CT Laboratories, LLC

ICP-6500 Instrument Run Logbook

Date	Time: Start / End	Analyst	Analytes / Sequence I.D.	Method	LIMS # or Sample Description	Nebulizer Pressure (kpa)	Calib. Std ID	Version	Comments
3/18/22	1137 / 2047	[signature]	031822	DODCalu	210356 210353 210355 210361 210354 210360	260	m15248,44 m15246	V4949 V4945	m15249, 50 m15245, 58
3/21/22	1303 / 1639	[signature]	032122	Pb	MDL Pb	260	m15243,44 m15246 m15326	V25 2728	m15249, 50, 45 m15257 m15258 m15309
3/22/22	1137 0616 0754 / 1129	[signature]	032122 032222	DODCalu Pb	210424 210385 MDL Pb 210423 210427 210430 210388 210426 210425	250	m15243,44 m15246 m15326	V4948 V4946	m15249,50 m15245, 58 m15257 m15309
3/23/22	1150 / 1526	[signature]	032122	Pb	MDL Pb	250	m15243,44 m15246 m15326	27,28	m15249,50 m15245, 58 m15257 m15309
3/25/22	0747 /	[signature]	032522	DODCal u	210521 210524, 210353 210520 210522 210525 210523 210526 210527 210546 210548	280	m15243 m15246 m15244		m15249,50 m15245, 58 m15257
	/								
	/								
	/								
	/								
	/								
	/								
	/								

Comments: _____

Checked By / Date: _____

CT Laboratories

Mercury Analyzer Instrument Run Log

Instrument ID: Cetac M-6000A

Analysis Date	Start Time	End Time	Analyst	LIMS Run # (s)	Method File ID #	Cal. Std. ID #	Lamp Current (mA)	Analysis Tube Lot #	Comments
1/12/22	1203	1335	MDS	198794, 198795	011222BW	M15210	6.402	524375-2029	$SnCl_2$: M15216
1/19/22	0907	1032	MDS/NAH	198964, 198965	011922S	M15224	6.406	524375-2029	$SnCl_2$: M15231
1/19/22	1206	1422	MDS	198968 198969, 198970, 198971, 198972, 198989	011922W	M15224	6.398	524375-2029	$SnCl_2$: M15231
1/26/22	0820	1023	MDS	199118, 199117, 199116, 199115	012622W	M15233	6.453	524375-2029	$SnCl_2$: M15239
2/1/22	0920	1102	MDS	199233, 199232, 199231, 199230	020122W	M15240	6.530	524375-2029	$SnCl_2$: M15246
2/10/22	0905	1048	MDS	199449, 199448	021022S	M15251	6.508	524375-2029	$SnCl_2$: M15258
2/10/22	1103	1335	MDS	199495 199488, 199489, 199490, 199493, 199494	021022W	M15251	6.523	524375-2029	$SnCl_2$: M15258
2/16/22	0900	1049	MDS	199654, 199653, 199655, 199656	021622W	M15260	6.677	524375-2029	$SnCl_2$: M15266
2/16/22	1100	1401	MDS	199656 199632, 199650, 199651, 199652, 199655	021622BW	M15260	6.633	524375-2029	$SnCl_2$: M15266
2/22/22	0945	1404	MDS	209769 209765, 209766, 209767, 209768	022222S	M15267	6.597	524375-2029	$SnCl_2$: M15273
2/24/22	0858	1107	MDS	199654, 209818, 209819, 209820	022422W	M15267	6.740	524375-2029	$SnCl_2$: M15273
3/2/22	1022	1154	MDS	209769, 209936, 209937	030222S	M15278	6.740	524375-2029	$SnCl_2$: M15285
3/3/22	1008	1240	MDS	209954, 209955, 209956	030322W	M15278	6.685	524375-2029	$SnCl_2$: M15285
3/9/22	1042	1304	MDS	210108, 210109, 210110, 210111	030922W	M15297	6.788	524375-2029	$SnCl_2$: M15304
3/10/22	0905	1037	MDS	210112, 210113	031022S	M15297	6.688	524375-2029	$SnCl_2$: M15304
3/11/22	0738	0835	MDS	210170	031122S	M15297	6.751	524375-2029	$SnCl_2$: M15304
3/16/22	0756	0910	MDS	~~210~~ 210284, 210282	031622W	M15308	—	524375-2029	$SnCl_2$: M15315
3/16/22	1008	1337	MDS	210287, 210288, 210289 210281, 210282, 210284, 210285, 210286	031622BW	M15308	6.872	524375-2029	$SnCl_2$: M15315
3/17/22	0852	1002	MDS	210306, 210307	031722S	M15308	7.030	524375-2029	$SnCl_2$: M15315
3/23/22	0907	1039	MDS	210466, 210467	032322S	M15318	6.953	524375-2029	$SnCl_2$: M15325
3/24/22	0919	1135	MDS	210480 210476, 210477, 210478, 210479	032422W	M15318	6.935	524375-2029	$SnCl_2$: M15325
								J533110-2104	

Reviewed By/Date: 3/25/22

Type	Date/Time	Message	User name	Application	Sequence Name
	03/22/2022 08:56:35	Running ICVLL (18)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:02:09	Running icb (11)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:07:45	Running icsa (14)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:13:52	Running icsab (15)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:18:39	Closing will close the method and all associated samples.	NAH	Analyst	
	03/22/2022 09:20:55	Running MBW tota (1)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:26:31	Running mdl 1 (2)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:32:07	Running mdl 2 (3)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:37:43	Running mdl 3 (4)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:43:19	Running mdl 4 (5)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:48:55	Running mdl 5 (6)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 09:54:30	Running mdl 6 (7)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:00:06	Running mdl 7 (8)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:05:43	Running mdl 8 (9)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:11:19	Running mbw diss (10)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:16:55	Running ccv1 (17)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:22:28	Running ccv2 (12)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:28:04	Running ccb (13)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:33:41	Running mdl diss 1 (11)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:39:18	Running mdl diss 2 (12)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:44:54	Running mdl diss 3 (13)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:50:30	Running mdl diss 4 (14)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 10:56:06	Running mdl diss 5 (15)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 11:01:42	Running mdl diss 6 (16)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 11:07:18	Running mdl diss 7 (17)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 11:12:55	Running mdl diss 8 (18)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 11:18:30	Running ccv1 (17)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 11:24:03	Running ccv2 (12)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 11:29:39	Running ccb (13)	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 11:35:11	Autosampler Run Completed	NAH	Analyst	S_Pb only(v25) #1
	03/22/2022 11:37:34	Autosampler Run Started	NAH	Analyst	
	03/22/2022 11:37:34	Sequence Started	NAH	Analyst	S_DOD Calibration
	03/22/2022 11:37:54	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	03/22/2022 11:45:33	Running CalStd2=0.5 (2)	NAH	Analyst	S_DOD Calibration
	03/22/2022 11:53:10	Running CalStd3=1 (3)	NAH	Analyst	S_DOD Calibration
	03/22/2022 12:00:47	Running CalStd4=5 (4)	NAH	Analyst	S_DOD Calibration
	03/22/2022 12:08:23	Running CalStd5=10 (5)	NAH	Analyst	S_DOD Calibration
	03/22/2022 12:09:38	Closing will close the method and all associated samples.	NAH	Analyst	
	03/22/2022 12:09:40	Closing will close the method and all associated samples.	NAH	Analyst	
	03/22/2022 12:15:57	Running CalStd6=20 (6)	NAH	Analyst	S_DOD Calibration
	03/22/2022 12:23:28	Running CalStd7=50 (7)	NAH	Analyst	S_DOD Calibration
	03/22/2022 12:30:49	Running CalStd8=100 (8)	NAH	Analyst	S_DOD Calibration
	03/22/2022 12:37:59	Running CalStd9=1000 (9)	NAH	Analyst	S_DOD Calibration
	03/22/2022 12:44:42	Running CalStd10=10000 (10)	NAH	Analyst	S_DOD Calibration
	03/22/2022 12:52:34	Running CalStd12=100K (11)	NAH	Analyst	S_DOD Calibration
	03/22/2022 13:00:52	Running CalStd13=100000 (12)	NAH	Analyst	S_DOD Calibration
	03/22/2022 13:08:38	Running CalStd14=500000 (13)	NAH	Analyst	S_DOD Calibration
	03/22/2022 13:17:29	Running CalibStd15=1000k (14)	NAH	Analyst	S_DOD Calibration
	03/22/2022 13:26:38	Running Ag Ba 1000, 50000 (15)	NAH	Analyst	S_DOD Calibration
	03/22/2022 13:32:34	Closing will close the method and all associated samples.	NAH	Analyst	
	03/22/2022 13:34:34	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	03/22/2022 13:36:23	Closing will close the method and all associated samples.	NAH	Analyst	

Type	Date/Time	Message	User name	Application	Sequence Name
	03/22/2022 13:42:10	Running icv (16)	NAH	Analyst	S_DOD Calibration
	03/22/2022 13:49:31	Running icv (16)	NAH	Analyst	S_DOD Calibration
	03/22/2022 13:56:52	Running ICVLL (24)	NAH	Analyst	S_DOD Calibration
	03/22/2022 14:04:32	Running icb (17)	NAH	Analyst	S_DOD Calibration
	03/22/2022 14:09:28	Closing will close the method and all associated samples.	NAH	Analyst	
	03/22/2022 14:12:10	Running icb (17)	NAH	Analyst	S_DOD Calibration
	03/22/2022 14:19:48	Running MRL/LLOQ (25)	NAH	Analyst	S_DOD Calibration
	03/22/2022 14:27:16	Running ICSA (20)	NAH	Analyst	S_DOD Calibration
	03/22/2022 14:29:04	Closing will close the method and all associated samples.	NAH	Analyst	
	03/22/2022 14:35:49	Running ICSAB (21)	NAH	Analyst	S_DOD Calibration
	03/22/2022 14:43:44	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	03/22/2022 14:51:21	Running ICVLL ag (1)	NAH	Analyst	S_DOD Calibration
	03/22/2022 14:58:56	Running lcss94695 (2)	NAH	Analyst	S_DOD Calibration
	03/22/2022 15:06:19	Running lcsds94695 (3)	NAH	Analyst	S_DOD Calibration
	03/22/2022 15:13:41	Running mbs94695 (4)	NAH	Analyst	S_DOD Calibration
	03/22/2022 15:21:19	Running 1121147 (5)	NAH	Analyst	S_DOD Calibration
	03/22/2022 15:28:42	Running l1121147 (6)	NAH	Analyst	S_DOD Calibration
	03/22/2022 15:36:27	Running pdss1121147 (7)	NAH	Analyst	S_DOD Calibration
	03/22/2022 15:43:49	Running 1121148 (8)	NAH	Analyst	S_DOD Calibration
	03/22/2022 15:51:19	Running 1121149 (9)	NAH	Analyst	S_DOD Calibration
	03/22/2022 15:58:57	Running 1121161 (10)	NAH	Analyst	S_DOD Calibration
	03/22/2022 16:06:35	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	03/22/2022 16:14:15	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	03/22/2022 16:21:02	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	03/22/2022 16:28:42	Running 1121162 (11)	NAH	Analyst	S_DOD Calibration
	03/22/2022 16:36:41	Running 1121163 (12)	NAH	Analyst	S_DOD Calibration
	03/22/2022 16:44:39	Running 1121164 (13)	NAH	Analyst	S_DOD Calibration
	03/22/2022 16:52:19	Running 1121165 (14)	NAH	Analyst	S_DOD Calibration
	03/22/2022 17:00:14	Running 1121166 (15)	NAH	Analyst	S_DOD Calibration
	03/22/2022 17:08:09	Running 1121167 (16)	NAH	Analyst	S_DOD Calibration
	03/22/2022 17:15:49	Running 1121175 (17)	NAH	Analyst	S_DOD Calibration
	03/22/2022 17:23:29	Running msw1121175 (18)	NAH	Analyst	S_DOD Calibration
	03/22/2022 17:30:54	Running msdw1121175 (19)	NAH	Analyst	S_DOD Calibration
	03/22/2022 17:38:34	Running 1121176 (20)	NAH	Analyst	S_DOD Calibration
	03/22/2022 17:46:14	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	03/22/2022 17:53:51	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	03/22/2022 18:00:38	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	03/22/2022 18:08:17	Running 1121177 (21)	NAH	Analyst	S_DOD Calibration
	03/22/2022 18:15:56	Running 1121178 (22)	NAH	Analyst	S_DOD Calibration
	03/22/2022 18:23:38	Running 1121179 (23)	NAH	Analyst	S_DOD Calibration
	03/22/2022 18:31:15	Running 1121180 (24)	NAH	Analyst	S_DOD Calibration
	03/22/2022 18:38:53	Running 1121181 (25)	NAH	Analyst	S_DOD Calibration
	03/22/2022 18:46:33	Running 1121182 (26)	NAH	Analyst	S_DOD Calibration
	03/22/2022 18:54:14	Running 1121183 (27)	NAH	Analyst	S_DOD Calibration
	03/22/2022 19:01:54	Running 1121184 (28)	NAH	Analyst	S_DOD Calibration
	03/22/2022 19:09:32	Running 1121185 (29)	NAH	Analyst	S_DOD Calibration
	03/22/2022 19:17:13	Running 1121186 (30)	NAH	Analyst	S_DOD Calibration
	03/22/2022 19:24:54	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	03/22/2022 19:32:31	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	03/22/2022 19:39:16	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	03/22/2022 19:46:54	Running msw1121186 (31)	NAH	Analyst	S_DOD Calibration
	03/22/2022 19:54:22	Running msdw1121186 (32)	NAH	Analyst	S_DOD Calibration

		Instrument:	ICP
Standard Log #:	M15329	Standard:	Pb ICV
Analyst:	NAH	Concentrations:	500 ug/L (Pb)
Prep Date:	03/21/2022	Expiration Date:	06/23
Prep:	Into a 1 L volumetric flask, pipetted **0.5 mL** Pb (1000 mg/L) M15289 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

		Instrument:	ICP 6500
Standard Log #:	M15326	Standard:	Pb ICAL
Analyst:	NAH	Concentrations:	10,100, 1000, and 10,000, 100,000 µg/L (Pb)
Prep Date:	03/21/2022	Expiration Date:	03/2023
Prep:	Into four, 1 L volumetric flasks, pipetted the following from Pb (10000 µg/mL) M15045 and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) *10 µg/L std.* - **0.001mL** *100 µg/L std.* - **0.01mL** 1000 µg/L std - **0.10 mL** *10,000 µg/L std.* - **1.0 mL** 100,000 µg/L std -**10.0 mL**		

		Instrument:	ICP 6500
Standard Log #:	M15327	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Pb
Prep Date:	03/21/2022	Expiration Date:	03/23
Prep:	Into a 1 L volumetric flask, pipetted 0.5 **mL** 10,000 mgL M15045 Pb and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15328	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 ug/L** Pb,
Prep Date:	03/21/2022	Expiration Date:	03/23
Prep:	Into a 1 L volumetric flask, pipetted .05 **mL** ml 10,000 mg/L M15045 Pb and brought up to volume with milli-Q H_2O.		

