GEL Laboratories LLC
a member of The GEL Group INC

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gel.com

August 07, 2018

Mr. Jason Litwiller
URS Corporation
2425 River Road (c/o SPRU DP)
Niskayuna, New York 12309

Re: SPRU Buildings
Work Order: 454715

Dear Mr. Litwiller:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 17, 2018. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. This package has been resubmitted to include revised metals list.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4778.

Sincerely,

Hope Taylor
Project Manager

Chain of Custody: 18-COC-29 07.16.18 C
Enclosures

URS Energy & Construction (2012-SC-SPRU-29463-171)
SPRU Buildings
SDG: 454715

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Case Narrative

This package has been resubmitted to include revised metals list.

Receipt Narrative
for
URS Energy & Construction (2012-SC-SPRU-29463-171)
SDG: 454715

August 07, 2018

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 17, 2018 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Sample Identification: The laboratory received the following samples:

Laboratory ID	Client ID
454715001	SW01
454715002	SW02
454715003	SW03
454715004	SW0123TB

Case Narrative:

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC/MS Semivolatile, GC/MS Volatile and Metals.

Hope Taylor
Project Manager

Chain of Custody and Supporting Documentation

SPRU DP OFF-SITE CHAIN-OF-CUSTODY FORM

454715

Page: 1 of 1
Project #: SPRU DP
COC Number (1): 18-COC-29 07.16.18 C

SPRU DP Off-Site Chain-of-Custody and Analytical Request Form

Work Order or Sample Delivery Group (SDG) Number:

Laboratory Address:
GEL Laboratories, LLC
2040 Savage Rd
Charleston, SC 29407

Client Name: AECOM (c/o Jason Litwiller) Phone #: 518-225-8513

Project/Site Name: SPRU Disposition Project

Address: 2401 River Rd. (SP-24) Niskayuna, NY 12309

Collected by: Matt Sylvester, John Tsambis
Send Results: Jason Litwiller
Reference: SPRU-ENV-020, Figure 13 (Sample locations) & SPRU-ENV-007 *QAPjP*

Sample Analysis Requested (5) (Fill in the number of containers for each test, X for analyses run from another container.)

Sample ID* (* Must be obtain from Sample Coordinator)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	Sample Code(2)	Field Filtered (3)	Sample Matrix (4)	Should this Sample be considered: Radioactive (Y or N)	TSCA Regulated (Y or N)	Total number of containers		Gamma Spec	Alpha Spec – Th232	Alpha Spec – U	Metals incl Hg (Se by SW6020)	VOCs (SW8260), For this gray till soil, purge and trap & medium level with methanol extraction	SVOCs (SW8270)	Sample Description (required) Note: Additional sample is required for sample-specific QC (as needed)
														HA-*		< --Preservative Type (6)
SW01	7/16/18	1405	N	N	SO	N	N	2					X	X	X	Soil from sidewall, excavated H2NE - confirmation samples (125ml VOC, 250ml)
SW02	7/16/18	1425	N	N	SO	N	N	2					X	X	X	Soil from sidewall, excavated H2NE - confirmation samples (125ml VOC, 250ml)
SW03	7/16/18	1455	N	N	SO	N	N	2					X	X	X	Soil from sidewall, excavated H2E - confirmation samples (125ml VOC, 250ml)
SW0123TB	7/16/18	1525	TB	N	W	N	N	2						X*	X	Trip blanks, supplied by GEL Labs [125ml=VOC]

TAT Requested (working days): Normal: Rush: X- 5 Day Chemicals Specify below:

E-mail Results (Yes/No): Yes

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards:*

No (clean confirmation samples). VOC samples taken from 6-12" depth. Soil is dry till, gray in color. PID had no detections.
SPRU-ENV-007, Section 3.2 - Sample equipment reused (i.e., Equipment Blanks, Trip Blanks, Duplicates, MS/MSD - 1 per 20 samples).
Analysis priority to VOC and Metals. Please return cooler & ice packs.
SPRU-ENV-017, Section 6.1 says: 'KAPL experience has shown low responses of internal standards in gray till samples analyzed for VOCs, resulting in data being unusable. Based on KAPL agreements with NYSDEC and to ensure usable data, the gray till samples will also be analyzed using a modified Method 8260, whereby analysis is performed using the low level purge and trap and the medium level methanol extraction. NYSDEC agreed that reanalysis for low level purge and trap is not needed to confirm the matrix effect from the till on the low internal standard responses. The lower of the usable concentrations from the two analyses (base & modified Method 8260) is used for reporting. Gray till samples can be identified on the COC to alert GEL to perform the dual analysis.'

Environmental Specialist or Manager Approval: William Duggan

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	7/16/18	1530	1. [signature]	7/16/18	1530
2. [signature]	7/16/18	1600	2. [signature]	7/17/18	8:55

Sample Shipping and Delivery Details

Lab PM: Hope Taylor
Method of Shipment: Fed Ex
Date Shipped: 7/16/18
Airbill #: 7727 1724 3744

1) Chain of Custody Number = Client Determined
2) Sample Codes: N = Normal Sample, , C = Composite*, TB = Trip Blank, EB = Equipment Blank, FB – Field Blank, D-Duplicate, MSD=Matrix Spike Duplicate
3) Field Filtered: For liquid matrices, indicate with a –Y- for yes the sample was field filtered or –N- for sample was not field filtered.
4) Matrix Codes: GW=Groundwater, WW=Waste Water, W=Water, ML=Misc. Liquid, SO=Soil, SD=Sediment, SL=Sludge, MW=Misc. Solid Waste, O=Oil, F=Filter, P=Wipe, SM=smear(s), MET=metal, CON-concrete
5) Sample Analysis Requested: Analytical suite (e.g., Gamma spec (full suite), TCLP metals) or analytical method requested (e.g., Alpha spec (specify isotopes), 8260B (VOCs), 6010B/7470A (total metals +Hg) and number of containers provided for each,.
6) Preservative Type: HA =Hydrochloric Acid, NI =Nitric Acid, SH =Sodium Hydroxide, SA =Sulfuric Acid, AA =Ascorbic Acid, HX = Hexane, ST =Sodium Thiosulfate. If no preservative is added = leave field blank.

*NOTE: All samples are grab samples unless otherwise specified

For Lab Receiving Use Only	
Custody Seal Intact?	YES NO
Cooler Temp:	C

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: UYSC	**SDG/AR/COC/Work Order:** 454715
Received By: ZKW	**Date Received:** 7/17/18
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7727 1724 3744

Suspected Hazard Information	**Yes**	**No**	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
COC/Samples marked or classified as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM/ mR/Hr **Classified as: Rad 1 Rad 2 Rad 3**
Is package, COC, and/or Samples marked HAZ?		✓	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 2°C
4	Daily check performed and passed on IR temperature gun?	✓			**Temperature Device Serial #:** IR3-18 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?		✓		Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	✓			If Yes, Are Encores or Soil Kits present? Yes___ No✓ (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes✓ No___ N/A___ (If unknown, select No) VOA vials free of headspace? Yes___ No✓ N/A___ Sample ID's and containers affected: Both TB Vials rec'd w/headspace
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials TMC Date 7/18/18 Page 1 of 1

GL-CHL-SR-001 Rev 5

Subject: RE: Coming to GEL today.
From: "Meyer, William" <william.meyer@urs-ps.com>
Date: 7/18/2018 9:13 AM
To: Hope Taylor <Hope.Taylor@gel.com>

Yes, cancel SVOCs

From: Hope Taylor [mailto:Hope.Taylor@gel.com]
Sent: Wednesday, July 18, 2018 9:12 AM
To: Meyer, William
Subject: Re: Coming to GEL today.

Good morning Bill,

Sample ID SW0123TB is requesting VOCs and SVOCs but we only received two 40 vials. Please advise if we should cancel the SVOCs.

Thanks,

Hope

On 7/17/2018 5:06 AM, Meyer, William wrote:

> Hope, please make sure that the cooler and ice packed are promptly returned to SPRU. The return address is on the COC.
>
> Thanks!
> Bill Meyer
> SPRU D&D RE
> Cell 978-837-0569

--

Hope Taylor
Project Manager

2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417
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Analytical Testing | Environmental | Engineering | Surveying

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http://www.gellaboratories.com

Laboratory Certifications

List of current GEL Certifications as of 07 August 2018

State	Certification
Alaska	17−018
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA180011
Maryland	270
Massachusetts	M−SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122018−1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	9904
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−18−13
Utah NELAP	SC000122018−26
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

Volatile Analysis

Case Narrative

GC/MS Volatile
Technical Case Narrative
URS Energy & Construction (URSC)
SDG #: 454715

Product: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method: SW846 5035A/8260C
Analytical Procedure: GL-OA-E-038 REV# 26
Analytical Batch: 1782981

Product: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method: SW846 8260C
Analytical Procedure: GL-OA-E-038 REV# 26
Analytical Batch: 1784646

Preparation Method: SW846 5035A
Preparation Procedure: GL-OA-E-039 REV# 12
Preparation Batch: 1782978

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
454715001	SW01
454715002	SW02
454715003	SW03
454715004	SW0123TB
1204070948	Method Blank (MB)
1204070949	High Blank (HB)
1204070950	Laboratory Control Sample (LCS)
1204070951	454688003(NonSDG) Post Spike (PS)
1204070952	454688003(NonSDG) Post Spike Duplicate (PSD)
1204074477	Method Blank (MB)
1204074478	Laboratory Control Sample (LCS)
1204074479	454685016(NonSDG) Post Spike (PS)
1204074480	454685016(NonSDG) Post Spike Duplicate (PSD)

Samples 454715001, 002 and 003 in this SDG were analyzed on a "dry weight corrected" basis. Sample 454715004 in this SDG was analyzed on an "as received" basis.
Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

Continuing Calibration Verification Requirements
The calibration verification standard requirements were not all met for sample 454715004 (SW0123TB). The daily CCV analyzed on 7/21/18 was biased high for tert-Butyl methyl-ether at 21.8%D and cis-1,3-dichloropropylene at 25.8%D. Less than 20% of the analytes were outside the method criteria. This satisfies the method criteria. The results are reported.

Quality Control (QC) Information

Blank (MB) Statement
Target analytes were detected in the blank 1204074477 (MB) below the reporting limit.

Matrix Spike/Matrix Spike Duplicate Recovery Statement
The spike and/or spike duplicate (See Below) recoveries were not all within the acceptance limits.

Sample	Analyte	Value
1204070951 (Non SDG 454688003PS)	Bromomethane	33* (70%-130%)
	Chloroethane	10* (70%-130%)
1204070952 (Non SDG 454688003PSD)	Bromomethane	32* (70%-130%)
	Chloroethane	9* (70%-130%)
1204074479 (Non SDG 454685016PS)	Acetone	50* (70%-130%)
1204074480 (Non SDG 454685016PSD)	Acetone	49* (70%-130%)

Technical Information

Sample Preservation and Integrity
Samples 454715001 (SW01), 454715002 (SW02), 454715003 (SW03) and 454715004 (SW0123TB) contained head-space greater than pea size. The Project Manager was notified and the results are reported.

Sample Dilutions/Methanol Dilutions
Samples 1204070951 (Non SDG 454688003PS), 1204070952 (Non SDG 454688003PSD), 454715001 (SW01), 454715002 (SW02) and 454715003 (SW03) were analyzed using a methanol dilution extraction procedure because the sample matrices were not amenable to more concentrated analyses.

Analyte	454715		
	001	002	003
Several	50X	50X	50X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

URSC013 URS Energy & Construction (2012-SC-SPRU-29463-171)

Client SDG: 454715 GEL Work Order: 454715

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
B The target analyte was detected in the associated blank.
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 23 JUL 2018 **Title: Data Validator**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:05**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715001**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.6**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 18:12**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:27**	**Aliquot:**	**5.1 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q318.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	106	ug/kg	15.9	106
79-34-5	1,1,2,2-Tetrachloroethane	U	106	ug/kg	15.9	106
79-00-5	1,1,2-Trichloroethane	U	106	ug/kg	15.9	106
75-34-3	1,1-Dichloroethane	U	106	ug/kg	15.9	106
75-35-4	1,1-Dichloroethylene	U	106	ug/kg	15.9	106
87-61-6	1,2,3-Trichlorobenzene	U	106	ug/kg	15.9	106
120-82-1	1,2,4-Trichlorobenzene	U	106	ug/kg	15.9	106
96-12-8	1,2-Dibromo-3-chloropropane	U	106	ug/kg	26.5	106
106-93-4	1,2-Dibromoethane	U	106	ug/kg	15.9	106
95-50-1	1,2-Dichlorobenzene	U	106	ug/kg	15.9	106
107-06-2	1,2-Dichloroethane	U	106	ug/kg	15.9	106
78-87-5	1,2-Dichloropropane	U	106	ug/kg	15.9	106
541-73-1	1,3-Dichlorobenzene	U	106	ug/kg	15.9	106
106-46-7	1,4-Dichlorobenzene	U	106	ug/kg	15.9	106
123-91-1	1,4-Dioxane	U	2650	ug/kg	796	2650
78-93-3	2-Butanone	U	530	ug/kg	159	530
591-78-6	2-Hexanone	U	530	ug/kg	159	530
108-10-1	4-Methyl-2-pentanone	U	530	ug/kg	159	530
67-64-1	Acetone	U	530	ug/kg	159	530
71-43-2	Benzene	U	106	ug/kg	15.9	106
74-97-5	Bromochloromethane	U	106	ug/kg	15.9	106
75-27-4	Bromodichloromethane	U	106	ug/kg	15.9	106
75-25-2	Bromoform	U	106	ug/kg	15.9	106
74-83-9	Bromomethane	U	106	ug/kg	15.9	106
75-15-0	Carbon disulfide	U	530	ug/kg	84.9	530
56-23-5	Carbon tetrachloride	U	106	ug/kg	15.9	106
108-90-7	Chlorobenzene	U	106	ug/kg	15.9	106
75-00-3	Chloroethane	U	106	ug/kg	15.9	106
67-66-3	Chloroform	U	106	ug/kg	15.9	106
74-87-3	Chloromethane	U	106	ug/kg	15.9	106
110-82-7	Cyclohexane	U	106	ug/kg	15.9	106
124-48-1	Dibromochloromethane	U	106	ug/kg	15.9	106
75-71-8	Dichlorodifluoromethane	U	106	ug/kg	15.9	106
100-41-4	Ethylbenzene	U	106	ug/kg	15.9	106
98-82-8	Isopropylbenzene	U	106	ug/kg	15.9	106
79-20-9	Methyl acetate	U	265	ug/kg	79.6	265
108-87-2	Methylcyclohexane	U	106	ug/kg	15.9	106
75-09-2	Methylene chloride	U	265	ug/kg	84.9	265

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:05**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715001**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.6**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 18:12**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:27**	**Aliquot:**	**5.1 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q318.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	106	ug/kg	15.9	106
127-18-4	Tetrachloroethylene	U	106	ug/kg	15.9	106
108-88-3	Toluene	U	106	ug/kg	15.9	106
79-01-6	Trichloroethylene	U	106	ug/kg	15.9	106
75-69-4	Trichlorofluoromethane	U	106	ug/kg	15.9	106
76-13-1	Trichlorotrifluoroethane	U	265	ug/kg	84.9	265
75-01-4	Vinyl chloride	U	106	ug/kg	15.9	106
156-59-2	cis-1,2-Dichloroethylene	U	106	ug/kg	15.9	106
10061-01-5	cis-1,3-Dichloropropylene	U	106	ug/kg	15.9	106
179601-23-1	m,p-Xylenes	U	212	ug/kg	15.9	212
95-47-6	o-Xylene	U	106	ug/kg	15.9	106
1634-04-4	tert-Butyl methyl ether	U	106	ug/kg	15.9	106
156-60-5	trans-1,2-Dichloroethylene	U	106	ug/kg	15.9	106
10061-02-6	trans-1,3-Dichloropropylene	U	106	ug/kg	15.9	106

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:25**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715002**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.3**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW02**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 18:44**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:28**	**Aliquot:**	**5.2 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q319.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	104	ug/kg	15.6	104
79-34-5	1,1,2,2-Tetrachloroethane	U	104	ug/kg	15.6	104
79-00-5	1,1,2-Trichloroethane	U	104	ug/kg	15.6	104
75-34-3	1,1-Dichloroethane	U	104	ug/kg	15.6	104
75-35-4	1,1-Dichloroethylene	U	104	ug/kg	15.6	104
87-61-6	1,2,3-Trichlorobenzene	U	104	ug/kg	15.6	104
120-82-1	1,2,4-Trichlorobenzene	U	104	ug/kg	15.6	104
96-12-8	1,2-Dibromo-3-chloropropane	U	104	ug/kg	25.9	104
106-93-4	1,2-Dibromoethane	U	104	ug/kg	15.6	104
95-50-1	1,2-Dichlorobenzene	U	104	ug/kg	15.6	104
107-06-2	1,2-Dichloroethane	U	104	ug/kg	15.6	104
78-87-5	1,2-Dichloropropane	U	104	ug/kg	15.6	104
541-73-1	1,3-Dichlorobenzene	U	104	ug/kg	15.6	104
106-46-7	1,4-Dichlorobenzene	U	104	ug/kg	15.6	104
123-91-1	1,4-Dioxane	U	2590	ug/kg	778	2590
78-93-3	2-Butanone	U	519	ug/kg	156	519
591-78-6	2-Hexanone	U	519	ug/kg	156	519
108-10-1	4-Methyl-2-pentanone	U	519	ug/kg	156	519
67-64-1	Acetone	U	519	ug/kg	156	519
71-43-2	Benzene	U	104	ug/kg	15.6	104
74-97-5	Bromochloromethane	U	104	ug/kg	15.6	104
75-27-4	Bromodichloromethane	U	104	ug/kg	15.6	104
75-25-2	Bromoform	U	104	ug/kg	15.6	104
74-83-9	Bromomethane	U	104	ug/kg	15.6	104
75-15-0	Carbon disulfide	U	519	ug/kg	83.0	519
56-23-5	Carbon tetrachloride	U	104	ug/kg	15.6	104
108-90-7	Chlorobenzene	U	104	ug/kg	15.6	104
75-00-3	Chloroethane	U	104	ug/kg	15.6	104
67-66-3	Chloroform	U	104	ug/kg	15.6	104
74-87-3	Chloromethane	U	104	ug/kg	15.6	104
110-82-7	Cyclohexane	U	104	ug/kg	15.6	104
124-48-1	Dibromochloromethane	U	104	ug/kg	15.6	104
75-71-8	Dichlorodifluoromethane	U	104	ug/kg	15.6	104
100-41-4	Ethylbenzene	U	104	ug/kg	15.6	104
98-82-8	Isopropylbenzene	U	104	ug/kg	15.6	104
79-20-9	Methyl acetate	U	259	ug/kg	77.8	259
108-87-2	Methylcyclohexane	U	104	ug/kg	15.6	104
75-09-2	Methylene chloride	U	259	ug/kg	83.0	259

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:25**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715002**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.3**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW02**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 18:44**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:28**	**Aliquot:**	**5.2 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q319.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	104	ug/kg	15.6	104
127-18-4	Tetrachloroethylene	U	104	ug/kg	15.6	104
108-88-3	Toluene	U	104	ug/kg	15.6	104
79-01-6	Trichloroethylene	U	104	ug/kg	15.6	104
75-69-4	Trichlorofluoromethane	U	104	ug/kg	15.6	104
76-13-1	Trichlorotrifluoroethane	U	259	ug/kg	83.0	259
75-01-4	Vinyl chloride	U	104	ug/kg	15.6	104
156-59-2	cis-1,2-Dichloroethylene	U	104	ug/kg	15.6	104
10061-01-5	cis-1,3-Dichloropropylene	U	104	ug/kg	15.6	104
179601-23-1	m,p-Xylenes	U	207	ug/kg	15.6	207
95-47-6	o-Xylene	U	104	ug/kg	15.6	104
1634-04-4	tert-Butyl methyl ether	U	104	ug/kg	15.6	104
156-60-5	trans-1,2-Dichloroethylene	U	104	ug/kg	15.6	104
10061-02-6	trans-1,3-Dichloropropylene	U	104	ug/kg	15.6	104

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:55**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715003**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**8.5**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW03**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 19:15**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:29**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q320.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	109	ug/kg	16.4	109
79-34-5	1,1,2,2-Tetrachloroethane	U	109	ug/kg	16.4	109
79-00-5	1,1,2-Trichloroethane	U	109	ug/kg	16.4	109
75-34-3	1,1-Dichloroethane	U	109	ug/kg	16.4	109
75-35-4	1,1-Dichloroethylene	U	109	ug/kg	16.4	109
87-61-6	1,2,3-Trichlorobenzene	U	109	ug/kg	16.4	109
120-82-1	1,2,4-Trichlorobenzene	U	109	ug/kg	16.4	109
96-12-8	1,2-Dibromo-3-chloropropane	U	109	ug/kg	27.3	109
106-93-4	1,2-Dibromoethane	U	109	ug/kg	16.4	109
95-50-1	1,2-Dichlorobenzene	U	109	ug/kg	16.4	109
107-06-2	1,2-Dichloroethane	U	109	ug/kg	16.4	109
78-87-5	1,2-Dichloropropane	U	109	ug/kg	16.4	109
541-73-1	1,3-Dichlorobenzene	U	109	ug/kg	16.4	109
106-46-7	1,4-Dichlorobenzene	U	109	ug/kg	16.4	109
123-91-1	1,4-Dioxane	U	2730	ug/kg	820	2730
78-93-3	2-Butanone	U	546	ug/kg	164	546
591-78-6	2-Hexanone	U	546	ug/kg	164	546
108-10-1	4-Methyl-2-pentanone	U	546	ug/kg	164	546
67-64-1	Acetone	U	546	ug/kg	164	546
71-43-2	Benzene	U	109	ug/kg	16.4	109
74-97-5	Bromochloromethane	U	109	ug/kg	16.4	109
75-27-4	Bromodichloromethane	U	109	ug/kg	16.4	109
75-25-2	Bromoform	U	109	ug/kg	16.4	109
74-83-9	Bromomethane	U	109	ug/kg	16.4	109
75-15-0	Carbon disulfide	U	546	ug/kg	87.4	546
56-23-5	Carbon tetrachloride	U	109	ug/kg	16.4	109
108-90-7	Chlorobenzene	U	109	ug/kg	16.4	109
75-00-3	Chloroethane	U	109	ug/kg	16.4	109
67-66-3	Chloroform	U	109	ug/kg	16.4	109
74-87-3	Chloromethane	U	109	ug/kg	16.4	109
110-82-7	Cyclohexane	U	109	ug/kg	16.4	109
124-48-1	Dibromochloromethane	U	109	ug/kg	16.4	109
75-71-8	Dichlorodifluoromethane	U	109	ug/kg	16.4	109
100-41-4	Ethylbenzene	U	109	ug/kg	16.4	109
98-82-8	Isopropylbenzene	U	109	ug/kg	16.4	109
79-20-9	Methyl acetate	U	273	ug/kg	82.0	273
108-87-2	Methylcyclohexane	U	109	ug/kg	16.4	109
75-09-2	Methylene chloride	U	273	ug/kg	87.4	273

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:55**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715003**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**8.5**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW03**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 19:15**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:29**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q320.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	109	ug/kg	16.4	109
127-18-4	Tetrachloroethylene	U	109	ug/kg	16.4	109
108-88-3	Toluene	U	109	ug/kg	16.4	109
79-01-6	Trichloroethylene	U	109	ug/kg	16.4	109
75-69-4	Trichlorofluoromethane	U	109	ug/kg	16.4	109
76-13-1	Trichlorotrifluoroethane	U	273	ug/kg	87.4	273
75-01-4	Vinyl chloride	U	109	ug/kg	16.4	109
156-59-2	cis-1,2-Dichloroethylene	U	109	ug/kg	16.4	109
10061-01-5	cis-1,3-Dichloropropylene	U	109	ug/kg	16.4	109
179601-23-1	m,p-Xylenes	U	219	ug/kg	16.4	219
95-47-6	o-Xylene	U	109	ug/kg	16.4	109
1634-04-4	tert-Butyl methyl ether	U	109	ug/kg	16.4	109
156-60-5	trans-1,2-Dichloroethylene	U	109	ug/kg	16.4	109
10061-02-6	trans-1,3-Dichloropropylene	U	109	ug/kg	16.4	109

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 15:25**	**Matrix:**	**WATER**
Lab Sample ID:	**454715004**	**Date Received:**	**07/17/2018 08:55**		
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW0123TB**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 13:30**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 13:30**				
Data File:	**072118V3\3Q608.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	2.00	ug/L	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane	U	2.00	ug/L	0.300	2.00
79-00-5	1,1,2-Trichloroethane	U	2.00	ug/L	0.300	2.00
75-34-3	1,1-Dichloroethane	U	2.00	ug/L	0.300	2.00
75-35-4	1,1-Dichloroethylene	U	2.00	ug/L	0.300	2.00
87-61-6	1,2,3-Trichlorobenzene	U	2.00	ug/L	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene	U	2.00	ug/L	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane	U	2.00	ug/L	0.500	2.00
106-93-4	1,2-Dibromoethane	U	2.00	ug/L	0.300	2.00
95-50-1	1,2-Dichlorobenzene	U	2.00	ug/L	0.300	2.00
107-06-2	1,2-Dichloroethane	U	2.00	ug/L	0.300	2.00
78-87-5	1,2-Dichloropropane	U	2.00	ug/L	0.300	2.00
541-73-1	1,3-Dichlorobenzene	U	2.00	ug/L	0.300	2.00
106-46-7	1,4-Dichlorobenzene	U	2.00	ug/L	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/L	15.0	50.0
78-93-3	2-Butanone	U	10.0	ug/L	3.00	10.0
591-78-6	2-Hexanone	U	10.0	ug/L	3.00	10.0
108-10-1	4-Methyl-2-pentanone	U	10.0	ug/L	3.00	10.0
67-64-1	Acetone	U	10.0	ug/L	3.00	10.0
71-43-2	Benzene	U	2.00	ug/L	0.300	2.00
74-97-5	Bromochloromethane	U	2.00	ug/L	0.300	2.00
75-27-4	Bromodichloromethane	U	2.00	ug/L	0.300	2.00
75-25-2	Bromoform	U	2.00	ug/L	0.300	2.00
74-83-9	Bromomethane	U	2.00	ug/L	0.300	2.00
75-15-0	Carbon disulfide	U	10.0	ug/L	1.60	10.0
56-23-5	Carbon tetrachloride	U	2.00	ug/L	0.300	2.00
108-90-7	Chlorobenzene	U	2.00	ug/L	0.300	2.00
75-00-3	Chloroethane	U	2.00	ug/L	0.300	2.00
67-66-3	Chloroform	U	2.00	ug/L	0.300	2.00
74-87-3	Chloromethane	U	2.00	ug/L	0.300	2.00
110-82-7	Cyclohexane	U	2.00	ug/L	0.300	2.00
124-48-1	Dibromochloromethane	U	2.00	ug/L	0.300	2.00
75-71-8	Dichlorodifluoromethane	U	2.00	ug/L	0.300	2.00
100-41-4	Ethylbenzene	U	2.00	ug/L	0.300	2.00
98-82-8	Isopropylbenzene	U	2.00	ug/L	0.300	2.00
79-20-9	Methyl acetate	U	5.00	ug/L	1.50	5.00
108-87-2	Methylcyclohexane	U	2.00	ug/L	0.300	2.00
75-09-2	Methylene chloride	U	5.00	ug/L	1.60	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 15:25**	**Matrix:**	**WATER**
Lab Sample ID:	**454715004**	**Date Received:**	**07/17/2018 08:55**		
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW0123TB**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 13:30**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 13:30**				
Data File:	**072118V3\3Q608.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	2.00	ug/L	0.300	2.00
127-18-4	Tetrachloroethylene	U	2.00	ug/L	0.300	2.00
108-88-3	Toluene	U	2.00	ug/L	0.300	2.00
79-01-6	Trichloroethylene	U	2.00	ug/L	0.300	2.00
75-69-4	Trichlorofluoromethane	U	2.00	ug/L	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.60	5.00
75-01-4	Vinyl chloride	U	2.00	ug/L	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene	U	2.00	ug/L	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene	U	2.00	ug/L	0.300	2.00
179601-23-1	m,p-Xylenes	U	4.00	ug/L	0.300	4.00
95-47-6	o-Xylene	U	2.00	ug/L	0.300	2.00
1634-04-4	tert-Butyl methyl ether	U	2.00	ug/L	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene	U	2.00	ug/L	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene	U	2.00	ug/L	0.300	2.00

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 454715

Matrix Type: LIQUID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1204074478	LCS for batch 1784646	106	91	102
1204074477	MB for batch 1784646	93	91	108
454715004	SW0123TB	105	92	106
1204074479	B3JVK9PS	104	88	106
1204074480	B3JVK9PSD	104	95	109

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(71%-134%)
TOL	= Toluene-d8	(74%-124%)
BFB	= Bromofluorobenzene	(70%-131%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Volatile

Surrogate Recovery Report

SDG Number: 454715

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC		TOL %REC		BFB %REC	
1204070950	LCS for batch 1782978	105		88		105	
1204070948	MB for batch 1782978	106		91		111	
1204070949	HB for batch 1782978	111	D	84	D	113	D
454715001	SW01	109	D	88	D	108	D
454715002	SW02	110	D	86	D	108	D
454715003	SW03	105	D	90	D	108	D
1204070951	CHEM Backfill/WinzingtonPS	107	D	87	D	105	D
1204070952	CHEM Backfill/WinzingtonPSD	109	D	87	D	105	D

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(81%-124%)
TOL	= Toluene-d8	(81%-120%)
BFB	= Bromofluorobenzene	(70%-130%)

* Recovery outside Acceptance Limits
\# Column to be used to flag recovery values
D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **LCS for batch 1782978**
Lab Sample ID **1204070950**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **SOIL**
Analysis Date: **07/18/2018 10:57**
Dilution: 1
Prep Batch ID: **1782978**
Batch ID: **1782981**

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	86.5	86	70-130
67-64-1	LCS	Acetone	250	0.0	258	103	70-130
79-20-9	LCS	Methyl acetate	250	0.0	251	101	70-130
75-15-0	LCS	Carbon disulfide	250	0.0	268	107	70-130
78-93-3	LCS	2-Butanone	250	0.0	264	106	70-130
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	225	90	70-130
591-78-6	LCS	2-Hexanone	250	0.0	237	95	70-130
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	49.4	99	70-130
74-87-3	LCS	Chloromethane	50.0	0.0	47.3	95	70-130
75-01-4	LCS	Vinyl chloride	50.0	0.0	51.2	102	70-130
74-83-9	LCS	Bromomethane	50.0	0.0	50.3	101	70-130
75-00-3	LCS	Chloroethane	50.0	0.0	50.5	101	70-130
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	49.7	99	70-130
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	53.2	106	70-130
75-09-2	LCS	Methylene chloride	50.0	0.0	51.1	102	70-130
1634-04-4	LCS	tert-Butyl methyl ether	50.0	0.0	54.7	109	70-130
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	50.6	101	70-130
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	49.4	99	70-130
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	51.0	102	70-130
74-97-5	LCS	Bromochloromethane	50.0	0.0	45.1	90	70-130
67-66-3	LCS	Chloroform	50.0	0.0	51.2	102	70-130
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	51.0	102	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **LCS for batch 1782978**
Lab Sample ID **1204070950**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **SOIL**
Analysis Date: **07/18/2018 10:57**
Prep Batch ID: **1782978**
Batch ID: **1782981**
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
110-82-7	LCS	Cyclohexane	50.0	0.0	46.3	93	70-130
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	50.3	101	70-130
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	50.8	102	70-130
71-43-2	LCS	Benzene	50.0	0.0	48.3	97	70-130
79-01-6	LCS	Trichloroethylene	50.0	0.0	50.7	101	70-130
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	50.8	102	70-130
108-87-2	LCS	Methylcyclohexane	50.0	0.0	49.2	98	70-130
75-27-4	LCS	Bromodichloromethane	50.0	0.0	54.1	108	70-130
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	56.8	114	70-130
108-88-3	LCS	Toluene	50.0	0.0	44.7	89	70-130
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	51.8	104	70-130
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	45.1	90	70-130
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	40.1	80	70-130
124-48-1	LCS	Dibromochloromethane	50.0	0.0	45.5	91	70-130
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	46.2	92	70-130
108-90-7	LCS	Chlorobenzene	50.0	0.0	43.5	87	70-130
100-41-4	LCS	Ethylbenzene	50.0	0.0	46.0	92	70-130
95-47-6	LCS	o-Xylene	50.0	0.0	45.7	91	70-130
100-42-5	LCS	Styrene	50.0	0.0	47.8	96	70-130
75-25-2	LCS	Bromoform	50.0	0.0	50.2	100	70-130
98-82-8	LCS	Isopropylbenzene	50.0	0.0	44.4	89	70-130
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	46.5	93	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **LCS for batch 1782978**
Lab Sample ID **1204070950**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **SOIL**
Analysis Date: **07/18/2018 10:57**
Dilution: 1
Prep Batch ID: **1782978**
Batch ID: **1782981**

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	45.1	90	70-130
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	45.5	91	70-130
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	47.7	95	70-130
87-61-6	LCS	1,2,3-Trichlorobenzene	50.0	0.0	49.5	99	70-130
120-82-1	LCS	1,2,4-Trichlorobenzene	50.0	0.0	50.9	102	70-130
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	45.6	91	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonPS**
Lab Sample ID **1204070951**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 19:46**
Prep Batch ID: **1782978**
Batch ID: **1782981**

Dilution: 50

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
67-64-1	PS	Acetone	250	0.00	U	225	90	70-130
79-20-9	PS	Methyl acetate	250	0.00	U	251	100	70-130
75-15-0	PS	Carbon disulfide	250	0.00	U	235	94	70-130
78-93-3	PS	2-Butanone	250	0.00	U	220	88	70-130
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	208	83	70-130
591-78-6	PS	2-Hexanone	250	0.00	U	214	86	70-130
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	45.2	90	70-130
74-87-3	PS	Chloromethane	50.0	0.00	U	45.0	90	70-130
75-01-4	PS	Vinyl chloride	50.0	0.00	U	46.1	92	70-130
74-83-9	PS	Bromomethane	50.0	0.00	U	16.4	33 *	70-130
75-00-3	PS	Chloroethane	50.0	0.00	U	4.78	10 *	70-130
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	55.5	111	70-130
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	49.5	99	70-130
75-09-2	PS	Methylene chloride	50.0	0.00	U	46.7	93	70-130
1634-04-4	PS	tert-Butyl methyl ether	50.0	0.00	U	49.6	99	70-130
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	47.6	95	70-130
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	46.7	93	70-130
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	45.6	91	70-130
74-97-5	PS	Bromochloromethane	50.0	0.00	U	41.2	82	70-130
67-66-3	PS	Chloroform	50.0	0.00	U	49.5	99	70-130
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	49.9	100	70-130
110-82-7	PS	Cyclohexane	50.0	0.00	U	41.8	84	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonPS**
Lab Sample ID **1204070951**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 19:46**
Prep Batch ID: **1782978**
Batch ID: **1782981**