Standard Log #:	M15321	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/22/2022	Expiration Date:	04/22/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15322	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/22/2022	Expiration Date:	04/22/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15323	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/22/2022	Expiration Date:	03/23/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.711 in a hood.		

Standard Log #:	M15324	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/23/2022	Expiration Date:	04/23/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15325	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/23/2022	Expiration Date:	04/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15318	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/22/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15319	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/22/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15320	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/22/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15316	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	03/18/2022	Lot #:	T2-MEB716384
Expiration Date (if any):		Catalog #:	CTI-SPK-1

Standard ID#:	M15317	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/Spike
Date Received:	03/18/2022	Lot #:	T2-MEB716383
Expiration Date (if any):		Catalog #:	CTI-GFCAL-1

Standard Log #:	M15311	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/15/2022	Expiration Date:	04/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15312	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/15/2022	Expiration Date:	04/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15313	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/15/2022	Expiration Date:	03/16/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15314	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/16/2022	Expiration Date:	04/16/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15315	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/16/2022	Expiration Date:	04/16/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15308	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/15/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15309	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/15/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15310	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/15/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15305	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate 99%
Date Received:	03/10/2022	Lot #:	A0426185
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M15306	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	03/10/2022	Lot #:	M012-04
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M15307	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	03/10/2022	Lot #:	M012-04
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M15300	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/08/2022	Expiration Date:	04/08/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15301	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/08/2022	Expiration Date:	04/08/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15302	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/08/2022	Expiration Date:	03/09/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15303	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/09/2022	Expiration Date:	04/09/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15304	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/09/2022	Expiration Date:	04/09/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15165 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15297	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/08/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15298	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/08/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15299	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/08/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15296	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/07/2022	Expiration Date:	03/07/2023
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15153. Dilute to 20 L and mix.		

		Instrument:	GFAA
Standard Log #:	M15292	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/07/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15293	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/07/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15294	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/07/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M15295	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/07/2022	Expiration Date:	03/07/2023
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15153. Dilute to 20 L and mix.		

Standard Log #:	M15291	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	03/04/2022	Expiration Date:	01/2023

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M15222	1000	0.01
As	2	M15223	1000	0.1
Pb	2	M15045	10000	0.01
Sb	2	M15220	1000	0.1
Se	2	M15217	1000	0.1
Tl	2	M15221	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M15290	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 10 µg/L Sb 20 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	03/04/2022	Expiration Date:	01/2023

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M15223	10,000
Pb	0.1	10,000	M15045	10,000
Tl	1	1000	M15221	10,000
Se	1	1000	M15217	10,000
Sb	1	1000	M15220	10,000
Ag	0.1	1000	M15222	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1.0	10,000	10
Pb	0.6	10,000	6
Tl	1.0	10,000	10
Se	2.0	10,000	20
Sb	1.0	10,000	10
Ag	0.6	1000	0.6

Standard ID#:	M15286	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 ug/mL
Date Received:	03/02/2022	Lot #:	211029
Expiration Date (if any):	04/30/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15287	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000 ug/mL
Date Received:	03/02/2022	Lot #:	1055526-35
Expiration Date (if any):	01/2023	Catalog #:	4400-10M521

Standard ID#:	M15288	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 ug/mL
Date Received:	03/02/2022	Lot #:	1137797-18
Expiration Date (if any):	06/2023	Catalog #:	4400-10M411

Standard ID#:	M15289	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 1000 ug/mL
Date Received:	03/02/2022	Lot #:	1046594-72
Expiration Date (if any):	06/2023	Catalog #:	S4400-1000281

Standard Log #:	M15281	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/01/2022	Expiration Date:	04/01/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15282	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/01/2022	Expiration Date:	03/02/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15283	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/02/2022	Expiration Date:	04/02/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15284	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/02/2022	Expiration Date:	04/02/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15285	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/02/2022	Expiration Date:	04/02/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15278	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/01/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15279	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/01/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15280	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/01/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15277	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/28/2022	Lot #:	58-137CR
Expiration Date (if any):	02/28/2023	Catalog #:	XSPIKE-1-250

Standard Log #:	M15275	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/23/2022	Expiration Date:	03/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15276	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/23/2022	Expiration Date:	03/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15270	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/21/2022	Expiration Date:	03/21/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15271	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/21/2022	Expiration Date:	02/22/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15272	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/22/2022	Expiration Date:	03/22/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15273	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/22/2022	Expiration Date:	03/22/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

Standard ID#:	M15274	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/23/2022	Lot #:	1-021JA
Expiration Date (if any):	02/28/2023	Catalog #:	XCTWI-5-500

		Instrument:	HydraII
Standard Log #:	M15267	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/21/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15268	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/21/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15269	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/21/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15263	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/15/2022	Expiration Date:	03/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M15264 and brought up to volume.		

Standard Log #:	M15264	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/15/2022	Expiration Date:	03/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15265	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/16/2022	Expiration Date:	03/16/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15266	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/16/2022	Expiration Date:	03/16/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15260	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/15/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15261	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/15/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15262	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/15/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15259	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	100 mg/mL Custom Standard
Date Received:	02/11/2022	Lot #:	58-054CR
Expiration Date (if any):	02/28/2023	Catalog #:	XCTWI-4-500

Standard Log #:	M15254	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/09/2022	Expiration Date:	03/09/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15255	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/09/2022	Expiration Date:	03/09/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15256	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/09/2022	Expiration Date:	02/10/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15257	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/10/2022	Expiration Date:	03/10/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15258	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/10/2022	Expiration Date:	03/10/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15251	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/09/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15252	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/09/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15253	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/09/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15250	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 10 ICVLL
Date Received:	02/08/2022	Lot #:	.01 mls m15222 into 1000 ml vol.
Expiration Date (if any):	06/2023	Catalog #:	

MRL BASE STD M15249 Analyst NAH

Prep Date 02/08/2022

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M15222	1000	1	07/2022
Al	400	M15112	10000	2	xx
Ba	10	M14772	1000	0.5	xx
Be	4	M15091	1000	0.2	xx
Cd	5	M15098	1000	0.25	xx
Co	10	M15019	1000	0.5	xx
Cr	10	M15027	10000	0.05	xx
Cu	10	M15021	10000	0.05	xx
Mg	500	M15174	10000	2.5	xx
Mn	10	M15023	10000	0.05	xx
Mo	10	M15170	1000	0.5	xx
Ni	10	M15095	1000	0.5	xx
Pb	10	M15045	10000	0.05	xx
Sb	20	M15229	1000	1	xx
V	10	M15020	1000	0.5	xx
Zn	10	M15114	10000	0.05	xx
K	1000	M15173	10000	5	xx
Na	1000	M15172	10000	5	xx
As	20	M15223	1000	1	xx
Ca	500	M15026	10000	2.5	xx
Fe	300	M15169	10000	1.5	xx
Se	20	M15217	1000	1	xx
Tl	20	M15221	1000	1	xx
Si	100	M15171	1000	5	xx
B	20	M14966	1000	1	xx
Li	20	M14681	1000	1	xx
W	50	Mxxxxxxx	1000	2.5	xx
Ti	10	M14674	1000	0.5	xx
Sr	10	M14775	1000	0.5	xx
Sn	50	M14774	1000	2.5	xx
S	300	M15025	10000	1.5	xx

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M15248	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	02/08/2022	Expiration Date:	07/2022
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M15068 and 15 **mL** 10000 mg/L Fe M15169 5.0 **mL** 1000 mg/L V M15020 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15246	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	02/0/2022	Expiration Date:	07/2022
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M15167, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M15068, **0.5 mL** Mo (1000 mg/L) M15022, **0.5 mL** B (1000 mg/L) M14966, **0.5 mL** Sr (1000 mg/L) M14775, **0.5 mL** Li (1000 mg/L) M14681, **0.5 mL** Sn (1000 mg/L) M14774, **0.5 mL** Ti (1000 mg/L) M14674, **0.5 mL** W (1000 mg/L) Mxxxxxxx, **0.5 mL** Si (1000 mg/L) M15219,**0.5 mL** S (10000 mg/L) M14677, **0.5 mL** K (10000 mg/L) M15116, and **0.5 mL** K (10000 mg/L) Na M15097		

		Instrument:	ICP 6500
Standard Log #:	M15247	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	02/08/2022	Expiration Date:	11/2022
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M15068, **15 mL** Fe (10,000 mg/L) M15169, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M15134, **2.5 mLs Na 10,000 ug/mL** M15172, **2.5 mLs k 10,000 ug/mL** M15173 **2.5 mLs S 10,000 ug/mL** M15025, **0.5 mls Si 1000 ug/mL** M15088 and brought up to volume with milli-Q .		

		Instrument:	ICP 6500
Standard Log #:	M15244	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn, Si. **100,000 ug/L** K, Na, S. **500 µg/L** Ag, Be, Cd
Prep Date:	02/08/2022	Expiration Date:	07/2022
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn Si) M15134,M15 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) 0.5 ml M150 10 mls of 10,000 mgL M15173 K, M15172 Na, M15025 S and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15245	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 ug/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn, Si. **10,000 ug/L** K, Na, S **50 ug/L** Ag, Be, Cd
Prep Date:	02/08/2022	Expiration Date:	07/2022
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15134 and 0.5 **mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) .05 ml M152 and .5 ml M15171 Si and 1 ml 10,000 mg/L M15173 K, M15172 Na, M15025 S and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15243	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	02/08/2022	Expiration Date:	11/2022

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15134, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) 1ml M15098,M and **1 mL** of Si (1000 mg/L) M15171 and 1 mL M14682 Ce and 1 ml M15108 Hg and 0.1 ml of 10,000 mg/L M15173 K and M15172 Na and M15025 S and M15166 P. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M15021, **10 mL** of Mn (10,000 mg/L) M15023, **10 mL** of Cr (10,000 mg/L) M15027, **10 mL** Pb (10,000 mg/L) M15045, **10 mL** of Zn (10,000 mg/L) M15114.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M15174, **10 mL** of Fe (10,000 mg/L) M15169, **10 mL** of Ca (10,000 mg/L) M15026 and **10 mL** Al (10,000 mg/L) M15112,10 mL of Na (10000) M15172, 10 mL K (10,000) M15173, 10 mL S (10,000) M15025,10 mL P (10,1000), M15166 10 mL Si (1000) M15171.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L),**50 mL** of Al (10,000 mg/L), 50 mL of Na (10,000), 50 mL of K (10,000).
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) **100 mL** of Al (10,000 mg/L),100 mL of Na (10,000 mg/L)100 mL of K (10,000 mg/L) 100 mL S (10,000 mg/L) 100 ml of P (10,000 mg/L).

Standard Log #:	M15242	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL Spike Soln
Prep Date:	02/08/2022	Expiration Date:	07/2022

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M15222	1000	2
Al	800	M15112	**10000**	4
As	40	M15223	1000	2
Ba	20	M14772	1000	1
Be	8	M15091	1000	0.4
Ca	1000	M15026	**10000**	5
Cd	10	M15098	1000	0.5
Co	20	M15019	1000	1
Cr	20	M15027	**10000**	0.1
Cu	20	M15021	**10000**	0.1
Fe	600	M15169	**10000**	3
Mg	1000	M15174	**10000**	5
Mn	20	M15023	**10000**	0.1
Mo	20	M15170	1000	1
Ni	20	M15095	1000	1
Pb	20	M15045	**10000**	0.1
Sb	40	M15220	1000	2
Se	40	M15217	1000	2
Tl	40	M15221	1000	2
V	20	M15020	1000	1
Zn	20	M15114	**10000**	0.1
Na	10000	M15172	**10000**	50
K	10000	M15173	**10000**	50
B	40	M14966	1000	2
Si	200	M15171	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M15025	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M15241	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ solid QSM
Prep Date:	02/08/2022	Expiration Date:	07/2022

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M15222	1000	2
Al	800	M15112	**10000**	4
As	40	M15223	1000	2
Ba	40	M14772	1000	2
Be	8	M15091	1000	0.4
Ca	1000	M15026	**10000**	5
Cd	10	M15098	1000	0.5
Co	20	M15019	1000	1
Cr	20	M15027	**10000**	0.1
Cu	20	M15021	**10000**	0.1
Fe	600	M15169	**10000**	3
Mg	1000	M15174	**10000**	5
Mn	20	M15023	**10000**	0.1
Mo	20	M15170	1000	1
Ni	20	M15095	1000	1
Pb	20	M15045	**10000**	0.1
Sb	40	M15220	1000	2
Se	40	M15217	1000	2
Tl	40	M15221	1000	2
V	20	M15020	1000	1
Zn	20	M15114	**10000**	0.1
Na	10000	M15172	**10000**	50
K	10000	M15173	**10000**	50
B	40	M14966	1000	2
Si	200	M15171	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M15025	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M15240	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ water QSM
Prep Date:	02/08/2022	Expiration Date:	07/2022