Dilution: 50

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	49.5	99	70-130
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	52.1	104	70-130
71-43-2	PS	Benzene	50.0	0.00	U	45.0	90	70-130
79-01-6	PS	Trichloroethylene	50.0	0.00	U	48.5	97	70-130
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	49.1	98	70-130
108-87-2	PS	Methylcyclohexane	50.0	0.00	U	45.0	90	70-130
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	52.0	104	70-130
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	51.4	103	70-130
108-88-3	PS	Toluene	50.0	0.00	U	40.8	82	70-130
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	49.0	98	70-130
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	43.4	87	70-130
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	36.9	74	70-130
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	43.1	86	70-130
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	44.0	88	70-130
108-90-7	PS	Chlorobenzene	50.0	0.00	U	39.4	79	70-130
100-41-4	PS	Ethylbenzene	50.0	0.00	U	41.4	83	70-130
95-47-6	PS	o-Xylene	50.0	0.00	U	40.9	82	70-130
100-42-5	PS	Styrene	50.0	0.00	U	42.6	85	70-130
75-25-2	PS	Bromoform	50.0	0.00	U	45.4	91	70-130
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	41.1	82	70-130
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	46.0	92	70-130
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	38.5	77	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	**454715**	**Sample Type:**	**Post Spike**
Client ID:	**CHEM Backfill/WinzingtonPS**	**Matrix:**	**Soil**
Lab Sample ID	**1204070951**	**%Moisture:**	**6.6**
Instrument:	**VOA3.I**	**Analysis Date:**	**07/18/2018 19:46**
Analyst:	**JP1**	**Prep Batch ID:**	**1782978**
Purge Vol:	**5 mL**	**Batch ID:**	**1782981**

Dilution: 50

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	38.7	77	70-130
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	43.6	87	70-130
87-61-6	PS	1,2,3-Trichlorobenzene	50.0	0.00	U	39.9	80	70-130
120-82-1	PS	1,2,4-Trichlorobenzene	50.0	0.00	U	38.8	78	70-130
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	40.4	81	70-130
179601-23-1	PS	m,p-Xylenes	100	0.00	U	74.2	74	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonPSD**
Lab Sample ID **1204070952**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 20:17**
Prep Batch ID: **1782978**
Batch ID: **1782981**
Dilution: **50**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
67-64-1	PSD	Acetone	250	0.00	U	211	84	70-130	6	0-20
79-20-9	PSD	Methyl acetate	250	0.00	U	246	98	70-130	2	0-20
75-15-0	PSD	Carbon disulfide	250	0.00	U	249	100	70-130	6	0-20
78-93-3	PSD	2-Butanone	250	0.00	U	221	88	70-130	0	0-20
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	203	81	70-130	2	0-20
591-78-6	PSD	2-Hexanone	250	0.00	U	196	79	70-130	9	0-20
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	50.1	100	70-130	10	0-20
74-87-3	PSD	Chloromethane	50.0	0.00	U	51.9	104	70-130	14	0-20
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	54.8	110	70-130	17	0-20
74-83-9	PSD	Bromomethane	50.0	0.00	U	16.1	32 *	70-130	2	0-20
75-00-3	PSD	Chloroethane	50.0	0.00	U	4.61	9 *	70-130	4	0-20
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	56.1	112	70-130	1	0-20
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	53.8	108	70-130	8	0-20
75-09-2	PSD	Methylene chloride	50.0	0.00	U	47.6	95	70-130	2	0-20
1634-04-4	PSD	tert-Butyl methyl ether	50.0	0.00	U	48.5	97	70-130	2	0-20
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	47.0	94	70-130	1	0-20
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	48.1	96	70-130	3	0-20
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	46.1	92	70-130	1	0-20
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	43.6	87	70-130	6	0-20
67-66-3	PSD	Chloroform	50.0	0.00	U	50.9	102	70-130	3	0-20
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	50.5	101	70-130	1	0-20
110-82-7	PSD	Cyclohexane	50.0	0.00	U	43.7	87	70-130	4	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonPSD**
Lab Sample ID **1204070952**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 20:17**
Prep Batch ID: **1782978**
Batch ID: **1782981**
Dilution: **50**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	50.6	101	70-130	2	0-20
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	53.8	108	70-130	3	0-20
71-43-2	PSD	Benzene	50.0	0.00	U	46.1	92	70-130	2	0-20
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	49.4	99	70-130	2	0-20
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	49.6	99	70-130	1	0-20
108-87-2	PSD	Methylcyclohexane	50.0	0.00	U	43.9	88	70-130	3	0-20
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	53.8	108	70-130	3	0-20
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	55.9	112	70-130	8	0-20
108-88-3	PSD	Toluene	50.0	0.00	U	42.9	86	70-130	5	0-20
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	50.1	100	70-130	2	0-20
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	44.0	88	70-130	2	0-20
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	38.2	76	70-130	4	0-20
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	43.2	86	70-130	0	0-20
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	42.9	86	70-130	2	0-20
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	40.2	80	70-130	2	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	43.1	86	70-130	4	0-20
95-47-6	PSD	o-Xylene	50.0	0.00	U	40.5	81	70-130	1	0-20
100-42-5	PSD	Styrene	50.0	0.00	U	42.5	85	70-130	0	0-20
75-25-2	PSD	Bromoform	50.0	0.00	U	46.1	92	70-130	2	0-20
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	42.4	85	70-130	3	0-20
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	42.8	86	70-130	7	0-20
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	42.0	84	70-130	9	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonPSD**
Lab Sample ID **1204070952**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 20:17**
Prep Batch ID: **1782978**
Batch ID: **1782981**

Dilution: **50**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	42.2	84	70-130	9	0-20
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	42.7	85	70-130	2	0-20
87-61-6	PSD	1,2,3-Trichlorobenzene	50.0	0.00	U	43.2	86	70-130	8	0-20
120-82-1	PSD	1,2,4-Trichlorobenzene	50.0	0.00	U	42.6	85	70-130	9	0-20
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	42.3	85	70-130	5	0-20
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	81.2	81	70-130	9	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **LCS for batch 1784646**
Lab Sample ID **1204074478**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **07/21/2018 10:55**
Dilution: 1
Batch ID: **1784646**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	99.9	100	70-130
67-64-1	LCS	Acetone	250	0.0	269	108	70-130
79-20-9	LCS	Methyl acetate	250	0.0	288	115	70-130
75-15-0	LCS	Carbon disulfide	250	0.0	288	115	70-130
78-93-3	LCS	2-Butanone	250	0.0	299	119	70-130
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	256	102	70-130
591-78-6	LCS	2-Hexanone	250	0.0	281	112	70-130
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	47.0	94	70-130
74-87-3	LCS	Chloromethane	50.0	0.0	42.3	85	70-130
75-01-4	LCS	Vinyl chloride	50.0	0.0	45.0	90	70-130
74-83-9	LCS	Bromomethane	50.0	0.0	47.8	96	70-130
75-00-3	LCS	Chloroethane	50.0	0.0	49.2	98	70-130
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	49.5	99	70-130
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	57.5	115	70-130
75-09-2	LCS	Methylene chloride	50.0	0.0	57.5	115	70-130
1634-04-4	LCS	tert-Butyl methyl ether	50.0	0.0	60.9	122	70-130
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	55.2	110	70-130
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	52.2	104	70-130
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	53.3	107	70-130
74-97-5	LCS	Bromochloromethane	50.0	0.0	50.5	101	70-130
67-66-3	LCS	Chloroform	50.0	0.0	55.6	111	70-130
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	53.4	107	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **LCS for batch 1784646**
Lab Sample ID **1204074478**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **WATER**
Analysis Date: **07/21/2018 10:55**
Dilution: 1
Batch ID: **1784646**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
110-82-7	LCS	Cyclohexane	50.0	0.0	51.2	102	70-130
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	53.9	108	70-130
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	55.9	112	70-130
71-43-2	LCS	Benzene	50.0	0.0	52.6	105	70-130
79-01-6	LCS	Trichloroethylene	50.0	0.0	53.4	107	70-130
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	54.3	109	70-130
108-87-2	LCS	Methylcyclohexane	50.0	0.0	53.7	107	70-130
75-27-4	LCS	Bromodichloromethane	50.0	0.0	57.6	115	70-130
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	62.9	126	70-130
108-88-3	LCS	Toluene	50.0	0.0	50.8	102	70-130
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	57.2	114	70-130
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	50.9	102	70-130
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	46.2	92	70-130
124-48-1	LCS	Dibromochloromethane	50.0	0.0	54.2	108	70-130
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	52.9	106	70-130
108-90-7	LCS	Chlorobenzene	50.0	0.0	46.6	93	70-130
100-41-4	LCS	Ethylbenzene	50.0	0.0	51.0	102	70-130
95-47-6	LCS	o-Xylene	50.0	0.0	52.0	104	70-130
100-42-5	LCS	Styrene	50.0	0.0	54.1	108	70-130
75-25-2	LCS	Bromoform	50.0	0.0	57.6	115	70-130
98-82-8	LCS	Isopropylbenzene	50.0	0.0	49.2	98	70-130
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	52.1	104	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**

Sample Type: **Laboratory Control Sample**

Client ID: **LCS for batch 1784646**

Matrix: **WATER**

Lab Sample ID **1204074478**

Instrument: **VOA3.I**

Analysis Date: **07/21/2018 10:55**

Dilution: 1

Analyst: **JP1**

Purge Vol: **5 mL**

Batch ID: **1784646**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L	Spike Conc. ug/L	Recovery %	Acceptance Limits
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	48.6	97	70-130
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	49.3	99	70-130
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	57.4	115	70-130
87-61-6	LCS	1,2,3-Trichlorobenzene	50.0	0.0	54.4	109	70-130
120-82-1	LCS	1,2,4-Trichlorobenzene	50.0	0.0	54.0	108	70-130
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	51.3	103	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **B3JVK9PS**
Lab Sample ID **1204074479**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike**
Matrix: **WATER**
Analysis Date: **07/21/2018 21:48**
Dilution: 1
Batch ID: **1784646**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
179601-23-1	PS	m,p-Xylenes	100	0.00	U	87.2	87	70-130
67-64-1	PS	Acetone	250	0.00	U	125	50 *	70-130
79-20-9	PS	Methyl acetate	250	0.00	U	260	104	70-130
75-15-0	PS	Carbon disulfide	250	0.00	U	275	110	70-130
78-93-3	PS	2-Butanone	250	0.00	U	182	73	70-130
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	218	87	70-130
591-78-6	PS	2-Hexanone	250	0.00	U	175	70	70-130
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	45.5	91	70-130
74-87-3	PS	Chloromethane	50.0	0.00	U	41.8	84	70-130
75-01-4	PS	Vinyl chloride	50.0	0.00	U	44.5	89	70-130
74-83-9	PS	Bromomethane	50.0	0.00	U	46.2	92	70-130
75-00-3	PS	Chloroethane	50.0	0.00	U	46.4	93	70-130
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	48.9	98	70-130
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	56.4	113	70-130
75-09-2	PS	Methylene chloride	50.0	0.00	U	55.1	110	70-130
1634-04-4	PS	tert-Butyl methyl ether	50.0	0.00	U	57.0	114	70-130
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	52.8	106	70-130
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	52.7	105	70-130
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	52.9	106	70-130
74-97-5	PS	Bromochloromethane	50.0	0.00	U	48.9	98	70-130
67-66-3	PS	Chloroform	50.0	0.00	U	55.1	110	70-130
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	54.4	109	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **B3JVK9PS**
Lab Sample ID **1204074479**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike**
Matrix: **WATER**
Analysis Date: **07/21/2018 21:48**
Dilution: 1
Batch ID: **1784646**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
110-82-7	PS	Cyclohexane	50.0	0.00	U	48.1	96	70-130
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	54.5	109	70-130
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	55.8	112	70-130
71-43-2	PS	Benzene	50.0	0.00	U	49.2	98	70-130
79-01-6	PS	Trichloroethylene	50.0	0.00	U	51.1	102	70-130
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	51.4	103	70-130
108-87-2	PS	Methylcyclohexane	50.0	0.00	U	50.9	102	70-130
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	55.5	111	70-130
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	56.9	114	70-130
108-88-3	PS	Toluene	50.0	0.00	U	44.9	90	70-130
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	51.3	103	70-130
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	46.2	92	70-130
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	41.0	82	70-130
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	48.6	97	70-130
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	46.7	93	70-130
108-90-7	PS	Chlorobenzene	50.0	0.00	U	43.3	87	70-130
100-41-4	PS	Ethylbenzene	50.0	0.00	U	45.4	91	70-130
95-47-6	PS	o-Xylene	50.0	0.00	U	44.9	90	70-130
100-42-5	PS	Styrene	50.0	0.00	U	46.7	93	70-130
75-25-2	PS	Bromoform	50.0	0.00	U	52.2	104	70-130
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	47.0	94	70-130
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	49.5	99	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **B3JVK9PS**
Lab Sample ID **1204074479**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike**
Matrix: **WATER**
Analysis Date: **07/21/2018 21:48**
Dilution: 1
Batch ID: **1784646**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	42.5	85	70-130
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	42.7	85	70-130
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	51.0	102	70-130
87-61-6	PS	1,2,3-Trichlorobenzene	50.0	0.00	U	41.8	84	70-130
120-82-1	PS	1,2,4-Trichlorobenzene	50.0	0.00	U	40.3	81	70-130
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	42.9	86	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **B3JVK9PSD**
Lab Sample ID **1204074480**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **WATER**
Analysis Date: **07/21/2018 22:19**
Dilution: 1
Batch ID: **1784646**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	76.1	76	70-130	14	0-20
67-64-1	PSD	Acetone	250	0.00	U	123	49 *	70-130	1	0-20
79-20-9	PSD	Methyl acetate	250	0.00	U	263	105	70-130	1	0-20
75-15-0	PSD	Carbon disulfide	250	0.00	U	273	109	70-130	1	0-20
78-93-3	PSD	2-Butanone	250	0.00	U	184	73	70-130	1	0-20
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	234	93	70-130	7	0-20
591-78-6	PSD	2-Hexanone	250	0.00	U	181	73	70-130	3	0-20
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	44.9	90	70-130	1	0-20
74-87-3	PSD	Chloromethane	50.0	0.00	U	41.5	83	70-130	1	0-20
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	44.8	90	70-130	1	0-20
74-83-9	PSD	Bromomethane	50.0	0.00	U	47.4	95	70-130	2	0-20
75-00-3	PSD	Chloroethane	50.0	0.00	U	45.4	91	70-130	2	0-20
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	46.4	93	70-130	5	0-20
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	56.7	113	70-130	1	0-20
75-09-2	PSD	Methylene chloride	50.0	0.00	U	55.7	111	70-130	1	0-20
1634-04-4	PSD	tert-Butyl methyl ether	50.0	0.00	U	58.7	117	70-130	3	0-20
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	52.7	105	70-130	0	0-20
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	52.2	104	70-130	1	0-20
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	53.1	106	70-130	0	0-20
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	49.3	99	70-130	1	0-20
67-66-3	PSD	Chloroform	50.0	0.00	U	53.9	108	70-130	2	0-20
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	53.2	106	70-130	2	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **B3JVK9PSD**
Lab Sample ID **1204074480**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **WATER**
Analysis Date: **07/21/2018 22:19**
Dilution: 1
Batch ID: **1784646**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
110-82-7	PSD	Cyclohexane	50.0	0.00	U	46.9	94	70-130	3	0-20
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	52.6	105	70-130	4	0-20
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	55.4	111	70-130	1	0-20
71-43-2	PSD	Benzene	50.0	0.00	U	50.5	101	70-130	3	0-20
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	50.3	101	70-130	2	0-20
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	51.7	103	70-130	1	0-20
108-87-2	PSD	Methylcyclohexane	50.0	0.00	U	48.8	98	70-130	4	0-20
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	55.8	112	70-130	1	0-20
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	56.1	112	70-130	1	0-20
108-88-3	PSD	Toluene	50.0	0.00	U	43.3	87	70-130	4	0-20
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	52.4	105	70-130	2	0-20
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	46.8	94	70-130	1	0-20
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	38.1	76	70-130	7	0-20
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	49.4	99	70-130	2	0-20
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	45.8	92	70-130	2	0-20
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	41.2	82	70-130	5	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	42.2	84	70-130	7	0-20
95-47-6	PSD	o-Xylene	50.0	0.00	U	41.9	84	70-130	7	0-20
100-42-5	PSD	Styrene	50.0	0.00	U	43.5	87	70-130	7	0-20
75-25-2	PSD	Bromoform	50.0	0.00	U	52.4	105	70-130	0	0-20
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	39.2	78	70-130	18	0-20
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	48.9	98	70-130	1	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **B3JVK9PSD**
Lab Sample ID **1204074480**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **WATER**
Analysis Date: **07/21/2018 22:19**
Dilution: 1
Batch ID: **1784646**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	38.1	76	70-130	11	0-20
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	37.0	74	70-130	15	0-20
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	51.3	103	70-130	1	0-20
87-61-6	PSD	1,2,3-Trichlorobenzene	50.0	0.00	U	41.6	83	70-130	0	0-20
120-82-1	PSD	1,2,4-Trichlorobenzene	50.0	0.00	U	39.0	78	70-130	3	0-20
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	41.2	82	70-130	4	0-20

Method Blank Summary

SDG Number:	**454715**	**Client:**	**URSC013**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 1782978**	**Instrument ID:**	**VOA3.I**	**Data File:**	**071818V3\3Q307B81.D**
Lab Sample ID:	**1204070948**	**Prep Date:**	**07/18/2018 09:00**	**Analyzed:**	**07/18/18 12:30**
Column:	**DB-624**				

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 1782978	1204070950	071818V3\3Q304L81.D	07/18/18	1057
02 HB for batch 1782978	1204070949	071818V3\3Q310.D	07/18/18	1404
03 SW01	454715001	071818V3\3Q318.D	07/18/18	1812
04 SW02	454715002	071818V3\3Q319.D	07/18/18	1844
05 SW03	454715003	071818V3\3Q320.D	07/18/18	1915
06 CHEM Backfill/WinzingtonPS	1204070951	071818V3\3Q321.D	07/18/18	1946
07 CHEM Backfill/WinzingtonPSD	1204070952	071818V3\3Q322.D	07/18/18	2017

Method Blank Summary

SDG Number:	**454715**	**Client:**	**URSC013**	**Matrix:**	**WATER**
Client ID:	**MB for batch 1784646**	**Instrument ID:**	**VOA3.I**	**Data File:**	**072118V3\3Q606B46.D**
Lab Sample ID:	**1204074477**	**Prep Date:**	**07/21/2018 12:28**	**Analyzed:**	**07/21/18 12:28**
Column:	**DB-624**				

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 1784646	1204074478	072118V3\3Q603L46.D	07/21/18	1055
02 SW0123TB	454715004	072118V3\3Q608.D	07/21/18	1330
03 B3JVK9PS	1204074479	072118V3\3Q624.D	07/21/18	2148
04 B3JVK9PSD	1204074480	072118V3\3Q625.D	07/21/18	2219

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 454715

Instrument ID: VOA3.I **Injection Date/Time:** 02-JUL-18 12:28

Column Description: DB-624 **Lab File ID** 070218V3\3O101.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	54.9
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.8
174	50.0 - 100.0% of mass 95	78.5
175	5.0 -9.0% of mass 174	6.7
176	95.0 - 101.0% of mass 174	97.6
177	5.0 - 9.0% of mass 176	6.7

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

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	W3VM180702-03	070218V3\3O104.D	02-JUL-18 13:56
ICALMIX[A]	W3VM180702-04	070218V3\3O105.D	02-JUL-18 14:28
ICALMIX[A]	W3VM180702-05	070218V3\3O106.D	02-JUL-18 14:59
ICALMIX[A]	W3VM180702-06	070218V3\3O107.D	02-JUL-18 15:30
ICALMIX[A]	W3VM180702-07	070218V3\3O108.D	02-JUL-18 16:01
ICALMIX[A]	W3VM180702-08	070218V3\3O109.D	02-JUL-18 16:32
ICALMIX[A]	W3VM180702-09	070218V3\3O110.D	02-JUL-18 17:03
ICVMIX[A]01	W3VM180702-10	070218V3\3O112.D	02-JUL-18 18:05
ICALMIX[B]	W3VM180702-11	070218V3\3O113.D	02-JUL-18 18:36
ICALMIX[B]	W3VM180702-12	070218V3\3O114.D	02-JUL-18 19:07
ICALMIX[B]	W3VM180702-13	070218V3\3O115.D	02-JUL-18 19:38
ICALMIX[B]	W3VM180702-14	070218V3\3O116.D	02-JUL-18 20:10
ICALMIX[B]	W3VM180702-15	070218V3\3O117.D	02-JUL-18 20:41
ICALMIX[B]	W3VM180702-16	070218V3\3O118.D	02-JUL-18 21:12
ICALMIX[B]	W3VM180702-17	070218V3\3O119.D	02-JUL-18 21:44
ICALMIX[B]	W3VM180702-18	070218V3\3O120.D	02-JUL-18 22:15
ICVMIX[B]02	W3VM180702-19	070218V3\3O122.D	02-JUL-18 23:17

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 454715

Instrument ID: VOA3.I **Injection Date/Time:** 18-JUL-18 09:28

Column Description: DB-624 **Lab File ID** 071818V3\3Q301.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	21.7
75	30.0 - 60.0% of mass 95	58.6
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	71
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	96.4
177	5.0 - 9.0% of mass 176	6.5

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

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVMIX[A]01	W3VM180718-02	071818V3\3Q303.D	18-JUL-18 10:26
BLK01LCS	1204070950	071818V3\3Q304L81.D	18-JUL-18 10:57
CCVMIX[B]02	W3VM180718-05	071818V3\3Q305.D	18-JUL-18 11:28
BLK01	1204070948	071818V3\3Q307B81.D	18-JUL-18 12:30
HBLK01	1204070949	071818V3\3Q310.D	18-JUL-18 14:04
SW01	454715001	071818V3\3Q318.D	18-JUL-18 18:12
SW02	454715002	071818V3\3Q319.D	18-JUL-18 18:44
SW03	454715003	071818V3\3Q320.D	18-JUL-18 19:15
CHEM Backfill/WinzingtonMS	1204070951	071818V3\3Q321.D	18-JUL-18 19:46
CHEM Backfill/WinzingtonMSD	1204070952	071818V3\3Q322.D	18-JUL-18 20:17

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 454715

Instrument ID: VOA3.I **Injection Date/Time:** 21-JUL-18 10:29

Column Description: DB-624 **Lab File ID** 072118V3\3Q602.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	19.4
75	30.0 - 60.0% of mass 95	56.8
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	72.8
175	5.0 -9.0% of mass 174	7.1
176	95.0 - 101.0% of mass 174	99.8
177	5.0 - 9.0% of mass 176	6.4

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

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVMIX[A]03	W3VM180721-01	072118V3\3Q603.D	21-JUL-18 10:55
BLK02LCS	1204074478	072118V3\3Q603L46.D	21-JUL-18 10:55
CCVMIX[B]04	W3VM180721-04	072118V3\3Q605.D	21-JUL-18 11:57
BLK02	1204074477	072118V3\3Q606B46.D	21-JUL-18 12:28
SW0123TB	454715004	072118V3\3Q608.D	21-JUL-18 13:30
B3JVK9MS	1204074479	072118V3\3Q624.D	21-JUL-18 21:48
B3JVK9MSD	1204074480	072118V3\3Q625.D	21-JUL-18 22:19

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 454715

Instrument: VOA3.I

STD Analysis Time: 18-JUL-18 10:26

GC Column: DB-624

Data File: 071818V3\3Q303.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1205721		12.8	580894		16.3	539269		18.8
Upper Limit	2411442		13.3	1161788		16.8	1078538		19.3
Lower Limit	602861		12.3	290447		15.8	269635		18.3
Sample ID									
BLK01LCS	1265620		12.8	622409		16.3	567034		18.8
BLK01	1226605		12.8	583334		16.3	467199		18.8
HBLK01	1110510		12.8	538311		16.3	437128		18.8
SW01	1064090		12.8	502864		16.3	426746		18.8
SW02	1057448		12.8	507898		16.3	424840		18.8
SW03	1045676		12.8	499229		16.3	409097		18.8
CHEM Backfill/WinzingtonMS	1069789		12.8	537249		16.3	483068		18.8
CHEM Backfill/WinzingtonMSD	1056892		12.8	546341		16.3	483451		18.8

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 454715

Instrument: VOA3.I

STD Analysis Time: 21-JUL-18 10:55

GC Column: DB-624

Data File: 072118V3\3Q603.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1208530		12.8	579451		16.3	537301		18.8
Upper Limit	2417060		13.3	1158902		16.8	1074602		19.3
Lower Limit	604265		12.3	289726		15.8	268651		18.3
Sample ID									
BLK02LCS	1208530		12.8	579451		16.3	537301		18.8
BLK02	1530090		12.8	690796		16.3	600237		18.8
SW0123TB	1303997		12.8	600937		16.3	532945		18.8
B3JVK9MS	1059944		12.8	534153		16.3	476541		18.8
B3JVK9MSD	1090674		12.8	528640		16.3	477556		18.8

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:05**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715001**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.6**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 18:12**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:27**	**Aliquot:**	**5.1 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q318.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	106	ug/kg	15.9	106
79-34-5	1,1,2,2-Tetrachloroethane	U	106	ug/kg	15.9	106
79-00-5	1,1,2-Trichloroethane	U	106	ug/kg	15.9	106
75-34-3	1,1-Dichloroethane	U	106	ug/kg	15.9	106
75-35-4	1,1-Dichloroethylene	U	106	ug/kg	15.9	106
87-61-6	1,2,3-Trichlorobenzene	U	106	ug/kg	15.9	106
120-82-1	1,2,4-Trichlorobenzene	U	106	ug/kg	15.9	106
96-12-8	1,2-Dibromo-3-chloropropane	U	106	ug/kg	26.5	106
106-93-4	1,2-Dibromoethane	U	106	ug/kg	15.9	106
95-50-1	1,2-Dichlorobenzene	U	106	ug/kg	15.9	106
107-06-2	1,2-Dichloroethane	U	106	ug/kg	15.9	106
78-87-5	1,2-Dichloropropane	U	106	ug/kg	15.9	106
541-73-1	1,3-Dichlorobenzene	U	106	ug/kg	15.9	106
106-46-7	1,4-Dichlorobenzene	U	106	ug/kg	15.9	106
123-91-1	1,4-Dioxane	U	2650	ug/kg	796	2650
78-93-3	2-Butanone	U	530	ug/kg	159	530
591-78-6	2-Hexanone	U	530	ug/kg	159	530
108-10-1	4-Methyl-2-pentanone	U	530	ug/kg	159	530
67-64-1	Acetone	U	530	ug/kg	159	530
71-43-2	Benzene	U	106	ug/kg	15.9	106
74-97-5	Bromochloromethane	U	106	ug/kg	15.9	106
75-27-4	Bromodichloromethane	U	106	ug/kg	15.9	106
75-25-2	Bromoform	U	106	ug/kg	15.9	106
74-83-9	Bromomethane	U	106	ug/kg	15.9	106
75-15-0	Carbon disulfide	U	530	ug/kg	84.9	530
56-23-5	Carbon tetrachloride	U	106	ug/kg	15.9	106
108-90-7	Chlorobenzene	U	106	ug/kg	15.9	106
75-00-3	Chloroethane	U	106	ug/kg	15.9	106
67-66-3	Chloroform	U	106	ug/kg	15.9	106
74-87-3	Chloromethane	U	106	ug/kg	15.9	106
110-82-7	Cyclohexane	U	106	ug/kg	15.9	106
124-48-1	Dibromochloromethane	U	106	ug/kg	15.9	106
75-71-8	Dichlorodifluoromethane	U	106	ug/kg	15.9	106
100-41-4	Ethylbenzene	U	106	ug/kg	15.9	106
98-82-8	Isopropylbenzene	U	106	ug/kg	15.9	106
79-20-9	Methyl acetate	U	265	ug/kg	79.6	265
108-87-2	Methylcyclohexane	U	106	ug/kg	15.9	106
75-09-2	Methylene chloride	U	265	ug/kg	84.9	265

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:05**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715001**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.6**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 18:12**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:27**	**Aliquot:**	**5.1 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q318.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	106	ug/kg	15.9	106
127-18-4	Tetrachloroethylene	U	106	ug/kg	15.9	106
108-88-3	Toluene	U	106	ug/kg	15.9	106
79-01-6	Trichloroethylene	U	106	ug/kg	15.9	106
75-69-4	Trichlorofluoromethane	U	106	ug/kg	15.9	106
76-13-1	Trichlorotrifluoroethane	U	265	ug/kg	84.9	265
75-01-4	Vinyl chloride	U	106	ug/kg	15.9	106
156-59-2	cis-1,2-Dichloroethylene	U	106	ug/kg	15.9	106
10061-01-5	cis-1,3-Dichloropropylene	U	106	ug/kg	15.9	106
179601-23-1	m,p-Xylenes	U	212	ug/kg	15.9	212
95-47-6	o-Xylene	U	106	ug/kg	15.9	106
1634-04-4	tert-Butyl methyl ether	U	106	ug/kg	15.9	106
156-60-5	trans-1,2-Dichloroethylene	U	106	ug/kg	15.9	106
10061-02-6	trans-1,3-Dichloropropylene	U	106	ug/kg	15.9	106

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q318.D
Acq On : 18 Jul 2018 18:12
Operator : JP1
InstName : VOA3
Sample : |454715001|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 18 Sample Multiplier: 1

GEL
07/19/2018

Quant Time: Jul 19 08:40:35 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.755	12.761	1.000	1064090	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	502864	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	426746	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.755	12.762	1.000	1066197	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	510614	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	426963	50.00	ug/L	0.00
System Monitoring Compounds								
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	217138	54.53	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1028685	43.91	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	453486	54.06	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	109%
45) Toluene-d8	50.000	81 - 120	88%
63) Bromofluorobenzene	50.000	70 - 130	108%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		0.000	4.990	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	6.196	6.159	0.486	325	N.D.		
6) Chloroethane	64	6.287	6.372	0.493	201	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.256	8.232	0.647	553	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.671	8.665	0.680	333	N.D.		
15) Methylene chloride	84	9.073	9.091	0.711	3113	Below Cal		93
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.975	9.988	0.782	570	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.182	11.183	0.877	723	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	282	N.D.		
32) Benzene	78	12.420	12.426	0.974	176	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.414	13.396	1.052	1370	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q318.D
Acq On : 18 Jul 2018 18:12
Operator : JP1
InstName : VOA3
Sample : |454715001|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 19 08:40:35 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.749	14.755	0.904	504	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene	112	16.358	16.352	1.003	153	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene	91	16.419	16.425	1.006	178	N.D.	
57) m,p-Xylenes		0.000	16.541	0.000	0	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene		0.000	17.791	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	17.949	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.041	18.041	0.960	206	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene		0.000	18.364	0.000	0	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	18.675	0.000	0	N.D.	
75) 1,3-Dichlorobenzene	146	18.742	18.730	0.997	175	N.D.	
76) 1,4-Dichlorobenzene	146	18.815	18.821	1.001	297	N.D.	
77) n-Butylbenzene		0.000	19.108	0.000	0	N.D.	
78) 1,2-Dichlorobenzene		0.000	19.236	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene		0.000	21.113	0.000	0	N.D.	
81) Hexachlorobutadiene		0.000	21.278	0.000	0	N.D.	
82) Naphthalene	128	21.491	21.491	1.144	773	N.D.	
83) 1,2,3-Trichlorobenzene		0.000	21.821	0.000	0	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.677	8.464	0.680	508	N.D.	
88) Allyl chloride	76	8.671	8.842	0.680	333	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.195	11.225	0.878	4852	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.615	11.597	0.911	1573	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q318.D
Acq On : 18 Jul 2018 18:12
Operator : JP1
InstName : VOA3
Sample : |454715001|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 19 08:40:35 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

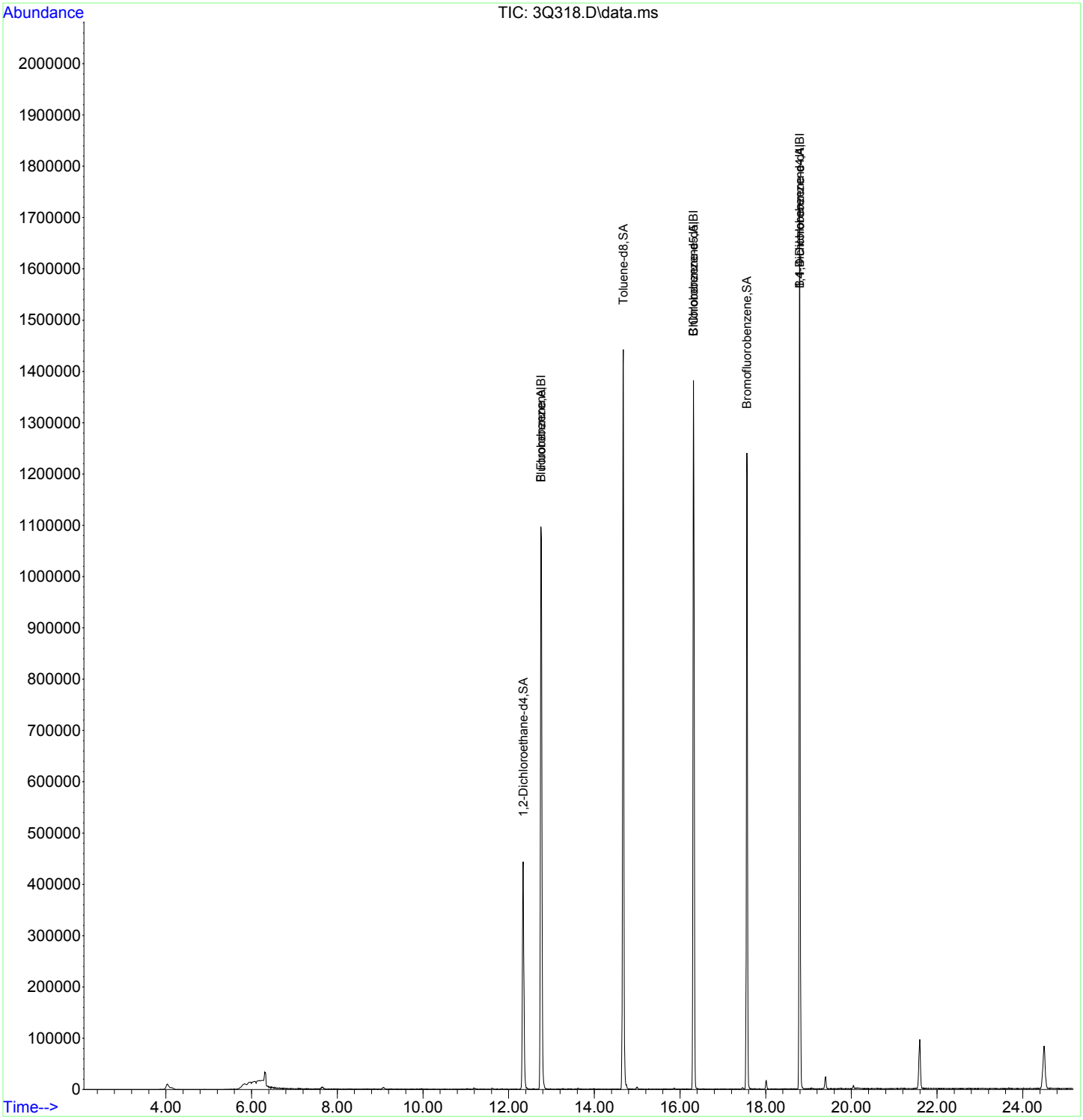
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0m	N.D.	d
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone	55	17.559	17.535	0.934	1464	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110)	Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111)	Benzyl chloride		0.000	18.943	0.000	0	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.388	19.346	1.032	1431	N.D.	