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M15222	1000	0.25
Al	120	M15112	**10000**	0.6
As	40	M15223	1000	2
Ba	4	M14772	1000	0.2
Be	8	M15091	1000	0.4
Ca	100	M15026	**10000**	0.5
Cd	2	M15098	1000	0.1
Co	5	M15019	1000	0.25
Cr	5	M15027	**10000**	0.025
Cu	40	M15021	**10000**	0.2
Fe	80	M15169	**10000**	0.4
Mg	40	M15174	**10000**	0.2
Mn	5	M15023	**10000**	0.025
Mo	5	M15170	1000	0.25
Ni	5	M15095	1000	0.25
Pb	20	M15045	**10000**	0.1
Sb	20	M15220	1000	1.0
Se	20	M15217	1000	2
Tl	40	M15221	1000	2
V	5	M15020	1000	0.25
Zn	20	M15114	**10000**	0.1
Na	700	M15172	**10000**	3.5
K	500	M15173	**10000**	2.5
B	40	M14966	1000	2
Si	200	M15171	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M15025	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M15236	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/25/2022	Expiration Date:	02/25/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15237	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/25/2022	Expiration Date:	02/25/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15238	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/26/2022	Expiration Date:	02/26/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15239	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/26/2022	Expiration Date:	02/26/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15233	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/25/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15234	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/25/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15235	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/25/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15232	Vendor:	Alfa Aesar Specpure
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Mod
Date Received:	01/18/2022	Lot #:	276713
Expiration Date (if any):	07/31/2023	Catalog #:	39043

Standard Log #:	M15227	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/18/2022	Expiration Date:	02/18/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15228	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/18/2022	Expiration Date:	02/18/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15229	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/18/2022	Expiration Date:	01/19/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15230	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/19/2022	Expiration Date:	02/19/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15231	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/19/2022	Expiration Date:	02/19/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15164 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15224	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/18/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15225	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/18/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15226	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/18/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15217	Vendor:	CPI
Analyst:	NAH	Chemical:	Se 1000 mg/L
Date Received:	01/13/2022	Lot #:	1135995-21
Expiration Date (if any):	06/2023	Catalog #:	S4400-1000491

Standard ID#:	M15218	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	01/13/2022	Lot #:	1157358-14
Expiration Date (if any):	06/2023	Catalog #:	4400-10M671

Standard ID#:	M15219	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	01/13/2022	Lot #:	211029
Expiration Date (if any):	04/30/2022	Catalog #:	S4400-1000504F

Standard ID#:	M15220	Vendor:	CPI
Analyst:	NAH	Chemical:	Sb 1000 mg/L
Date Received:	1/13/2022	Lot #:	1129139-6
Expiration Date (if any):	06/2023	Catalog #:	S4400-100023

Standard ID#:	M15221	Vendor:	CPI
Analyst:	NAH	Chemical:	Tl 1000 mg/L
Date Received:	01/13/2022	Lot #:	1025512-61
Expiration Date (if any):	01/2023	Catalog #:	S4400-1000581

Standard ID#:	M15222	Vendor:	CPI
Analyst:	NAH	Chemical:	Ag 1000 mg/L
Date Received:	01/13/2022	Lot #:	1106123-69
Expiration Date (if any):	06/2023	Catalog #:	S4400-1000511

Standard ID#:	M15223	Vendor:	CPI
Analyst:	NAH	Chemical:	As 1000 mg/L
Date Received:	01/13/2022	Lot #:	1103713-64
Expiration Date (if any):	06/2023	Catalog #:	S4400-100031

Standard Log #:	M15213	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/11/2022	Expiration Date:	02/11/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15214	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/11/2022	Expiration Date:	02/11/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

Standard Log #:	M15215	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/12/2022	Expiration Date:	02/12/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15216	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/12/2022	Expiration Date:	02/12/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15210	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/11/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15211	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/11/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15212	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/11/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15205	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/04/2022	Expiration Date:	02/04/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15206	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/04/2022	Expiration Date:	02/04/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15207	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/04/2022	Expiration Date:	01/05/2022
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15208	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/05/2022	Expiration Date:	02/05/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15209	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/05/2022	Expiration Date:	02/05/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15202	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/04/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15203	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/04/2022	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15204	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/04/2022	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M15199	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/03/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15200	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/03/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15201	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/03/2022	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M15194	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/28/2021	Expiration Date:	01/28/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15195	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/28/2021	Expiration Date:	01/28/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15196	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/28/2021	Expiration Date:	12/29/2021
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15197	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/29/2021	Expiration Date:	01/29/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15198	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/29/2021	Expiration Date:	01/29/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15191	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/28/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15192	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/28/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15193	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/28/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15186	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/20/2021	Expiration Date:	01/20/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15187	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/20/2021	Expiration Date:	01/20/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15188	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/20/2021	Expiration Date:	12/21/2021
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15189	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/21/2021	Expiration Date:	01/21/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15190	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/21/2021	Expiration Date:	01/21/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15183	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/20/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15184	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/20/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15185	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/20/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15180	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/15/2021	Expiration Date:	01/15/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15144 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15181	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/15/2021	Expiration Date:	01/15/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

Standard Log #:	M15182	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	12/20/2021	Expiration Date:	12/20/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M15153. Dilute to 20 L and mix.		

Standard Log #:	M15178	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/14/2021	Expiration Date:	01/14/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15179	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/14/2021	Expiration Date:	01/14/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15175	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/14/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15176	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/14/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15177	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/14/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15169	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	10,000 ug/mL Iron
Date Received:	12/13/2021	Lot #:	1034257-77
Expiration Date (if any):	06/13/2023	Catalog #:	4400-10M261

Standard ID#:	M15170	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	1,000 ug/mL Molybdenum
Date Received:	12/13/2021	Lot #:	1138256-5
Expiration Date (if any):	06/13/2023	Catalog #:	S4400-1000343

Standard ID#:	M15171	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	1,000 ug/mL Silicon
Date Received:	12/13/2021	Lot #:	1198119-3
Expiration Date (if any):	06/13/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15172	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	10,000 ug/mL Sodium
Date Received:	12/13/2021	Lot #:	1122472-6
Expiration Date (if any):	06/13/2023	Catalog #:	4400-10M521

Standard ID#:	M15173	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	10,000 ug/mL Potassium
Date Received:	12/13/2021	Lot #:	1137797-18
Expiration Date (if any):	06/13/2023	Catalog #:	4400-10M411

Standard ID#:	M15174	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	10,000 ug/mL Magnesium
Date Received:	12/13/2021	Lot #:	1075232-54
Expiration Date (if any):	06/13/2023	Catalog #:	4400-10M311

Standard ID#:	M15164	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/10/2021	Lot #:	L259-10
Expiration Date (if any):	N/A	Catalog #:	LC251701

Standard ID#:	M15165	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	12/10/2021	Lot #:	L259-10
Expiration Date (if any):	N/A	Catalog #:	LC251701

Standard ID#:	M15166	Vendor:	SPEX CERTIPREP
Analyst:	BMM	Chemical:	10,000 ug/mL Phosphorus
Date Received:	12/13/2021	Lot #:	AR18-111PY
Expiration Date (if any):	12/30/2022	Catalog #:	PLP9-3Y

Standard ID#:	M15167	Vendor:	SPEX CERTIPREP
Analyst:	BMM	Chemical:	CUSTOM ASSURANCE STANDARD
Date Received:	12/13/2021	Lot #:	57-204CR
Expiration Date (if any):	12/30/2022	Catalog #:	XSPIKE-1-250

Standard ID#:	M15168	Vendor:	CPI INTERNATIONAL
Analyst:	BMM	Chemical:	1,000 ug/mL Silicon
Date Received:	12/13/2021	Lot #:	1198119-3
Expiration Date (if any):	06/13/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15163	Vendor:	Decon Labs
Analyst:	NAH	Chemical:	Dri-Clean lab detergent
Date Received:	12/08/2021	Lot #:	1J519
Expiration Date (if any):	----------	Catalog #:	2502

Standard Log #:	M15158	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	12/07/2021	Expiration Date:	01/07/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15159	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	12/07/2021	Expiration Date:	01/07/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15160	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	12/07/2021	Expiration Date:	12/08/2021
Prep:	Carefully mixed **3** parts HCl AB.706 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15161	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/08/2021	Expiration Date:	01/08/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15056 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15162	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/08/2021	Expiration Date:	01/08/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.706 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15155	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/07/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15156	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	12/07/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15157	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/07/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15153	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	12/01/2021	Expiration Date:	05/01/2022
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC310 and brought up to volume.		

Standard Log #:	M15154	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	12/01/2021	Expiration Date:	12/01/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14946. Dilute to 20 L and mix.		

Standard Log #:	M15148	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/30/2021	Expiration Date:	12/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15149	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/30/2021	Expiration Date:	12/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15150	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/30/2021	Expiration Date:	12/01/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.708 in a hood.		

Standard Log #:	M15151	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	12/01/2021	Expiration Date:	01/01/2022
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15056 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15152	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	12/01/2021	Expiration Date:	01/01/2022
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15145	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/30/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15146	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/30/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15147	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/30/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15144	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	11/29/2021	Lot #:	A0431536
Expiration Date (if any):		Catalog #:	198530010

Standard ID#:	M15143	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	11/22/2021	Lot #:	2123812-500
Expiration Date (if any):	05/31/2023	Catalog #:	HP10M67-1-500

Standard Log #:	M15138	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/16/2021	Expiration Date:	12/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15139	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/16/2021	Expiration Date:	12/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15140	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/16/2021	Expiration Date:	11/17/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15141	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/17/2021	Expiration Date:	12/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M15056 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15142	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/17/2021	Expiration Date:	12/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15058 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15135	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/16/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15136	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/16/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15137	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/16/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15134	Vendor:	SpexCertiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/11/2021	Lot #:	1-040EL
Expiration Date (if any):	11/20/2022	Catalog #:	XCTWI-5-500

Standard Log #:	M15129	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/10/2021	Expiration Date:	12/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15130	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/10/2021	Expiration Date:	12/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15131	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/10/2021	Expiration Date:	11/11/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15132	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/11/2021	Expiration Date:	12/11/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15133	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/11/2021	Expiration Date:	12/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15058 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15126	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/10/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15127	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/10/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15128	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/10/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15124	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	11/04/2021	Expiration Date:	12/04/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15125	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	11/05/2021	Expiration Date:	12/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15057 and brought up to volume.		

Standard Log #:	M15121	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	11/03/2021	Expiration Date:	12/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15122	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	11/03/2021	Expiration Date:	12/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15123	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	11/03/2021	Expiration Date:	11/04/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard ID#:	M15117	Vendor:	SPEX CertiPrep
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	11/03/2021	Lot #:	CL12-145HGY
Expiration Date (if any):	10/30/2022	Catalog #:	CLHG4-2Y

		Instrument:	HydraII
Standard Log #:	M15118	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	11/03/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15119	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	11/03/2021	Expiration Date:	01/22/2023
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M15108 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15120	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	11/03/2021	Expiration Date:	10/30/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M15117 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15112	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1144484-5
Expiration Date (if any):	04/2023	Catalog #:	4400-10M11

Standard ID#:	M15113	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 mg/L
Date Received:	10/25/2021	Lot #:	KD37797-20
Expiration Date (if any):	04/2023	Catalog #:	4400-10M411-500

Standard ID#:	M15114	Vendor:	CPI
Analyst:	NAH	Chemical:	ZN 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1149838-4
Expiration Date (if any):	04/2023	Catalog #:	S4400-10M681

Standard ID#:	M15115	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1157358-4
Expiration Date (if any):	04/2023	Catalog #:	4400-10M671

Standard ID#:	M15116	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 mg/L
Date Received:	10/25/2021	Lot #:	1137797-18
Expiration Date (if any):	04/2023	Catalog #:	4400-10M411

		Instrument:	GFAA
Standard Log #:	M15109	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/25/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15110	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/25/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M15111	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/25/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M15108	Vendor:	CPI International
Analyst:	MDS	Chemical:	Mercury 1000 µg/mL
Date Received:	10/21/2021	Lot #:	1084154-49
Expiration Date (if any):	01/22/2023	Catalog #:	S4400-1000331

Standard Log #:	M15103	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/19/2021	Expiration Date:	11/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15104	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/19/2021	Expiration Date:	11/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15105	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/19/2021	Expiration Date:	10/20/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15106	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/20/2021	Expiration Date:	11/20/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15107	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/20/2021	Expiration Date:	11/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M15058 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15100	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15101	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15102	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/19/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15099	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	10/15/2021	Expiration Date:	02/2022

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M14623	1000	0.01
As	2	M14621	1000	0.1
Pb	2	M15045	10000	0.01
Sb	2	M14622	1000	0.1
Se	2	M14624	1000	0.1
Tl	2	M14626	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard ID#:	M15094	Vendor:	CPI
Analyst:	NAH	Chemical:	MG 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1075232-5
Expiration Date (if any):	09/2022	Catalog #:	4400-10M311

Standard ID#:	M15095	Vendor:	CPI
Analyst:	NAH	Chemical:	Ni 1000 mg/L
Date Received:	10/14/2021	Lot #:	1049780-73
Expiration Date (if any):	03/2023	Catalog #:	S4400-1000361

Standard ID#:	M15096	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	10/14/2021	Lot #:	1047570-102
Expiration Date (if any):	03/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15097	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1055526-35
Expiration Date (if any):	11/2022	Catalog #:	4400-10M521

Standard ID#:	M15098	Vendor:	CPI
Analyst:	NAH	Chemical:	Cd 1000 mg/L
Date Received:	10/14/2021	Lot #:	1080470-23
Expiration Date (if any):	01/2023	Catalog #:	S4400-100081

Standard ID#:	M15090	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1079898-11
Expiration Date (if any):	01/2023	Catalog #:	S4400-10M391

Standard ID#:	M15091	Vendor:	CPI
Analyst:	NAH	Chemical:	Be 1000 mg/L
Date Received:	10/14/2021	Lot #:	1072683-57
Expiration Date (if any):	01/2023	Catalog #:	S4400-100051

Standard ID#:	M15092	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1072921-23
Expiration Date (if any):	01/2023	Catalog #:	4400-10M91

Standard ID#:	M15093	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 mg/L
Date Received:	10/14/2021	Lot #:	1034257-71
Expiration Date (if any):	03/2023	Catalog #:	4400-10M261

Standard Log #:	M15086	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/13/2021	Expiration Date:	11/13/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15087	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/13/2021	Expiration Date:	11/13/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14949 and brought up to volume.		