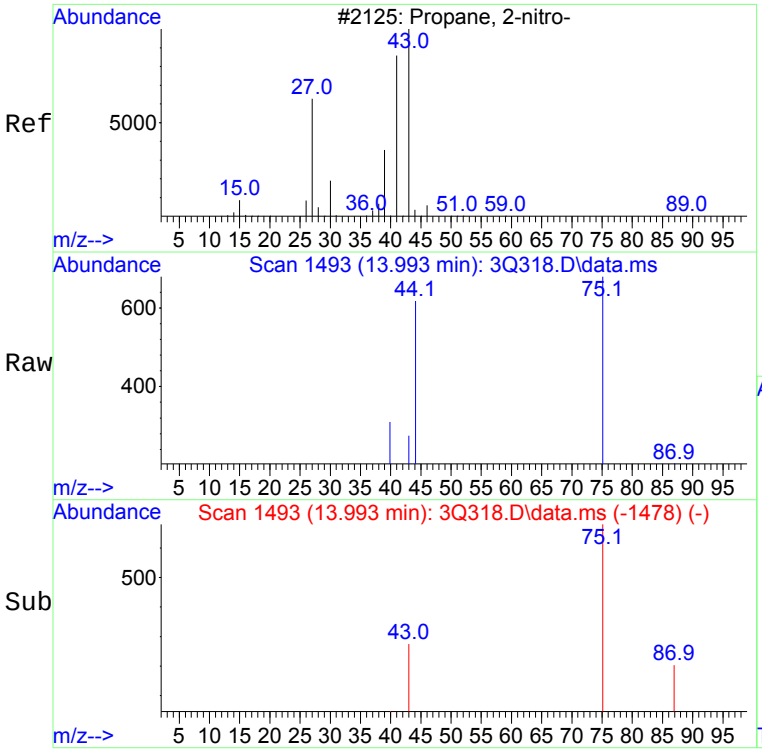
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q318.D
Acq On : 18 Jul 2018 18:12
Operator : JP1
InstName : VOA3
Sample : |454715001|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 19 08:40:35 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

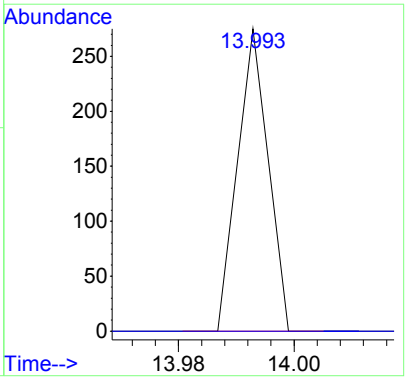




#102 BEFORE analyst DELETION
2-Nitropropane
Concen: 3.38 ug/L
RT: 13.993 min Scan# 1493
Delta R.T. -0.110 min
Lab File: 3Q318.D
Acq: 18 Jul 2018 18:12

Tgt Ion: 43 Resp: 101

Ion	Ratio	Lower	Upper
43	100		
41	0.0	55.3	115.3#



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:25**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715002**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.3**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW02**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 18:44**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:28**	**Aliquot:**	**5.2 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q319.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	104	ug/kg	15.6	104
79-34-5	1,1,2,2-Tetrachloroethane	U	104	ug/kg	15.6	104
79-00-5	1,1,2-Trichloroethane	U	104	ug/kg	15.6	104
75-34-3	1,1-Dichloroethane	U	104	ug/kg	15.6	104
75-35-4	1,1-Dichloroethylene	U	104	ug/kg	15.6	104
87-61-6	1,2,3-Trichlorobenzene	U	104	ug/kg	15.6	104
120-82-1	1,2,4-Trichlorobenzene	U	104	ug/kg	15.6	104
96-12-8	1,2-Dibromo-3-chloropropane	U	104	ug/kg	25.9	104
106-93-4	1,2-Dibromoethane	U	104	ug/kg	15.6	104
95-50-1	1,2-Dichlorobenzene	U	104	ug/kg	15.6	104
107-06-2	1,2-Dichloroethane	U	104	ug/kg	15.6	104
78-87-5	1,2-Dichloropropane	U	104	ug/kg	15.6	104
541-73-1	1,3-Dichlorobenzene	U	104	ug/kg	15.6	104
106-46-7	1,4-Dichlorobenzene	U	104	ug/kg	15.6	104
123-91-1	1,4-Dioxane	U	2590	ug/kg	778	2590
78-93-3	2-Butanone	U	519	ug/kg	156	519
591-78-6	2-Hexanone	U	519	ug/kg	156	519
108-10-1	4-Methyl-2-pentanone	U	519	ug/kg	156	519
67-64-1	Acetone	U	519	ug/kg	156	519
71-43-2	Benzene	U	104	ug/kg	15.6	104
74-97-5	Bromochloromethane	U	104	ug/kg	15.6	104
75-27-4	Bromodichloromethane	U	104	ug/kg	15.6	104
75-25-2	Bromoform	U	104	ug/kg	15.6	104
74-83-9	Bromomethane	U	104	ug/kg	15.6	104
75-15-0	Carbon disulfide	U	519	ug/kg	83.0	519
56-23-5	Carbon tetrachloride	U	104	ug/kg	15.6	104
108-90-7	Chlorobenzene	U	104	ug/kg	15.6	104
75-00-3	Chloroethane	U	104	ug/kg	15.6	104
67-66-3	Chloroform	U	104	ug/kg	15.6	104
74-87-3	Chloromethane	U	104	ug/kg	15.6	104
110-82-7	Cyclohexane	U	104	ug/kg	15.6	104
124-48-1	Dibromochloromethane	U	104	ug/kg	15.6	104
75-71-8	Dichlorodifluoromethane	U	104	ug/kg	15.6	104
100-41-4	Ethylbenzene	U	104	ug/kg	15.6	104
98-82-8	Isopropylbenzene	U	104	ug/kg	15.6	104
79-20-9	Methyl acetate	U	259	ug/kg	77.8	259
108-87-2	Methylcyclohexane	U	104	ug/kg	15.6	104
75-09-2	Methylene chloride	U	259	ug/kg	83.0	259

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:25**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715002**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.3**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW02**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 18:44**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:28**	**Aliquot:**	**5.2 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q319.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	104	ug/kg	15.6	104
127-18-4	Tetrachloroethylene	U	104	ug/kg	15.6	104
108-88-3	Toluene	U	104	ug/kg	15.6	104
79-01-6	Trichloroethylene	U	104	ug/kg	15.6	104
75-69-4	Trichlorofluoromethane	U	104	ug/kg	15.6	104
76-13-1	Trichlorotrifluoroethane	U	259	ug/kg	83.0	259
75-01-4	Vinyl chloride	U	104	ug/kg	15.6	104
156-59-2	cis-1,2-Dichloroethylene	U	104	ug/kg	15.6	104
10061-01-5	cis-1,3-Dichloropropylene	U	104	ug/kg	15.6	104
179601-23-1	m,p-Xylenes	U	207	ug/kg	15.6	207
95-47-6	o-Xylene	U	104	ug/kg	15.6	104
1634-04-4	tert-Butyl methyl ether	U	104	ug/kg	15.6	104
156-60-5	trans-1,2-Dichloroethylene	U	104	ug/kg	15.6	104
10061-02-6	trans-1,3-Dichloropropylene	U	104	ug/kg	15.6	104

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q319.D
Acq On : 18 Jul 2018 18:44
Operator : JP1
InstName : VOA3
Sample : |454715002|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 19 Sample Multiplier: 1

EM
07/19/2018

Quant Time: Jul 19 08:40:37 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1057448	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	507898	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	424840	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1059978	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	515226	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	424909	50.00	ug/L	0.00
System Monitoring Compounds								
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	216770	54.78	ug/L	0.00
45) Toluene-d8	98	14.670	14.676	0.899	1021387	43.17	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	451998	54.12	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	110%
45) Toluene-d8	50.000	81 - 120	86%
63) Bromofluorobenzene	50.000	70 - 130	108%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		0.000	4.990	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	6.141	6.159	0.481	577	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.281	8.232	0.649	858	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide		0.000	8.665	0.000	0	N.D.		
15) Methylene chloride	84	9.079	9.091	0.711	2920	Below Cal		90
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.976	9.988	0.782	286	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.207	11.183	0.878	955	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.457	12.438	0.976	564	N.D.		
32) Benzene	78	12.414	12.426	0.973	227	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.414	13.396	1.051	1671	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q319.D
Acq On : 18 Jul 2018 18:44
Operator : JP1
InstName : VOA3
Sample : |454715002|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 19 08:40:37 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.749	14.755	0.904	590	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene		0.000	16.352	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene		0.000	16.425	0.000	0	N.D.	
57) m,p-Xylenes		0.000	16.541	0.000	0	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene		0.000	17.791	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	17.949	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.041	18.041	0.960	326	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene		0.000	18.364	0.000	0	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	18.675	0.000	0	N.D.	
75) 1,3-Dichlorobenzene		0.000	18.730	0.000	0	N.D.	
76) 1,4-Dichlorobenzene	146	18.828	18.821	1.002	528	N.D.	
77) n-Butylbenzene		0.000	19.108	0.000	0	N.D.	
78) 1,2-Dichlorobenzene		0.000	19.236	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene		0.000	21.113	0.000	0	N.D.	
81) Hexachlorobutadiene		0.000	21.278	0.000	0	N.D.	
82) Naphthalene	128	21.498	21.491	1.144	1150	N.D.	
83) 1,2,3-Trichlorobenzene		0.000	21.821	0.000	0	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.659	8.464	0.679	128	N.D.	
88) Allyl chloride		0.000	8.842	0.000	0	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.195	11.225	0.877	5121	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.603	11.597	0.909	1718	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q319.D
Acq On : 18 Jul 2018 18:44
Operator : JP1
InstName : VOA3
Sample : |454715002|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 19 08:40:37 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

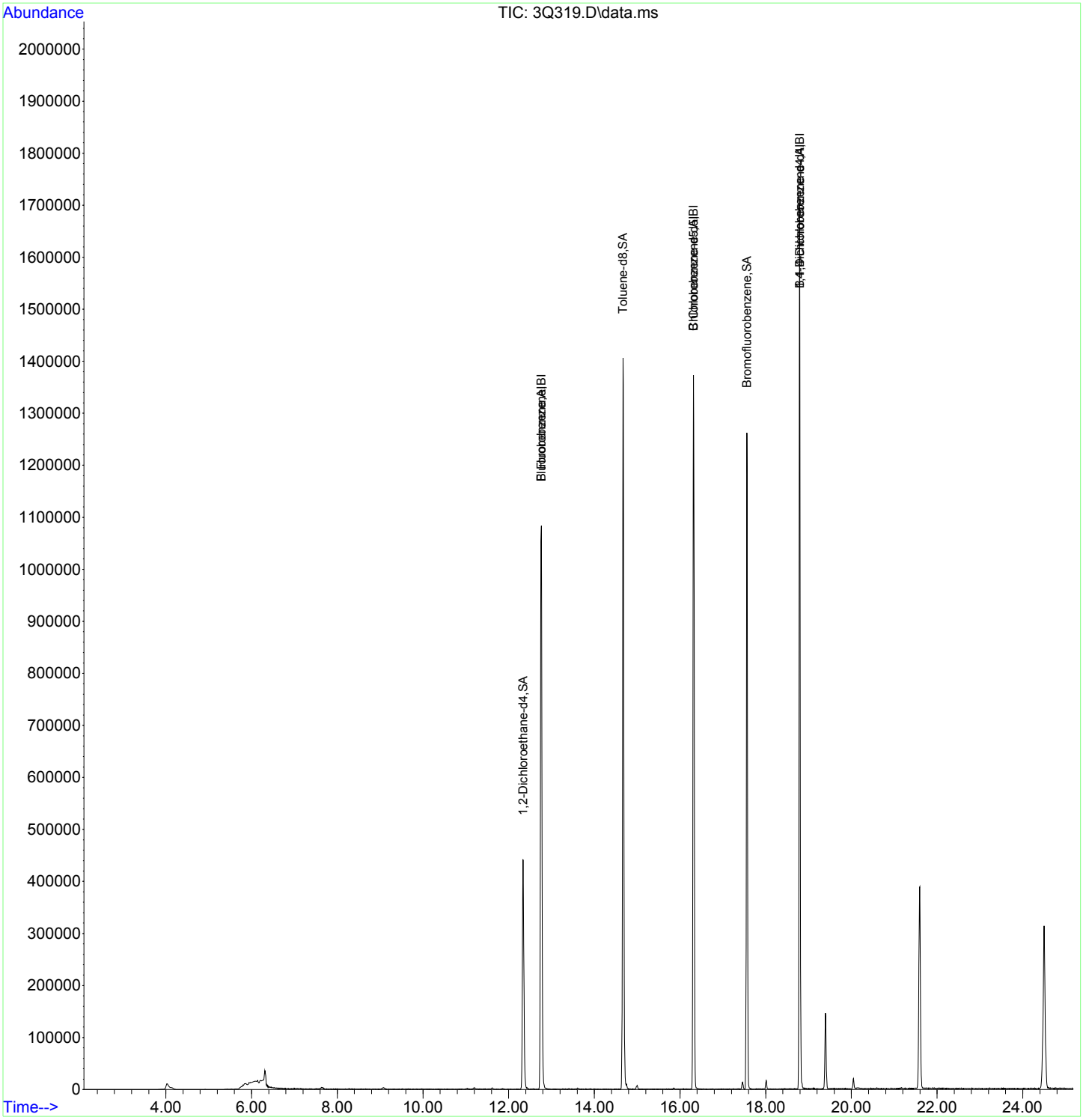
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0m	N.D.	d
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone	55	17.559	17.535	0.934	1445	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110)	Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111)	Benzyl chloride		0.000	18.943	0.000	0	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.395	19.346	1.032	5564	N.D.	

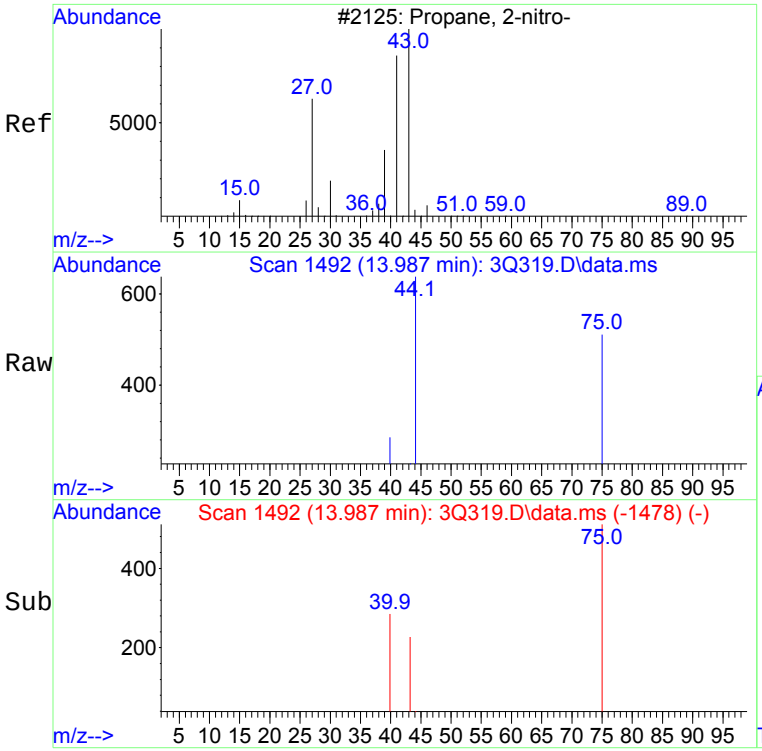
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q319.D
Acq On : 18 Jul 2018 18:44
Operator : JP1
InstName : VOA3
Sample : |454715002|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 19 08:40:37 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

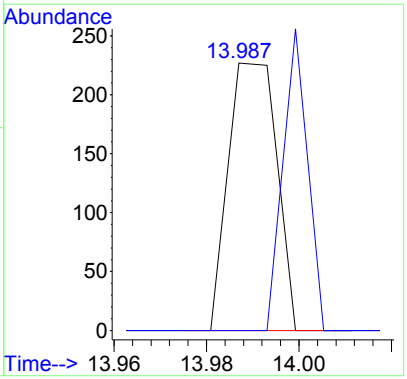




#102 BEFORE analyst DELETION
2-Nitropropane
Concen: 3.41 ug/L
RT: 13.987 min Scan# 1492
Delta R.T. -0.116 min
Lab File: 3Q319.D
Acq: 18 Jul 2018 18:44

Tgt Ion: 43 Resp: 165

Ion	Ratio	Lower	Upper
43	100		
41	0.0	55.3	115.3#



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:55**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715003**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**8.5**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW03**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 19:15**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:29**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q320.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	109	ug/kg	16.4	109
79-34-5	1,1,2,2-Tetrachloroethane	U	109	ug/kg	16.4	109
79-00-5	1,1,2-Trichloroethane	U	109	ug/kg	16.4	109
75-34-3	1,1-Dichloroethane	U	109	ug/kg	16.4	109
75-35-4	1,1-Dichloroethylene	U	109	ug/kg	16.4	109
87-61-6	1,2,3-Trichlorobenzene	U	109	ug/kg	16.4	109
120-82-1	1,2,4-Trichlorobenzene	U	109	ug/kg	16.4	109
96-12-8	1,2-Dibromo-3-chloropropane	U	109	ug/kg	27.3	109
106-93-4	1,2-Dibromoethane	U	109	ug/kg	16.4	109
95-50-1	1,2-Dichlorobenzene	U	109	ug/kg	16.4	109
107-06-2	1,2-Dichloroethane	U	109	ug/kg	16.4	109
78-87-5	1,2-Dichloropropane	U	109	ug/kg	16.4	109
541-73-1	1,3-Dichlorobenzene	U	109	ug/kg	16.4	109
106-46-7	1,4-Dichlorobenzene	U	109	ug/kg	16.4	109
123-91-1	1,4-Dioxane	U	2730	ug/kg	820	2730
78-93-3	2-Butanone	U	546	ug/kg	164	546
591-78-6	2-Hexanone	U	546	ug/kg	164	546
108-10-1	4-Methyl-2-pentanone	U	546	ug/kg	164	546
67-64-1	Acetone	U	546	ug/kg	164	546
71-43-2	Benzene	U	109	ug/kg	16.4	109
74-97-5	Bromochloromethane	U	109	ug/kg	16.4	109
75-27-4	Bromodichloromethane	U	109	ug/kg	16.4	109
75-25-2	Bromoform	U	109	ug/kg	16.4	109
74-83-9	Bromomethane	U	109	ug/kg	16.4	109
75-15-0	Carbon disulfide	U	546	ug/kg	87.4	546
56-23-5	Carbon tetrachloride	U	109	ug/kg	16.4	109
108-90-7	Chlorobenzene	U	109	ug/kg	16.4	109
75-00-3	Chloroethane	U	109	ug/kg	16.4	109
67-66-3	Chloroform	U	109	ug/kg	16.4	109
74-87-3	Chloromethane	U	109	ug/kg	16.4	109
110-82-7	Cyclohexane	U	109	ug/kg	16.4	109
124-48-1	Dibromochloromethane	U	109	ug/kg	16.4	109
75-71-8	Dichlorodifluoromethane	U	109	ug/kg	16.4	109
100-41-4	Ethylbenzene	U	109	ug/kg	16.4	109
98-82-8	Isopropylbenzene	U	109	ug/kg	16.4	109
79-20-9	Methyl acetate	U	273	ug/kg	82.0	273
108-87-2	Methylcyclohexane	U	109	ug/kg	16.4	109
75-09-2	Methylene chloride	U	273	ug/kg	87.4	273

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:55**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715003**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**8.5**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW03**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 19:15**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:29**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q320.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	109	ug/kg	16.4	109
127-18-4	Tetrachloroethylene	U	109	ug/kg	16.4	109
108-88-3	Toluene	U	109	ug/kg	16.4	109
79-01-6	Trichloroethylene	U	109	ug/kg	16.4	109
75-69-4	Trichlorofluoromethane	U	109	ug/kg	16.4	109
76-13-1	Trichlorotrifluoroethane	U	273	ug/kg	87.4	273
75-01-4	Vinyl chloride	U	109	ug/kg	16.4	109
156-59-2	cis-1,2-Dichloroethylene	U	109	ug/kg	16.4	109
10061-01-5	cis-1,3-Dichloropropylene	U	109	ug/kg	16.4	109
179601-23-1	m,p-Xylenes	U	219	ug/kg	16.4	219
95-47-6	o-Xylene	U	109	ug/kg	16.4	109
1634-04-4	tert-Butyl methyl ether	U	109	ug/kg	16.4	109
156-60-5	trans-1,2-Dichloroethylene	U	109	ug/kg	16.4	109
10061-02-6	trans-1,3-Dichloropropylene	U	109	ug/kg	16.4	109

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q320.D
Acq On : 18 Jul 2018 19:15
Operator : JP1
InstName : VOA3
Sample : |454715003|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 20 Sample Multiplier: 1

EM
07/19/2018

Quant Time: Jul 19 08:40:39 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1045676	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	499229	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	409097	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1048257	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	507700	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	409269	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	205075	52.41	ug/L	0.00
45) Toluene-d8	98	14.670	14.676	0.899	1044464	44.91	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	434582	54.04	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	105%
45) Toluene-d8	50.000	81 - 120	90%
63) Bromofluorobenzene	50.000	70 - 130	108%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane	50	4.972	4.990	0.390	222	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	6.159	6.159	0.483	319	N.D.		
6) Chloroethane	64	6.318	6.372	0.495	101	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.256	8.232	0.647	1135	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.567	8.665	0.671	177	N.D.		
15) Methylene chloride	84	9.067	9.091	0.711	2623	Below Cal		88
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.975	9.988	0.782	625	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.195	11.183	0.877	567	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.445	12.438	0.975	273	N.D.		
32) Benzene	78	12.420	12.426	0.973	279	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.414	13.396	1.051	1303	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q320.D
Acq On : 18 Jul 2018 19:15
Operator : JP1
InstName : VOA3
Sample : |454715003|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 19 08:40:39 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.749	14.755	0.904	426	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene		0.000	16.352	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene	91	16.432	16.425	1.007	157	N.D.	
57) m,p-Xylenes	106	16.535	16.541	1.013	155	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene	91	17.791	17.791	0.947	104	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	17.949	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.047	18.041	0.960	153	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene		0.000	18.364	0.000	0	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	18.675	0.000	0	N.D.	
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	268	N.D.	
76) 1,4-Dichlorobenzene	146	18.815	18.821	1.001	370	N.D.	
77) n-Butylbenzene	91	18.937	19.108	1.008	110	N.D.	
78) 1,2-Dichlorobenzene		0.000	19.236	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene		0.000	21.113	0.000	0	N.D.	
81) Hexachlorobutadiene		0.000	21.278	0.000	0	N.D.	
82) Naphthalene	128	21.504	21.491	1.144	926	N.D.	
83) 1,2,3-Trichlorobenzene		0.000	21.821	0.000	0	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.537	8.464	0.669	106	N.D.	
88) Allyl chloride		0.000	8.842	0.000	0	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.195	11.225	0.877	4345	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.628	11.597	0.911	1141	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q320.D
Acq On : 18 Jul 2018 19:15
Operator : JP1
InstName : VOA3
Sample : |454715003|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 19 08:40:39 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

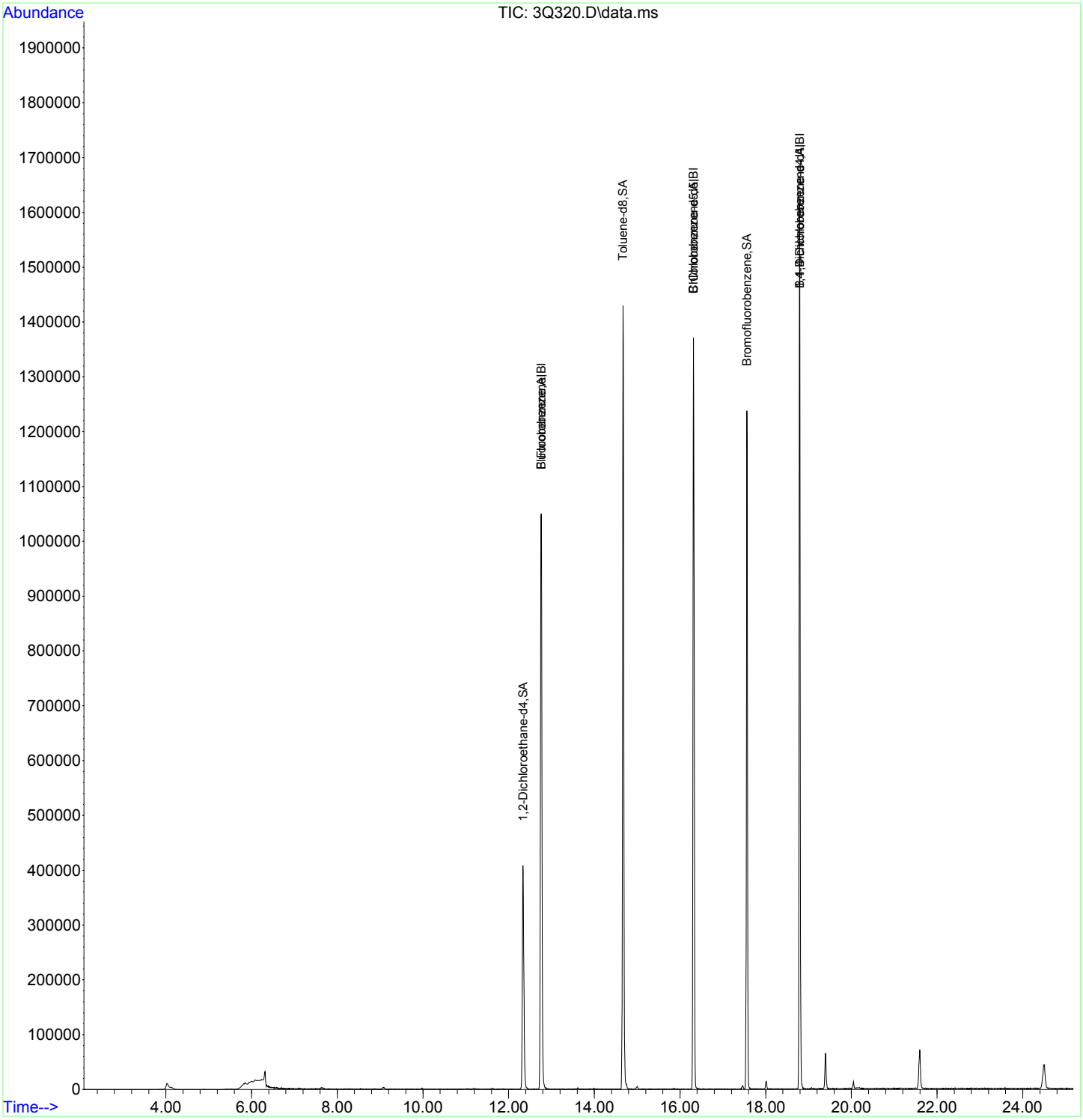
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0m	N.D.	d
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone	55	17.565	17.535	0.935	1147	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110)	Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111)	Benzyl chloride	91	18.937	18.943	1.008	110	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.394	19.346	1.032	2617	N.D.	

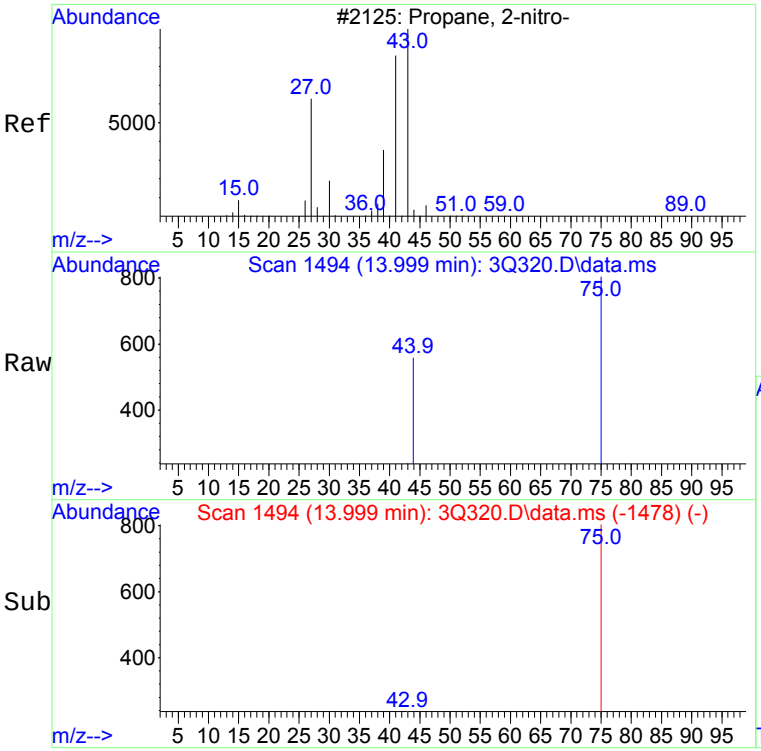
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q320.D
Acq On : 18 Jul 2018 19:15
Operator : JP1
InstName : VOA3
Sample : |454715003|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 19 08:40:39 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

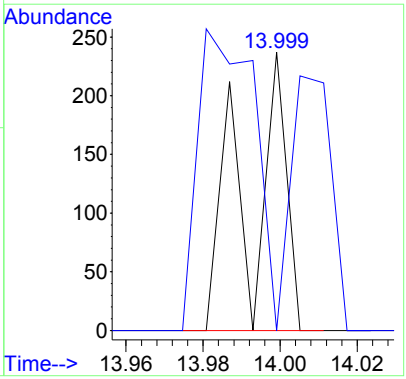




#102 BEFORE analyst DELETION
2-Nitropropane
Concen: 3.41 ug/L
RT: 13.999 min Scan# 1494
Delta R.T. -0.104 min
Lab File: 3Q320.D
Acq: 18 Jul 2018 19:15

Tgt Ion: 43 Resp: 164

Ion	Ratio	Lower	Upper
43	100		
41	95.7	55.3	115.3



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 15:25**	**Matrix:**	**WATER**
Lab Sample ID:	**454715004**	**Date Received:**	**07/17/2018 08:55**		
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW0123TB**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 13:30**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 13:30**				
Data File:	**072118V3\3Q608.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	2.00	ug/L	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane	U	2.00	ug/L	0.300	2.00
79-00-5	1,1,2-Trichloroethane	U	2.00	ug/L	0.300	2.00
75-34-3	1,1-Dichloroethane	U	2.00	ug/L	0.300	2.00
75-35-4	1,1-Dichloroethylene	U	2.00	ug/L	0.300	2.00
87-61-6	1,2,3-Trichlorobenzene	U	2.00	ug/L	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene	U	2.00	ug/L	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane	U	2.00	ug/L	0.500	2.00
106-93-4	1,2-Dibromoethane	U	2.00	ug/L	0.300	2.00
95-50-1	1,2-Dichlorobenzene	U	2.00	ug/L	0.300	2.00
107-06-2	1,2-Dichloroethane	U	2.00	ug/L	0.300	2.00
78-87-5	1,2-Dichloropropane	U	2.00	ug/L	0.300	2.00
541-73-1	1,3-Dichlorobenzene	U	2.00	ug/L	0.300	2.00
106-46-7	1,4-Dichlorobenzene	U	2.00	ug/L	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/L	15.0	50.0
78-93-3	2-Butanone	U	10.0	ug/L	3.00	10.0
591-78-6	2-Hexanone	U	10.0	ug/L	3.00	10.0
108-10-1	4-Methyl-2-pentanone	U	10.0	ug/L	3.00	10.0
67-64-1	Acetone	U	10.0	ug/L	3.00	10.0
71-43-2	Benzene	U	2.00	ug/L	0.300	2.00
74-97-5	Bromochloromethane	U	2.00	ug/L	0.300	2.00
75-27-4	Bromodichloromethane	U	2.00	ug/L	0.300	2.00
75-25-2	Bromoform	U	2.00	ug/L	0.300	2.00
74-83-9	Bromomethane	U	2.00	ug/L	0.300	2.00
75-15-0	Carbon disulfide	U	10.0	ug/L	1.60	10.0
56-23-5	Carbon tetrachloride	U	2.00	ug/L	0.300	2.00
108-90-7	Chlorobenzene	U	2.00	ug/L	0.300	2.00
75-00-3	Chloroethane	U	2.00	ug/L	0.300	2.00
67-66-3	Chloroform	U	2.00	ug/L	0.300	2.00
74-87-3	Chloromethane	U	2.00	ug/L	0.300	2.00
110-82-7	Cyclohexane	U	2.00	ug/L	0.300	2.00
124-48-1	Dibromochloromethane	U	2.00	ug/L	0.300	2.00
75-71-8	Dichlorodifluoromethane	U	2.00	ug/L	0.300	2.00
100-41-4	Ethylbenzene	U	2.00	ug/L	0.300	2.00
98-82-8	Isopropylbenzene	U	2.00	ug/L	0.300	2.00
79-20-9	Methyl acetate	U	5.00	ug/L	1.50	5.00
108-87-2	Methylcyclohexane	U	2.00	ug/L	0.300	2.00
75-09-2	Methylene chloride	U	5.00	ug/L	1.60	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 15:25**	**Matrix:**	**WATER**
Lab Sample ID:	**454715004**	**Date Received:**	**07/17/2018 08:55**		
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW0123TB**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 13:30**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 13:30**				
Data File:	**072118V3\3Q608.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	2.00	ug/L	0.300	2.00
127-18-4	Tetrachloroethylene	U	2.00	ug/L	0.300	2.00
108-88-3	Toluene	U	2.00	ug/L	0.300	2.00
79-01-6	Trichloroethylene	U	2.00	ug/L	0.300	2.00
75-69-4	Trichlorofluoromethane	U	2.00	ug/L	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.60	5.00
75-01-4	Vinyl chloride	U	2.00	ug/L	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene	U	2.00	ug/L	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene	U	2.00	ug/L	0.300	2.00
179601-23-1	m,p-Xylenes	U	4.00	ug/L	0.300	4.00
95-47-6	o-Xylene	U	2.00	ug/L	0.300	2.00
1634-04-4	tert-Butyl methyl ether	U	2.00	ug/L	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene	U	2.00	ug/L	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene	U	2.00	ug/L	0.300	2.00