Standard ID#:	M15088	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/L
Date Received:	10/13/2021	Lot #:	1047570-102
Expiration Date (if any):	03/2023	Catalog #:	S4400-1000504F

Standard ID#:	M15089	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	10/13/2021	Lot #:	57-130CR
Expiration Date (if any):	10/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M15083	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/12/2021	Expiration Date:	11/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15084	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/12/2021	Expiration Date:	11/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15085	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/12/2021	Expiration Date:	10/13/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

		Instrument:	HydraII
Standard Log #:	M15080	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/12/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15081	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/12/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15082	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/12/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15079	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	8 µg/L As 10 µg/L Pb 8 µg/L Sb 16 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	10/11/2021	Expiration Date:	02/2022

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M14621	10,000
Pb	0.1	10,000	M15045	10,000
Tl	1	1000	M14626	10,000
Se	1	1000	M14624	10,000
Sb	1	1000	M14622	10,000
Ag	0.1	1000	M14623	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	0.8	10,000	8
Pb	1.0	10,000	10
Tl	1.0	10,000	10
Se	1.6	10,000	16
Sb	0.8	10,000	8
Ag	0.6	1000	0.6

Standard Log #:	M15074	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	10/05/2021	Expiration Date:	11/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15075	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	10/05/2021	Expiration Date:	11/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15076	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	10/05/2021	Expiration Date:	10/06/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15077	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	10/06/2021	Expiration Date:	11/06/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15078	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	10/06/2021	Expiration Date:	11/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15071	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/05/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15072	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	10/05/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15073	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/05/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15067	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/04/2021	Expiration Date:	08/20/2022
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M15008 and **10 mL** Mg (10,000 mg/L) M14739 and brought up to volume.		

Standard ID#:	M15068	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Interference A
Date Received:	10/4/2021	Lot #:	18-102WLX
Expiration Date (if any):	09/22	Catalog #:	INT-A1

Standard ID#:	M15069	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	10/04/2021	Lot #:	1-181-PC
Expiration Date (if any):	09/30/2022	Catalog #:	XCTWI-1-500

MRL BASE STD M15066 Analyst NAH

Prep Date 10/04/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	02/22
Al	400	M15098	10000	2	02/23
Ba	10	M14772	1000	0.5	09/22
Be	4	M15203	1000	0.2	09/22
Cd	5	M14201	1000	0.25	09/22
Co	10	M15019	1000	0.5	02/23
Cr	10	M15027	10000	0.05	02/23
Cu	10	M15021	10000	0.05	02/23
Mg	500	M14739	10000	2.5	08/22
Mn	10	M15023	10000	0.05	02/23
Mo	10	M15022	1000	0.5	02/23
Ni	10	M14196	1000	0.5	xx
Pb	10	M15045	10000	0.05	03/23
Sb	20	M14622	1000	1	02/22
V	10	M15020	1000	0.5	02/23
Zn	10	M14197	10000	0.05	xx
K	1000	M14887	10000	5	11/22
Na	1000	M14969	10000	5	01/23
As	20	M14621	1000	1	02/22
Ca	500	M15026	10000	2.5	02/23
Fe	300	M15024	10000	1.5	02/23
Se	20	M14624	1000	1	02/22
Tl	20	M14626	1000	1	02/22
Si	100	M14968	1000	5	01/23
B	20	M14966	1000	1	01/23
Li	20	M14681	1000	1	07/22
W	50	xxxxx	1000	2.5	xxxxx
Ti	10	M14674	1000	0.5	07/22
Sr	10	M14683	1000	0.5	07/22
Sn	50	M14774	1000	2.5	09/22
S	300	M14773	10000	1.5	09/22

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M15064	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **15 mL** Fe (10,000 mg/L) M15204, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15028 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15065	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833 and **15 mL** Fe (10000 mg/L) M15024 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15061	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15028 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15062	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15028 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M15063	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	10/04/2021	Expiration Date:	01/30/2022
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14988, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **0.5 mL** Mo (1000 mg/L) M15022, **0.5 mL** B (1000 mg/L) M14966, **0.5 mL** Sr (1000 mg/L) M14683, **0.5 mL** Li (1000 mg/L) M14681, **0.5 mL** Sn (1000 mg/L) M14774 and **0.5 mL** Ti (1000 mg/L) M14674.		

		Instrument:	ICP 6500
Standard Log #:	M15060	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	10/14/2021	Expiration Date:	01/30/2022
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M15828, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **1 mL** of Si (1000 mg/L) M14968 and 1 mL M14682 Ce *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M15046. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M15021, **10 mL** of Mn (10,000 mg/L) M15023, **10 mL** of Cr (10,000 mg/L) M15027, **10 mL** Pb (10,000 mg/L) M15045, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14969. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14739, **10 mL** of Fe (10,000 mg/L) M15024, **10 mL** of Ca (10,000 mg/L) M14740 and **10 mL** Al (10,000 mg/L) M14737. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

Standard Log #:	M15059	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	09/29/2021	Expiration Date:	10/29/2021
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14946. Dilute to 20 L and mix.		

Standard ID#:	M15057	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	09/23/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M15058	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	09/23/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M15056	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	09/22/2021	Lot #:	A0428169
Expiration Date (if any):		Catalog #:	198531000

Standard Log #:	M15051	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/20/2021	Expiration Date:	10/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15052	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/20/2021	Expiration Date:	10/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15053	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/20/2021	Expiration Date:	09/21/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15054	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/21/2021	Expiration Date:	10/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15055	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/21/2021	Expiration Date:	10/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15048	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15049	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15050	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/20/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15047	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	MRZ	pH:	4.93 ± 0.05
Prep Date:	09/09/2021	Expiration Date:	09/09/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14964. Dilute to 20 L and mix.		

Standard ID#:	M15045	Vendor:	CPI
Analyst:	NAH	Chemical:	Pb 10,000 mg/L
Date Received:	09/15/2021	Lot #:	1035677-18
Expiration Date (if any):	03/2023	Catalog #:	4400-10M281

Standard ID#:	M15046	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,1000 mg/L
Date Received:	09/15/2021	Lot #:	1137797-13
Expiration Date (if any):	03/2023	Catalog #:	4400-10M411-500

Standard Log #:	M15040	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/14/2021	Expiration Date:	10/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15041	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/14/2021	Expiration Date:	10/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15042	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/14/2021	Expiration Date:	09/15/2021
Prep:	Carefully mixed **3** parts HCl AB.707 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15043	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/15/2021	Expiration Date:	10/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15044	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/15/2021	Expiration Date:	10/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.707 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15037	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15038	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15039	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/14/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M15032	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	09/01/2021	Expiration Date:	10/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15033	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	09/01/2021	Expiration Date:	10/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15034	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	09/01/2021	Expiration Date:	09/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15035	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	09/02/2021	Expiration Date:	10/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15036	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	09/02/2021	Expiration Date:	10/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14940 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15029	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/01/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15030	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	09/01/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15031	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/01/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15023	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10,000 mg/L
Date Received:	08/30/2021	Lot #:	985851-80
Expiration Date (if any):	02/2023	Catalog #:	S4400-10M321

Standard ID#:	M15024	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1034257-71
Expiration Date (if any):	02/2023	Catalog #:	4400-10M261

Standard ID#:	M15025	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1050965-59
Expiration Date (if any):	02/2023	Catalog #:	4400-10M544

Standard ID#:	M15026	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1072921-23
Expiration Date (if any):	02/2023	Catalog #:	4400-10M91

Standard ID#:	M15027	Vendor:	CPI
Analyst:	NAH	Chemical:	Cr 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1076194-26
Expiration Date (if any):	02/2023	Catalog #:	S4400-10M121

Standard ID#:	M15028	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	NAH	Lot #:	17-023AB
Expiration Date (if any):	AUG 30,2022	Catalog #:	XCTWI-5-500

Standard ID#:	M15018	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1077245-48
Expiration Date (if any):	02/2023	Catalog #:	4400-10M11

Standard ID#:	M15019	Vendor:	CPI
Analyst:	NAH	Chemical:	Co 1000 mg/L
Date Received:	08/30/2021	Lot #:	1107088-1
Expiration Date (if any):	02/2023	Catalog #:	S4400-1000131

Standard ID#:	M15020	Vendor:	CPI
Analyst:	NAH	Chemical:	V 1000 mg/L
Date Received:	08/30/2021	Lot #:	1055682-88
Expiration Date (if any):	02/2023	Catalog #:	S4400-1000651

Standard ID#:	M15021	Vendor:	CPI
Analyst:	NAH	Chemical:	Cu 10,000 mg/L
Date Received:	08/30/2021	Lot #:	1063159-57
Expiration Date (if any):	02/2023	Catalog #:	S4400-10M141

Standard ID#:	M15022	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	08/30/2021	Lot #:	1075718-15
Expiration Date (if any):	02/2023	Catalog #:	S4400-1000343

Standard Log #:	M15013	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/24/2021	Expiration Date:	09/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15014	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/24/2021	Expiration Date:	09/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15015	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/24/2021	Expiration Date:	08/25/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15016	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/25/2021	Expiration Date:	09/25/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15017	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/25/2021	Expiration Date:	09/25/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15010	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/24/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15011	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/24/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15012	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/24/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M15009	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	08/23/2021	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

Standard ID#:	M15008	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Palladium Matrix Modifier
Date Received:	08/19/2021	Lot #:	2113302-100
Expiration Date (if any):	08/31/2022	Catalog #:	HP1900-100

Standard Log #:	M15003	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M15004	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15005	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	08/19/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M15006	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M15007	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/18/2021	Expiration Date:	09/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14939 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M15000	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/18/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M15001	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/18/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M15002	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/18/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14997	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	08/13/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14998	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	08/13/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14999	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	08/13/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14992	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/10/2021	Expiration Date:	09/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14993	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/10/2021	Expiration Date:	09/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14994	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/10/2021	Expiration Date:	08/11/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14995	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/11/2021	Expiration Date:	09/11/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14996	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/11/2021	Expiration Date:	09/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14989	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/10/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14990	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/10/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14991	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/10/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14987	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/09/2021	Lot #:	5-190MF
Expiration Date (if any):	08/30/2022	Catalog #:	XCTWI-1-500

Standard ID#:	M14988	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	08/09/2021	Lot #:	5-189MF
Expiration Date (if any):	08/30/2021	Catalog #:	XSPIKE-1-250

Standard Log #:	M14982	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	09/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14983	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	09/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14984	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	08/03/2021	Expiration Date:	08/04/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14985	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	08/04/2021	Expiration Date:	09/04/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14986	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	08/04/2021	Expiration Date:	09/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14979	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	08/03/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14980	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	08/03/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14981	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	08/03/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14978	Vendor:	Enviromental Express
Analyst:	BMM	Chemical:	Acid Washed TCLP Filters
Date Received:	05/20/2021	Lot #:	400175-1116-T
Expiration Date (if any):		Catalog #:	FG77150MM

Standard Log #:	M14973	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	08/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14974	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	08/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14975	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/27/2021	Expiration Date:	07/28/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14976	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/29/2021	Expiration Date:	08/29/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14977	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/29/2021	Expiration Date:	08/29/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14970	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/27/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14971	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/27/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14972	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/27/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14966	Vendor:	CPI
Analyst:	NAH	Chemical:	Boron 10,000 mg/L
Date Received:	07/27/2021	Lot #:	1101946-16
Expiration Date (if any):	01/2023	Catalog #:	S4400-100074

Standard ID#:	M14967	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 mk/L
Date Received:	07/27/2021	Lot #:	1109477-26
Expiration Date (if any):	01/2023	Catalog #:	4400-10M671

Standard ID#:	M14968	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	07/27/2021	Lot #:	1047570-64
Expiration Date (if any):	01/2023	Catalog #:	S4400-1000504F

Standard ID#:	M14969	Vendor:	CPI
Analyst:	NAH	Chemical:	Na 10000
Date Received:	07/27/2021	Lot #:	1055526-35
Expiration Date (if any):	01/2023	Catalog #:	4400-10M521

		Instrument:	CETAC
Standard Log #:	M14963	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/21/2021	Expiration Date:	08/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

Standard Log #:	M14964	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/22/2021	Expiration Date:	07/22/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14964. Dilute to 20 L and mix.		

Standard Log #:	M14965	Reagent:	TCLP 1 N HCL
Analyst:	BMM		
Prep Date:	07/23/2021	Expiration Date:	07/23/2022
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, added 83 mL HCL AB.704 and brought up to volume.		

Standard Log #:	M14959	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	08/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14960	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	08/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14961	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/20/2021	Expiration Date:	07/21/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14962	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/21/2021	Expiration Date:	08/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14956	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14957	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/20/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14958	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/20/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14955	Vendor:	GFS Chemicals
Analyst:	NAH	Chemical:	AMCO Clear 2.0 NTU
Date Received:	07/16/2021	Lot #:	21150075
Expiration Date (if any):	07/22/2022	Catalog #:	8008

Standard Log #:	M14950	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	08/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14951	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	08/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14952	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/14/2021	Expiration Date:	07/15/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14953	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/15/2021	Expiration Date:	08/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14954	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/15/2021	Expiration Date:	08/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14947	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14948	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/14/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14949	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/14/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14944	Standard:	ICV Std.
Analyst:	nah	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	07/09/2021	Expiration Date:	08/2022
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14874, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **0.5 mL** Mo (1000 mg/L) M14888, **0.5 mL** B (1000 mg/L) M14675, **0.5 mL** Sr (1000 mg/L) M14683, **0.5 mL** Li (1000 mg/L) M14681, **0.5 mL** Sn (1000 mg/L) M14774, **0.5 mL** Ti (1000 mg/L) M14674, **0.5 mL** W (1000 mg/L) XXXXXXX, **0.5 mL** Si (1000 mg/L) M14680, **0.5 mL** S (10000 mg/L) M14570, **0.5 mL** K (10000 mg/L) M14887, and **0.5 mL** Na (10000 mg/L) M14736		

Standard Log #:	M14945	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	07/12/2021	Expiration Date:	07/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14946	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	07/14/2021	Expiration Date:	12/14/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC272 and brought up to volume.		

Standard ID#:	M14939	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	07/09/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14940	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	07/09/2021	Lot #:	L069-02
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14941	Vendor:	GFS
Analyst:	NAH	Chemical:	AMCO Clear 0.1 ntu
Date Received:	07/12/2021	Lot #:	Returned to manufacturer
Expiration Date (if any):	not used	Catalog #:	not used

		Instrument:	ICP 6500
Standard Log #:	M14942	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	07/09/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14833 and 15 **mL** 10000 mg/L Fe M14676 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14943	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	07/09/2021	Expiration Date:	12/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14833, **15 mL** Fe (10,000 mg/L) M14676, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14788, **2.5 mLs Na 10,000 ug/mL** M14736 **,2.5 mLs k 10,000 ug/mL** M14370 **2.5 mLs S 10,000 ug/mL** M14677, **0.5 mls Si 1000 ug/mL** M14735 and brought up to volume with milli-Q .		