Quantitation Report
GEL Laboratories, LLC

JP
07/23/2018

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q608.D
Acq On : 21 Jul 2018 13:30
Operator : JP1
InstName : VOA3
Sample : |454715004|1784646|1|VOA|1|VOA8260CL|
Misc : URSC 5ML PH<2
ALS Vial : 8 Sample Multiplier: 1

EM
07/23/2018

Quant Time: Jul 23 08:34:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.768	12.761	1.000	1303997	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	600937	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.797	18.791	1.000	532945	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.768	12.762	1.000	1306509	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	609787	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.797	18.791	1.000	533374	50.00	ug/L	0.00
System Monitoring Compounds								
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	255191	52.29	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1288749	46.03	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	557122	53.18	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	70 - 130	105%
45) Toluene-d8	50.000	70 - 130	92%
63) Bromofluorobenzene	50.000	70 - 130	106%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane	50	5.027	4.990	0.394	1211	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.281	8.232	0.649	1846	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.659	8.665	0.678	320	N.D.		
15) Methylene chloride	84	9.098	9.091	0.713	4268	Below Cal		97
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		0.000	9.988	0.000	0	N.D.		
19) Vinyl acetate	43	10.335	10.317	0.809	117	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		0.000	12.438	0.000	0	N.D.		
32) Benzene	78	12.426	12.426	0.973	385	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.414	13.396	1.051	284	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q608.D
Acq On : 21 Jul 2018 13:30
Operator : JP1
InstName : VOA3
Sample : |454715004|1784646|1|VOA|1|VOA8260CL|
Misc : URSC 5ML PH<2
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 23 08:34:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39)	Dibromomethane		0.000	13.682	0.000	0	N.D.	
40)	Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41)	2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42)	cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46)	Toluene	91	14.755	14.755	0.904	2147	N.D.	
47)	trans-1,3-Dichloroprop...		0.000	14.968	0.000	0m	N.D.	d
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49)	2-Hexanone		0.000	15.413	0.000	0	N.D.	
50)	1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51)	Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53)	1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54)	Chlorobenzene	112	16.346	16.352	1.002	331	N.D.	
55)	1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56)	Ethylbenzene	91	16.432	16.425	1.007	580	N.D.	
57)	m,p-Xylenes	106	16.535	16.541	1.013	368	N.D.	
58)	o-Xylene		0.000	16.986	0.000	0	N.D.	
59)	Styrene	104	16.992	16.992	1.041	730	N.D.	
61)	Bromoform		0.000	17.261	0.000	0	N.D.	
62)	Isopropylbenzene	105	17.456	17.358	0.929	1640	N.D.	
64)	1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65)	1,2,3-Trichloropropane	75	17.761	17.748	0.945	150	N.D.	
66)	Bromobenzene		0.000	17.767	0.000	0	N.D.	
67)	n-Propylbenzene	91	17.785	17.791	0.946	528	N.D.	
68)	1,3,5-Trimethylbenzene	105	17.956	17.949	0.955	535	N.D.	
69)	2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70)	4-Chlorotoluene	91	18.053	18.041	0.960	820	N.D.	
71)	tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72)	1,2,4-Trimethylbenzene	105	18.358	18.364	0.977	691	N.D.	
73)	sec-Butylbenzene	105	18.553	18.547	0.987	643	N.D.	
74)	4-Isopropyltoluene	119	18.669	18.675	0.993	676	N.D.	
75)	1,3-Dichlorobenzene	146	18.736	18.730	0.997	767	N.D.	
76)	1,4-Dichlorobenzene	146	18.809	18.821	1.001	1297	N.D.	
77)	n-Butylbenzene	91	19.108	19.108	1.017	1327	N.D.	
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.023	856	N.D.	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80)	1,2,4-Trichlorobenzene	180	21.126	21.113	1.124	1907	N.D.	
81)	Hexachlorobutadiene	225	21.272	21.278	1.132	930	N.D.	
82)	Naphthalene	128	21.492	21.491	1.143	4597	N.D.	
83)	1,2,3-Trichlorobenzene	180	21.827	21.821	1.161	1929	N.D.	
85)	Acrolein		0.000	7.927	0.000	0	N.D.	
86)	Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87)	Isopropyl Alcohol		0.000	8.464	0.000	0	N.D.	
88)	Allyl chloride	76	8.701	8.842	0.682	113	N.D.	
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	158	N.D.	
90)	Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91)	Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92)	2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94)	Ethyl acetate		0.000	11.225	0.000	0	N.D.	
95)	Propionitrile		0.000	11.305	0.000	0	N.D.	
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97)	Tetrahydrofuran	42	11.622	11.597	0.910	1098	N.D.	
98)	Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q608.D
Acq On : 21 Jul 2018 13:30
Operator : JP1
InstName : VOA3
Sample : |454715004|1784646|1|VOA|1|VOA8260CL|
Misc : URSC 5ML PH<2
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 23 08:34:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

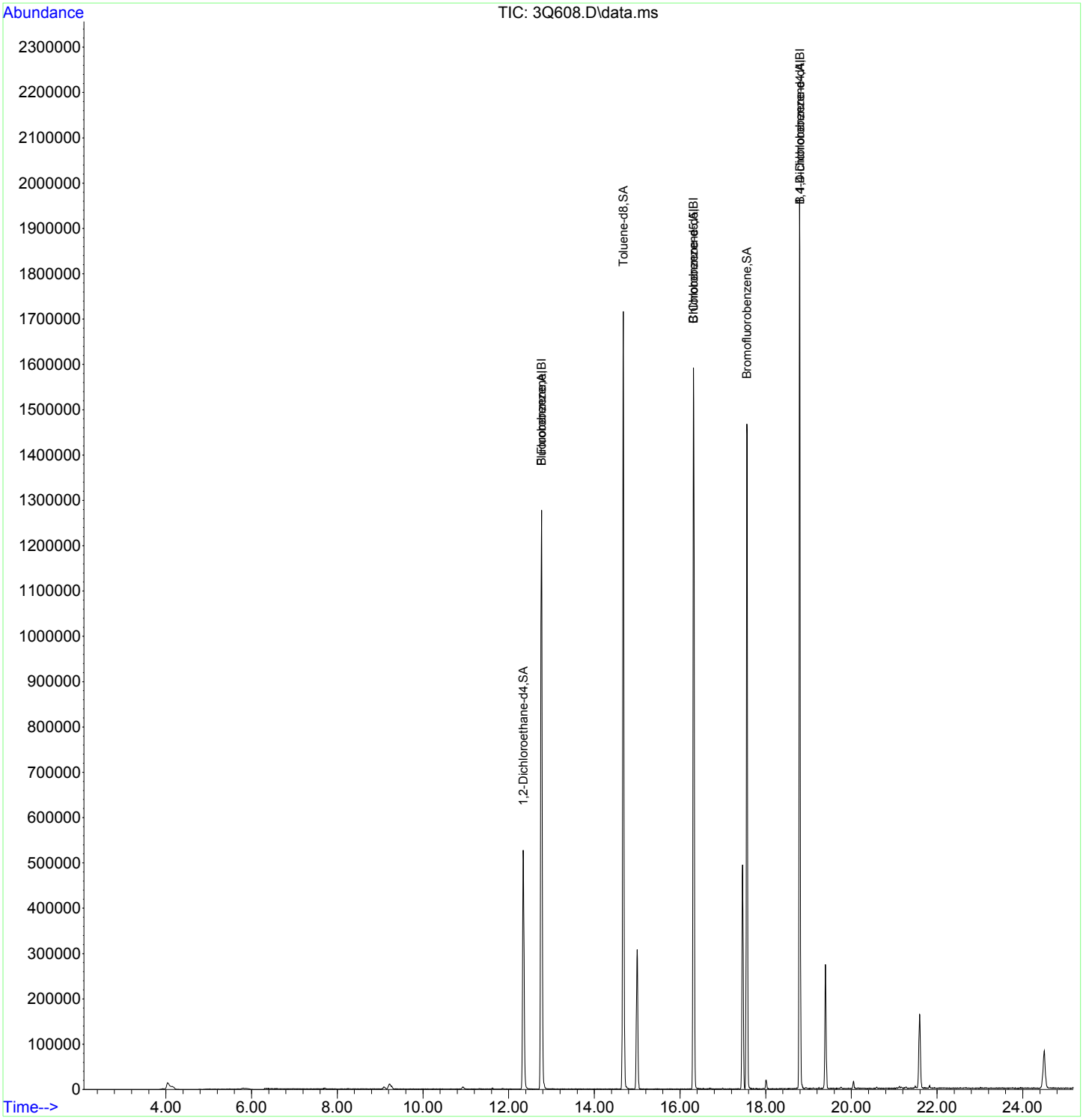
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate	69	13.566	13.560	1.063	286	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0	N.D.	
104)	Ethyl methacrylate	69	14.999	14.987	0.919	309	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene	53	17.437	17.425	0.928	199	N.D.	
108)	Cyclohexanone	55	17.566	17.535	0.934	1485	N.D.	
109)	trans-1,4-Dichloro-2-b...	53	17.712	17.718	0.942	170	N.D.	
110)	Pentachloroethane	167	18.401	18.395	0.979	180	N.D.	
111)	Benzyl chloride	91	18.949	18.943	1.008	2282	N.D.	
112)	bis(2-Chloroisopropyl)...		0.000	19.346	0.000	0m	N.D.	d

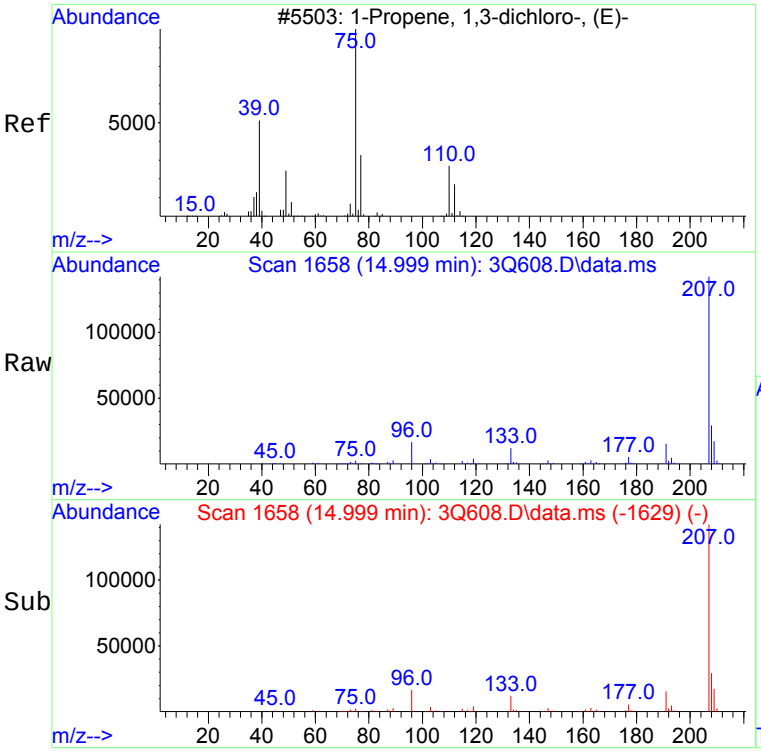
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q608.D
Acq On : 21 Jul 2018 13:30
Operator : JP1
InstName : VOA3
Sample : |454715004|1784646|1|VOA|1|VOA8260CL|
Misc : URSC 5ML PH<2
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 23 08:34:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

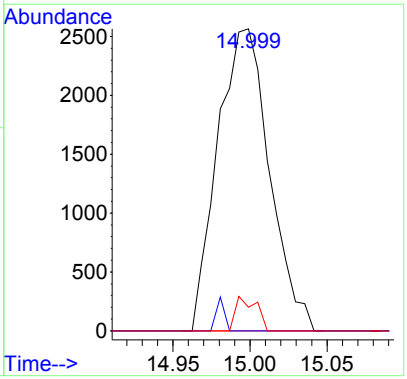


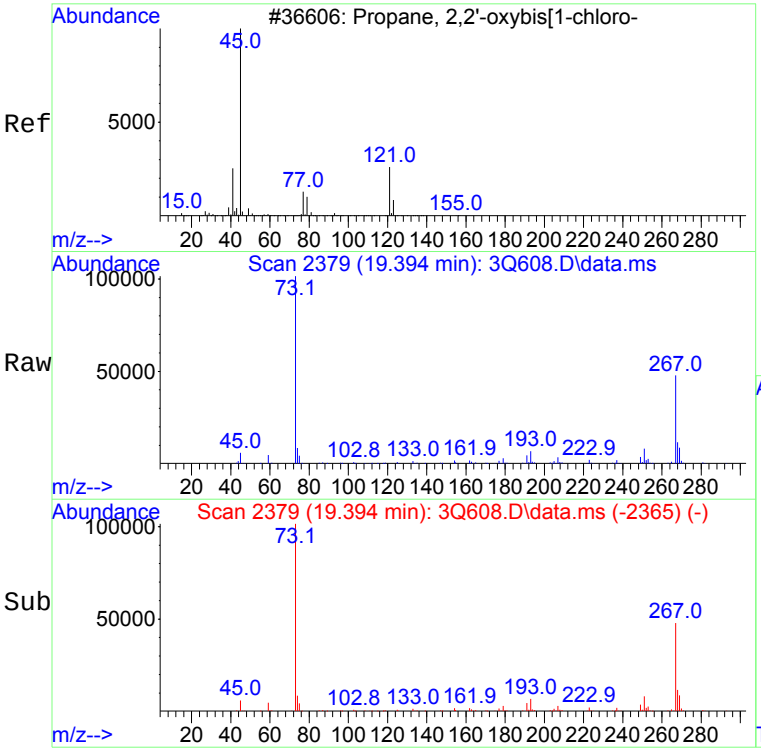


#47 BEFORE analyst DELETION
trans-1,3-Dichloropropylene
Concen: 0.51 ug/L
RT: 14.999 min Scan# 1658
Delta R.T. 0.031 min
Lab File: 3Q608.D
Acq: 21 Jul 2018 13:30

Tgt Ion: 75 Resp: 6002

Ion	Ratio	Lower	Upper
75	100		
39	1.7	17.5	77.5#
77	4.5	2.1	62.1

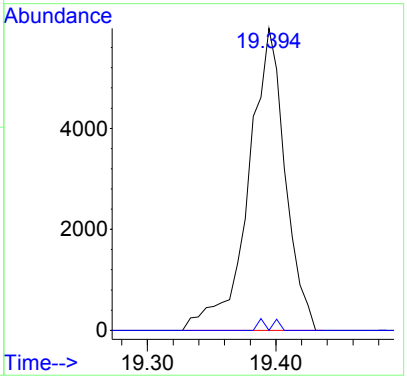




#112 BEFORE analyst DELETION
bis(2-Chloroisopropyl)ether
Concen: 2.95 ug/L
RT: 19.394 min Scan# 2379
Delta R.T. 0.049 min
Lab File: 3Q608.D
Acq: 21 Jul 2018 13:30

Tgt Ion: 45 Resp: 11914

Ion	Ratio	Lower	Upper
45	100		
121	1.4	0.0	52.1



Standards

Low level SW846 8260B and Regular level 8260B and EPA 624

Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4	Level 5	Level 6 #	Level 7 !	Level 7a
Fluorobenzene (IS)	20	20/50	20/50	20/50	20/50	20/50	20/50	20/50	20/50
1,2-Dichloroethane-d4(surr)		20/50	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol		50	100	200	500	1000	2000	5000	10000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane		2	5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	150	200
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	150	200
Tetrahydrofuran			5	10	25	50	100	250	500
tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Chlorobenzene-d5 (IS)	20	20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Toluene-d8 (surr)		20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Ethyl methacrylate			5	10	25	50	100	250	500
1,4-Dichlorobenzene-d4 (IS)	20	20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Bromofluorobenzene (surr)		20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
Cyclohexanone			25	50	125	250	500	1250	2500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Method	PQL	Concentration range		
SW 846 8260B low level	Level 1 &1a	Levels 1-> 7a	IS/SS @ 20 ppb	
EPA 524.2	Level 1a	Levels 1a-> 7a	IS/SS @ 20 ppb	
SW846 8260B/624	Level 2	Levels 1a-> 7a	IS/SS @ 50 ppb	n-butyl alchol only in 1a

#: Indicates calibration verification concentration level used for low level analysis

!: Indicates calibration verification concentration level used for regular level analysis

Calibration History Report VOA3
GEL Laboratories, LLC

JP 07/03/2018

Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

EM 07/03/2018

Cal Lvl:8 Amt:0.00 None of the compounds use this level.

Injection Date	Mix	Calibration File

Cal Lvl:1 Amt:1.00 Last Updated with: C:\msdchem\1\data\070218V3\3O113.D

Injection Date	Mix	Calibration File
02 Jul 2018 18:36	B	C:\msdchem\1\data\070218V3\3O113.D

Cal Lvl:2 Amt:2.00 Last Updated with: C:\msdchem\1\data\070218V3\3O114.D

Injection Date	Mix	Calibration File
02 Jul 2018 19:07	B	C:\msdchem\1\data\070218V3\3O114.D
02 Jul 2018 13:56	A	C:\msdchem\1\data\070218V3\3O104.D

Cal Lvl:3 Amt:5.00 Last Updated with: C:\msdchem\1\data\070218V3\3O115.D

Injection Date	Mix	Calibration File
02 Jul 2018 19:38	B	C:\msdchem\1\data\070218V3\3O115.D
02 Jul 2018 14:28	A	C:\msdchem\1\data\070218V3\3O105.D

Cal Lvl:4 Amt:10.00 Last Updated with: C:\msdchem\1\data\070218V3\3O116.D

Injection Date	Mix	Calibration File
02 Jul 2018 20:10	B	C:\msdchem\1\data\070218V3\3O116.D
02 Jul 2018 14:59	A	C:\msdchem\1\data\070218V3\3O106.D

Cal Lvl:5 Amt:20.00 Last Updated with: C:\msdchem\1\data\070218V3\3O117.D

Injection Date	Mix	Calibration File
02 Jul 2018 20:41	B	C:\msdchem\1\data\070218V3\3O117.D
02 Jul 2018 15:30	A	C:\msdchem\1\data\070218V3\3O107.D

Cal Lvl:6 Amt:50.00 Last Updated with: C:\msdchem\1\data\070218V3\3O118.D

Injection Date	Mix	Calibration File
02 Jul 2018 21:12	B	C:\msdchem\1\data\070218V3\3O118.D
02 Jul 2018 16:01	A	C:\msdchem\1\data\070218V3\3O108.D

Cal Lvl:7 Amt:100.00 Last Updated with: C:\msdchem\1\data\070218V3\3O120.D

Injection Date	Mix	Calibration File
02 Jul 2018 22:15	B	C:\msdchem\1\data\070218V3\3O120.D
02 Jul 2018 17:03	A	C:\msdchem\1\data\070218V3\3O110.D

Cal Lvl:9 Amt:80.00 Last Updated with: C:\msdchem\1\data\070218V3\3O119.D

Injection Date	Mix	Calibration File
02 Jul 2018 21:44	B	C:\msdchem\1\data\070218V3\3O119.D
02 Jul 2018 16:32	A	C:\msdchem\1\data\070218V3\3O109.D

Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

VOA3-8260C-070218.M Tue Jul 03 07:36:13 2018

Response Factor Report VOA3
GEL Laboratories, LLC

Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

JP 07/03/2018
EM 07/03/2018

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
2)MA Dichlorodifluoromethane			0.4349253	0.4641413	0.4097957	0.4152493				
	0.4430749	0.3973842	0.4446952				0.4299	AVRG		5.4274
3)MPA Chloromethane			0.4778414	0.4635193	0.4398552	0.4220475				
	0.4219674	0.3978988	0.4287036				0.4360	AVRG		6.2251
4)MCA Vinyl chloride			0.4275732	0.4410897	0.4317088	0.4089242				
	0.4134703	0.3932422	0.4156330				0.4188	AVRG		3.8124
5)MA Bromomethane			0.3340713	0.2971923	0.2884670	0.2883162				
	0.2920593	0.2867536	0.2967414				0.2977	AVRG		5.5695
6)MA Chloroethane			0.2700025	0.2945198	0.2924243	0.2993887				
	0.2920457	0.2904114	0.3041445				0.2918	AVRG		3.6874
7)MA Trichlorofluoromethane			0.6745666	0.6734811	0.6588232	0.6503476				
	0.6296055	0.5696052	0.6217520				0.6397	AVRG		5.7692
8)MA Ethyl ether			0.2031980	0.2180181	0.2189778	0.2316374				
	0.2406893	0.2437905	0.2378351				0.2277	AVRG		6.5031
9)MA Acetone			0.1981028	0.1911551	0.2056602	0.1842015				
	0.1597838	0.1577013	0.1670119				0.1805	AVRG		10.6100
10)MCA 1,1-Dichloroethylene			0.5567611	0.5416051	0.5346622	0.5126101				
	0.5508728	0.5122771	0.5598584				0.5384	AVRG		3.6563
11)MA Iodomethane			0.5099564	0.5022444	0.4913552	0.4694601				
	0.5125338	0.4765436	0.5041454				0.4952	AVRG		3.3724
12)MA Acetonitrile			0.0416801	0.0405412	0.0415635	0.0393517				
	0.0355409	0.0372862	0.0391922				0.0393	AVRG		5.7386
13)MA Methyl acetate			0.0489834	0.0507446	0.0558549	0.0505099				
	0.0496502	0.0494446	0.0504300				0.0508	AVRG		4.5625
14)MA Carbon disulfide			1.1094626	1.0831713	1.0659149	0.9414782				
	1.0467680	0.9448779	1.0279679				1.0314	AVRG		6.3561
15)MA Methylene chloride			20622	41401	71667	142017		1/x		
0.0075 | 0.3190 | 0.00	369057	842937	585311					LINR	#	0.9997
16)MA tert-Butyl methyl ether			0.7663831	0.8145991	0.8468187	0.8260659				
	0.8463122	0.8642065	0.8590133				0.8319	AVRG		4.0571

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GEL Laboratories, LLC

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For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
17)MA trans-1,2-Dichloroethyle			0.4585939	0.4875136	0.4723869	0.4427987				
	0.4540031	0.4192659	0.4373546				0.4531	AVRG		5.0050
18)MA Hexane				0.4054434	0.4017726	0.4190248				
	0.4009881	0.4239066	0.4369114				0.4147	AVRG		3.4740
19)MA Vinyl acetate			0.3303342	0.3573324	0.3928041	0.4204739				
	0.3861603	0.4063191	0.4096010				0.3861	AVRG		8.2742
20)MPA 1,1-Dichloroethane			0.6240785	0.5932768	0.5756660	0.5667300				
	0.5811452	0.5340992	0.5595119				0.5764	AVRG		4.8814
21)MA 2-Butanone			0.0407373	0.0454248	0.0477459	0.0442132				
	0.0410077	0.0422177	0.0434109				0.0435	AVRG		5.7597
22)MA cis-1,2-Dichloroethylene			0.3084487	0.3139465	0.2913980	0.3019849				
	0.3006410	0.2907330	0.3032967				0.3015	AVRG		2.7928
23)MA 2,2-Dichloropropane			0.5178753	0.5080773	0.4902785	0.5005775				
	0.5051629	0.4568636	0.4961261				0.4964	AVRG		3.9375
24)MA Bromochloromethane			0.1319480	0.1432657	0.1373798	0.1383760				
	0.1400665	0.1384244	0.1391132				0.1384	AVRG		2.4619
25)MCA Chloroform			0.6269119	0.6220038	0.5903257	0.6028697				
	0.5820169	0.5450123	0.5728848				0.5917	AVRG		4.8356
26)MA 1,1,1-Trichloroethane			0.5745919	0.5508860	0.5395225	0.5461676				
	0.5424294	0.4948470	0.5407725				0.5413	AVRG		4.3888
27)MA Cyclohexane			0.4720281	0.4744912	0.4814610	0.4647361				
	0.5026463	0.4707914	0.5100191				0.4823	AVRG		3.5816
28)MA 1,1-Dichloropropene			0.4108660	0.4253268	0.3951212	0.4160533				
	0.4206272	0.3871916	0.4194343				0.4107	AVRG		3.4621
29)MA Carbon tetrachloride			0.5028046	0.5096322	0.5008132	0.5063340				
	0.5095520	0.4586876	0.5048185				0.4989	AVRG		3.6177
30)SA 1,2-Dichloroethane-d4			0.1873017	0.1917712	0.1909304	0.1885102				
	0.1883021	0.1812673	0.1817233				0.1871	AVRG		2.2132
31)MA 1,2-Dichloroethane			0.4855844	0.5046662	0.4826452	0.4744475				
	0.4549794	0.4153229	0.4483478				0.4666	AVRG		6.3255

Response Factor Report VOA3
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For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
32)MA Benzene			1.1981575	1.1886915	1.1550573	1.1063651				
	1.1474308	1.0864302	1.1801104				1.1517	AVRG		3.6629
33)MA Cyclohexene			0.5665070	0.5760658	0.5810394	0.5724981				
	0.6019989	0.5739733	0.6062899				0.5826	AVRG		2.6387
34)MA n-Butyl alcohol			25497	72339	166645	374899		1/x		
-0.0158 | 0.0087 | 0.00	876103	2209438	1623255					LINR	# #	0.9975
35)MA Trichloroethylene			0.3185854	0.3072312	0.3021695	0.2960513				
	0.2944850	0.2833105	0.3090632				0.3016	AVRG		3.8103
36)MA 2-Pentanone			0.1615912	0.1825584	0.2166123	0.2077666				
	0.1906852	0.2012445	0.2116673				0.1960	AVRG		9.8333
37)MCA 1,2-Dichloropropane			0.2850976	0.2998843	0.2879440	0.2915767				
	0.2954603	0.2832820	0.3017414				0.2921	AVRG		2.4571
38)MA Methylcyclohexane			0.4781101	0.4984368	0.4816238	0.4814577				
	0.5155388	0.4786550	0.5097190				0.4919	AVRG		3.2133
39)MA Dibromomethane			0.1832910	0.1914777	0.1848919	0.1841363				
	0.1876707	0.1791555	0.1887143				0.1856	AVRG		2.1777
40)MA Bromodichloromethane			0.4141879	0.4280187	0.4225162	0.4498882				
	0.4615166	0.4207322	0.4441121				0.4344	AVRG		4.0385
41)MA 2-Chloroethylvinyl ether			0.1267502	0.1875652	0.1591439	0.1658923				
	0.1671099	0.1629268	0.1635748				0.1619	AVRG		11.1348
42)MA cis-1,3-Dichloropropylen			0.4243490	0.4447146	0.4676105	0.4697747				
	0.5039365	0.4725926	0.4831621				0.4666	AVRG		5.5195
44)MA 4-Methyl-2-pentanone			0.1937403	0.2045945	0.2420022	0.2360378				
	0.2067994	0.2222088	0.2352369				0.2201	AVRG		8.4587
45)SA Toluene-d8			2.3804049	2.3030637	2.3265207	2.2446754				
	2.2541839	2.4147300	2.3822858				2.3294	AVRG		2.8377
46)MCA Toluene			2.6659321	2.5964825	2.5137000	2.4598715				
	2.3721519	2.4567995	2.5370078				2.5146	AVRG		3.8672
47)MA trans-1,3-Dichloropropyl			0.9173811	0.8668760	0.9791499	0.9943851				
	1.0019639	1.0271628	1.0702696				0.9796	AVRG		6.9461

Response Factor Report VOA3
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For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
48)MA 1,1,2-Trichloroethane			0.4697210	0.4624015	0.4836470	0.4757038				
	0.4611492	0.4728239	0.4724642				0.4711	AVRG		1.6442
49)MA 2-Hexanone			0.2478706	0.2774409	0.3265093	0.2671198				
	0.2651757	0.2677829	0.2789905				0.2758	AVRG		8.9008
50)MA 1,3-Dichloropropane			0.9423447	0.9621567	0.9868361	0.9399092				
	0.9249110	0.9043085	0.9483339				0.9441	AVRG		2.7831
51)MA Tetrachloroethylene			0.5592414	0.5297220	0.5422157	0.5387267				
	0.5076993	0.5060613	0.5384044				0.5317	AVRG		3.6018
52)MA Dibromochloromethane			0.5878043	0.6013645	0.6376920	0.6822386				
	0.6875603	0.7071491	0.7194339				0.6605	AVRG		7.8568
53)MA 1,2-Dibromoethane			0.5226088	0.5257529	0.5362707	0.5493078				
	0.5511653	0.5725864	0.5732181				0.5473	AVRG		3.7490
54)MPA Chlorobenzene			1.7359531	1.6190006	1.6720428	1.6512527				
	1.5901504	1.6271377	1.7165281				1.6589	AVRG		3.1914
55)MA 1,1,1,2-Tetrachloroethan			0.6653655	0.6422243	0.6730990	0.6816558				
	0.6725556	0.6635017	0.7056926				0.6720	AVRG		2.8706
56)MCA Ethylbenzene			2.9722289	2.7925125	2.8586287	2.9776139				
	2.9220776	2.7473610	3.0413878				2.9017	AVRG		3.6759
57)MA m,p-Xylenes			1.0510522	1.0375257	1.1039677	1.0883825				
	1.0623138	1.0628932	1.1077830				1.0734	AVRG		2.5115
58)MA o-Xylene			1.0244921	0.9994002	1.0901704	1.0845111				
	1.0925450	1.0917941	1.1519962				1.0764	AVRG		4.6591
59)MA Styrene			1.5180736	1.5702687	1.7306344	1.7442869				
	1.7857522	1.7741902	1.8495062				1.7104	AVRG		7.0517
61)MPA Bromoform			0.3850241	0.4013735	0.4272025	0.4658675				
	0.4948788	0.5130686	0.5128489				0.4572	AVRG		11.6219
62)MA Isopropylbenzene			2.8867071	3.0980908	3.1530483	3.3120896				
	3.4099075	3.0278098	3.3132434				3.1716	AVRG		5.8164
63)SA Bromofluorobenzene			0.9905776	1.0098627	0.9718630	0.9827040				
	0.9815082	0.9599144	0.9837241				0.9829	AVRG		1.5755

Response Factor Report VOA3
GEL Laboratories, LLC

Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
64)MPA 1,1,2,2-Tetrachloroethan			0.8229882	0.8308494	0.8482282	0.8436838				
	0.8127642	0.8301846	0.8424010				0.8330	AVRG		1.5159
65)MA 1,2,3-Trichloropropane			0.8396300	0.8460695	0.8361775	0.8408952				
	0.7859705	0.8114538	0.8080740				0.8240	AVRG		2.7236
66)MA Bromobenzene			0.7829220	0.7777615	0.7317052	0.8178553				
	0.7877683	0.7628307	0.7845431				0.7779	AVRG		3.3703
67)MA n-Propylbenzene			3.6097812	3.7974381	3.6581508	4.0059051				
	3.9339947	3.5771820	3.8668083				3.7785	AVRG		4.4223
68)MA 1,3,5-Trimethylbenzene			2.5555650	2.7987532	2.7716145	2.8169078				
	2.8410265	2.6031986	2.7626222				2.7357	AVRG		4.0509
69)MA 2-Chlorotoluene			0.7191805	0.7402104	0.7451125	0.7551068				
	0.7701217	0.7255462	0.7628397				0.7454	AVRG		2.5205
70)MA 4-Chlorotoluene			2.4071069	2.4105543	2.2659427	2.5335371				
	2.5200832	2.3520864	2.4135073				2.4147	AVRG		3.8313
71)MA tert-Butylbenzene			0.4531616	0.4990746	0.5127932	0.5254445				
	0.5642953	0.5221345	0.5592740				0.5195	AVRG		7.2432
72)MA 1,2,4-Trimethylbenzene			2.6635803	2.7698714	2.8348477	2.9626504				
	2.8964009	2.5956050	2.9066270				2.8042	AVRG		4.8175
73)MA sec-Butylbenzene			3.4747621	3.6215176	3.7015214	3.8615340				
	3.9099119	3.4861721	3.7664593				3.6888	AVRG		4.6471
74)MA 4-Isopropyltoluene			2.7702139	3.0348967	3.0873807	3.2429126				
	3.3168274	3.0519284	3.2009508				3.1007	AVRG		5.7855
75)MA 1,3-Dichlorobenzene			1.7056987	1.6317943	1.6036838	1.5822535				
	1.5402806	1.4468755	1.5544072				1.5807	AVRG		5.1004
76)MA 1,4-Dichlorobenzene			1.6866076	1.5837960	1.5700143	1.5751564				
	1.5820935	1.4611244	1.5013559				1.5657	AVRG		4.5461
77)MA n-Butylbenzene			2.9521442	3.0120787	3.0962099	3.2510554				
	3.2860583	2.9850483	3.0849508				3.0954	AVRG		4.1776
78)MA 1,2-Dichlorobenzene			1.5613853	1.5208699	1.4863130	1.5571564				
	1.5218942	1.5418185	1.4920127				1.5259	AVRG		1.9379