Standard Log #:	M14938	Reagent:	TCLP EXTRACTION FLUID #2
Analyst:	BMM	pH:	2.88 ± 0.05
Prep Date:	07/08/2021	Expiration Date:	07/08/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703. Dilute to 20 L and mix.		

Standard Log #:	M14933	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	08/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14934	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	08/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14935	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/07/2021	Expiration Date:	07/08/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14936	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/08/2021	Expiration Date:	08/08/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14937	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/08/2021	Expiration Date:	08/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14844 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14930	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/07/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14931	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	07/07/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14932	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/07/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14925	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14926	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14799 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14927	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	07/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14928	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14929	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	07/01/2021	Expiration Date:	08/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14922	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/30/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14923	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/30/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14924	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/30/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14921	Vendor:	LabChem
Analyst:	NAH	Chemical:	Turbidity Standard(Formazin) 4000NT
Date Received:	06/25/2021	Lot #:	L147-07
Expiration Date (if any):	06/08/2022	Catalog #:	LC26290

		Instrument:	ICP 6500
Standard Log #:	M14919	Standard:	ICSA3_Cr_Cu_Co_Mo
Analyst:	NAH	Concentrations:	**10,000 ug/L** Cr, Cu, Co and Mo
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L Cr M14205 0.5 **mL** 10000 mg/L Cu M14199 5.0 **mL** 1000 mg/L Co M14204 5.0 **mL** 1000 mg/L Mo M14888 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14920	Standard:	ICSA4_Ni_Ti
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ni and Ti
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ni M14196 5.0 **mL** 10000 mg/L Ti M14674 brought up to volume with milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M14916	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/23/2021	Expiration Date:	07/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M14917	Standard:	ICSA1_Mn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Mn
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 **mL** 10000 mg/L mn M14200 brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14918	Standard:	ICSA2_Ba_Be_Sn
Analyst:	NAH	Concentrations:	**10,000 ug/L** Ba, Be, and Sn
Prep Date:	06/24/2021	Expiration Date:	09/2021
Prep:	Into a 500 mL volumetric flask, pipetted 5.0 **mL** 1000 mg/L Ba M14772 5.0 **mL** 10000 mg/L Be M14203 5.0 **mL** 10000 mg/L Sn M14774 brought up to volume with milli-Q H_2O.		

Standard Log #:	M14912	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	07/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14913	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	07/22/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14914	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/22/2021	Expiration Date:	06/23/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14915	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/23/2021	Expiration Date:	07/23/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14909	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/22/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14910	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/22/2021	Expiration Date:	11/30/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14911	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/22/2021	Expiration Date:	05/02/2022
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14904	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	07/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14905	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	07/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14906	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/16/2021	Expiration Date:	06/17/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14907	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/17/2021	Expiration Date:	07/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14908	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/17/2021	Expiration Date:	07/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

Standard Log #:	M14903	Instrument:	ICP 6500
Analyst:	NAH	Standard:	Dissolved MDL Verificaion
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	2.7	M14623	1000	0.135
Al	10	M14736	**10000**	.05
As	20	M14621	1000	1
Ba	2	M14772	1000	0.1
Be	1	M14203	1000	0.05
Ca	50	M14740	**10000**	0.25
Cd	0.5	M14201	1000	.025
Co	2.5	M14204	1000	0.125
Cr	5	M14205	**10000**	.025
Cu	10	M14199	**10000**	.05
Fe	40	M14738	**10000**	0.2
Mg	25	M14676	**10000**	0.125
Mn	3	M14200	**10000**	.015
Mo	2.5	M14888	1000	0.125
Ni	3	M14196	1000	0.15
Pb	20	M14202	**10000**	0.1
Sb	10	M14622	1000	0.5
Se	20	M14624	1000	1
Tl	20	M14626	1000	1
V	3	M14198	1000	0.15
Zn	5	M14197	**10000**	0.025
Na	150	M14736	**10000**	0.75
K	150	M14741	**10000**	0.75
B	20	M14675	1000	1
Si	200	M14735	1000	10
Li	10	M14681	1000	0.5
Sr	20	M14775	1000	1
Sn	20	M14774	1000	1
Ti	5	M14674	1000	0.25
S	200	M14773	**10000**	10

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14902	Instrument:	ICP 6500
Analyst:	NAH	Standard:	MDL spike Soln.
Prep Date:	06/16/2021	Expiration Date:	09//2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M14623	1000	2
Al	800	M14736	**10000**	4
As	40	M14621	1000	2
Ba	20	M14772	1000	1
Be	8	M14203	1000	0.4
Ca	1000	M14740	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14738	**10000**	3
Mg	1000	M14676	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14888	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M14622	1000	2
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14736	**10000**	50
K	10000	M14741	**10000**	50
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14901	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ Solid QSM
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	40	M14623	1000	2
Al	800	M14736	**10000**	4
As	40	M14621	1000	2
Ba	40	M14772	1000	2
Be	8	M14203	1000	0.4
Ca	1000	M14740	**10000**	5
Cd	10	M14201	1000	0.5
Co	20	M14204	1000	1
Cr	20	M14205	**10000**	0.1
Cu	20	M14199	**10000**	0.1
Fe	600	M14738	**10000**	3
Mg	1000	M14676	**10000**	5
Mn	20	M14200	**10000**	0.1
Mo	20	M14888	1000	1
Ni	20	M14196	1000	1
Pb	20	M14202	**10000**	0.1
Sb	40	M14622	1000	2
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	20	M14198	1000	1
Zn	20	M14197	**10000**	0.1
Na	10000	M14736	**10000**	50
K	10000	M14741	**10000**	50
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14900	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ water QSM
Prep Date:	06/16/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M14623	1000	0.25
Al	120	M14737	**10000**	0.6
As	40	M14621	1000	2
Ba	4	M14772	1000	0.2
Be	8	M14203	1000	0.4
Ca	100	M14740	**10000**	0.5
Cd	2	M14201	1000	0.1
Co	5	M14204	1000	0.25
Cr	5	M14205	**10000**	0.025
Cu	40	M14199	**10000**	0.2
Fe	80	M14738	**10000**	0.4
Mg	40	M14676	**10000**	0.2
Mn	5	M14200	**10000**	0.025
Mo	5	M14888	1000	0.25
Ni	5	M14196	1000	0.25
Pb	20	M14202	**10000**	0.1
Sb	20	M14622	1000	1.0
Se	40	M14624	1000	2
Tl	40	M14626	1000	2
V	5	M14198	1000	0.25
Zn	20	M14197	**10000**	0.1
Na	700	M14736	**10000**	3.5
K	500	M14741	**10000**	2.5
B	40	M14675	1000	2
Si	200	M14735	1000	10
Li	20	M14681	1000	1
Sr	20	M14775	1000	1
Sn	40	M14774	1000	2
Ti	20	M14674	1000	1
S	400	M14773	**10000**	20

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	GFAA
Standard Log #:	M14897	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14898	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14899	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/14/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14892	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	07/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14893	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	07/08/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14894	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/08/2021	Expiration Date:	06/09/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.705 in a hood.		

Standard Log #:	M14895	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/09/2021	Expiration Date:	07/09/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14886 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14896	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/09/2021	Expiration Date:	07/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14889	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/08/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14890	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/08/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14891	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/08/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14886	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Hydroxylamine Sulfate
Date Received:	06/04/2021	Lot #:	Y20F051
Expiration Date (if any):		Catalog #:	88944

Standard ID#:	M14887	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 mg/L
Date Received:	06/04/2021	Lot #:	1053109-69
Expiration Date (if any):	11/2022	Catalog #:	4400-10M411500

Standard ID#:	M14888	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	06/04/2021	Lot #:	1075718-15
Expiration Date (if any):	11/2022	Catalog #:	S4400-1000343

Standard Log #:	M14885	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14883	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14884	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	06/03/2021	Expiration Date:	06/03/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14878	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	07/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14879	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	07/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14880	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	06/01/2021	Expiration Date:	06/02/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14881	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	06/02/2021	Expiration Date:	07/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14882	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	06/02/2021	Expiration Date:	07/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14845 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14875	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14876	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	06/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14877	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/01/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14874	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05/24/2021	Lot #:	16-115AB
Expiration Date (if any):	05/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M14869	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	06/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14870	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	06/18/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14871	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/18/2021	Expiration Date:	05/19/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14872	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/19/2021	Expiration Date:	06/19/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14873	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/19/2021	Expiration Date:	06/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14866	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/18/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14867	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/18/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14868	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/18/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14865	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	05/12/2021	Expiration Date:	09/30/2021
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M14508 and **10 mL** Mg (10,000 mg/L) M14676 and brought up to volume.		

Standard Log #:	M14860	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	06/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M14724 and brought up to volume.		

Standard Log #:	M14861	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	06/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14862	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/11/2021	Expiration Date:	05/12/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14863	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/12/2021	Expiration Date:	06/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14864	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/12/2021	Expiration Date:	06/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14857	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14858	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14859	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14854	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14855	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14856	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	05/05/2021	Expiration Date:	05/05/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14850	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14851	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	06/04/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14852	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	05/04/2021	Expiration Date:	05/05/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14853	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	05/05/2021	Expiration Date:	06/05/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14847	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/04/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14848	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	05/04/2021	Expiration Date:	05/02/2021
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14849	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/04/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14846	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	ACID WASHED TCLP FILTERS
Date Received:	04/29/2021	Lot #:	400175-1081-AG
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

		Instrument:	CETAC
Standard Log #:	M14842	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard Log #:	M14843	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	04/19/2021	Expiration Date:	04/19/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard ID#:	M14844	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14845	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	04/28/2021	Lot #:	L060-06
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M14838	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14839	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	05/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14840	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/27/2021	Expiration Date:	04/28/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14841	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/28/2021	Expiration Date:	05/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14835	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14836	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14837	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M14832	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14713 and brought up to volume.		

Standard ID#:	M14833	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Interference A
Date Received:	04/21/2021	Lot #:	18-102WLX
Expiration Date (if any):	04/30/2022	Catalog #:	INT-A1

Standard ID#:	M14834	Vendor:	Custom Assurance Std
Analyst:	NAH	Chemical:	Ca 20000 Mg,Na 10000: THardness
Date Received:	04/21/2021	Lot #:	16-022AB
Expiration Date (if any):	04/30/2022	Catalog #:	XCTIWI-1-500

Standard Log #:	M14828	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14829	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	05/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14830	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/20/2021	Expiration Date:	04/21/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14831	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/21/2021	Expiration Date:	05/21/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14825	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14826	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/20/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14827	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/20/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14824	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14821	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14395 , **15 mL** Fe (10,000 mg/L) M14738 , **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 , **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14788 , **2.5 mLs Na 10,000 ug/mL** M14736 ,**2.5 mLs k 10,000 ug/mL** 14625 **2.5 mLs S 10,000 ug/mL** M14570 , **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14822	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	04/15/2021	Expiration Date:	06/21
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14395 and 15 **mL** 10000 mg/L Fe M14738 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M14682 and brought up to volume with milli-Q H_2O.	

		Instrument:	ICP 6500
Standard Log #:	M14823	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	04/15/2021	Expiration Date:	09/21
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M14685 and brought up to volume with milli-Q H_2O.	

MRL BASE STD M14820 Analyst NAH

Prep Date 04/15/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	XX
Al	400	M14737	10000	2	XX
Ba	10	M14772	1000	0.5	XX
Be	4	M14203	1000	0.2	09/21
Cd	5	M14740	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14676	10000	2.5	XX
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14684	1000	0.5	XX
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	XX
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14741	10000	5	XX
Na	1000	M14736	10000	5	XX
As	20	M14621	1000	1	XX
Ca	500	M14740	10000	2.5	XX
Fe	300	M14738	10000	1.5	XX
Se	20	M14624	1000	1	XX
Tl	20	M14674	1000	1	XX
Si	100	M14735	1000	5	XX
B	20	M14675	1000	1	09/21
Li	20	M14681	1000	1	XX
W	50	MXXX	1000	2.5	XXXXX
Ti	10	M14674	1000	0.5	XX
Sr	10	M14775	1000	0.5	XX
Sn	50	M14774	1000	2.5	XX
S	300	M14773	10000	1.5	XX

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Standard Log #:	M14815	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14816	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	05/14/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14817	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/14/2021	Expiration Date:	04/15/2021
Prep:	Carefully mixed **3** parts HCl AB.704 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14818	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14819	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/15/2021	Expiration Date:	05/15/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.704 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14812	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14813	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/14/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14814	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/14/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	ICP 6500
Standard Log #:	M14811	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	04/13/2021	Expiration Date:	09/2021
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14788, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14685 and **1 mL** of Si (1000 mg/L) M14477. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14736. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M14676, **10 mL** of Fe (10,000 mg/L) M14676, **10 mL** of Ca (10,000 mg/L) M14740 and **10 mL** Al (10,000 mg/L) M14478. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	GFAA
Standard Log #:	M14808	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14809	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14797 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14810	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/12/2021	Expiration Date:	04/12/2022
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14798 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14803	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14804	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	05/06/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14805	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	04/06/2021	Expiration Date:	04/07/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14806	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14807	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	04/07/2021	Expiration Date:	05/07/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14800	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14801	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	04/06/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14802	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/06/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14799	Vendor:	Acros Organics
Analyst:	MDS	Chemical:	Potassium Persulfate
Date Received:	04/06/2021	Lot #:	A0417285
Expiration Date (if any):		Catalog #:	424185000

Standard ID#:	M14797	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	04/05/2021	Lot #:	S2-MEB703691
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-SPK-1

Standard ID#:	M14798	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	04/05/2021	Lot #:	S2-MEB703690
Expiration Date (if any):	04/12/2021	Catalog #:	CTI-GFCAL-1

Standard Log #:	M14792	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	04/30/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14793	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/30/2021	Expiration Date:	03/31/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14794	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

Standard Log #:	M14795	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14796	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/31/2021	Expiration Date:	05/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14789	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14790	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/30/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14791	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/30/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14787	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Phosphorus 10,000 mg/L
Date Received:	03/29/2021	Lot #:	AR18-111PY
Expiration Date (if any):	3/29/2022	Catalog #:	PLP9-3Y

Standard ID#:	M14788	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/29/2021	Lot #:	4-070MF
Expiration Date (if any):	03/29/2021	Catalog #:	XCTWI-5-500

Standard Log #:	M14786	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/25/2021	Expiration Date:	03/25/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14785. Dilute to 20 L and mix.		