Response Factor Report VOA3
GEL Laboratories, LLC

Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
79)MA 1,2-Dibromo-3-chloroprop			0.1525401	0.1416569	0.1617466	0.1763196				
	0.1815899	0.1955788	0.1997888				0.1727	AVRG		12.5931
80)MA 1,2,4-Trichlorobenzene			1.2251565	1.1792568	1.2110833	1.3567683				
	1.3383529	1.2619601	1.3334023				1.2723	AVRG		5.5546
81)MA Hexachlorobutadiene			0.8743582	0.8797974	0.8824669	0.9242436				
	0.8952023	0.8182871	0.8721821				0.8781	AVRG		3.6224
82)MA Naphthalene			2.2271862	2.3727839	2.7987196	2.9914903				
	2.9688270	2.9235598	3.0910857				2.7677	AVRG		12.0602
83)MA 1,2,3-Trichlorobenzene			1.2142922	1.2144457	1.2205907	1.3578369				
	1.2915527	1.2268043	1.2990269				1.2606	AVRG		4.4529
85)B Acrolein		0.0342511	0.0484091	0.0455606	0.0522235	0.0553973				
	0.0543665	0.0527212	0.0530230				0.0495	AVRG		14.0377
86)B Trichlorotrifluoroethane		0.3319524	0.3426199	0.3592841	0.3568861	0.3688235				
	0.3641965	0.3485107	0.3633008				0.3544	AVRG		3.5215
87)B Isopropyl Alcohol		0.0176753	0.0206532	0.0204542	0.0225680	0.0242076				
	0.0226396	0.0216397	0.0248701				0.0218	AVRG		10.4805
88)B Allyl chloride		0.1381970	0.1545143	0.1603514	0.1691382	0.1714192				
	0.1683419	0.1596406	0.1648914				0.1608	AVRG		6.6804
89)B tert-Butyl Alcohol		0.0262596	0.0341863	0.0345612	0.0386705	0.0405905				
	0.0367116	0.0357291	0.0405004				0.0359	AVRG		12.8593
90)B Acrylonitrile		0.0823423	0.0897266	0.0944099	0.0982053	0.0967783				
	0.0948205	0.0950253	0.0993914				0.0938	AVRG		5.8413
91)B Isopropyl ether		0.7647030	0.8006504	0.8551917	0.8793898	0.9388461				
	0.8884932	0.8980140	0.9454771				0.8713	AVRG		7.2263
92)B 2-Chloro-1,3-butadiene		0.3577201	0.3585299	0.3979053	0.4125080	0.4410182				
	0.4614680	0.4589907	0.4633113				0.4189	AVRG		10.5794
93)B Ethyl tert-butyl ether		0.7362251	0.7955955	0.8533042	0.8697873	0.9747609				
	0.9215402	0.9438652	0.9152722				0.8763	AVRG		9.1019
94)B Ethyl acetate		0.2379790	0.2440121	0.2483098	0.2636880	0.2753584				
	0.2454912	0.2170561	0.2466668				0.2473	AVRG		6.9580

Response Factor Report VOA3
GEL Laboratories, LLC

Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
95)B Propionitrile		0.0341523	0.0365282	0.0365878	0.0387881	0.0404251				
	0.0376503	0.0366106	0.0398923				0.0376	AVRG		5.4799
96)B Methacrylonitrile		0.0842267	0.1036110	0.1046824	0.1055435	0.1123269				
	0.1034972	0.1021372	0.1115734				0.1034	AVRG		8.3473
97)B Tetrahydrofuran		0.0843467	0.0853100	0.0769385	0.0839426	0.0874733				
	0.0778115	0.0763049	0.0842100				0.0820	AVRG		5.2660
98)B Isobutyl alcohol		0.0097552	0.0118466	0.0121744	0.0134804	0.0147126				
	0.0132780	0.0130695	0.0146183				0.0129	AVRG	$	12.5538
99)B Methyl tert-amyl ether		0.6816337	0.7307856	0.8034835	0.8110923	0.8503573				
	0.8336265	0.8509845	0.8745490				0.8046	AVRG		8.2168
100)B Methyl methacrylate		0.1215973	0.1446739	0.1625029	0.1700932	0.1813319				
	0.1672783	0.1554777	0.1816427				0.1606	AVRG		12.4820
101)B 1,4-Dioxane		0.0027483	0.0029322	0.0031057	0.0033326	0.0034283				
	0.0031470	0.0031868	0.0037766				0.0032	AVRG	#	9.7849
102)B 2-Nitropropane		7038	15931	44101	97872	207529		1/x		
-0.0061 | 0.0918 | 0.00	524270	1043063	666527					LINR	#	0.9978
104)B Ethyl methacrylate		0.5682944	0.6548561	0.7189086	0.7657168	0.7538755				
	0.7125975	0.7162156	0.7441546				0.7043	AVRG		9.1675
106)B 1-Chlorohexane		0.6895834	0.6718532	0.7925257	0.7412232	0.8585489				
	0.8945375	0.9049018	0.8832223				0.8045	AVRG		11.7215
107)B cis-1,4-Dichloro-2-buten		0.2047927	0.2212962	0.2478673	0.2477764	0.2755915				
	0.2853779	0.2497477	0.2762270				0.2511	AVRG		11.1253
108)B Cyclohexanone		0.0221061	0.0212493	0.0191393	0.0210490	0.0227748				
	0.0210087	0.0196631	0.0216124				0.0211	AVRG		5.6760
109)B trans-1,4-Dichloro-2-but		0.1751010	0.2187715	0.2318751	0.2416506	0.2549697				
	0.2365454	0.2074053	0.2411871				0.2259	AVRG		11.1585
110)B Pentachloroethane		0.4508414	0.4716120	0.5044529	0.5234995	0.5316345				
	0.5727900	0.4998805	0.5162774				0.5089	AVRG		7.3260
111)B Benzyl chloride		1.0864145	1.1701698	1.2784486	1.4284990	1.4578242				
	1.3937283	1.2262258	1.3754649				1.3021	AVRG		10.2318

Response Factor Report VOA3
GEL Laboratories, LLC

Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r2
b m1 m2	6	7	9							
112)B bis(2-Chloroisopropyl)et		0.3549430	0.3619071	0.3653618	0.3731773	0.4021177				
	0.3799905	0.3720901	0.4201239				0.3787	AVRG		5.7889

(#) = Out of Range ($) = Individual RF Out of Range
AVRG = Average, LINR = Linear Regression, 1/x = the inverse of concentration, 1/x^2 = the inverse square of concentration

Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O104.D
Acq On : 02 Jul 2018 13:56
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-03|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD002 5UL/5ML N/A MIX[A]
ALS Vial : 4 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:34:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.768	12.761	1.000	1023509	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	430628	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	398092	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.768	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	191705	50.05	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1025069	51.09	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	394341	50.39	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	17806	2.02	ug/L	100
3) Chloromethane	50	4.991	4.990	0.391	19563	2.19	ug/L	96
4) Vinyl chloride	62	5.301	5.319	0.415	17505	2.04	ug/L	100
5) Bromomethane	94	6.123	6.159	0.480	13677	2.24	ug/L	92
6) Chloroethane	64	6.372	6.372	0.499	11054	1.85	ug/L	93
7) Trichlorofluoromethane	101	7.055	7.061	0.553	27617	2.11	ug/L	98
8) Ethyl ether	59	7.610	7.610	0.596	8319	1.78	ug/L	93
9) Acetone	43	8.250	8.232	0.646	40552	10.97	ug/L	96
10) 1,1-Dichloroethylene	61	8.171	8.177	0.640	22794	2.07	ug/L	100
11) Iodomethane	142	8.494	8.500	0.665	104389	10.30	ug/L	99
12) Acetonitrile	41	8.829	8.817	0.692	42660	53.02	ug/L	96
13) Methyl acetate	74	8.860	8.854	0.694	10027	9.64	ug/L #	86
14) Carbon disulfide	76	8.671	8.665	0.679	227109	10.76	ug/L	95
15) Methylene chloride	84	9.091	9.091	0.712	20622	1.98	ug/L	98
16) tert-Butyl methyl ether	73	9.524	9.537	0.746	31376	1.84	ug/L	99
17) trans-1,2-Dichloroethy...	61	9.573	9.567	0.750	18775	2.02	ug/L	98
18) Hexane	57	9.994	9.988	0.783	17800	2.10	ug/L	87
19) Vinyl acetate	43	10.323	10.317	0.809	67620	8.55	ug/L	97
20) 1,1-Dichloroethane	63	10.292	10.286	0.806	25550	2.17	ug/L	96
21) 2-Butanone	72	11.189	11.183	0.876	8339	9.36	ug/L #	74
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	12628	2.05	ug/L	99
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	21202	2.09	ug/L	89
24) Bromochloromethane	128	11.548	11.548	0.905	5402	1.91	ug/L	90
25) Chloroform	83	11.621	11.628	0.910	25666	2.12	ug/L	98
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.933	23524	2.12	ug/L	99
27) Cyclohexane	56	11.999	11.999	0.940	19325	1.96	ug/L	98
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	16821	2.00	ug/L	96
29) Carbon tetrachloride	117	12.140	12.146	0.951	20585	2.02	ug/L	99
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	19880	2.08	ug/L	97
32) Benzene	78	12.420	12.426	0.973	49053	2.08	ug/L	99
33) Cyclohexene	67	12.542	12.548	0.982	23193	1.94	ug/L	97
34) n-Butyl alcohol	56	13.024	13.024	1.020	25497	235.29	ug/L	91
35) Trichloroethylene	95	13.225	13.225	1.036	13043	2.11	ug/L	99
36) 2-Pentanone	43	13.402	13.396	1.050	33078	8.24	ug/L	98
37) 1,2-Dichloropropane	63	13.524	13.524	1.059	11672	1.95	ug/L	99
38) Methylcyclohexane	83	13.475	13.475	1.055	19574	1.94	ug/L	97
39) Dibromomethane	93	13.688	13.682	1.072	7504	1.97	ug/L	98
40) Bromodichloromethane	83	13.834	13.834	1.084	16957	1.91	ug/L	98
41) 2-Chloroethylvinyl ether	63	14.133	14.127	1.107	25946	7.83	ug/L	98
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.124	17373	1.82	ug/L	96

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O104.D
Acq On : 02 Jul 2018 13:56
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-03|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD002 5UL/5ML N/A MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 03 07:34:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	16686	8.80	ug/L	97
46)	Toluene	91	14.755	14.755	0.904	45921	2.12	ug/L	99
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	15802	1.87	ug/L	98
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	8091	1.99	ug/L	96
49)	2-Hexanone	58	15.420	15.413	0.945	21348	8.99	ug/L	93
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	16232	2.00	ug/L	96
51)	Tetrachloroethylene	164	15.383	15.383	0.943	9633	2.10	ug/L	97
52)	Dibromochloromethane	129	15.682	15.676	0.961	10125	1.78	ug/L	100
53)	1,2-Dibromoethane	107	15.834	15.840	0.970	9002	1.91	ug/L	97
54)	Chlorobenzene	112	16.352	16.352	1.002	29902	2.09	ug/L	76
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	11461	1.98	ug/L	98
56)	Ethylbenzene	91	16.419	16.425	1.006	51197	2.05	ug/L	97
57)	m,p-Xylenes	106	16.541	16.541	1.014	36209	3.92	ug/L	96
58)	o-Xylene	106	16.986	16.986	1.041	17647	1.90	ug/L	97
59)	Styrene	104	16.998	16.992	1.042	26149	1.78	ug/L	99
61)	Bromoform	173	17.261	17.261	0.919	6131	1.68	ug/L	99
62)	Isopropylbenzene	105	17.358	17.358	0.924	45967	1.82	ug/L	98
64)	1,1,2,2-Tetrachloroethane	83	17.663	17.663	0.940	13105	1.98	ug/L	98
65)	1,2,3-Trichloropropane	75	17.754	17.748	0.945	13370	2.04	ug/L	93
66)	Bromobenzene	156	17.767	17.767	0.945	12467	2.01	ug/L	98
67)	n-Propylbenzene	91	17.791	17.791	0.947	57481	1.91	ug/L	97
68)	1,3,5-Trimethylbenzene	105	17.943	17.949	0.955	40694	1.87	ug/L	97
69)	2-Chlorotoluene	126	17.937	17.937	0.955	11452	1.93	ug/L	96
70)	4-Chlorotoluene	91	18.041	18.041	0.960	38330	1.99	ug/L	99
71)	tert-Butylbenzene	134	18.321	18.321	0.975	7216	1.74	ug/L #	90
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	42414	1.90	ug/L	89
73)	sec-Butylbenzene	105	18.547	18.547	0.987	55331	1.88	ug/L	99
74)	4-Isopropyltoluene	119	18.669	18.675	0.994	44112	1.79	ug/L	97
75)	1,3-Dichlorobenzene	146	18.736	18.730	0.997	27161	2.16	ug/L	98
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	26857	2.15	ug/L	85
77)	n-Butylbenzene	91	19.108	19.108	1.017	47009	1.91	ug/L	95
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	24863	2.05	ug/L	99
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	2429	1.77	ug/L	93
80)	1,2,4-Trichlorobenzene	180	21.126	21.113	1.124	19509	1.93	ug/L	100
81)	Hexachlorobutadiene	225	21.272	21.278	1.132	13923	1.99	ug/L	99
82)	Naphthalene	128	21.498	21.491	1.144	35465	1.61	ug/L	99
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	19336	1.93	ug/L	98
85)	Acrolein		0.000	7.927	0.000	0	N.D.		
86)	Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.		
87)	Isopropyl Alcohol		0.000	8.464	0.000	0	N.D.		
88)	Allyl chloride		8.671	8.842	0.679	0m	N.D.	d	
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.		
90)	Acrylonitrile		0.000	9.531	0.000	0	N.D.		
91)	Isopropyl ether		10.323	10.317	0.809	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.		
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.189	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		0.000	11.305	0.000	0	N.D.		
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.609	11.597	0.909	0m	N.D.	d	
98)	Isobutyl alcohol		0.000	12.176	0.000	0	N.D.		
99)	Methyl tert-amyl ether		12.426	12.500	0.973	0m	N.D.	d	
100)	Methyl methacrylate		13.481	13.560	1.056	0m	N.D.	d	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.		
102)	2-Nitropropane		14.133	14.103	1.107	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O104.D
Acq On : 02 Jul 2018 13:56
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-03|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD002 5UL/5ML N/A MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 03 07:34:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

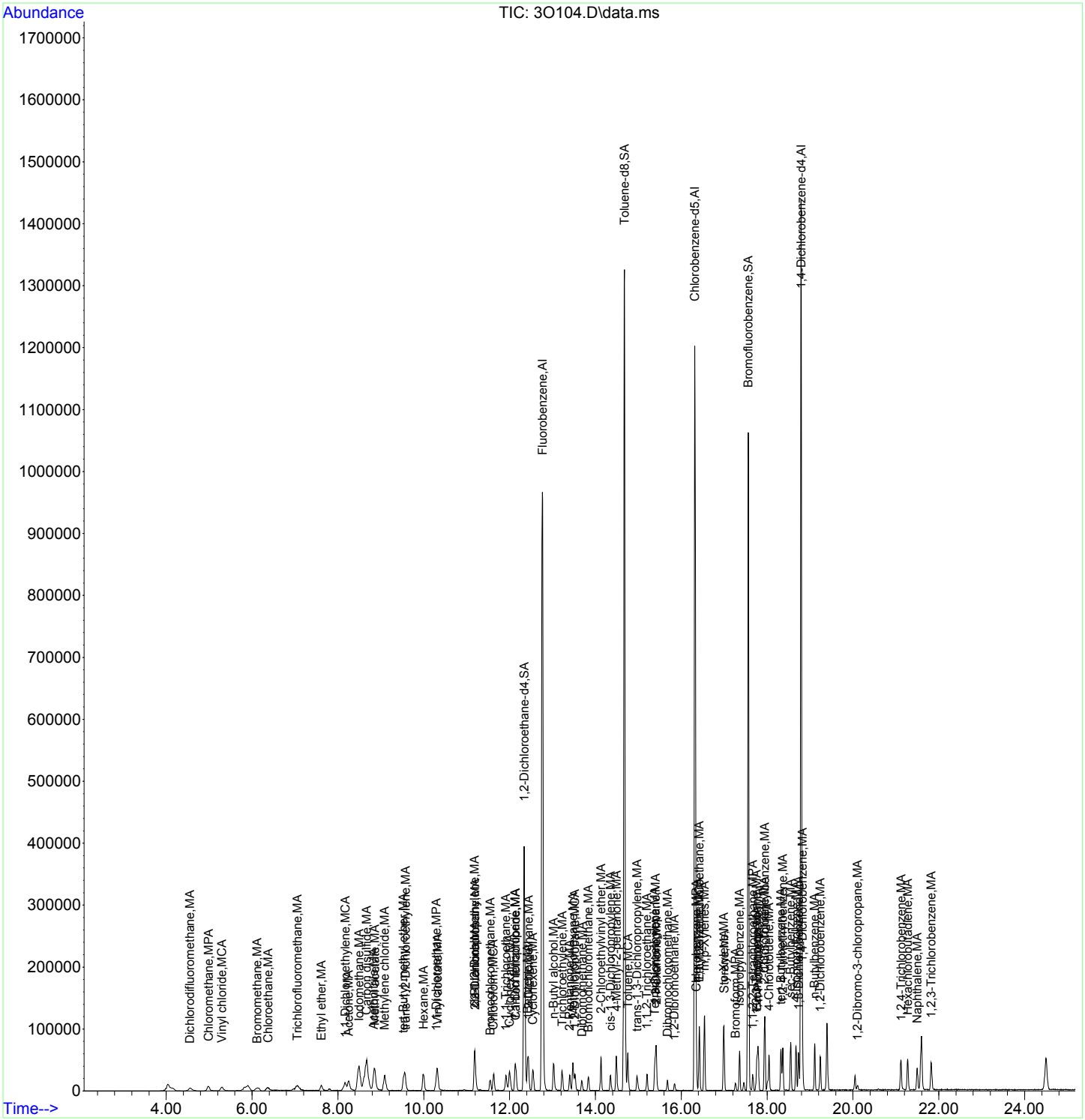
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.553	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.797	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111) Benzyl chloride		18.943	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O104.D
Acq On : 02 Jul 2018 13:56
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-03|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD002 5UL/5ML N/A MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 03 07:34:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O105.D
Acq On : 02 Jul 2018 14:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-04|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[A]
ALS Vial : 5 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:34:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.761	12.761	1.000	1028997	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	453502	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	410640	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	197332	51.24	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1044444	49.43	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	414690	51.37	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	47760	5.40	ug/L	97
3) Chloromethane	50	4.972	4.990	0.390	47696	5.32	ug/L	99
4) Vinyl chloride	62	5.301	5.319	0.415	45388	5.27	ug/L	99
5) Bromomethane	94	6.123	6.159	0.480	30581	4.99	ug/L	96
6) Chloroethane	64	6.372	6.372	0.499	30306	5.05	ug/L	100
7) Trichlorofluoromethane	101	7.061	7.061	0.553	69301	5.26	ug/L	100
8) Ethyl ether	59	7.610	7.610	0.596	22434	4.79	ug/L	96
9) Acetone	43	8.244	8.232	0.646	98349	26.47	ug/L	97
10) 1,1-Dichloroethylene	61	8.171	8.177	0.640	55731	5.03	ug/L	99
11) Iodomethane	142	8.488	8.500	0.665	258404	25.36	ug/L	99
12) Acetonitrile	41	8.835	8.817	0.692	104292	128.92	ug/L	97
13) Methyl acetate	74	8.860	8.854	0.694	26108	24.97	ug/L #	87
14) Carbon disulfide	76	8.671	8.665	0.679	557290	26.26	ug/L	99
15) Methylene chloride	84	9.085	9.091	0.712	41401	5.12	ug/L	98
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	83822	4.90	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	50165	5.38	ug/L	99
18) Hexane	57	9.994	9.988	0.783	41720	4.89	ug/L	90
19) Vinyl acetate	43	10.317	10.317	0.808	183847	23.13	ug/L	98
20) 1,1-Dichloroethane	63	10.280	10.286	0.806	61048	5.15	ug/L	100
21) 2-Butanone	72	11.176	11.183	0.876	23371	26.08	ug/L #	87
22) cis-1,2-Dichloroethylene	96	11.189	11.183	0.877	32305	5.21	ug/L	97
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	52281	5.12	ug/L	91
24) Bromochloromethane	128	11.548	11.548	0.905	14742	5.18	ug/L	98
25) Chloroform	83	11.628	11.628	0.911	64004	5.26	ug/L	97
26) 1,1,1-Trichloroethane	97	11.920	11.914	0.934	56686	5.09	ug/L	98
27) Cyclohexane	56	11.993	11.999	0.940	48825	4.92	ug/L	99
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	43766	5.18	ug/L	98
29) Carbon tetrachloride	117	12.146	12.146	0.952	52441	5.11	ug/L	99
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	51930	5.41	ug/L	98
32) Benzene	78	12.426	12.426	0.974	122316	5.16	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	59277	4.94	ug/L	99
34) n-Butyl alcohol	56	13.024	13.024	1.021	72339	497.65	ug/L	95
35) Trichloroethylene	95	13.225	13.225	1.036	31614	5.09	ug/L	100
36) 2-Pentanone	43	13.402	13.396	1.050	93926	23.28	ug/L	98
37) 1,2-Dichloropropane	63	13.530	13.524	1.060	30858	5.13	ug/L	100
38) Methylcyclohexane	83	13.475	13.475	1.056	51289	5.07	ug/L	97
39) Dibromomethane	93	13.682	13.682	1.072	19703	5.16	ug/L	98
40) Bromodichloromethane	83	13.834	13.834	1.084	44043	4.93	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	77202	23.18	ug/L	99
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	45761	4.77	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O105.D
Acq On : 02 Jul 2018 14:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-04|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 03 07:34:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	46392	23.24	ug/L	92
46)	Toluene	91	14.755	14.755	0.904	117751	5.16	ug/L	98
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	39313	4.42	ug/L	97
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	20970	4.91	ug/L	98
49)	2-Hexanone	58	15.413	15.413	0.945	62910	25.14	ug/L	91
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	43634	5.10	ug/L	90
51)	Tetrachloroethylene	164	15.383	15.383	0.943	24023	4.98	ug/L	98
52)	Dibromochloromethane	129	15.682	15.676	0.961	27272	4.55	ug/L	99
53)	1,2-Dibromoethane	107	15.846	15.840	0.971	23843	4.80	ug/L	97
54)	Chlorobenzene	112	16.352	16.352	1.002	73422	4.88	ug/L	89
55)	1,1,1,2-Tetrachloroethane	131	16.413	16.419	1.006	29125	4.78	ug/L	99
56)	Ethylbenzene	91	16.425	16.425	1.007	126641	4.81	ug/L	98
57)	m,p-Xylenes	106	16.535	16.541	1.013	94104	9.67	ug/L	96
58)	o-Xylene	106	16.986	16.986	1.041	45323	4.64	ug/L	94
59)	Styrene	104	16.998	16.992	1.042	71212	4.59	ug/L	96
61)	Bromoform	173	17.261	17.261	0.919	16482	4.39	ug/L	100
62)	Isopropylbenzene	105	17.358	17.358	0.924	127220	4.88	ug/L	99
64)	1,1,2,2-Tetrachloroethane	83	17.663	17.663	0.940	34118	4.99	ug/L	99
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	34743	5.13	ug/L	98
66)	Bromobenzene	156	17.767	17.767	0.945	31938	5.00	ug/L	92
67)	n-Propylbenzene	91	17.791	17.791	0.947	155938	5.03	ug/L	99
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	114928	5.12	ug/L	99
69)	2-Chlorotoluene	126	17.937	17.937	0.955	30396	4.96	ug/L	93
70)	4-Chlorotoluene	91	18.041	18.041	0.960	98987	4.99	ug/L	99
71)	tert-Butylbenzene	134	18.321	18.321	0.975	20494	4.80	ug/L	96
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	113742	4.94	ug/L	99
73)	sec-Butylbenzene	105	18.547	18.547	0.987	148714	4.91	ug/L	98
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	124625	4.89	ug/L	98
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	67008	5.16	ug/L	99
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	65037	5.06	ug/L	93
77)	n-Butylbenzene	91	19.108	19.108	1.017	123688	4.87	ug/L	99
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	62453	4.98	ug/L	98
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	5817	4.10	ug/L	89
80)	1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	48425	4.63	ug/L	98
81)	Hexachlorobutadiene	225	21.278	21.278	1.132	36128	5.01	ug/L	98
82)	Naphthalene	128	21.498	21.491	1.144	97436	4.29	ug/L	99
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	49870	4.82	ug/L	97
85)	Acrolein		0.000	7.927	0.000	0	N.D.		
86)	Trichlorotrifluoroethane		8.159	8.165	0.639	0m	N.D.	d	
87)	Isopropyl Alcohol		8.634	8.464	0.677	0m	N.D.	d	
88)	Allyl chloride		8.671	8.842	0.679	0m	N.D.	d	
89)	tert-Butyl Alcohol		9.226	9.220	0.723	0m	N.D.	d	
90)	Acrylonitrile		9.537	9.531	0.747	0m	N.D.	d	
91)	Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.		
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.183	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		0.000	11.305	0.000	0	N.D.		
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.615	11.597	0.910	0m	N.D.	d	
98)	Isobutyl alcohol		12.176	12.176	0.954	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.426	12.500	0.974	0m	N.D.	d	
100)	Methyl methacrylate		13.475	13.560	1.056	0m	N.D.	d	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.		
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O105.D
Acq On : 02 Jul 2018 14:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-04|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 03 07:34:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

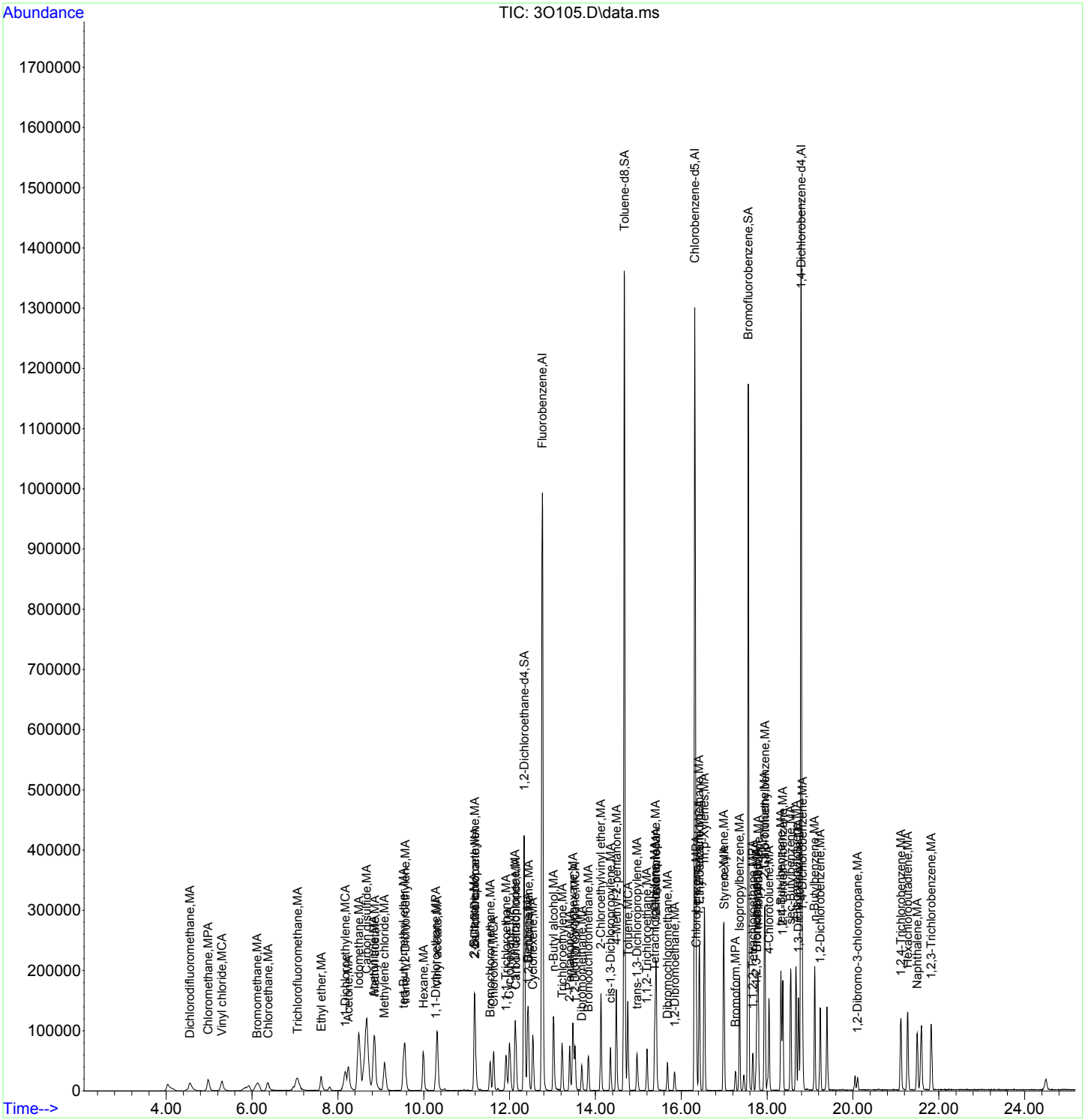
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		15.005	14.987	0.920	0m	N.D.	d
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.797	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.395	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.937	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O105.D
Acq On : 02 Jul 2018 14:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-04|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 03 07:34:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O106.D
Acq On : 02 Jul 2018 14:59
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-05|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[A]
ALS Vial : 6 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:35:00 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.761	12.761	1.000	1013322	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	436496	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	412837	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	193474	51.02	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1015517	49.94	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	401221	49.44	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	83051	9.53	ug/L	96
3) Chloromethane	50	4.990	4.990	0.391	89143	10.09	ug/L	99
4) Vinyl chloride	62	5.301	5.319	0.415	87492	10.31	ug/L	98
5) Bromomethane	94	6.123	6.159	0.480	58462	9.69	ug/L	96
6) Chloroethane	64	6.354	6.372	0.498	59264	10.02	ug/L	99
7) Trichlorofluoromethane	101	7.049	7.061	0.552	133520	10.30	ug/L	99
8) Ethyl ether	59	7.604	7.610	0.596	44379	9.62	ug/L	96
9) Acetone	43	8.238	8.232	0.646	208400	56.96	ug/L	98
10) 1,1-Dichloroethylene	61	8.165	8.177	0.640	108357	9.93	ug/L	99
11) Iodomethane	142	8.494	8.500	0.666	497901	49.61	ug/L	99
12) Acetonitrile	41	8.817	8.817	0.691	210586	264.35	ug/L	98
13) Methyl acetate	74	8.854	8.854	0.694	56599	54.97	ug/L	96
14) Carbon disulfide	76	8.671	8.665	0.679	1080115	51.67	ug/L	100
15) Methylene chloride	84	9.085	9.091	0.712	71667	9.90	ug/L	99
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	171620	10.18	ug/L	99
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	95736	10.42	ug/L	97
18) Hexane	57	9.988	9.988	0.783	81425	9.69	ug/L	96
19) Vinyl acetate	43	10.317	10.317	0.808	398037	50.86	ug/L	99
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	116667	9.99	ug/L	99
21) 2-Butanone	72	11.182	11.183	0.876	48382	54.83	ug/L	92
22) cis-1,2-Dichloroethylene	96	11.189	11.183	0.877	59056	9.67	ug/L	97
23) 2,2-Dichloropropane	77	11.189	11.195	0.877	99362	9.88	ug/L	96
24) Bromochloromethane	128	11.542	11.548	0.904	27842	9.93	ug/L	96
25) Chloroform	83	11.628	11.628	0.911	119638	9.98	ug/L	100
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	109342	9.97	ug/L	98
27) Cyclohexane	56	11.999	11.999	0.940	97575	9.98	ug/L	99
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	80077	9.62	ug/L	95
29) Carbon tetrachloride	117	12.146	12.146	0.952	101497	10.04	ug/L	99
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	97815	10.34	ug/L	99
32) Benzene	78	12.426	12.426	0.974	234089	10.03	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	117756	9.97	ug/L	97
34) n-Butyl alcohol	56	13.024	13.024	1.021	166645	1041.87	ug/L	96
35) Trichloroethylene	95	13.225	13.225	1.036	61239	10.02	ug/L	98
36) 2-Pentanone	43	13.402	13.396	1.050	219498	55.25	ug/L	97
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	58356	9.86	ug/L	97
38) Methylcyclohexane	83	13.475	13.475	1.056	97608	9.79	ug/L	96
39) Dibromomethane	93	13.682	13.682	1.072	37471	9.96	ug/L	98
40) Bromodichloromethane	83	13.834	13.834	1.084	85629	9.73	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	161264	49.16	ug/L	99
42) cis-1,3-Dichloropropylene	75	14.347	14.353	1.124	94768	10.02	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O106.D
Acq On : 02 Jul 2018 14:59
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-05|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[A]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 03 07:35:00 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	105633	54.98	ug/L	96
46)	Toluene	91	14.755	14.755	0.904	219444	10.00	ug/L	99
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	85479	10.00	ug/L	98
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	42222	10.27	ug/L	98
49)	2-Hexanone	58	15.413	15.413	0.945	142520	59.18	ug/L	95
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	86150	10.45	ug/L	89
51)	Tetrachloroethylene	164	15.383	15.383	0.943	47335	10.20	ug/L	99
52)	Dibromochloromethane	129	15.682	15.676	0.961	55670	9.66	ug/L	99
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	46816	9.80	ug/L	100
54)	Chlorobenzene	112	16.352	16.352	1.002	145968	10.08	ug/L	95
55)	1,1,1,2-Tetrachloroethane	131	16.413	16.419	1.006	58761	10.02	ug/L	99
56)	Ethylbenzene	91	16.419	16.425	1.006	249556	9.85	ug/L	99
57)	m,p-Xylenes	106	16.535	16.541	1.013	192751	20.57	ug/L	97
58)	o-Xylene	106	16.986	16.986	1.041	95171	10.13	ug/L	98
59)	Styrene	104	16.992	16.992	1.041	151083	10.12	ug/L	97
61)	Bromoform	173	17.261	17.261	0.919	35273	9.34	ug/L	99
62)	Isopropylbenzene	105	17.358	17.358	0.924	260339	9.94	ug/L	99
64)	1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	70036	10.18	ug/L	100
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	69041	10.15	ug/L	92
66)	Bromobenzene	156	17.767	17.767	0.945	60415	9.41	ug/L	93
67)	n-Propylbenzene	91	17.791	17.791	0.947	302044	9.68	ug/L	99
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	228845	10.13	ug/L	100
69)	2-Chlorotoluene	126	17.943	17.937	0.955	61522	10.00	ug/L	95
70)	4-Chlorotoluene	91	18.047	18.041	0.960	187093	9.38	ug/L	99
71)	tert-Butylbenzene	134	18.321	18.321	0.975	42340	9.87	ug/L	94
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	234066	10.11	ug/L	100
73)	sec-Butylbenzene	105	18.547	18.547	0.987	305625	10.03	ug/L	99
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	254917	9.96	ug/L	99
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	132412	10.15	ug/L	99
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	129632	10.03	ug/L	98
77)	n-Butylbenzene	91	19.108	19.108	1.017	255646	10.00	ug/L	98
78)	1,2-Dichlorobenzene	146	19.242	19.236	1.024	122721	9.74	ug/L	98
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	13355	9.36	ug/L	94
80)	1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	99996	9.52	ug/L	99
81)	Hexachlorobutadiene	225	21.272	21.278	1.132	72863	10.05	ug/L	98
82)	Naphthalene	128	21.498	21.491	1.144	231083	10.11	ug/L	100
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	100781	9.68	ug/L	98
85)	Acrolein		0.000	7.927	0.000	0	N.D.		
86)	Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.		
87)	Isopropyl Alcohol		8.683	8.464	0.680	0m	N.D.	d	
88)	Allyl chloride		8.939	8.842	0.700	0m	N.D.	d	
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.		
90)	Acrylonitrile		9.543	9.531	0.748	0m	N.D.	d	
91)	Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.		
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.176	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		0.000	11.305	0.000	0	N.D.		
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.615	11.597	0.910	0m	N.D.	d	
98)	Isobutyl alcohol		12.134	12.176	0.951	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.548	12.500	0.983	0m	N.D.	d	
100)	Methyl methacrylate		13.481	13.560	1.056	0m	N.D.	d	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.		
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O106.D
Acq On : 02 Jul 2018 14:59
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-05|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[A]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 03 07:35:00 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.395	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.943	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O106.D
Acq On    : 02 Jul 2018  14:59
Operator  : JP1
InstName  : VOA3
Sample    : |W3VM180702-05|ICAL|1|VOA|1|VOA8260CL|
Misc      : VSTD010 5UL/5ML N/A MIX[A]
ALS Vial  : 6   Sample Multiplier: 1