Standard Log #:	M14785	Reagent:	10N NaOH
Analyst:	BMM		
Prep Date:	03/24/2021	Expiration Date:	08/24/2021
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH WC208 and brought up to volume.		

Standard Log #:	M14780	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14781	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	04/23/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14782	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/23/2021	Expiration Date:	03/24/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14783	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14611 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14784	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/24/2021	Expiration Date:	04/24/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14777	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14778	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/23/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14779	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/23/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14772	Vendor:	CPI
Analyst:	NAH	Chemical:	Ba 1000 mg/mL
Date Received:	03/22/2021	Lot #:	994634-134
Expiration Date (if any):	09/2022	Catalog #:	S4400-100041

Standard ID#:	M14773	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/mL
Date Received:	03/22/2021	Lot #:	1050965-34
Expiration Date (if any):	09/2022	Catalog #:	4400-10M544

Standard ID#:	M14774	Vendor:	CPI
Analyst:	NAH	Chemical:	Sn 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1066479-21
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000613

Standard ID#:	M14775	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/mL
Date Received:	03/22/2021	Lot #:	1096004-1
Expiration Date (if any):	09/2022	Catalog #:	S4400-1000531

Standard ID#:	M14776	Vendor:	Spex Certi Prep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	03/23/2021	Lot #:	56-049CR
Expiration Date (if any):	03/30/2022	Catalog #:	XSPIKE-1-250

Standard Log #:	M14767	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14768	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	03/17/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14769	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/16/2021	Expiration Date:	04/16/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14770	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14771	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/17/2021	Expiration Date:	04/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14714 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14764	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14765	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14766	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14763	Vendor:	ENVIROMENTAL EXPRESS
Analyst:	BMM	Chemical:	TCLP Acid Washed Filters
Date Received:	01/05/21	Lot #:	400182-0364-T
Expiration Date (if any):	N/A	Catalog #:	FG77150MM

Standard Log #:	M14758	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	04/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14759	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/09/2021	Expiration Date:	03/10/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14760	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

Standard Log #:	M14761	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14762	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/10/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14755	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14756	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14757	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14754	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Mod.
Date Received:	03/04/2021	Lot #:	225022
Expiration Date (if any):	03/31/2022	Catalog #:	39043

		Instrument:	GFAA
Standard Log #:	M14751	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14752	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14753	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/03/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14748	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14749	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	03/02/2021	Expiration Date:	04/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14750	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	03/02/2021	Expiration Date:	03/02/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14745	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14746	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	04/01/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14747	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	03/01/2021	Expiration Date:	03/02/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14742	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14743	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	03/01/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14744	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	03/01/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14740	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Calcium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1072921-23
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M91

Standard ID#:	M14741	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Potassium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1053109-37
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M411

Standard ID#:	M14735	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Silicon 1000 µg/mL
Date Received:	02/25/2021	Lot #:	1047570-64
Expiration Date (if any):	08/20/2021	Catalog #:	S4400-1000504F

Standard ID#:	M14736	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Sodium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1055526-35
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M521

Standard ID#:	M14737	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Aluminum 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1077245-17
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M11

Standard ID#:	M14738	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Iron 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1034257-40
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M261

Standard ID#:	M14739	Vendor:	CPI INTERNATIONAL
Analyst:	MDS	Chemical:	Magnesium 10,000 µg/mL
Date Received:	02/25/2021	Lot #:	1075232-5
Expiration Date (if any):	08/20/2022	Catalog #:	4400-10M311

Standard Log #:	M14731	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14732	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/16/2021	Expiration Date:	03/16/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14733	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14734	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/17/2021	Expiration Date:	03/17/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14728	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14729	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/16/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14730	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/16/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14725	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14726	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14727	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	02/15/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard Log #:	M14720	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14721	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/09/2021	Expiration Date:	03/09/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

Standard Log #:	M14722	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14723	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/10/2021	Expiration Date:	03/10/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard ID#:	M14724	Vendor:	ThermoFisher Scientific
Analyst:	MDS	Chemical:	Potassium Permanganate
Date Received:	02/08/2021	Lot #:	201466
Expiration Date (if any):	Suggested Retest 04/202	Catalog #:	P279

		Instrument:	HydraII
Standard Log #:	M14717	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14718	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/09/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14719	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/09/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14713	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14714	Vendor:	LabChem
Analyst:	MDS	Chemical:	Stannous Chloride
Date Received:	02/05/2021	Lot #:	L022-06
Expiration Date (if any):		Catalog #:	LC251701

Standard ID#:	M14715 (1) & (2)	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	02/3/2021	Lot #:	2023715-500
Expiration Date (if any):	08/31/2022	Catalog #:	10M67-1-500

Standard ID#:	M14716	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Phosphorus 10000 mg/L
Date Received:	02/08/2021	Lot #:	AR18-111PY
Expiration Date (if any):	02/28/2022	Catalog #:	PLP9--3Y

Standard Log #:	M14708	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14709	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	03/02/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14710	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	02/02/2021	Expiration Date:	02/03/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14711	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14712	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	02/03/2021	Expiration Date:	03/03/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14705	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14706	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	02/02/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14707	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/02/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14702	Reagent:	1:3 HNO3
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/27/2022
Prep:	Carefully mixed **3** parts DI with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14703	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14704	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/28/2021	Expiration Date:	02/28/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

Standard Log #:	M14699	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14700	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	02/27/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14701	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/27/2021	Expiration Date:	01/28/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14696	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14697	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/27/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14698	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/27/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	GFAA
Standard Log #:	M14694	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) N/A **3.2 mL** of As (1000 mg/L) M14621 **3.2 mL** of Se (1000 mg/L) M14624 **0.08 mL** of Pb (10,000 mg/L) M14202 **1.0 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M14695	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/26/2021	Expiration Date:	09/2021
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M14622 **1.0 mL** of As (1000 mg/L) M14621 **2.0 mL** of Se (1000 mg/L) M14624 **0.045 mL** of Pb (10,000 mg/L) M14202 **0.4 mL** of Tl (1000 mg/L) M14626 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M14689	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14690	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	02/19/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14691	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/19/2021	Expiration Date:	01/20/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

Standard Log #:	M14692	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14693	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/20/2021	Expiration Date:	02/20/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14598 and brought up to volume.		

		Instrument:	HydraII
Standard Log #:	M14686	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14687	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/19/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14688	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/19/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M14680	Vendor:	CPI
Analyst:	NAH	Chemical:	Si 1000 mg/L
Date Received:	01/15/2021	Lot #:	1047870-29
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000504F

Standard ID#:	M14681	Vendor:	CPI
Analyst:	NAH	Chemical:	Li 1000 mg/L
Date Received:	01/15/2021	Lot #:	104768-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000291

Standard ID#:	M14682	Vendor:	CPI
Analyst:	NAH	Chemical:	Ce 1000 mg/L
Date Received:	01/15/2021	Lot #:	S4400-1000101
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000101

Standard ID#:	M14683	Vendor:	CPI
Analyst:	NAH	Chemical:	Sr 1000 mg/L
Date Received:	01/15/2021	Lot #:	1096004-1
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000531

Standard ID#:	M14684	Vendor:	CPI
Analyst:	NAH	Chemical:	Mo 1000 mg/L
Date Received:	01/15/2021	Lot #:	1075718-2
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000343

Standard ID#:	M14685	Vendor:	SpexCertiPrep
Analyst:	NAH	Chemical:	Custom Assurance standard
Date Received:	01/18/2021	Lot #:	XCTWI-4-500
Expiration Date (if any):	01/30/2022	Catalog #:	14-242AB

Standard ID#:	M14674	Vendor:	CPI
Analyst:	NAH	Chemical:	Ti 1000 mg/L
Date Received:	01/15/2021	Lot #:	1038255-27
Expiration Date (if any):	07/2022	Catalog #:	S4400-1000623

Standard ID#:	M14675	Vendor:	CPI
Analyst:	NAH	Chemical:	B 1000 mg/L
Date Received:	01/15/2021	Lot #:	1024903-65
Expiration Date (if any):	07/2022	Catalog #:	S4400-100074

Standard ID#:	M14676	Vendor:	CPI
Analyst:	NAH	Chemical:	M 10000 mg/L
Date Received:	01/15/2021	Lot #:	1013353
Expiration Date (if any):	07/2022	Catalog #:	4400-10M311

Standard ID#:	M14677	Vendor:	CPI
Analyst:	NAH	Chemical:	S 10000 mg/L
Date Received:	01/15/2021	Lot #:	1050965-25
Expiration Date (if any):	07/2022	Catalog #:	4400-10M544

Standard ID#:	M14678	Vendor:	CPI
Analyst:	NAH	Chemical:	P 10000 mg/L
Date Received:	01/15/2021	Lot #:	1079898-6
Expiration Date (if any):	07/2022	Catalog #:	S4400-10M391

Standard ID#:	M14679	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	01/15/2021	Lot #:	1034527-40
Expiration Date (if any):	07/2022	Catalog #:	4400-10M261

Standard Log #:	M14673	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/13/2021	Expiration Date:	09/2021

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M14623	1000	0.01
As	2	M14621	1000	0.1
Pb	2	M14202	10000	0.01
Sb	2	M14622	1000	0.1
Se	2	M14624	1000	0.1
Tl	2	M14626	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M14670	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M14544 and **60 g** hydroxylamine sulfate M14507 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14671	Reagent:	Stannous Chloride Solution
Analyst:	MDS		
Prep Date:	01/12/2021	Expiration Date:	02/12/2021
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.698 and dissolved **100 g** Stannous chloride M14597 and brought up to volume.		

Standard Log #:	M14672	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	BMM	pH:	4.93 ± 0.05
Prep Date:	01/12/2021	Expiration Date:	01/12/2022
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.703 and **128.6 mL** 10N NaOH M14545. Dilute to 20 L and mix.		

Standard Log #:	M14667	Reagent:	Potassium Permanganate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M13080 and brought up to volume.		

Standard Log #:	M14668	Reagent:	Potassium Persulfate Solution
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	02/11/2021
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M14600 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M14669	Reagent:	Hg Aqua Regia
Analyst:	MDS		
Prep Date:	01/11/2021	Expiration Date:	01/12/2021
Prep:	Carefully mixed **3** parts HCl AB.698 with **1** part HNO_3 AB.700 in a hood.		

		Instrument:	HydraII
Standard Log #:	M14664	Standard:	Hg ICAL
Analyst:	MDS	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	HydraII
Standard Log #:	M14665	Standard:	Hg CCV
Analyst:	MDS	Concentration:	3.0 ug/L Hg
Prep Date:	01/11/2021	Expiration Date:	05/02/2022
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M14571 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	HydraII
Standard Log #:	M14666	Standard:	Alt. Source Working Std.
Analyst:	MDS	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/11/2021	Expiration Date:	11/30/2021
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M14572 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M14663	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	8 µg/L As 10 µg/L Pb 8 µg/L Sb 16 µg/L Se 10 µg/L Tl 0.6 µg/L Ag
Prep Date:	01/06/2021	Expiration Date:	09/2021

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M14621	10,000
Pb	0.1	10,000	M14202	10,000
Tl	1	1000	M14626	10,000
Se	1	1000	M14624	10,000
Sb	1	1000	M14622	10,000
Ag	0.1	1000	M14623	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	0.8	10,000	8
Pb	1.0	10,000	10
Tl	1.0	10,000	10
Se	1.6	10,000	16
Sb	0.8	10,000	8
Ag	0.6	1000	0.6

		Instrument:	GFAA
Standard Log #:	M14660	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14661	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M14227 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M14662	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	01/04/2021	Expiration Date:	04/10/2021
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M14228 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

MRL BASE STD M14659 Analyst NAH

Prep Date 01/04/2021

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M14623	1000	1	02/22
Al	400	M14478	10000	2	02/22
Ba	10	M14568	1000	0.5	05/22
Be	4	M14203	1000	0.2	09/21
Cd	5	M14201	1000	0.25	09/21
Co	10	M14204	1000	0.5	09/21
Cr	10	M14205	10000	0.05	09/21
Cu	10	M14199	10000	0.05	09/21
Mg	500	M14472	10000	2.5	02/22
Mn	10	M14200	10000	0.05	09/21
Mo	10	M14569	1000	0.5	05/22
Ni	10	M14196	1000	0.5	09/21
Pb	10	M14202	10000	0.05	09/21
Sb	20	M14622	1000	1	02/22
V	10	M14198	1000	0.5	09/21
Zn	10	M14197	10000	0.05	09/21
K	1000	M14436	10000	5	02/22
Na	1000	M14559	10000	5	02/22
As	20	M14621	1000	1	02/22
Ca	500	M14476	10000	2.5	02/22
Fe	300	M14470	10000	1.5	02/22
Se	20	M14624	1000	1	02/22
Tl	20	M14626	1000	1	02/22
Si	100	M14435	1000	5	02/22
B	20	M14131	1000	1	07/21
Li	20	M14127	1000	1	07/21
W	50	xxxxxxxx	1000	2.5	xxxxxx
Ti	10	M14009	1000	0.5	04/21
Sr	10	M14007	1000	0.5	04/21
Sn	50	M14008	1000	2.5	04/21
S	300	M14570	10000	1.5	05/22

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M14658	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, K, Na, S, **50000 ug/L** Si **1000 ug/L.**
Prep Date:	1/04/2021	Expiration Date:	03/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **15 mL** Fe (10,000 mg/L) M14470, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195, **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn), M14628, **2.5 mLs Na 10,000 ug/mL** M14473 ,**2.5 mLs k 10,000 ug/mL** M14436 **2.5 mLs S 10,000 ug/mL** M14570, **0.5 mls Si 1000 ug/mL** M14477 and brought up to volume with milli-Q .	