Quant Time: Jul 03 07:35:00 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title  : Volatile Organics 8260B                    SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE
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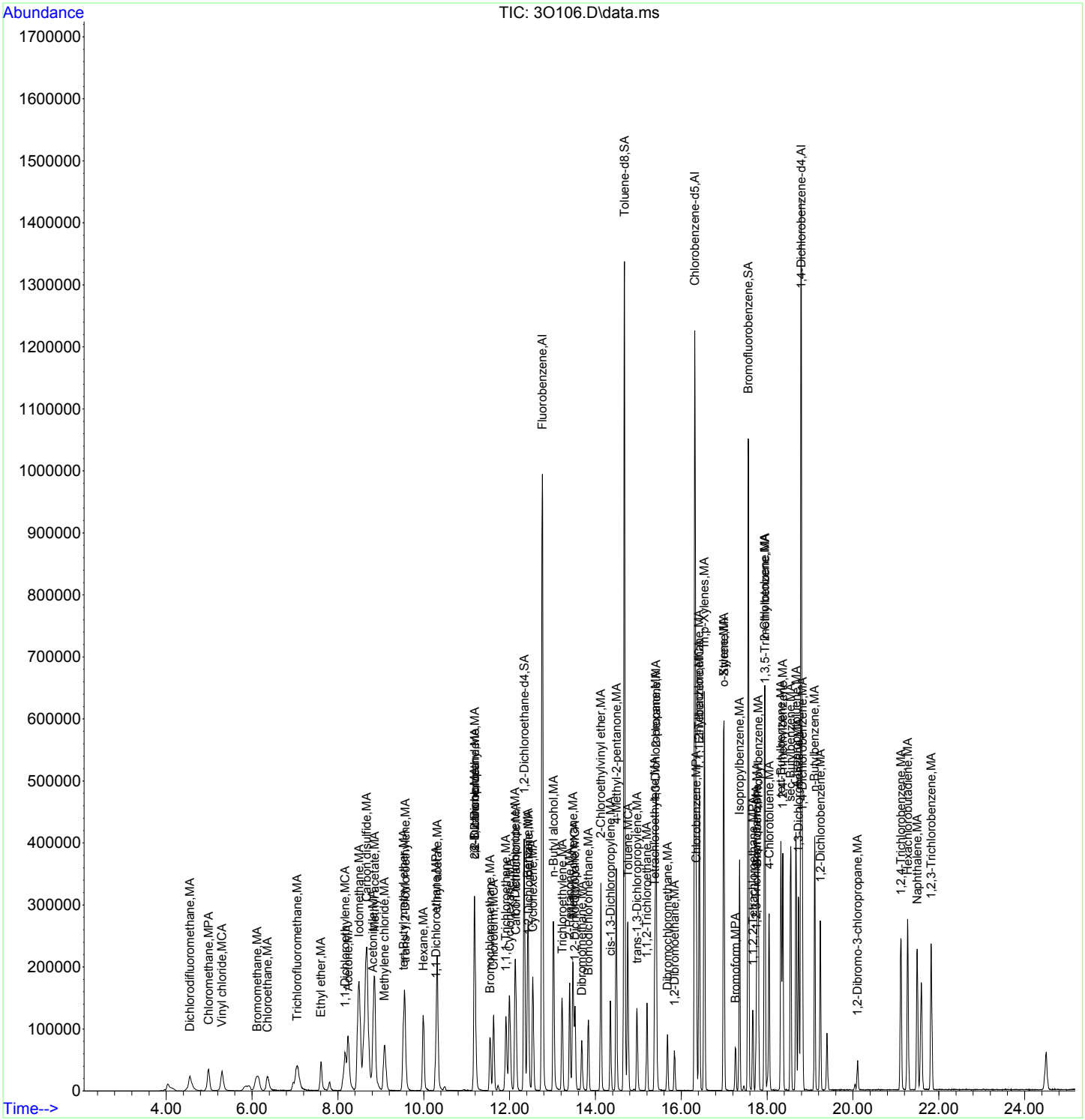


Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O107.D
Acq On : 02 Jul 2018 15:30
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-06|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD020 5UL/5ML N/A MIX[A]
ALS Vial : 7 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:35:02 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.761	12.761	1.000	1072711	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	463324	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	437501	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	202217	50.37	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1040012	48.18	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	429934	49.99	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	178177	19.32	ug/L	100
3) Chloromethane	50	4.990	4.990	0.391	181094	19.36	ug/L	100
4) Vinyl chloride	62	5.301	5.319	0.415	175463	19.53	ug/L	98
5) Bromomethane	94	6.141	6.159	0.481	123712	19.37	ug/L	100
6) Chloroethane	64	6.366	6.372	0.499	128463	20.52	ug/L	99
7) Trichlorofluoromethane	101	7.055	7.061	0.553	279054	20.33	ug/L	99
8) Ethyl ether	59	7.604	7.610	0.596	99392	20.34	ug/L	98
9) Acetone	43	8.238	8.232	0.646	395190	102.04	ug/L	100
10) 1,1-Dichloroethylene	61	8.171	8.177	0.640	219953	19.04	ug/L	100
11) Iodomethane	142	8.494	8.500	0.666	1007190	94.81	ug/L	99
12) Acetonitrile	41	8.817	8.817	0.691	422130	500.56	ug/L	99
13) Methyl acetate	74	8.854	8.854	0.694	108365	99.42	ug/L	97
14) Carbon disulfide	76	8.677	8.665	0.680	2019868	91.28	ug/L	100
15) Methylene chloride	84	9.085	9.091	0.712	142017	19.57	ug/L	98
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	354452	19.86	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	189998	19.54	ug/L	99
18) Hexane	57	9.994	9.988	0.783	179797	20.21	ug/L	97
19) Vinyl acetate	43	10.317	10.317	0.808	902094	108.89	ug/L	99
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	243175	19.67	ug/L	99
21) 2-Butanone	72	11.182	11.183	0.876	94856	101.55	ug/L	93
22) cis-1,2-Dichloroethylene	96	11.182	11.183	0.876	129577	20.03	ug/L	98
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	214790	20.17	ug/L	97
24) Bromochloromethane	128	11.548	11.548	0.905	59375	20.00	ug/L	99
25) Chloroform	83	11.627	11.628	0.911	258682	20.38	ug/L	99
26) 1,1,1-Trichloroethane	97	11.920	11.914	0.934	234352	20.18	ug/L	99
27) Cyclohexane	56	11.993	11.999	0.940	199411	19.27	ug/L	99
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	178522	20.26	ug/L	100
29) Carbon tetrachloride	117	12.146	12.146	0.952	217260	20.30	ug/L	99
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	203578	20.34	ug/L	99
32) Benzene	78	12.426	12.426	0.974	474724	19.21	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	245650	19.65	ug/L	100
34) n-Butyl alcohol	56	13.024	13.024	1.021	374899	2111.39	ug/L	98
35) Trichloroethylene	95	13.225	13.225	1.036	127031	19.63	ug/L	98
36) 2-Pentanone	43	13.395	13.396	1.050	445747	105.99	ug/L	99
37) 1,2-Dichloropropane	63	13.523	13.524	1.060	125111	19.96	ug/L	99
38) Methylcyclohexane	83	13.481	13.475	1.056	206586	19.57	ug/L	98
39) Dibromomethane	93	13.682	13.682	1.072	79010	19.84	ug/L	98
40) Bromodichloromethane	83	13.834	13.834	1.084	193044	20.71	ug/L	98
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	355909	102.50	ug/L	99
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	201573	20.14	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O107.D
Acq On : 02 Jul 2018 15:30
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-06|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD020 5UL/5ML N/A MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 03 07:35:02 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	218724	107.25	ug/L	96
46)	Toluene	91	14.755	14.755	0.904	455887	19.56	ug/L	99
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	184289	20.30	ug/L	98
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	88162	20.19	ug/L	99
49)	2-Hexanone	58	15.419	15.413	0.945	247526	96.84	ug/L	95
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	174193	19.91	ug/L	96
51)	Tetrachloroethylene	164	15.383	15.383	0.943	99842	20.26	ug/L	99
52)	Dibromochloromethane	129	15.675	15.676	0.961	126439	20.66	ug/L	100
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	101803	20.07	ug/L	100
54)	Chlorobenzene	112	16.352	16.352	1.002	306026	19.91	ug/L	98
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	126331	20.29	ug/L	100
56)	Ethylbenzene	91	16.425	16.425	1.007	551840	20.52	ug/L	98
57)	m,p-Xylenes	106	16.541	16.541	1.014	403419	40.56	ug/L	98
58)	o-Xylene	106	16.986	16.986	1.041	200992	20.15	ug/L	98
59)	Styrene	104	16.992	16.992	1.041	323268	20.40	ug/L	98
61)	Bromoform	173	17.261	17.261	0.919	81527	20.38	ug/L	100
62)	Isopropylbenzene	105	17.358	17.358	0.924	579617	20.89	ug/L	98
64)	1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	147645	20.26	ug/L	99
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	147157	20.41	ug/L	97
66)	Bromobenzene	156	17.767	17.767	0.945	143125	21.03	ug/L	99
67)	n-Propylbenzene	91	17.791	17.791	0.947	701035	21.20	ug/L	100
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	492960	20.59	ug/L	100
69)	2-Chlorotoluene	126	17.937	17.937	0.955	132144	20.26	ug/L	100
70)	4-Chlorotoluene	91	18.047	18.041	0.960	443370	20.98	ug/L	100
71)	tert-Butylbenzene	134	18.321	18.321	0.975	91953	20.23	ug/L	94
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	518465	21.13	ug/L	100
73)	sec-Butylbenzene	105	18.547	18.547	0.987	675770	20.94	ug/L	100
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	567511	20.92	ug/L	99
75)	1,3-Dichlorobenzene	146	18.736	18.730	0.997	276895	20.02	ug/L	99
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	275653	20.12	ug/L	99
77)	n-Butylbenzene	91	19.108	19.108	1.017	568936	21.01	ug/L	99
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	272503	20.41	ug/L	99
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	30856	20.41	ug/L	95
80)	1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	237435	21.33	ug/L	100
81)	Hexachlorobutadiene	225	21.278	21.278	1.132	161743	21.05	ug/L	99
82)	Naphthalene	128	21.497	21.491	1.144	523512	21.62	ug/L	100
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	237622	21.54	ug/L	98
85)	Acrolein		0.000	7.927	0.000	0	N.D.		
86)	Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.		
87)	Isopropyl Alcohol		8.652	8.464	0.678	0m	N.D.	d	
88)	Allyl chloride		8.677	8.842	0.680	0m	N.D.	d	
89)	tert-Butyl Alcohol		8.982	9.220	0.704	0m	N.D.	d	
90)	Acrylonitrile		9.536	9.531	0.747	0m	N.D.	d	
91)	Isopropyl ether		10.311	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		10.481	10.427	0.821	0m	N.D.	d	
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.182	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		11.182	11.305	0.876	0m	N.D.	d	
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.609	11.597	0.910	0m	N.D.	d	
98)	Isobutyl alcohol		12.170	12.176	0.954	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.548	12.500	0.983	0m	N.D.	d	
100)	Methyl methacrylate		13.475	13.560	1.056	0m	N.D.	d	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.		
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O107.D
Acq On : 02 Jul 2018 15:30
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-06|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD020 5UL/5ML N/A MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 03 07:35:02 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

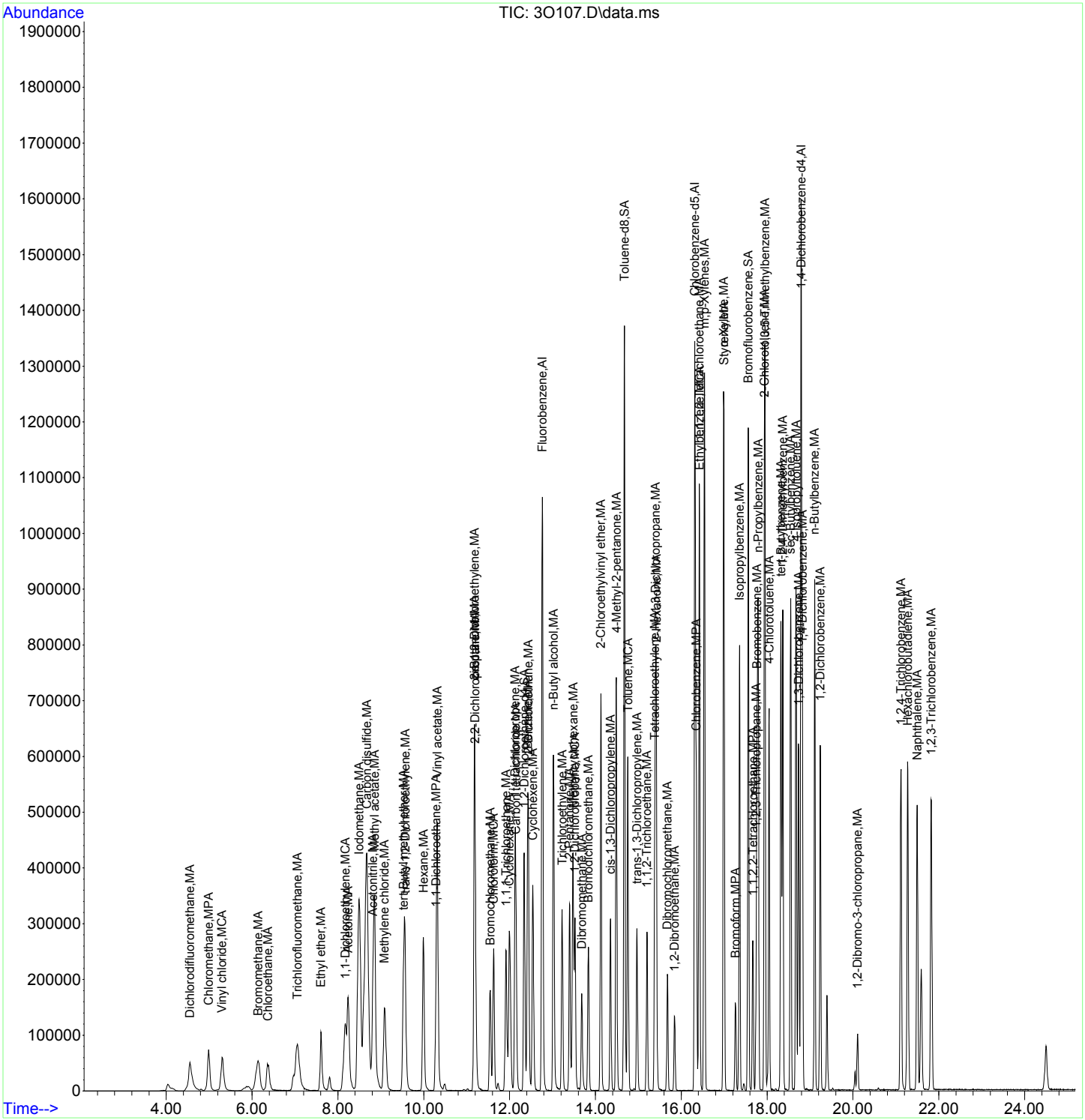
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.553	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.943	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O107.D
Acq On : 02 Jul 2018 15:30
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-06|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD020 5UL/5ML N/A MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 03 07:35:02 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O108.D
Acq On : 02 Jul 2018 16:01
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-07|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[A]
ALS Vial : 8 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.761	12.761	1.000	1099085	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	502577	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	455554	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	206960	50.32	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1132901	48.39	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	447130	49.93	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	486977	51.53	ug/L	100
3) Chloromethane	50	4.990	4.990	0.391	463778	48.39	ug/L	100
4) Vinyl chloride	62	5.319	5.319	0.417	454439	49.36	ug/L	100
5) Bromomethane	94	6.159	6.159	0.483	320998	49.06	ug/L	100
6) Chloroethane	64	6.372	6.372	0.499	320983	50.03	ug/L	100
7) Trichlorofluoromethane	101	7.061	7.061	0.553	691990	49.21	ug/L	100
8) Ethyl ether	59	7.610	7.610	0.596	264538	52.84	ug/L	100
9) Acetone	43	8.232	8.232	0.645	878080	221.29	ug/L	100
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	605456	51.16	ug/L	100
11) Iodomethane	142	8.500	8.500	0.666	2816591	258.76	ug/L	100
12) Acetonitrile	41	8.817	8.817	0.691	976561	1130.21	ug/L	100
13) Methyl acetate	74	8.854	8.854	0.694	272849	244.33	ug/L	100
14) Carbon disulfide	76	8.665	8.665	0.679	5752435	253.73	ug/L	100
15) Methylene chloride	84	9.091	9.091	0.712	369057	51.45	ug/L	100
16) tert-Butyl methyl ether	73	9.537	9.537	0.747	930169	50.87	ug/L	100
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	498988	50.10	ug/L	100
18) Hexane	57	9.988	9.988	0.783	440720	48.35	ug/L	100
19) Vinyl acetate	43	10.317	10.317	0.808	2122115	250.01	ug/L	100
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	638728	50.42	ug/L	100
21) 2-Butanone	72	11.183	11.183	0.876	225355	235.48	ug/L	100
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	330430	49.86	ug/L	100
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	555217	50.88	ug/L	100
24) Bromochloromethane	128	11.548	11.548	0.905	153945	50.61	ug/L	100
25) Chloroform	83	11.628	11.628	0.911	639686	49.18	ug/L	100
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	596176	50.10	ug/L	100
27) Cyclohexane	56	11.999	11.999	0.940	552451	52.11	ug/L	100
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	462305	51.21	ug/L	100
29) Carbon tetrachloride	117	12.146	12.146	0.952	560041	51.06	ug/L	100
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	500061	48.76	ug/L	100
32) Benzene	78	12.426	12.426	0.974	1261124	49.81	ug/L	100
33) Cyclohexene	67	12.548	12.548	0.983	661648	51.66	ug/L	100
34) n-Butyl alcohol	56	13.024	13.024	1.021	876103	4698.78	ug/L	100
35) Trichloroethylene	95	13.225	13.225	1.036	323664	48.83	ug/L	100
36) 2-Pentanone	43	13.396	13.396	1.050	1047896	243.20	ug/L	100
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	324736	50.57	ug/L	100
38) Methylcyclohexane	83	13.475	13.475	1.056	566621	52.40	ug/L	100
39) Dibromomethane	93	13.682	13.682	1.072	206266	50.55	ug/L	100
40) Bromodichloromethane	83	13.834	13.834	1.084	507363	53.13	ug/L	100
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	918340	258.12	ug/L	100
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	553869	54.00	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O108.D
Acq On : 02 Jul 2018 16:01
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-07|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 03 07:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	519663	234.90	ug/L	100
46)	Toluene	91	14.755	14.755	0.904	1192189	47.17	ug/L	100
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	503564	51.14	ug/L	100
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	231763	48.94	ug/L	100
49)	2-Hexanone	58	15.413	15.413	0.945	666356	240.33	ug/L	100
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	464839	48.98	ug/L	100
51)	Tetrachloroethylene	164	15.383	15.383	0.943	255158	47.74	ug/L	100
52)	Dibromochloromethane	129	15.676	15.676	0.961	345552	52.05	ug/L	100
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	277003	50.36	ug/L	100
54)	Chlorobenzene	112	16.352	16.352	1.002	799173	47.93	ug/L	100
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	338011	50.04	ug/L	100
56)	Ethylbenzene	91	16.425	16.425	1.007	1468569	50.35	ug/L	100
57)	m,p-Xylenes	106	16.541	16.541	1.014	1067789	98.97	ug/L	100
58)	o-Xylene	106	16.986	16.986	1.041	549088	50.75	ug/L	100
59)	Styrene	104	16.992	16.992	1.041	897478	52.20	ug/L	100
61)	Bromoform	173	17.261	17.261	0.919	225444	54.12	ug/L	100
62)	Isopropylbenzene	105	17.358	17.358	0.924	1553397	53.76	ug/L	100
64)	1,1,2,2-Tetrachloroethane	83	17.663	17.663	0.940	370258	48.78	ug/L	100
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	358052	47.69	ug/L	100
66)	Bromobenzene	156	17.767	17.767	0.945	358871	50.63	ug/L	100
67)	n-Propylbenzene	91	17.791	17.791	0.947	1792147	52.06	ug/L	100
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	1294241	51.93	ug/L	100
69)	2-Chlorotoluene	126	17.937	17.937	0.955	350832	51.66	ug/L	100
70)	4-Chlorotoluene	91	18.041	18.041	0.960	1148034	52.18	ug/L	100
71)	tert-Butylbenzene	134	18.321	18.321	0.975	257067	54.32	ug/L	100
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1319467	51.64	ug/L	100
73)	sec-Butylbenzene	105	18.547	18.547	0.987	1781176	53.00	ug/L	100
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	1510994	53.48	ug/L	100
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	701681	48.72	ug/L	100
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	720729	50.52	ug/L	100
77)	n-Butylbenzene	91	19.108	19.108	1.017	1496977	53.08	ug/L	100
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	693305	49.87	ug/L	100
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	82724	52.56	ug/L	100
80)	1,2,4-Trichlorobenzene	180	21.113	21.113	1.124	609692	52.60	ug/L	100
81)	Hexachlorobutadiene	225	21.278	21.278	1.132	407813	50.98	ug/L	100
82)	Naphthalene	128	21.491	21.491	1.144	1352461	53.63	ug/L	100
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	588372	51.23	ug/L	100
85)	Acrolein		7.805	7.927	0.612	0m	N.D.	d	
86)	Trichlorotrifluoroethane		8.177	8.165	0.641	0m	N.D.	d	
87)	Isopropyl Alcohol		8.677	8.464	0.680	0m	N.D.	d	
88)	Allyl chloride		8.665	8.842	0.679	0m	N.D.	d	
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.		
90)	Acrylonitrile		9.530	9.531	0.747	0m	N.D.	d	
91)	Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		10.488	10.427	0.822	0m	N.D.	d	
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.183	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		11.176	11.305	0.876	0m	N.D.	d	
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.640	11.597	0.912	0m	N.D.	d	
98)	Isobutyl alcohol		12.146	12.176	0.952	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.542	12.500	0.983	0m	N.D.	d	
100)	Methyl methacrylate		13.560	13.560	1.063	0m	N.D.	d	
101)	1,4-Dioxane		13.682	13.652	1.072	0m	N.D.	d	
102)	2-Nitropropane		13.999	14.103	1.097	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O108.D
Acq On : 02 Jul 2018 16:01
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-07|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 03 07:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

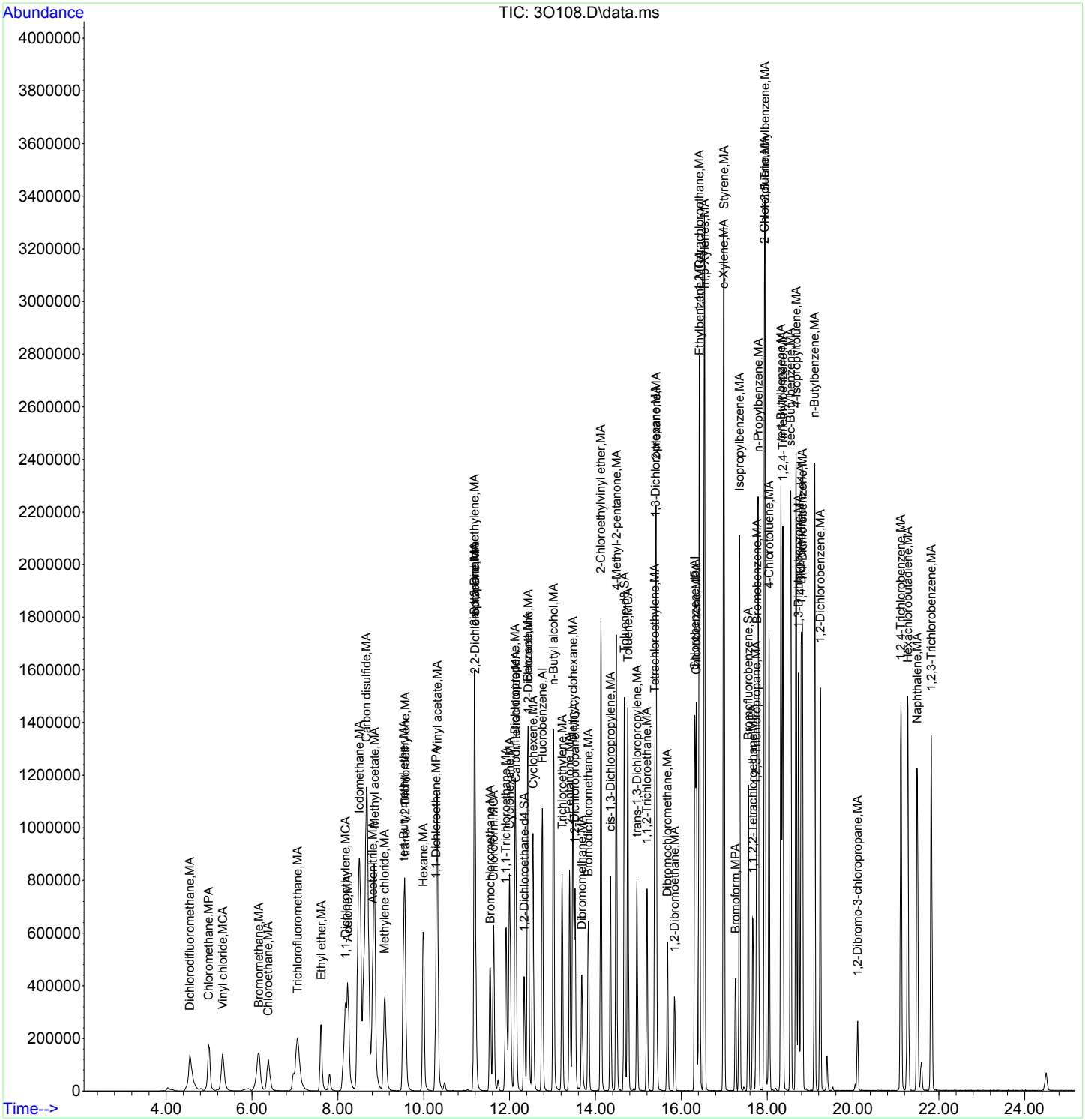
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.913	18.943	1.006	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O108.D
Acq On : 02 Jul 2018 16:01
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-07|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 03 07:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O109.D
Acq On : 02 Jul 2018 16:32
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-08|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD080 4UL/5ML N/A MIX[A]
ALS Vial : 9 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.761	12.761	1.000	1130873	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	490217	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	477085	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	205506	48.56	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1167837	51.13	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	469320	50.04	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	804630	82.75	ug/L	100
3) Chloromethane	50	4.990	4.990	0.391	775695	78.67	ug/L	99
4) Vinyl chloride	62	5.319	5.319	0.417	752045	79.39	ug/L	99
5) Bromomethane	94	6.159	6.159	0.483	536923	79.75	ug/L	100
6) Chloroethane	64	6.385	6.372	0.500	550318	83.37	ug/L	99
7) Trichlorofluoromethane	101	7.055	7.061	0.553	1124996	77.75	ug/L	99
8) Ethyl ether	59	7.604	7.610	0.596	430338	83.55	ug/L	99
9) Acetone	43	8.232	8.232	0.645	1510954	370.08	ug/L	97
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	1013006	83.19	ug/L	99
11) Iodomethane	142	8.500	8.500	0.666	4560995	407.24	ug/L	99
12) Acetonitrile	41	8.817	8.817	0.691	1772856	1994.11	ug/L	100
13) Methyl acetate	74	8.854	8.854	0.694	456239	397.07	ug/L	98
14) Carbon disulfide	76	8.671	8.665	0.679	9300009	398.68	ug/L	99
15) Methylene chloride	84	9.091	9.091	0.712	585311	79.95	ug/L	98
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	1554296	82.61	ug/L	100
17) trans-1,2-Dichloroethy...	61	9.561	9.567	0.749	791348	77.21	ug/L	99
18) Hexane	57	9.994	9.988	0.783	790546	84.29	ug/L	99
19) Vinyl acetate	43	10.317	10.317	0.808	3705654	424.30	ug/L	99
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	1012379	77.66	ug/L	100
21) 2-Butanone	72	11.176	11.183	0.876	392738	398.84	ug/L	94
22) cis-1,2-Dichloroethylene	96	11.189	11.183	0.877	548784	80.48	ug/L	98
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	897689	79.95	ug/L	98
24) Bromochloromethane	128	11.542	11.548	0.904	251711	80.43	ug/L	98
25) Chloroform	83	11.627	11.628	0.911	1036576	77.45	ug/L	99
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	978472	79.92	ug/L	99
27) Cyclohexane	56	11.999	11.999	0.940	922827	84.60	ug/L	98
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	758923	81.71	ug/L	98
29) Carbon tetrachloride	117	12.146	12.146	0.952	913417	80.94	ug/L	100
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	811239	76.88	ug/L	100
32) Benzene	78	12.426	12.426	0.974	2135288	81.97	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	1097019	83.25	ug/L	100
34) n-Butyl alcohol	56	13.024	13.024	1.021	1623255	8388.14	ug/L	98
35) Trichloroethylene	95	13.225	13.225	1.036	559218	81.99	ug/L	99
36) 2-Pentanone	43	13.402	13.396	1.050	1914951	431.93	ug/L	100
37) 1,2-Dichloropropane	63	13.523	13.524	1.060	545970	82.63	ug/L	99
38) Methylcyclohexane	83	13.475	13.475	1.056	922284	82.89	ug/L	99
39) Dibromomethane	93	13.682	13.682	1.072	341459	81.33	ug/L	98
40) Bromodichloromethane	83	13.834	13.834	1.084	803810	81.81	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	1479859	404.26	ug/L	100
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	874232	82.84	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O109.D
Acq On : 02 Jul 2018 16:32
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-08|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD080 4UL/5ML N/A MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 03 07:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	922537	427.53	ug/L	96
46)	Toluene	91	14.755	14.755	0.904	1989895	80.71	ug/L	99
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	839463	87.40	ug/L	98
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	370576	80.23	ug/L	98
49)	2-Hexanone	58	15.419	15.413	0.945	1094127	404.57	ug/L	98
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	743823	80.36	ug/L	99
51)	Tetrachloroethylene	164	15.383	15.383	0.943	422296	81.01	ug/L	99
52)	Dibromochloromethane	129	15.675	15.676	0.961	564286	87.14	ug/L	99
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	449602	83.79	ug/L	100
54)	Chlorobenzene	112	16.352	16.352	1.002	1346354	82.78	ug/L	99
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	553508	84.01	ug/L	100
56)	Ethylbenzene	91	16.419	16.425	1.006	2385504	83.85	ug/L	100
57)	m,p-Xylenes	106	16.541	16.541	1.014	1737773	165.12	ug/L	96
58)	o-Xylene	106	16.986	16.986	1.041	903565	85.62	ug/L	97
59)	Styrene	104	16.992	16.992	1.041	1450655	86.51	ug/L	100
61)	Bromoform	173	17.261	17.261	0.919	391476	89.74	ug/L	100
62)	Isopropylbenzene	105	17.358	17.358	0.924	2529118	83.57	ug/L	100
64)	1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	643035	80.90	ug/L	100
65)	1,2,3-Trichloropropane	75	17.754	17.748	0.945	616832	78.45	ug/L	96
66)	Bromobenzene	156	17.767	17.767	0.945	598870	80.68	ug/L	100
67)	n-Propylbenzene	91	17.791	17.791	0.947	2951674	81.87	ug/L	98
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	2108809	80.79	ug/L	98
69)	2-Chlorotoluene	126	17.937	17.937	0.955	582303	81.87	ug/L	97
70)	4-Chlorotoluene	91	18.047	18.041	0.960	1842317	79.96	ug/L	99
71)	tert-Butylbenzene	134	18.321	18.321	0.975	426914	86.13	ug/L	98
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	2218733	82.92	ug/L	98
73)	sec-Butylbenzene	105	18.553	18.547	0.987	2875074	81.68	ug/L	99
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	2443401	82.59	ug/L	100
75)	1,3-Dichlorobenzene	146	18.736	18.730	0.997	1186535	78.67	ug/L	100
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	1146039	76.71	ug/L	99
77)	n-Butylbenzene	91	19.108	19.108	1.017	2354854	79.73	ug/L	100
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	1138907	78.22	ug/L	100
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	152506	92.52	ug/L	98
80)	1,2,4-Trichlorobenzene	180	21.113	21.113	1.124	1017834	83.84	ug/L	100
81)	Hexachlorobutadiene	225	21.272	21.278	1.132	665768	79.46	ug/L	99
82)	Naphthalene	128	21.497	21.491	1.144	2359537	89.35	ug/L	100
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	991594	82.44	ug/L	99
85)	Acrolein		7.811	7.927	0.612	0m	N.D.	d	
86)	Trichlorotrifluoroethane		8.140	8.165	0.638	0m	N.D.	d	
87)	Isopropyl Alcohol		8.677	8.464	0.680	0m	N.D.	d	
88)	Allyl chloride		8.671	8.842	0.679	0m	N.D.	d	
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.		
90)	Acrylonitrile		9.530	9.531	0.747	0m	N.D.	d	
91)	Isopropyl ether		10.311	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		10.481	10.427	0.821	0m	N.D.	d	
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.176	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		11.176	11.305	0.876	0m	N.D.	d	
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.627	11.597	0.911	0m	N.D.	d	
98)	Isobutyl alcohol		12.170	12.176	0.954	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.499	12.500	0.979	0m	N.D.	d	
100)	Methyl methacrylate		13.475	13.560	1.056	0m	N.D.	d	
101)	1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d	
102)	2-Nitropropane		13.938	14.103	1.092	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O109.D
Acq On : 02 Jul 2018 16:32
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-08|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD080 4UL/5ML N/A MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 03 07:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