		Instrument:	ICP 6500
Standard Log #:	M14656	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M14639, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M14359, **0.5 mL** Mo (1000 mg/L) M14569, **0.5 mL** B (1000 mg/L) M14131, **0.5 mL** Sr (1000 mg/L) M14007, **0.5 mL** Li (1000 mg/L) M14127, **0.5 mL** Sn (1000 mg/L) M14008, **0.5 mL** Ti (1000 mg/L) M14009, **0.5 mL** W (1000 mg/L) xxxxxxx, **0.5 mL** Si (1000 mg/L) M14567, **0.5 mL** S (10000 mg/L) M14372, **0.5 mL** K (10000 mg/L) M14436, and **0.5 mL** Na (10000 mg/L) M14559		

		Instrument:	ICP 6500
Standard Log #:	M14657	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **10,000** V, Ce
Prep Date:	01/04/2021	Expiration Date:	06/30/2021
Prep:	Into a 500 mL volumetric flask, pipetted 50 **mL** Interference A std M14359 and 15 **mL** 10000 mg/L Fe M14470 5.0 **mL** 1000 mg/L V M14198 5.0 **mL** 1000 mg/L Ce M1359 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M14655	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	01/04/2021	Expiration Date:	03/30/2021

Prep:

Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O.
(5% HNO_3, 5% HCl)
1000 ug/L Std. - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M14628, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M14195 and **1 mL** of Si (1000 mg/L) M14435 and 1 mL M13859 Ce
0.25 ug/L Std. - **0.25 mL** of the 1000 ug/L Std.
0.5 ug/L Std. - **0.5 mL** of the 1000 ug/L Std.
1 ug/L Std. - **1 mL** of the 1000 ug/L Std.
5 ug/L Std. - **5 mL** of the 1000 ug/L Std.
10 ug/L Std. - **10 mL** of the 1000 ug/L Std.
20 ug/L Std. - **20 mL** of the 1000 ug/L Std.
50 ug/L Std. - **50 mL** of the 1000 ug/L Std.
100 ug/L Std. - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3
10,000 ug/L Std. - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M14625.
100k ug/L Std. - **10 mL** of Cu (10,000 mg/L) M14199, **10 mL** of Mn (10,000 mg/L) M14200, **10 mL** of Cr (10,000 mg/L) M14205, **10 mL** Pb (10,000 mg/L) M14202, **10 mL** of Zn (10,000 mg/L) M14197 and **10 mL** of Na (10,000 mg/L) M14559.
100,000 ug/L Std. - **10 mL** of Mg (10,000 mg/L) M14472, **10 mL** of Fe (10,000 mg/L) M14470, **10 mL** of Ca (10,000 mg/L) M14476 and **10 mL** Al (10,000 mg/L) M14478.
500,000 ug/L Std. - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L)
1000k ug/L Std. - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)

CHAIN OF CUSTODY,
PM CONFIRMATION
AND
SAMPLE CONDITION FORMS
DOCUMENTS

Rev. 02/2017

CHAIN OF CUSTODY

Page 1 of 1

Company: TETRA TECH
Project Contact: WES WILLIAMS
Telephone: 216.470.8109
Project Name: PWDF
Project #: TBD
Location: PLAINFIELD, IN
Sampled By: WES WILLIAMS

CT LABORATORIES

Folder #: 168330
Company: TETRA TECH
Project: PWDF
Logged By: erc PM: BMS

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Program:
QSM RCRA SDWA NPDES
Solid Waste Other _____

PO #

Report To:
EMAIL: katherine.cooper@tetratech.com
Company: TETRA TECH
Address:

Invoice To:*
EMAIL:
Company: TETRA TECH
Address: CHICAGO, IL

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions QUICKEST TAT POSSIBLE, PLEASE

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: 3/23/22
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y(N)	TAL METALS	SVOCs	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test				
3/17/22	1603	M	C		PWDF-WS-01-031722	N	✓	✓			112147
↓	1623	↓	↓		PWDF-WS-02-031722	N	✓	✓			48
↓	1658	↓	↓		PWDF-WS-03-031722	N	✓	✓			49

Relinquished By:	Date/Time	Received By:	Date/Time
WES WILLIAMS	3/18/22 1445		3/19/22 1300
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			3/19/22 829

Lab Use Only
Ice Present (Yes) No
Temp 3.6 IR Gun 28
Cooler # XXXX

Cooler Receipt Form

Ice Present (YES) NO

Observed Temperature 3.6

Actual Temperature 3.6

IR Gun # 28

Initials [signature]

Date 3/18/22 Time 1300

Cooler #: xxxx

ORIGIN ID:HNBA (216) 470-8109
TETRA TECH
6777 ENGLE RD STE L
CLEVELAND, OH 44130
UNITED STATES US

SHIP DATE: 18MAR22
ACTWGT: 19.05 LB
CAD: 6991237/SSF02300
DIMS: 15x14x10 IN
BILL THIRD PARTY

TO RECEIVING
CT LABS
1230 LANGE CT

BARABOO WI 53913
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 2710 2837 3299

SATURDAY 12:00P
PRIORITY OVERNIGHT
AHS
53913
WI-US MSN

XO LNRA

Szymanski, Brett M

From: Cooper, Katherine <Katherine.Cooper@tetratech.com>
Sent: 03/21/2022 11:52
To: Szymanski, Brett M
Cc: Welch, Bruce
Subject: RE: PWDF - Limited Sample Volume

Hi Brett,

Yes, we would like the lab to move forward as summarized in your email below. We understand the reporting limits will be elevated and samples will be reports on a wet-weight basis.

Thank you,

Katherine Cooper | **Environmental Scientist**
Mobile: 262.203.2563 | Main: 312.201.7700 | Fax: 312.201.0031
katherine.cooper@tetratech.com This e-mail address is being protected from spambots. You need JavaScript enabled to view it

Tetra Tech
1 S. Wacker Drive, 37th Floor | Chicago, IL 60606 | www.tetratech.com

---

From: Szymanski, Brett M <BSzymanski@ctlaboratories.com>
Sent: Monday, March 21, 2022 11:37 AM
To: Cooper, Katherine <Katherine.Cooper@tetratech.com>
Cc: Welch, Bruce <Bruce.Welch@tetratech.com>
Subject: PWDF - Limited Sample Volume

Hello Katherine,

As we briefly discussed over the phone, there was limited sample mass received for the rush PWDF samples that arrived at our facility on Saturday, March 19th (the samples are essentially ash so a full 8-oz jar only contains ~10-grams of material). As such, we will need to reduce the sample mass that we prep for the metals and SVOC analyses, which will elevate the reporting limits. We will also need to report the samples on a wet-weight basis (i.e., not adjusted for the moisture content of the sample).

Please let me know if we should go ahead and proceed as summarized above.

Thank you,

Brett Szymanski
Project Manager
CT Laboratories LLC
a woman-owned small business
1230 Lange Court
Baraboo, WI 53913

608-356-2760 office
608-356-2766 fax
www.ctlaboratories.com

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Folder #: 168330

********RUSH PROJECT********

REPORT DUE 3/23/2022

Contract #: 3473

Company: TETRA TECH **Project:** PWDF **Proj #:**

Project Phase: PLAINFIELD, IN **PO Number:** 1168710 / CT- **Invoice #:** 168997

Project Manager: *BMS* **Date Received:** 03/19/22 **Log Date:** 03/21/2022

Report To: KATHERINE COOPER CC: R5 START LIST

1 S WACKER DRIVE
SUITE 3700
CHICAGO, IL 60606

Phone: : Fax:

Rep. E-Mail katherine.cooper@tetratech.com

Invoice To :ACCOUNTS PAYABLE CC:

1 S WACKER DRIVE
SUITE 3700
CHICAGO, IL 60606

Phone: Fax:

EMail:

Collected By:

Collector's Phone:

Arrival Temperature: 3.6 oC

SAMPLE #: 1121147 **DESCR:** PWDF-WS-01-031722 **PRIMARY / DETAILED MATRIX:** SOLID / SOIL **SAMPLED:** 3/17/2022 **Time:** 16:03

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
8	SOLIDS,PERCENT	(EPA 8000C)				3/31/2022	3/23/2022	*Y*	Logged
1206	MERCURY QSM 5.0	(EPA 7471B)				4/14/2022	3/23/2022	*Y*	Logged
1238	SVOC 8270 QSM 5	(EPA 8270D)			*Y*		3/23/2022	*Y*	NeedPrep
1324	ICP QSM 5.0 6010D	(EPA 6010D)				9/13/2022	3/23/2022	*Y*	Logged
			Aluminum						
			Antimony						
			Arsenic						
			Barium						
			Beryllium						
			Cadmium						
			Calcium						
			Chromium						
			Cobalt						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpDF07.tmp

Folder #: 168330 **Company:** *TETRA TECH* **Project:** PWDF

SAMPLE #: 1121147 **DESCR:** PWDF-WS-01-031722 **PRIMARY / DETAILED MATRIX:** SOLID / SOIL **SAMPLED:** 3/17/2022 **Time:** 16:03

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Copper						
			Iron						
			Lead						
			Magnesium						
			Manganese						
			Nickel						
			Selenium						
			Silver						
			Thallium						
			Vanadium						
			Zinc						
1325	ICP K QSM 5.0 6010D	(EPA 6010D)				9/13/2022	3/23/2022	*Y*	Logged
1326	ICP NA QSM 5.0 6010D	(EPA 6010D)				9/13/2022	3/23/2022	*Y*	Logged

SAMPLE #: 1121148 **DESCR:** PWDF-WS-02-031722 **PRIMARY / DETAILED MATRIX:** SOLID / SOIL **SAMPLED:** 3/17/2022 **Time:** 16:23

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
8	SOLIDS,PERCENT	(EPA 8000C)				3/31/2022	3/23/2022	*Y*	Logged
1206	MERCURY QSM 5.0	(EPA 7471B)				4/14/2022	3/23/2022	*Y*	Logged
1238	SVOC 8270 QSM 5	(EPA 8270D)			*Y*		3/23/2022	*Y*	NeedPrep
1324	ICP QSM 5.0 6010D	(EPA 6010D)				9/13/2022	3/23/2022	*Y*	Logged
			Aluminum						
			Antimony						
			Arsenic						
			Barium						
			Beryllium						
			Cadmium						

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpDF07.tmp

Folder #: 168330 **Company:** *TETRA TECH* **Project:** PWDF

SAMPLE #: 1121148 **DESCR:** PWDF-WS-02-031722 **PRIMARY / DETAILED MATRIX:** SOLID / SOIL **SAMPLED:** 3/17/2022 **Time:** 16:23

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Calcium						
			Chromium						
			Cobalt						
			Copper						
			Iron						
			Lead						
			Magnesium						
			Manganese						
			Nickel						
			Selenium						
			Silver						
			Thallium						
			Vanadium						
			Zinc						
1325	ICP K QSM 5.0 6010D	(EPA 6010D)				9/13/2022	3/23/2022	*Y*	Logged
1326	ICP NA QSM 5.0 6010D	(EPA 6010D)				9/13/2022	3/23/2022	*Y*	Logged

SAMPLE #: 1121149 **DESCR:** PWDF-WS-03-031722 **PRIMARY / DETAILED MATRIX:** SOLID / SOIL **SAMPLED:** 3/17/2022 **Time:** 16:58

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
8	SOLIDS,PERCENT	(EPA 8000C)				3/31/2022	3/23/2022	*Y*	Logged
1206	MERCURY QSM 5.0	(EPA 7471B)				4/14/2022	3/23/2022	*Y*	Logged
1238	SVOC 8270 QSM 5	(EPA 8270D)			*Y*		3/23/2022	*Y*	NeedPrep
1324	ICP QSM 5.0 6010D	(EPA 6010D)				9/13/2022	3/23/2022	*Y*	Logged
			Aluminum						
			Antimony						
			Arsenic						

Folder #: 168330 **Company:** *TETRA TECH* **Project:** PWDF

SAMPLE #: 1121149 **DESCR:** PWDF-WS-03-031722 **PRIMARY / DETAILED MATRIX:** SOLID / SOIL **SAMPLED:** 3/17/2022 **Time:** 16:58

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Barium						
			Beryllium						
			Cadmium						
			Calcium						
			Chromium						
			Cobalt						
			Copper						
			Iron						
			Lead						
			Magnesium						
			Manganese						
			Nickel						
			Selenium						
			Silver						
			Thallium						
			Vanadium						
			Zinc						
1325	ICP K QSM 5.0 6010D	(EPA 6010D)				9/13/2022	3/23/2022	*Y*	Logged
1326	ICP NA QSM 5.0 6010D	(EPA 6010D)				9/13/2022	3/23/2022	*Y*	Logged

Folder #: 168330 **Company:** *TETRA TECH* **Project:** PWDF

Invoice Number: 168997 **Preliminary Invoice Estimate:** $1,147.50

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ICP K QSM 5.0 6010D	SOIL	3	$3.50	1.70	$17.85
ICP NA QSM 5.0 6010D	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Aluminum	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Antimony	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Arsenic	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Barium	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Beryllium	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Cadmium	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Calcium	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Chromium	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Cobalt	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Copper	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Iron	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Lead	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Magnesium	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Manganese	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Nickel	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Selenium	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Silver	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Thallium	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Vanadium	SOIL	3	$3.50	1.70	$17.85
ICP QSM 5.0 6010D Zinc	SOIL	3	$3.50	1.70	$17.85
MERCURY QSM 5.0	SOIL	3	$18.00	1.70	$91.80
SOLIDS,PERCENT	SOIL	3	$0.00	0.00	$0.00
SVOC 8270 QSM 5	SOIL	3	$130.00	1.70	$663.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$0.00

C:\Windows\ServiceProfiles\LocalService\AppData\Local\Temp\tmpDF07.tmp

Bottle Information

Container	# Containers	Tests
SOLIDS	**3**	%SOL,HG,ICP,K,NA,8270

CT LABORATORIES

delivering more than data from your environmental analyses

Sample Condition Report

Folder #:	168330	Print Date / Time:	03/21/2022	08:26	
Client:	TETRA TECH	Received Date / Time / By:	03/19/2022	13:00	JLS
Project Name:	PWDF	Log-In Date / Time / By:	03/21/2022	08:26	erc
Project Phase:	PLAINFIELD, IN	Project #:			PM: BMS
Coolers:	UNMARKED	Temperature:	3.6 C		On Ice: **Y**
Custody Seals Present :	**N**	COC Present:?	**Y**	Complete?	**Y**
Seal Intact?	**N**	Numbers:	N/A		
Ship Method:	FEDEX EXPRESS	Tracking Number:	2710 2837 3299		
Adequate Packaging:	**Y**	Temp Blank Enclosed?	**Y**		