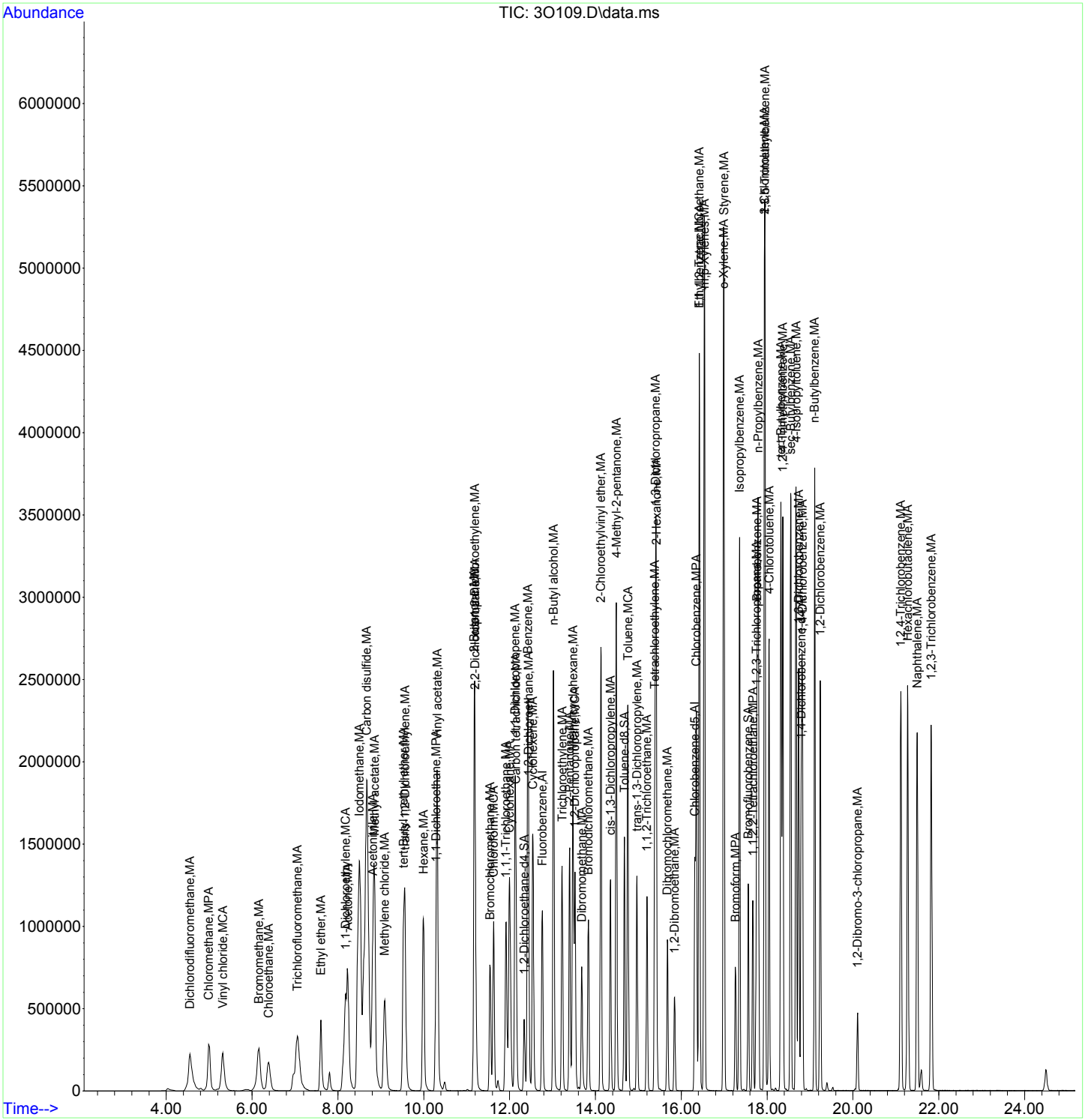
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		14.865	14.987	0.911	0m	N.D.	d
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.553	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.394	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.913	18.943	1.006	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O109.D
Acq On : 02 Jul 2018 16:32
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-08|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD080 4UL/5ML N/A MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 03 07:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O110.D
Acq On : 02 Jul 2018 17:03
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-09|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[A]
ALS Vial : 10 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:35:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.768	12.761	1.000	1318550	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	564982	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	539271	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.768	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	239010	48.44	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1364279	51.83	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	517654	48.83	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue	
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	1047942	92.44	ug/L	100	
3) Chloromethane	50	5.009	4.990	0.392	1049299	91.27	ug/L	100	
4) Vinyl chloride	62	5.319	5.319	0.417	1037019	93.90	ug/L	99	
5) Bromomethane	94	6.159	6.159	0.482	756198	96.34	ug/L	100	
6) Chloroethane	64	6.385	6.372	0.500	765844	99.51	ug/L	98	
7) Trichlorofluoromethane	101	7.055	7.061	0.553	1502106	89.04	ug/L	99	
8) Ethyl ether	59	7.604	7.610	0.596	642900	107.05	ug/L	99	A
9) Acetone	43	8.238	8.232	0.645	2079371	436.81	ug/L	96	
10) 1,1-Dichloroethylene	61	8.183	8.177	0.641	1350926	95.15	ug/L	97	
11) Iodomethane	142	8.500	8.500	0.666	6283466	481.19	ug/L	97	
12) Acetonitrile	41	8.817	8.817	0.691	2458186	2371.41	ug/L	100	
13) Methyl acetate	74	8.854	8.854	0.693	651952	486.64	ug/L	95	
14) Carbon disulfide	76	8.671	8.665	0.679	12458687	458.07	ug/L	99	
15) Methylene chloride	84	9.092	9.091	0.712	842937	99.03	ug/L	97	
16) tert-Butyl methyl ether	73	9.537	9.537	0.747	2278999	103.88	ug/L	100	A
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.749	1105646	92.53	ug/L	98	
18) Hexane	57	9.988	9.988	0.782	1117884	102.23	ug/L	95	A
19) Vinyl acetate	43	10.317	10.317	0.808	5357520	526.12	ug/L	98	A
20) 1,1-Dichloroethane	63	10.287	10.286	0.806	1408473	92.67	ug/L	100	
21) 2-Butanone	72	11.177	11.183	0.875	556662	484.85	ug/L	92	
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	766692	96.43	ug/L	96	
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	1204795	92.03	ug/L	95	
24) Bromochloromethane	128	11.548	11.548	0.905	365039	100.04	ug/L	95	A
25) Chloroform	83	11.628	11.628	0.911	1437252	92.11	ug/L	99	
26) 1,1,1-Trichloroethane	97	11.920	11.914	0.934	1304961	91.42	ug/L	99	
27) Cyclohexane	56	12.000	11.999	0.940	1241524	97.61	ug/L	97	
28) 1,1-Dichloropropene	75	12.128	12.127	0.950	1021063	94.29	ug/L	96	
29) Carbon tetrachloride	117	12.146	12.146	0.951	1209605	91.93	ug/L	100	
31) 1,2-Dichloroethane	62	12.445	12.438	0.975	1095248	89.02	ug/L	98	
32) Benzene	78	12.426	12.426	0.973	2865025	94.33	ug/L	100	
33) Cyclohexene	67	12.542	12.548	0.982	1513625	98.52	ug/L	99	
34) n-Butyl alcohol	56	13.024	13.024	1.020	2208442	9772.50	ug/L	96	
35) Trichloroethylene	95	13.225	13.225	1.036	747118	93.95	ug/L	99	
36) 2-Pentanone	43	13.396	13.396	1.049	2653510	513.33	ug/L	99	A
37) 1,2-Dichloropropane	63	13.524	13.524	1.059	747043	96.97	ug/L	99	
38) Methylcyclohexane	83	13.475	13.475	1.055	1262261	97.30	ug/L	98	
39) Dibromomethane	93	13.682	13.682	1.072	472451	96.52	ug/L	98	
40) Bromodichloromethane	83	13.835	13.834	1.084	1109734	96.87	ug/L	99	
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.106	2148271	503.32	ug/L	99	A
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.124	1246274	101.29	ug/L	97	A

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O110.D
Acq On : 02 Jul 2018 17:03
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-09|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[A]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 03 07:35:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
44) 4-Methyl-2-pentanone	58	14.487	14.487	0.888	1255440	504.82	ug/L	93	A
46) Toluene	91	14.755	14.755	0.904	2776095	97.70	ug/L	98	
47) trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	1160657	104.86	ug/L	98	A
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	534274	100.36	ug/L	98	A
49) 2-Hexanone	58	15.420	15.413	0.945	1513050	485.43	ug/L	95	
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	1021836	95.78	ug/L	97	
51) Tetrachloroethylene	164	15.383	15.383	0.943	571831	95.17	ug/L	99	
52) Dibromochloromethane	129	15.682	15.676	0.961	799053	107.07	ug/L	100	A
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	647002	104.63	ug/L	100	A
54) Chlorobenzene	112	16.352	16.352	1.002	1838607	98.09	ug/L	98	
55) 1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	749733	98.73	ug/L	99	
56) Ethylbenzene	91	16.426	16.425	1.007	3104419	94.68	ug/L	99	
57) m,p-Xylenes	106	16.535	16.541	1.013	2402062	198.04	ug/L	93	
58) o-Xylene	106	16.986	16.986	1.041	1233688	101.43	ug/L	94	A
59) Styrene	104	16.993	16.992	1.041	2004771	103.73	ug/L	99	A
61) Bromoform	173	17.261	17.261	0.919	553366	112.22	ug/L	99	A
62) Isopropylbenzene	105	17.358	17.358	0.924	3265620	95.47	ug/L	98	
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	895389	99.66	ug/L	99	
65) 1,2,3-Trichloropropane	75	17.748	17.748	0.945	875187	98.47	ug/L	93	
66) Bromobenzene	156	17.767	17.767	0.945	822745	98.06	ug/L	99	
67) n-Propylbenzene	91	17.791	17.791	0.947	3858141	94.67	ug/L	97	
68) 1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	2807659	95.16	ug/L	97	
69) 2-Chlorotoluene	126	17.937	17.937	0.955	782532	97.33	ug/L	94	
70) 4-Chlorotoluene	91	18.047	18.041	0.960	2536824	97.41	ug/L	99	
71) tert-Butylbenzene	134	18.322	18.321	0.975	563144	100.52	ug/L	97	A
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	2799469	92.56	ug/L	97	
73) sec-Butylbenzene	105	18.547	18.547	0.987	3759983	94.51	ug/L	99	
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	3291633	98.43	ug/L	99	
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	1560516	91.53	ug/L	100	
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	1575884	93.32	ug/L	99	
77) n-Butylbenzene	91	19.108	19.108	1.017	3219500	96.44	ug/L	98	
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	1662916	101.04	ug/L	100	A
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	210940	113.22	ug/L	97	A
80) 1,2,4-Trichlorobenzene	180	21.114	21.113	1.124	1361077	99.19	ug/L	100	
81) Hexachlorobutadiene	225	21.272	21.278	1.132	882557	93.19	ug/L	100	
82) Naphthalene	128	21.498	21.491	1.144	3153182	105.63	ug/L	100	A
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	1323160	97.32	ug/L	99	
85) Acrolein		7.799	7.927	0.611	0m	N.D.	d		
86) Trichlorotrifluoroethane		8.159	8.165	0.639	0m	N.D.	d		
87) Isopropyl Alcohol		8.677	8.464	0.680	0m	N.D.	d		
88) Allyl chloride		8.671	8.842	0.679	0m	N.D.	d		
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.			
90) Acrylonitrile		9.531	9.531	0.746	0m	N.D.	d		
91) Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d		
92) 2-Chloro-1,3-butadiene		10.482	10.427	0.821	0m	N.D.	d		
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94) Ethyl acetate		11.177	11.225	0.875	0m	N.D.	d		
95) Propionitrile		11.183	11.305	0.876	0m	N.D.	d		
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97) Tetrahydrofuran		11.628	11.597	0.911	0m	N.D.	d		
98) Isobutyl alcohol		12.176	12.176	0.954	0m	N.D.	d		
99) Methyl tert-amyl ether		12.548	12.500	0.983	0m	N.D.	d		
100) Methyl methacrylate		13.475	13.560	1.055	0m	N.D.	d		
101) 1,4-Dioxane		13.682	13.652	1.072	0m	N.D.	d		
102) 2-Nitropropane		14.036	14.103	1.099	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O110.D
Acq On : 02 Jul 2018 17:03
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-09|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[A]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 03 07:35:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		14.865	14.987	0.911	0m	N.D.	d
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.395	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.907	18.943	1.006	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O110.D
Acq On    : 02 Jul 2018  17:03
Operator  : JP1
InstName  : VOA3
Sample    : |W3VM180702-09|ICAL|1|VOA|1|VOA8260CL|
Misc      : VSTD100 5UL/5ML N/A MIX[A]
ALS Vial  : 10   Sample Multiplier: 1

Quant Time: Jul 03 07:35:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title  : Volatile Organics 8260B                    SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE
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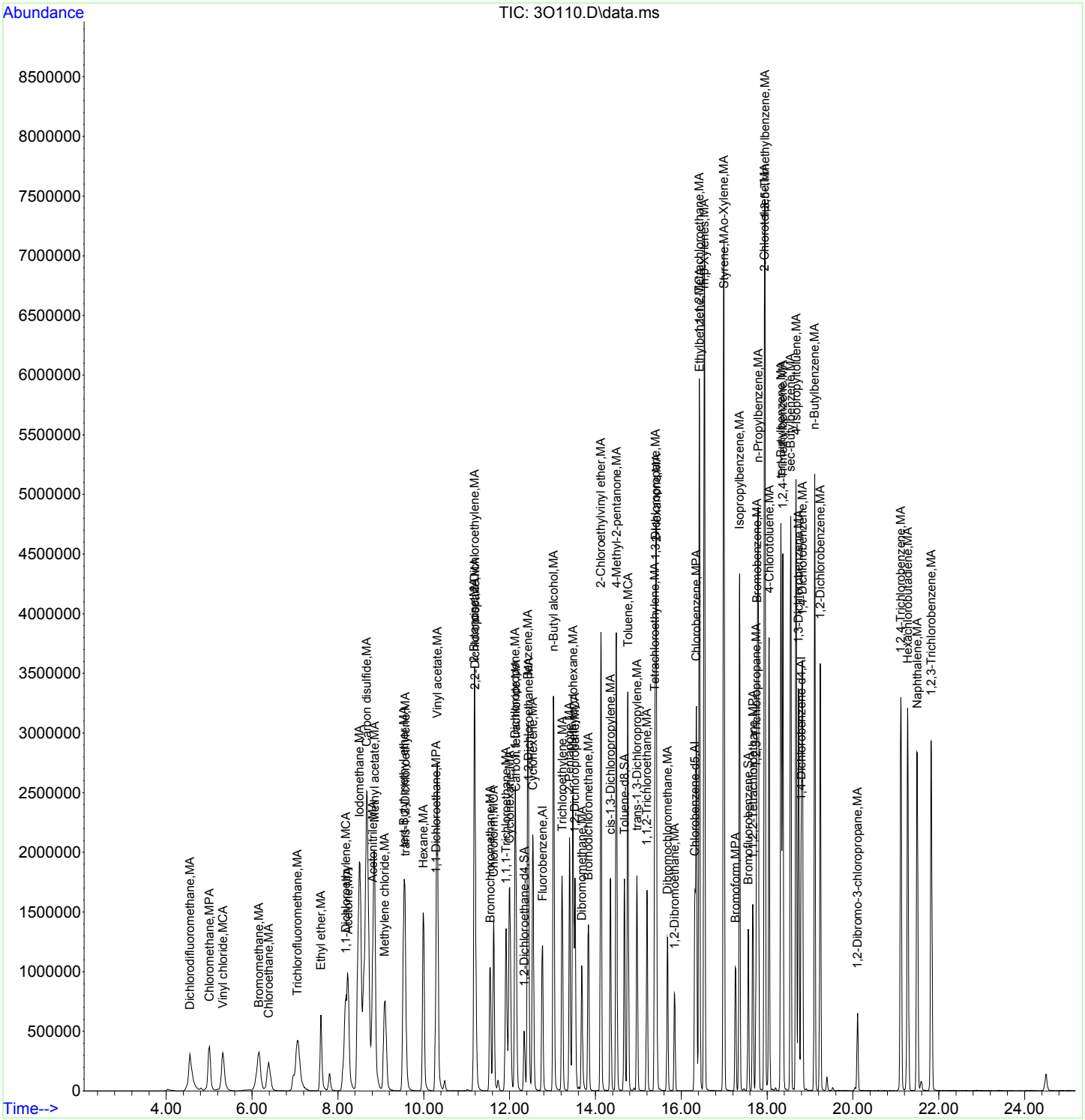


Continuing Calibration Summary

Client SDG: 454715

Instrument ID: VOA3.I **Injection Date:** 02-JUL-18 18:05

Data File: 070218V3\3O112.D **Init. Cal. Date(s)** 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180702-10 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD **Method Update:** 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.17803		.01		-4.84768	30		Averaged
S	Toluene-d8	2.3294	2.31751		.01		-0.51043	30		Averaged
S	Bromofluorobenzene	0.9829	0.95075		.01		-3.27093	30		Averaged
	Dichlorodifluoromethane	0.4299	0.41546		.01		-3.35892	30		Averaged
	Chloromethane	0.436	0.41241		.1		-5.41055	30		Averaged
	Vinyl chloride	0.4188	0.38872		.01		-7.18243	30		Averaged
	Bromomethane	0.2977	0.28162		.01		-5.40141	30		Averaged
	Chloroethane	0.2918	0.28233		.01		-3.24537	30		Averaged
	Trichlorofluoromethane	0.6397	0.55791		.01		-12.78568	30		Averaged
	1,1-Dichloroethylene	0.5384	0.51272		.01		-4.76969	30		Averaged
	Acetone	0.1805	0.13261		.01		-26.53186	30		Averaged
	Carbon disulfide	1.0314	1.02938		.01		-0.19585	30		Averaged
	Methyl acetate	0.0508	0.04907		.01		-3.40551	30		Averaged
	Methylene chloride	50	48.39	50			-3.22	30		Linear
	tert-Butyl methyl ether	0.8319	0.82304		.01		-1.06503	30		Averaged
	trans-1,2-Dichloroethylene	0.4531	0.40549		.01		-10.50761	30		Averaged
	1,1-Dichloroethane	0.5764	0.52286		.1		-9.28869	30		Averaged
	2-Butanone	0.0435	0.03698		.01		-14.98851	30		Averaged
	cis-1,2-Dichloroethylene	0.3015	0.28948		.01		-3.98673	30		Averaged
	Bromochloromethane	0.1384	0.13388		.01		-3.2659	30		Averaged
	Chloroform	0.5917	0.5291		.01		-10.57969	30		Averaged
	1,1,1-Trichloroethane	0.5413	0.4831		.01		-10.75189	30		Averaged
	Cyclohexane	0.4823	0.44402		.01		-7.93697	30		Averaged
	Carbon tetrachloride	0.4989	0.44043		.01		-11.71978	30		Averaged
	Benzene	1.1517	1.06822		.01		-7.24842	30		Averaged
	1,2-Dichloroethane	0.4666	0.41478		.01		-11.10587	30		Averaged
	Trichloroethylene	0.3016	0.27047		.01		-10.32162	30		Averaged
	Methylcyclohexane	0.4919	0.43881		.01		-10.79284	30		Averaged
	1,2-Dichloropropane	0.2921	0.265		.01		-9.27764	30		Averaged
	Bromodichloromethane	0.4344	0.40412		.01		-6.97053	30		Averaged
	cis-1,3-Dichloropropylene	0.4666	0.47352		.01		1.48307	30		Averaged
	4-Methyl-2-pentanone	0.2201	0.2142		.01		-2.6806	30		Averaged
	Toluene	2.5146	2.36773		.01		-5.84069	30		Averaged
	trans-1,3-Dichloropropylene	0.9796	1.03124		.01		5.27154	30		Averaged
	1,1,2-Trichloroethane	0.4711	0.47202		.01		0.19529	30		Averaged
	Tetrachloroethylene	0.5317	0.46762		.01		-12.05191	30		Averaged
	2-Hexanone	0.2758	0.23854		.01		-13.50979	30		Averaged

Continuing Calibration Summary

Instrument ID: VOA3.I **Injection Date:** 02-JUL-18 18:05

Data File: 070218V3\3O112.D **Init. Cal. Date(s)** 02-JUL-18 13:56 02-JUL-18 22:15

Lab Sample ID W3VM180702-10 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
Dibromochloromethane	0.6605	0.68573		.01		3.81983	30		Averaged
1,2-Dibromoethane	0.5473	0.56851		.01		3.87539	30		Averaged
Chlorobenzene	1.6589	1.58479		.3		-4.46742	30		Averaged
Ethylbenzene	2.9017	2.7868		.01		-3.95975	30		Averaged
m,p-Xylenes	1.0734	1.00554		.01		-6.32197	30		Averaged
o-Xylene	1.0764	1.08072		.01		0.40134	30		Averaged
Styrene	1.7104	1.77471		.01		3.75994	30		Averaged
Bromoform	0.4572	0.46544		.1		1.80227	30		Averaged
Isopropylbenzene	3.1716	2.97598		.01		-6.16786	30		Averaged
1,1,2,2-Tetrachloroethane	0.833	0.79074		.3		-5.07323	30		Averaged
1,3-Dichlorobenzene	1.5807	1.4659		.01		-7.26261	30		Averaged
1,4-Dichlorobenzene	1.5657	1.47848		.01		-5.57067	30		Averaged
1,2-Dichlorobenzene	1.5259	1.45207		.01		-4.83846	30		Averaged
1,2-Dibromo-3-chloropropane	0.1727	0.17588		.01		1.84134	30		Averaged
1,2,4-Trichlorobenzene	1.2723	1.26005		.01		-0.96282	30		Averaged
1,2,3-Trichlorobenzene	1.2606	1.21801		.01		-3.37855	30		Averaged

Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O112.D
Acq On : 02 Jul 2018 18:05
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-10|ICV|1|VOA|1|VOA8260CL|
Misc : ICV50 5UL/5ML N/A MIX[A]
ALS Vial : 12 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:36:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.761	12.761	1.000	1346732	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	569354	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	552843	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	1349624	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	578810	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	553411	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	239762	47.57	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1319485	49.74	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	525615	48.37	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	559515	48.32	ug/L	100
3) Chloromethane	50	4.990	4.990	0.391	555411	47.30	ug/L	99
4) Vinyl chloride	62	5.319	5.319	0.417	523499	46.41	ug/L	99
5) Bromomethane	94	6.104	6.159	0.478	379273	47.31	ug/L	99
6) Chloroethane	64	6.366	6.372	0.499	380220	48.37	ug/L	99
7) Trichlorofluoromethane	101	7.049	7.061	0.552	751351	43.60	ug/L	99
8) Ethyl ether	59	7.604	7.610	0.596	331183	53.99	ug/L	99
9) Acetone	43	8.238	8.232	0.646	892931	183.65	ug/L	96
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	690491	47.62	ug/L	97
11) Iodomethane	142	8.506	8.500	0.667	3342626	250.62	ug/L	96
12) Acetonitrile	41	8.823	8.817	0.691	1144790	1081.27	ug/L	99
13) Methyl acetate	74	8.848	8.854	0.693	330423	241.48	ug/L	95
14) Carbon disulfide	76	8.665	8.665	0.679	6931486	249.52	ug/L	100
15) Methylene chloride	84	9.097	9.091	0.713	425931	48.39	ug/L	98
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	1108414	49.47	ug/L	99
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	546083	44.74	ug/L	97
18) Hexane	57	9.994	9.988	0.783	416856	37.32	ug/L	96
19) Vinyl acetate	43	10.317	10.317	0.808	2715137	261.05	ug/L	99
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	704153	45.36	ug/L	100
21) 2-Butanone	72	11.182	11.183	0.876	249029	212.36	ug/L	95
22) cis-1,2-Dichloroethylene	96	11.182	11.183	0.876	389846	48.01	ug/L	96
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	599560	44.84	ug/L	97
24) Bromochloromethane	128	11.548	11.548	0.905	180303	48.38	ug/L	98
25) Chloroform	83	11.627	11.628	0.911	712552	44.71	ug/L	100
26) 1,1,1-Trichloroethane	97	11.920	11.914	0.934	650603	44.62	ug/L	99
27) Cyclohexane	56	11.999	11.999	0.940	597972	46.03	ug/L	99
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	531808	48.08	ug/L	97
29) Carbon tetrachloride	117	12.146	12.146	0.952	593137	44.14	ug/L	100
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	558593	44.45	ug/L	99
32) Benzene	78	12.426	12.426	0.974	1438602	46.37	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	653754	41.66	ug/L	99
34) n-Butyl alcohol	56	13.024	13.024	1.021	1030520	4514.28	ug/L	98
35) Trichloroethylene	95	13.225	13.225	1.036	364248	44.85	ug/L	98
36) 2-Pentanone	43	13.395	13.396	1.050	1072515	203.14	ug/L	99
37) 1,2-Dichloropropane	63	13.523	13.524	1.060	356878	45.35	ug/L	100
38) Methylcyclohexane	83	13.475	13.475	1.056	590964	44.60	ug/L	98
39) Dibromomethane	93	13.682	13.682	1.072	225226	45.05	ug/L	97
40) Bromodichloromethane	83	13.834	13.834	1.084	544239	46.51	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	945554	216.90	ug/L	100
42) cis-1,3-Dichloropropylene	75	14.346	14.353	1.124	637705	50.74	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O112.D
Acq On : 02 Jul 2018 18:05
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-10|ICV|1|VOA|1|VOA8260CL|
Misc : ICV50 5UL/5ML N/A MIX[A]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 03 07:36:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	609791	243.32	ug/L	96
46)	Toluene	91	14.755	14.755	0.904	1348074	47.08	ug/L	99
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	587142	52.64	ug/L	97
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	268745	50.09	ug/L	99
49)	2-Hexanone	58	15.413	15.413	0.945	679061	216.19	ug/L	97
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	506641	47.13	ug/L	95
51)	Tetrachloroethylene	164	15.383	15.383	0.943	266239	43.97	ug/L	99
52)	Dibromochloromethane	129	15.675	15.676	0.961	390421	51.91	ug/L	99
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	323686	51.94	ug/L	99
54)	Chlorobenzene	112	16.352	16.352	1.002	902308	47.77	ug/L	99
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	370207	48.38	ug/L	99
56)	Ethylbenzene	91	16.419	16.425	1.006	1586673	48.02	ug/L	99
57)	m,p-Xylenes	106	16.535	16.541	1.013	1145018	93.68	ug/L	99
58)	o-Xylene	106	16.986	16.986	1.041	615310	50.20	ug/L	98
59)	Styrene	104	16.992	16.992	1.041	1010436	51.88	ug/L	98
61)	Bromoform	173	17.261	17.261	0.919	257318	50.90	ug/L	99
62)	Isopropylbenzene	105	17.358	17.358	0.924	1645251	46.92	ug/L	100
64)	1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	437157	47.46	ug/L	99
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	416542	45.72	ug/L	97
66)	Bromobenzene	156	17.767	17.767	0.945	409828	47.65	ug/L	99
67)	n-Propylbenzene	91	17.791	17.791	0.947	1890813	45.26	ug/L	99
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	1327863	43.90	ug/L	99
69)	2-Chlorotoluene	126	17.937	17.937	0.955	359404	43.60	ug/L	96
70)	4-Chlorotoluene	91	18.047	18.041	0.960	1221059	45.73	ug/L	98
71)	tert-Butylbenzene	134	18.321	18.321	0.975	277766	48.36	ug/L	97
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1427205	46.03	ug/L	99
73)	sec-Butylbenzene	105	18.547	18.547	0.987	1901271	46.61	ug/L	100
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	1610208	46.97	ug/L	99
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	810415	46.37	ug/L	100
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	817366	47.21	ug/L	100
77)	n-Butylbenzene	91	19.108	19.108	1.017	1545962	45.17	ug/L	100
78)	1,2-Dichlorobenzene	146	19.242	19.236	1.024	802764	47.58	ug/L	99
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	97232	50.91	ug/L	98
80)	1,2,4-Trichlorobenzene	180	21.113	21.113	1.124	696608	49.52	ug/L	100
81)	Hexachlorobutadiene	225	21.278	21.278	1.132	449813	46.33	ug/L	100
82)	Naphthalene	128	21.497	21.491	1.144	1577882	51.56	ug/L	100
83)	1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	673368	48.31	ug/L	99
85)	Acrolein		7.805	7.927	0.612	0m	N.D.	d	
86)	Trichlorotrifluoroethane		8.177	8.165	0.641	0m	N.D.	d	
87)	Isopropyl Alcohol		8.598	8.464	0.674	0m	N.D.	d	
88)	Allyl chloride		8.665	8.842	0.679	0m	N.D.	d	
89)	tert-Butyl Alcohol		9.219	9.220	0.722	0m	N.D.	d	
90)	Acrylonitrile		9.530	9.531	0.747	0m	N.D.	d	
91)	Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		10.426	10.427	0.817	0m	N.D.	d	
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.182	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		11.189	11.305	0.877	0m	N.D.	d	
96)	Methacrylonitrile		11.512	11.512	0.902	0m	N.D.	d	
97)	Tetrahydrofuran		11.621	11.597	0.911	0m	N.D.	d	
98)	Isobutyl alcohol		12.146	12.176	0.952	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.554	12.500	0.984	0m	N.D.	d	
100)	Methyl methacrylate		13.481	13.560	1.056	0m	N.D.	d	
101)	1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d	
102)	2-Nitropropane		14.017	14.103	1.098	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O112.D
Acq On : 02 Jul 2018 18:05
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-10|ICV|1|VOA|1|VOA8260CL|
Misc : ICV50 5UL/5ML N/A MIX[A]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 03 07:36:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

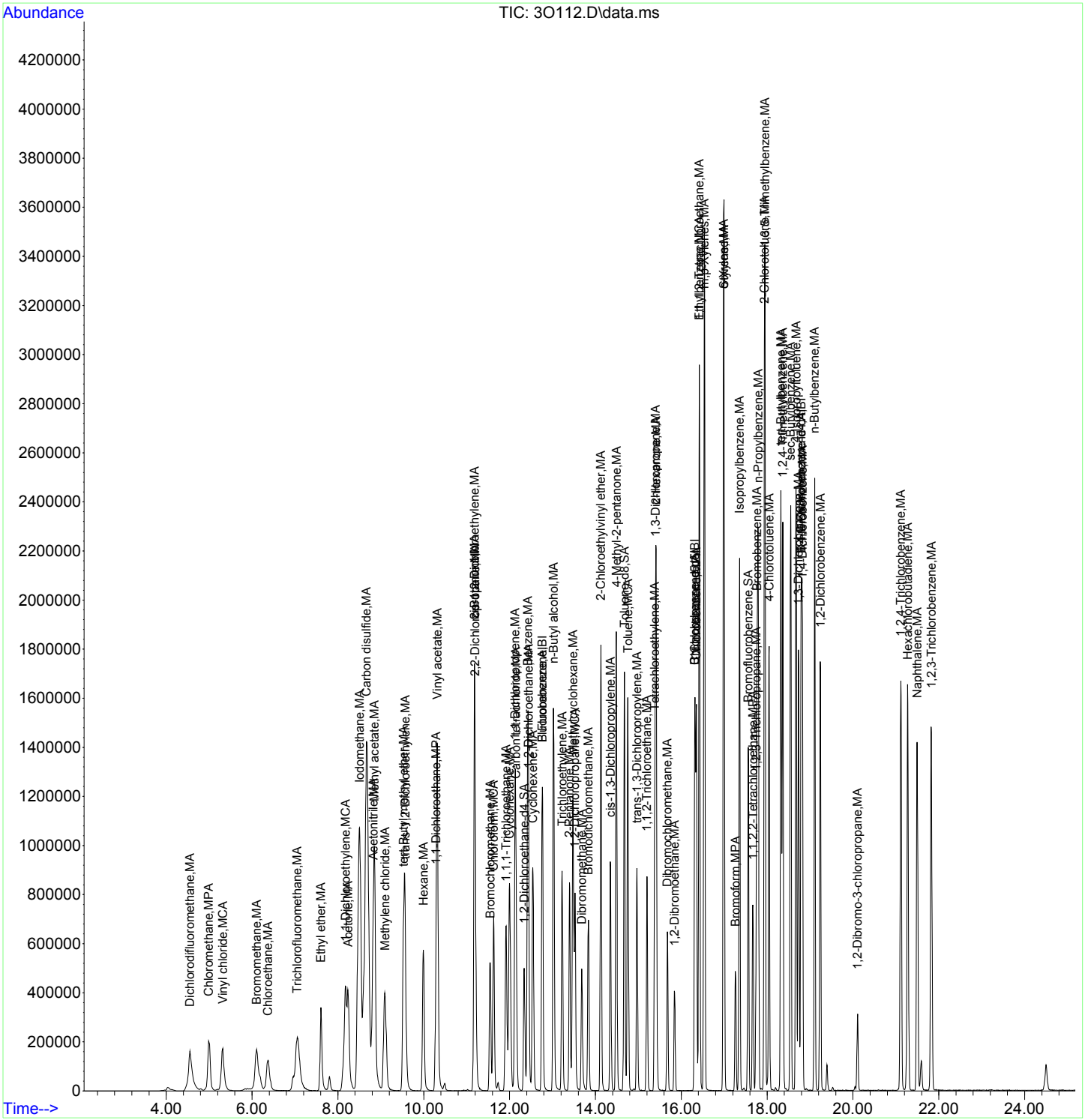
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		14.987	14.987	0.919	0m	N.D.	d
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.724	17.718	0.943	0m	N.D.	d
110) Pentachloroethane		18.388	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.943	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O112.D
Acq On : 02 Jul 2018 18:05
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-10|ICV|1|VOA|1|VOA8260CL|
Misc : ICV50 5UL/5ML N/A MIX[A]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 03 07:36:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O113.D
Acq On : 02 Jul 2018 18:36
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-11|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[B]
ALS Vial : 13 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:35:14 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1416890	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	599478	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	537861	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.991	4.990	0.391	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		6.050	6.159	0.474	0m	N.D.	d	
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.250	8.232	0.646	0m	N.D.	d	
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		8.506	8.500	0.667	0m	N.D.	d	
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.866	8.854	0.695	0m	N.D.	d	
14) Carbon disulfide		8.604	8.665	0.674	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		9.579	9.567	0.751	0m	N.D.	d	
18) Hexane		9.988	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.293	10.286	0.807	0m	N.D.	d	
21) 2-Butanone		11.189	11.183	0.877	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		11.189	11.183	0.877	0m	N.D.	d	
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.628	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.134	12.127	0.951	0m	N.D.	d	
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.445	12.438	0.975	0m	N.D.	d	
32) Benzene		12.426	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.219	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.402	13.396	1.050	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		
39) Dibromomethane		13.688	13.682	1.073	0m	N.D.	d	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.353	14.353	1.125	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O113.D
Acq On : 02 Jul 2018 18:36
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-11|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[B]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 03 07:35:14 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		14.481	14.487	0.888	0m	N.D.	d	
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.981	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		15.432	15.413	0.946	0m	N.D.	d	
50)	1,3-Dichloropropane		15.407	15.401	0.944	0m	N.D.	d	
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		15.676	15.676	0.961	0m	N.D.	d	
53)	1,2-Dibromoethane		15.853	15.840	0.972	0m	N.D.	d	
54)	Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		16.413	16.419	1.006	0m	N.D.	d	
56)	Ethylbenzene		16.413	16.425	1.006	0m	N.D.	d	
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58)	o-Xylene		16.986	16.986	1.041	0m	N.D.	d	
59)	Styrene		16.993	16.992	1.041	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.		
65)	1,2,3-Trichloropropane		17.724	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.761	17.767	0.945	0m	N.D.	d	
67)	n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.956	17.949	0.956	0m	N.D.	d	
69)	2-Chlorotoluene		17.937	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.328	18.321	0.975	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.370	18.364	0.978	0m	N.D.	d	
73)	sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.730	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.821	18.821	1.002	0m	N.D.	d	
77)	n-Butylbenzene		19.108	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.236	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		20.108	20.108	1.070	0m	N.D.	d	
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.272	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85)	Acrolein	56	7.946	7.927	0.623	4853	3.46	ug/L	82
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	47034	4.68	ug/L	98
87)	Isopropyl Alcohol	45	8.476	8.464	0.664	25044	40.47	ug/L	91
88)	Allyl chloride	76	8.854	8.842	0.694	19581	4.30	ug/L #	83
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	37207	36.57	ug/L	88
90)	Acrylonitrile	53	9.543	9.531	0.748	11667	4.39	ug/L	95
91)	Isopropyl ether	45	10.323	10.317	0.809	21670	0.88	ug/L	79
92)	2-Chloro-1,3-butadiene	53	10.433	10.427	0.818	10137	0.85	ug/L	95
93)	Ethyl tert-butyl ether	59	10.896	10.890	0.854	20863	0.84	ug/L	98
94)	Ethyl acetate	43	11.225	11.225	0.880	33719	4.81	ug/L	97
95)	Propionitrile	54	11.317	11.305	0.887	4839	4.54	ug/L	82
96)	Methacrylonitrile	67	11.518	11.512	0.903	11934	4.07	ug/L	96
97)	Tetrahydrofuran	42	11.616	11.597	0.910	11951	5.14	ug/L	91
98)	Isobutyl alcohol	43	12.170	12.176	0.954	13822	37.91	ug/L	98
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	19316	0.85	ug/L	94
100)	Methyl methacrylate	69	13.566	13.560	1.063	17229	3.79	ug/L	99
101)	1,4-Dioxane	88	13.658	13.652	1.070	3894	42.85	ug/L	88
102)	2-Nitropropane	43	14.103	14.103	1.105	7038	6.03	ug/L	85

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O113.D
Acq On : 02 Jul 2018 18:36
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-11|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[B]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 03 07:35:14 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

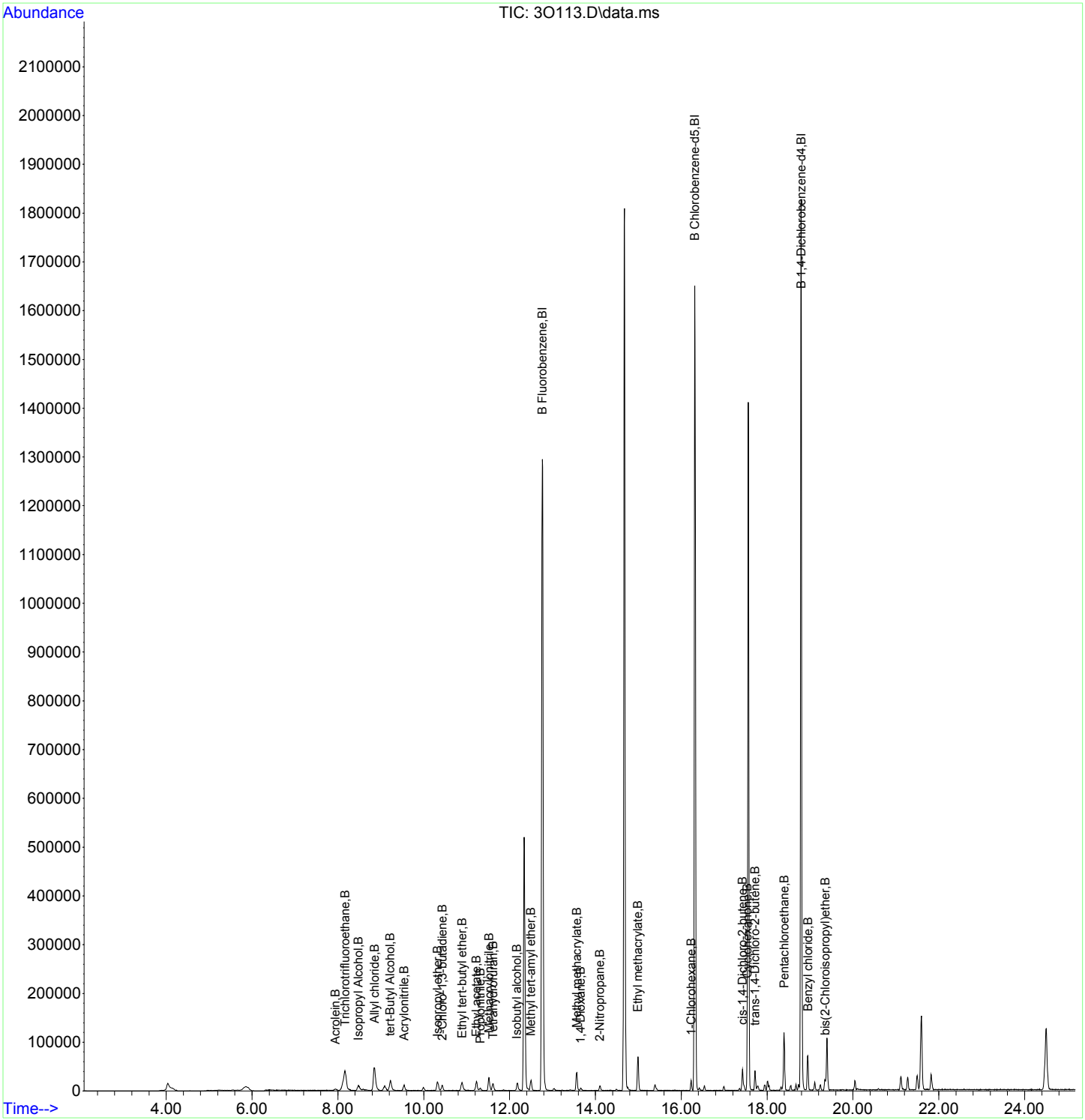
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	34068	4.03	ug/L	99
106) 1-Chlorohexane	91	16.230	16.231	0.864	7418	0.86	ug/L	97
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	11015	4.08	ug/L	81
108) Cyclohexanone	55	17.535	17.535	0.933	5945	26.22	ug/L	82
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	9418	3.87	ug/L	96
110) Pentachloroethane	167	18.395	18.395	0.979	24249	4.43	ug/L	84
111) Benzyl chloride	91	18.949	18.943	1.008	58434	4.17	ug/L	98
112) bis(2-Chloroisopropyl)...	45	19.352	19.346	1.030	19091	4.69	ug/L	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O113.D
Acq On : 02 Jul 2018 18:36
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-11|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[B]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 03 07:35:14 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O114.D
Acq On : 02 Jul 2018 19:07
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-12|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[B]
ALS Vial : 14 Sample Multiplier: 1

GEL
07/03/2018

Quant Time: Jul 03 07:35:16 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1355117	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	576180	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	524817	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		6.050	6.159	0.474	0m	N.D.	d	
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.238	8.232	0.646	0m	N.D.	d	
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.848	8.854	0.693	0m	N.D.	d	
14) Carbon disulfide		8.592	8.665	0.673	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.994	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.616	11.628	0.910	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.439	12.438	0.975	0m	N.D.	d	
32) Benzene		12.420	12.426	0.973	0m	N.D.	d	
33) Cyclohexene		12.475	12.548	0.978	0m	N.D.	d	
34) n-Butyl alcohol		13.030	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone		13.408	13.396	1.051	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.353	14.353	1.125	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O114.D
Acq On : 02 Jul 2018 19:07
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-12|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[B]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 03 07:35:16 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46)	Toluene		14.749	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.975	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		15.420	15.413	0.945	0m	N.D.	d	
50)	1,3-Dichloropropane		15.395	15.401	0.944	0m	N.D.	d	
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		15.840	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.352	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.		
56)	Ethylbenzene		16.420	16.425	1.006	0m	N.D.	d	
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58)	o-Xylene		16.986	16.986	1.041	0m	N.D.	d	
59)	Styrene		16.993	16.992	1.041	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.352	17.358	0.923	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.		
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.767	17.767	0.945	0m	N.D.	d	
67)	n-Propylbenzene		17.797	17.791	0.947	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.950	17.949	0.955	0m	N.D.	d	
69)	2-Chlorotoluene		17.944	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.041	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.389	18.321	0.979	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.370	18.364	0.978	0m	N.D.	d	
73)	sec-Butylbenzene		18.547	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.815	18.821	1.001	0m	N.D.	d	
77)	n-Butylbenzene		19.108	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.120	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.492	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.821	21.821	1.161	0m	N.D.	d	
85)	Acrolein	56	7.933	7.927	0.622	13120	9.78	ug/L	99
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	92858	9.67	ug/L	98
87)	Isopropyl Alcohol	45	8.470	8.464	0.664	55975	94.57	ug/L	90
88)	Allyl chloride	76	8.836	8.842	0.692	41877	9.61	ug/L	97
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	92653	95.22	ug/L	95
90)	Acrylonitrile	53	9.537	9.531	0.747	24318	9.56	ug/L	98
91)	Isopropyl ether	45	10.323	10.317	0.809	43399	1.84	ug/L	94
92)	2-Chloro-1,3-butadiene	53	10.433	10.427	0.818	19434	1.71	ug/L	100
93)	Ethyl tert-butyl ether	59	10.884	10.890	0.853	43125	1.82	ug/L	98
94)	Ethyl acetate	43	11.225	11.225	0.880	66133	9.87	ug/L	100
95)	Propionitrile	54	11.305	11.305	0.886	9900	9.72	ug/L	95
96)	Methacrylonitrile	67	11.512	11.512	0.902	28081	10.02	ug/L	99
97)	Tetrahydrofuran	42	11.609	11.597	0.910	23121	10.40	ug/L	98
98)	Isobutyl alcohol	43	12.183	12.176	0.955	32107	92.07	ug/L	96
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	39612	1.82	ug/L	94
100)	Methyl methacrylate	69	13.560	13.560	1.063	39210	9.01	ug/L	97
101)	1,4-Dioxane	88	13.652	13.652	1.070	7947	91.43	ug/L	92
102)	2-Nitropropane	43	14.103	14.103	1.105	15931	9.73	ug/L	92

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O114.D
Acq On : 02 Jul 2018 19:07
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-12|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[B]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 03 07:35:16 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

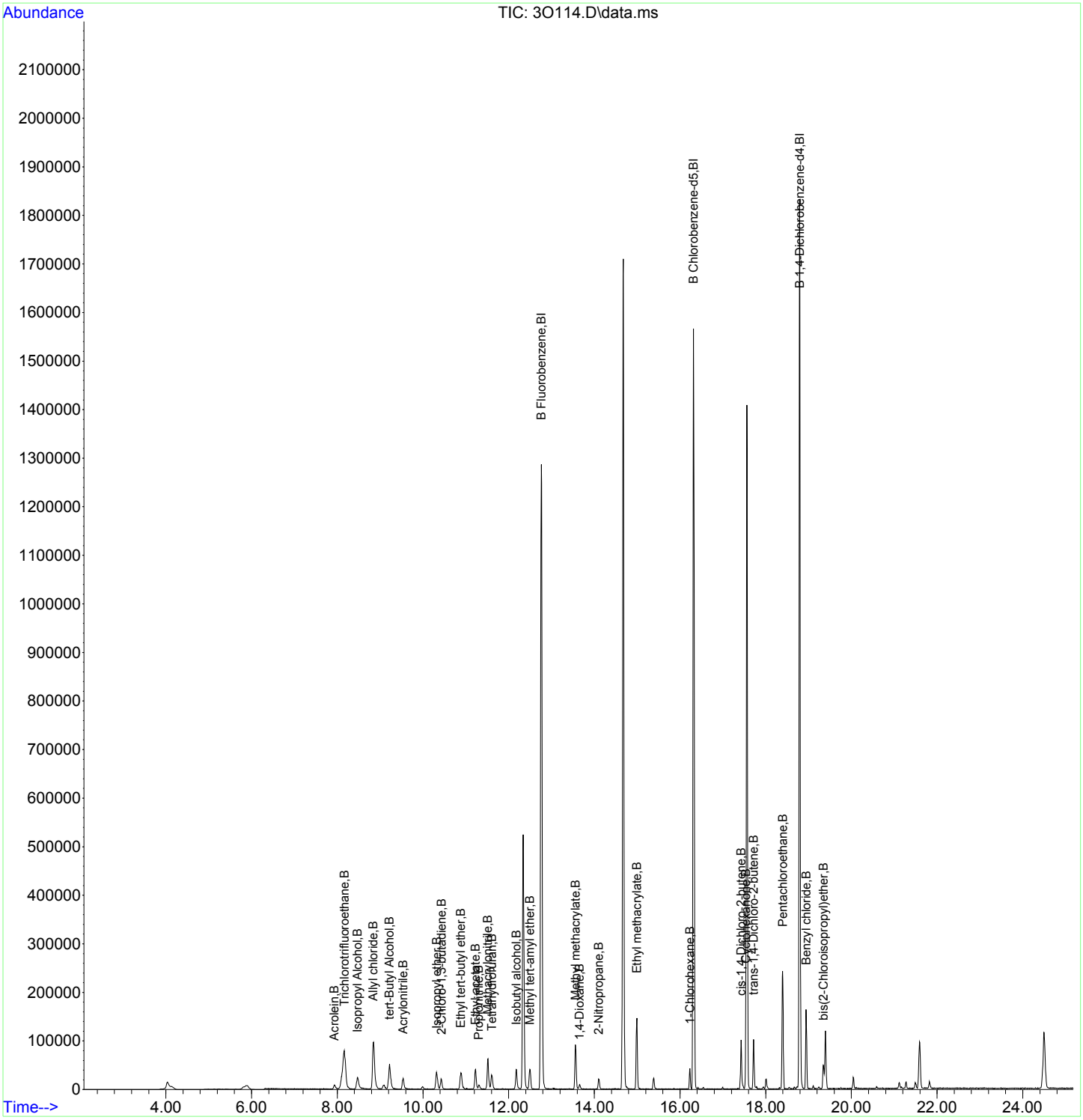
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.993	14.987	0.919	75463	9.30	ug/L	99
106) 1-Chlorohexane	91	16.231	16.231	0.864	14104	1.67	ug/L	99
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	23228	8.81	ug/L	87
108) Cyclohexanone	55	17.535	17.535	0.933	11152	50.41	ug/L	95
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	22963	9.68	ug/L	91
110) Pentachloroethane	167	18.395	18.395	0.979	49502	9.27	ug/L	86
111) Benzyl chloride	91	18.943	18.943	1.008	122825	8.99	ug/L	100
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	37987	9.56	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O114.D
Acq On : 02 Jul 2018 19:07
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-12|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[B]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 03 07:35:16 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O115.D
Acq On : 02 Jul 2018 19:38
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-13|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD025 5UL/5ML N/A MIX[B]
ALS Vial : 15 Sample Multiplier: 1

GEL
07/03/2018

Quant Time: Jul 03 07:35:18 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1303275	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	567054	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	506747	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.559	17.559	0.934	0d	0.00	ug/L	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		5.922	6.159	0.464	0m	N.D.	d	
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.470	8.232	0.664	0m	N.D.	d	
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.842	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.836	8.854	0.692	0m	N.D.	d	
14) Carbon disulfide		8.848	8.665	0.693	0m	N.D.	d	
15) Methylene chloride		9.085	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.988	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.323	10.317	0.809	0m	N.D.	d	
20) 1,1-Dichloroethane		10.415	10.286	0.816	0m	N.D.	d	
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.457	12.438	0.976	0m	N.D.	d	
32) Benzene		12.432	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.506	12.548	0.980	0m	N.D.	d	
34) n-Butyl alcohol		13.048	13.024	1.022	0m	N.D.	d	
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.408	13.396	1.051	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.566	13.475	1.063	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O115.D
Acq On : 02 Jul 2018 19:38
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-13|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD025 5UL/5ML N/A MIX[B]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 03 07:35:18 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46)	Toluene		14.749	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.975	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		0.000	15.413	0.000	0	N.D.		
50)	1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.		
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.		
54)	Chlorobenzene		16.358	16.352	1.003	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.		
56)	Ethylbenzene		16.419	16.425	1.006	0m	N.D.	d	
57)	m,p-Xylenes		16.535	16.541	1.013	0m	N.D.	d	
58)	o-Xylene		16.993	16.986	1.041	0m	N.D.	d	
59)	Styrene		17.005	16.992	1.042	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.535	17.663	0.933	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.773	17.767	0.946	0m	N.D.	d	
67)	n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.944	17.949	0.955	0m	N.D.	d	
69)	2-Chlorotoluene		17.931	17.937	0.954	0m	N.D.	d	
70)	4-Chlorotoluene		18.041	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.364	18.364	0.977	0m	N.D.	d	
73)	sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.821	18.821	1.002	0m	N.D.	d	
77)	n-Butylbenzene		19.114	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.248	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.821	21.821	1.161	0m	N.D.	d	
85)	Acrolein	56	7.939	7.927	0.622	29689	23.01	ug/L	99
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	234123	25.34	ug/L	98
87)	Isopropyl Alcohol	45	8.470	8.464	0.664	133287	234.15	ug/L	93
88)	Allyl chloride	76	8.848	8.842	0.693	104491	24.93	ug/L	96
89)	tert-Butyl Alcohol	59	9.226	9.220	0.723	225214	240.67	ug/L	95
90)	Acrylonitrile	53	9.537	9.531	0.747	61521	25.15	ug/L	99
91)	Isopropyl ether	45	10.317	10.317	0.808	111455	4.91	ug/L	97
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	51858	4.75	ug/L	100
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	111209	4.87	ug/L	99
94)	Ethyl acetate	43	11.225	11.225	0.880	161808	25.10	ug/L	98
95)	Propionitrile	54	11.305	11.305	0.886	23842	24.34	ug/L	97
96)	Methacrylonitrile	67	11.512	11.512	0.902	68215	25.30	ug/L	98
97)	Tetrahydrofuran	42	11.603	11.597	0.909	50136	23.44	ug/L	97
98)	Isobutyl alcohol	43	12.176	12.176	0.954	79333	236.55	ug/L	95
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	104716	4.99	ug/L	96
100)	Methyl methacrylate	69	13.560	13.560	1.063	105893	25.30	ug/L	99
101)	1,4-Dioxane	88	13.658	13.652	1.070	20238	242.09	ug/L	97
102)	2-Nitropropane	43	14.109	14.103	1.106	44101	21.76	ug/L	95

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O115.D
Acq On : 02 Jul 2018 19:38
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-13|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD025 5UL/5ML N/A MIX[B]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 03 07:35:18 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

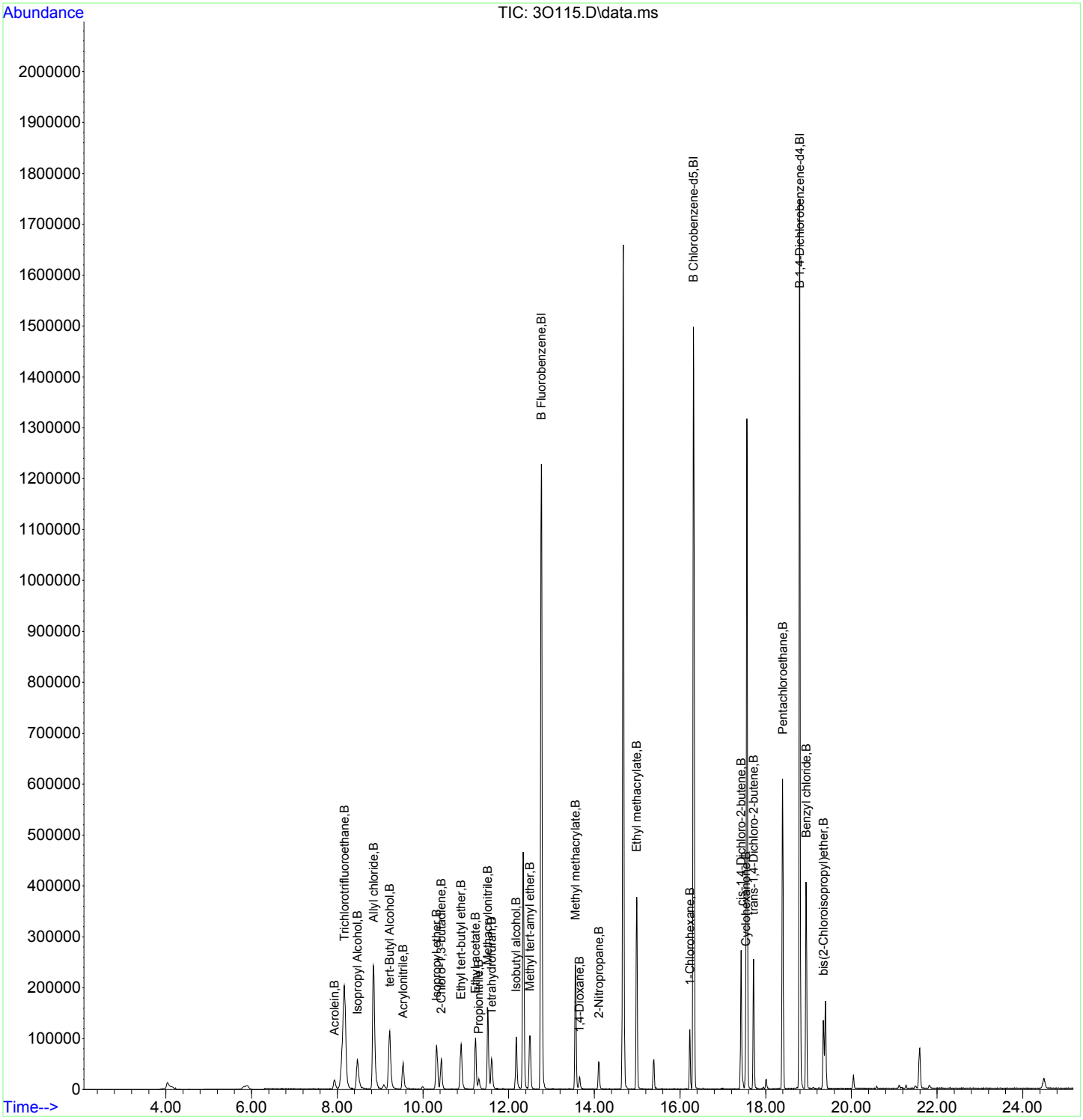
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	203830	25.52	ug/L	99
106) 1-Chlorohexane	91	16.230	16.231	0.864	40161	4.93	ug/L	99
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	62803	24.68	ug/L	89
108) Cyclohexanone	55	17.535	17.535	0.933	24247	113.52	ug/L	95
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	58751	25.66	ug/L	93
110) Pentachloroethane	167	18.395	18.395	0.979	127815	24.78	ug/L	94
111) Benzyl chloride	91	18.943	18.943	1.008	323925	24.55	ug/L	99
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	92573	24.12	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O115.D
Acq On : 02 Jul 2018 19:38
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-13|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD025 5UL/5ML N/A MIX[B]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 03 07:35:18 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O116.D
Acq On : 02 Jul 2018 20:10
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-14|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[B]
ALS Vial : 16 Sample Multiplier: 1

GEL
07/03/2018

Quant Time: Jul 03 07:35:20 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1244994	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	534413	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	494797	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.		d
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.171	8.232	0.640	0m	N.D.		d
10) 1,1-Dichloroethylene		8.171	8.177	0.640	0m	N.D.		d
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.		d
13) Methyl acetate		8.848	8.854	0.693	0m	N.D.		d
14) Carbon disulfide		8.854	8.665	0.694	0m	N.D.		d
15) Methylene chloride		9.098	9.091	0.713	0m	N.D.		d
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.988	9.988	0.783	0m	N.D.		d
19) Vinyl acetate		10.323	10.317	0.809	0m	N.D.		d
20) 1,1-Dichloroethane		10.433	10.286	0.818	0m	N.D.		d
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.634	11.628	0.912	0m	N.D.		d
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.176	12.127	0.954	0m	N.D.		d
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.445	12.438	0.975	0m	N.D.		d
32) Benzene		12.420	12.426	0.973	0m	N.D.		d
33) Cyclohexene		12.493	12.548	0.979	0m	N.D.		d
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.		d
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.		d
36) 2-Pentanone		13.420	13.396	1.052	0m	N.D.		d
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.548	13.475	1.062	0m	N.D.		d
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O116.D
Acq On : 02 Jul 2018 20:10
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-14|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[B]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 03 07:35:20 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.975	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		15.438	15.413	0.946	0m	N.D.	d	
50)	1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.		
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		15.840	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.		
56)	Ethylbenzene		16.426	16.425	1.007	0m	N.D.	d	
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58)	o-Xylene		0.000	16.986	0.000	0	N.D.		
59)	Styrene		16.999	16.992	1.042	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.535	17.663	0.933	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.761	17.767	0.945	0m	N.D.	d	
67)	n-Propylbenzene		17.785	17.791	0.946	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.956	17.949	0.956	0m	N.D.	d	
69)	2-Chlorotoluene		17.944	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.041	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.370	18.364	0.978	0m	N.D.	d	
73)	sec-Butylbenzene		18.547	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.730	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.822	18.821	1.002	0m	N.D.	d	
77)	n-Butylbenzene		19.108	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.126	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.272	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85)	Acrolein	56	7.933	7.927	0.622	65018	52.76	ug/L	98
86)	Trichlorotrifluoroethane	101	8.171	8.165	0.640	444321	50.34	ug/L	99
87)	Isopropyl Alcohol	45	8.470	8.464	0.664	280970	516.70	ug/L	94
88)	Allyl chloride	76	8.854	8.842	0.694	210576	52.59	ug/L	98
89)	tert-Butyl Alcohol	59	9.226	9.220	0.723	481446	538.57	ug/L	97
90)	Acrylonitrile	53	9.531	9.531	0.747	122265	52.33	ug/L	100
91)	Isopropyl ether	45	10.323	10.317	0.809	218967	10.09	ug/L	99
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	102714	9.85	ug/L	98
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	216576	9.93	ug/L	99
94)	Ethyl acetate	43	11.225	11.225	0.880	328290	53.31	ug/L	99
95)	Propionitrile	54	11.305	11.305	0.886	48291	51.61	ug/L	98
96)	Methacrylonitrile	67	11.512	11.512	0.902	131401	51.01	ug/L	98
97)	Tetrahydrofuran	42	11.603	11.597	0.909	104508	51.16	ug/L	99
98)	Isobutyl alcohol	43	12.176	12.176	0.954	167830	523.84	ug/L	97
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	201961	10.08	ug/L	98
100)	Methyl methacrylate	69	13.560	13.560	1.063	211765	52.96	ug/L	99
101)	1,4-Dioxane	88	13.652	13.652	1.070	41491	519.55	ug/L	99
102)	2-Nitropropane	43	14.103	14.103	1.105	97872	46.16	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O116.D
Acq On : 02 Jul 2018 20:10
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-14|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[B]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 03 07:35:20 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

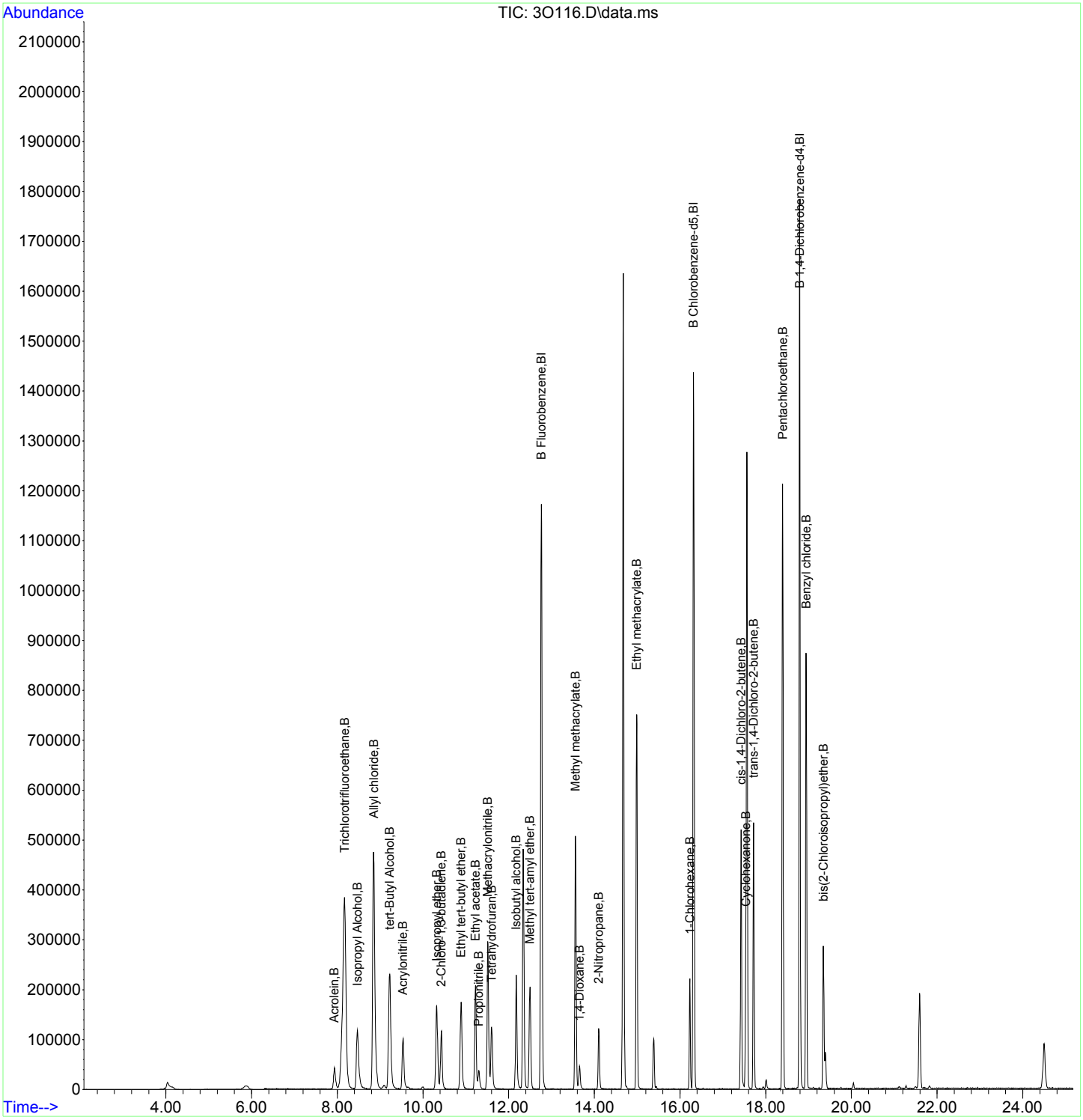
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	409209	54.36	ug/L	99
106) 1-Chlorohexane	91	16.231	16.231	0.864	73351	9.21	ug/L	96
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	122599	49.34	ug/L	94
108) Cyclohexanone	55	17.535	17.535	0.933	52075	249.69	ug/L	99
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	119568	53.48	ug/L	95
110) Pentachloroethane	167	18.395	18.395	0.979	259026	51.44	ug/L	96
111) Benzyl chloride	91	18.943	18.943	1.008	706817	54.85	ug/L	99
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	184647	49.27	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O116.D
Acq On : 02 Jul 2018 20:10
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-14|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[B]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 03 07:35:20 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O117.D
Acq On : 02 Jul 2018 20:41
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-15|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[B]
ALS Vial : 17 Sample Multiplier: 1

GEL
07/03/2018

Quant Time: Jul 03 07:35:22 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1181618	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	520186	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	464461	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.559	17.559	0.934	0d	0.00	ug/L	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.991	4.990	0.391	0m	N.D.		d
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.165	8.232	0.640	0m	N.D.		d
10) 1,1-Dichloroethylene		8.159	8.177	0.639	0m	N.D.		d
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.		d
13) Methyl acetate		8.842	8.854	0.693	0m	N.D.		d
14) Carbon disulfide		8.848	8.665	0.693	0m	N.D.		d
15) Methylene chloride		9.085	9.091	0.712	0m	N.D.		d
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.994	9.988	0.783	0m	N.D.		d
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.		d
20) 1,1-Dichloroethane		10.421	10.286	0.817	0m	N.D.		d
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.621	11.628	0.911	0m	N.D.		d
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.176	12.127	0.954	0m	N.D.		d
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.438	12.438	0.975	0m	N.D.		d
32) Benzene		12.420	12.426	0.973	0m