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

NO CUSTODY SEALS WERE PRESENT ON THE COOLER UPON RECEIPT.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
1121147 PWDF-WS-01-031722				
	SOLIDS	1	N / N	%SOL,HG,ICP,K,NA,8270
	Total # of Containers of Type	**(*SOLIDS*) = 1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
1121148 PWDF-WS-02-031722				
	SOLIDS	1	N / N	%SOL,HG,ICP,K,NA,8270
	Total # of Containers of Type	**(*SOLIDS*) = 1**		
Sample ID / Description	**Container Type**	**Cond. Code**	**pH OK?/Filtered?**	**Tests**
1121149 PWDF-WS-03-031722				
	SOLIDS	1	N / N	%SOL,HG,ICP,K,NA,8270
	Total # of Containers of Type	**(*SOLIDS*) = 1**		

Condition Code	*Condition Description*
1	Sample Received OK

19-Mar-2022

Katherine Cooper
TETRATECH-CHICAGO
1 South Wacker Drive
37th Floor
Chicago, IL 60606

Re: **Plainfield Fire ER** Work Order: **22030781**

Dear Katherine,

ALS Environmental received 8 samples on 19-Mar-2022 09:13 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 15.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Danielle Strasinger

Electronically approved by: Joe Ribar

Danielle Strasinger
Project Manager

Report of Laboratory Analysis

ALS Environmental

Date: 19-Mar-22

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER
Work Order: **22030781**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
22030781-01	PWDF-WS-6-031822	Bulk		3/18/2022 16:51	3/19/2022 09:13	☐
22030781-02	PWDF-WS-7-031822	Bulk		3/18/2022 17:05	3/19/2022 09:13	☐
22030781-03	PWDF-WS-8-031822	Bulk		3/18/2022 17:23	3/19/2022 09:13	☐
22030781-04	PWDF-WS-9-031822	Bulk		3/18/2022 17:29	3/19/2022 09:13	☐
22030781-05	PWDF-WS-10-031822	Bulk		3/18/2022 17:31	3/19/2022 09:13	☐
22030781-06	PWDF-WS-11-031822	Bulk		3/18/2022 17:38	3/19/2022 09:13	☐
22030781-07	PWDF-WS-12-031822	Bulk		3/18/2022 17:47	3/19/2022 09:13	☐
22030781-08	PWDF-WS-13-031822	Bulk		3/18/2022 17:57	3/19/2022 09:13	☐

Client:	TETRATECH-CHICAGO
Project:	Plainfield Fire ER
Work Order:	22030781

Case Narrative

It is the responsibility of the client to notify the lab of any certification requirements in writing via the chain of custody as this may determine the preparation and analytical procedures employed.
Laboratory accreditation does not in any way constitute approval or endorsement by any accrediting body or agency of the federal government. Please contact ALS Cincinnati QA/QC Manager for accreditation identifications and certifications.
All sample collection is performed outside of ALS and is the sole responsibility of the client. Sample condition acceptable upon receipt except where noted. Estimates of concentration are semi-quantitative and are made on an area basis. Results apply only to portions of samples analyzed. Samples disposed after 60 days.
All analytical data (results) and technical content (comments) related to the preparation and analysis of the samples stated herein is the responsibility of the analyst. Raw data is reviewed and validated by a qualified peer analyst and imported into the Laboratory Information Management System (LIMS) where it is formatted by the cover letter signatory charged with compiling and sending the final LIMS generated report to the client.
The reporting limit (RL) for asbestos in bulk materials is 1% and is a function of the quantity of sample analyzed, the nature of any matrix interferences, sample preparation, and fiber size and distribution. Results reported as ND indicate that no asbestos was detected. Results reported as Trace indicate that asbestos was detected at some level confidently determined to be <1% which is considered inconclusive according to New York ELAP.
ALS performs variety of PLM methods for asbestos in bulk building materials including EPA 600/R-93/116, NIOSH 9002, ELAP 198.1, and ELAP 198.6. In addition, we perform a modified uncertified version of EPA 600/R-04/004 for asbestos in vermiculite which reports asbestos as present or absent only, an in-house developed uncertified method ALS SOP ENV 004 for asbestos in soil, and asbestos in soil by ASTM D7521.
Regardless of the method requested, all samples are examined according to mandatory method protocol. Any optional method protocol are eliminated from the initial analysis but may be performed upon client request. These may include; insufficient sample volume rejection*, phase separation of layered or heterogeneous samples, ashing to remove organic interferences, acid dissolution to remove mineral carbonate interferences, point counting**, and analysis by transmission electron microscopy (TEM) is recommended to verify all ND PLM results.
All samples are examined by stereomicroscope for the determination of homogeneity, texture, friability, color, and extent of fibrous components. Non-asbestos materials such as foil, paper, metal, plastic, pebbles, or organic debris are ignored and a subsample of the remaining material homogenized by some means for examination by polarized light microscope (PLM). Information obtained via both stereomicroscope and PLM are used in the final qualitative and quantitative analysis of fibrous components.
NOTE: Any visible building debris in soil samples such as pieces of drywall, roofing material,

insulation, concrete, etc., are not included in the soil analysis. If present, these are considered possible asbestos containing materials (ACM) and may be analyzed as separate samples upon client request.
*Sufficient sample volume is material dependent. For samples such as floor tiles, roofing felts, sheet insulation, etc., three to four square inches of the layered material is preferred. For materials such as ceiling tiles, loose fill insulation, pipe insulation, etc., one cubic inch (~15cc) is preferred. For samples of thin coating materials such as paints, mastics, spray plasters, etc., a smaller sample size may be suitable. For vermiculite analysis, a one gallon ziploc bag full of dry, loose material is acceptable. For ENV 004 soil samples, a 4oz jar is recommended. The ASTM D7521 Soil method requires a minimum of 8oz and a maximum of 16oz of homogeneous soil.
**PLM samples at or near the 1% detection limit may be analyzed by the 400 point count analysis which refers to method EPA 600/M4/82/020, or AHERA method EPA 40 CFR Part 763, Sub. E, App. E as these are synonymous

Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

ALS Environmental

Date: *19-Mar-22*

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER

Work Order: 22030781

Lab ID: 22030781-01A
Client Sample ID: PWDF-WS-6-031822

Collection Date: 3/18/2022 4:51:00 PM
Matrix: BULK

Analytical Results

Analyses	Result	Units	
Asbestos by PLM			Date Analyzed: **3/19/2022**
Macroscopic Examination	Prep Date: **3/19/2022**		**E600/R-93/116** Analyst: **HSC**
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			**E600/R-93/116**
Cellulose	ND	%	
Fiberglass	>1<=3	%	
Non-fibrous	>90<=100	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			**E600/R-93/116**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: *19-Mar-22*

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER

Work Order: 22030781

Lab ID: 22030781-02A
Client Sample ID: PWDF-WS-7-031822

Collection Date: 3/18/2022 5:05:00 PM
Matrix: BULK

Analytical Results

Analyses	Result	Units	
Asbestos by PLM			Date Analyzed: **3/19/2022**
Macroscopic Examination	Prep Date: **3/19/2022**		**E600/R-93/116** Analyst: **HSC**
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			**E600/R-93/116**
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>90<=100	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			**E600/R-93/116**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: *19-Mar-22*

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER

Work Order: 22030781

Lab ID: 22030781-03A
Client Sample ID: PWDF-WS-8-031822

Collection Date: 3/18/2022 5:23:00 PM
Matrix: BULK

Analytical Results

Analyses	Result	Units	
Asbestos by PLM			Date Analyzed: **3/19/2022**
Macroscopic Examination	Prep Date: **3/19/2022**		**E600/R-93/116** Analyst: **HSC**
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			**E600/R-93/116**
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>90<=100	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			**E600/R-93/116**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: *19-Mar-22*

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER

Work Order: 22030781

Lab ID: 22030781-04A
Client Sample ID: PWDF-WS-9-031822

Collection Date: 3/18/2022 5:29:00 PM
Matrix: BULK

Analytical Results

Analyses	Result	Units	
Asbestos by PLM			Date Analyzed: **3/19/2022**
Macroscopic Examination	Prep Date: **3/19/2022**		**E600/R-93/116** Analyst: **HSC**
Color	Black/ Tan		
Description	Material		
Homogeneity	Layered/Inseparable		
Texture	Crumbly/ Foam		
Other Materials			**E600/R-93/116**
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>60<=70	%	
Other fibers	ND	%	
Resin/binder	>20<=30	%	
Asbestiform Minerals			**E600/R-93/116**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: *19-Mar-22*

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER

Work Order: 22030781

Lab ID: 22030781-05A
Client Sample ID: PWDF-WS-10-031822

Collection Date: 3/18/2022 5:31:00 PM
Matrix: BULK

Analytical Results

Analyses	Result	Units	
Asbestos by PLM			Date Analyzed: **3/19/2022**
Macroscopic Examination	Prep Date: **3/19/2022**		**E600/R-93/116** Analyst: **HSC**
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			**E600/R-93/116**
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>90<=100	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			**E600/R-93/116**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: *19-Mar-22*

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER

Work Order: 22030781

Lab ID: 22030781-06A
Client Sample ID: PWDF-WS-11-031822

Collection Date: 3/18/2022 5:38:00 PM
Matrix: BULK

Analytical Results

Analyses	Result	Units	
Asbestos by PLM			Date Analyzed: **3/19/2022**
Macroscopic Examination	Prep Date: **3/19/2022**		**E600/R-93/116** Analyst: **HSC**
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			**E600/R-93/116**
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>90<=100	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			**E600/R-93/116**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: *19-Mar-22*

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER

Work Order: 22030781

Lab ID: 22030781-07A
Client Sample ID: PWDF-WS-12-031822

Collection Date: 3/18/2022 5:47:00 PM
Matrix: BULK

Analytical Results

Analyses	Result	Units	
Asbestos by PLM			Date Analyzed: **3/19/2022**
Macroscopic Examination	Prep Date: **3/19/2022**		**E600/R-93/116** Analyst: **HSC**
Color	Black/ Tan		
Description	Material		
Homogeneity	Layered/Inseparable		
Texture	Crumbly/ Foam		
Other Materials			**E600/R-93/116**
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>60<=70	%	
Other fibers	ND	%	
Resin/binder	>20<=30	%	
Asbestiform Minerals			**E600/R-93/116**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: *19-Mar-22*

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER

Work Order: 22030781

Lab ID: 22030781-08A
Client Sample ID: PWDF-WS-13-031822

Collection Date: 3/18/2022 5:57:00 PM
Matrix: BULK

Analytical Results

Analyses	Result	Units	
Asbestos by PLM			Date Analyzed: **3/19/2022**
Macroscopic Examination	Prep Date: **3/19/2022**		**E600/R-93/116** Analyst: **HSC**
Color	Black		
Description	Material		
Homogeneity	Homogeneous		
Texture	Crumbly		
Other Materials			**E600/R-93/116**
Cellulose	ND	%	
Fiberglass	ND	%	
Non-fibrous	>90<=100	%	
Other fibers	ND	%	
Resin/binder	ND	%	
Asbestiform Minerals			**E600/R-93/116**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - actinolite	ND	%	
Total asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: 19-Mar-22

Client: TETRATECH-CHICAGO
Project: Plainfield Fire ER
WorkOrder: **22030781**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
%	

ALS Environmental

Sample Receipt Checklist

Client Name: **TETRATECH-CHICAGO** Date/Time Received: **19-Mar-22 09:13**

Work Order: **22030781** Received by: **AB**

Checklist completed by Alec Bolender (eSignature) 19-Mar-22 (Date) Reviewed by: (eSignature) (Date)

Matrices: bulk

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Environmental
4388 Glendale Milford Rd
Cincinnati, Ohio 45242
(Tel) 513.733.5336
(Fax) 513.733.5347
joe.ribar@ALSglobal.com

Chain of Custody Form

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22030781

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	PLAINFIELD FIRE ER	A	BULK ASBESTOS BY PLM (EPA 600/R-93/116)
Work Order		Project Number		B	
Company Name	TETRA TECH	Bill To Company	TETRA TECH	C	
Send Report To	KATHERINE COOPER	Invoice Attn.		D	
Address	1 S. WACKER DR 37TH FL	Address	SAME	E	
				F	
City/State/Zip	CHICAGO, IL 60606	City/State/Zip		G	
Phone		Phone		H	
Fax		Fax		I	
e-Mail Address	katherine.cooper@tetratech.com			J	

No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	PWDF-WS-6-031822	3/18/22	1651	WS	NA	1	✓										✓
2	PWDF-WS-7-031822		1705	WS		1	✓		A	PLEASE HOLD ALL							✓
3	PWDF-WS-8-031822		1723	WS		1	✓			SAMPLES FOR POSSIBLE							✓
4	PWDF-WS-9-031822		1729	WS		1	✓			POINT COUNT, PENDING							✓
5	PWDF-WS-10-031822		1731	WS		1	✓			RESULTS							✓
6	PWDF-WS-11-031822		1738	WS		1	✓										✓
7	PWDF-WS-12-031822		1747	WS		1	✓										✓
8	PWDF-WS-13-031822		1757	WS		1	✓										✓
9																	
10																	

Sampler(s): Please Print & Sign: WES WILLIAMS

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☐ 10 Wk Days ☐ 5 Wk Days ☐ 3 Wk Days ☐ 2 Wk Days ☐ Other ☒ 24 Hour

Results Due Date: 3/19/22 @ 1500

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Notes:
WES WILLIAMS	3/18/22	1655		3/19	0913	
Relinquished by:	Date:	Time:	Received by (Laboratory):	Date:	Time:	

VAP: ☐ Yes ☐ No

Cooler Temp:

QC Package: (Check Box Below)
☐ Level II: Standard QC ☐ Level III: Raw Data
☐ TRRP LRC ☑ TRRP Level IV IF POSSIBLE
☐ Level IV: SW846 Methods/CLP like
☐ Other:

Failure to complete all portions of this form may delay analysis. Please fill in this form *LEGIBLY*

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS.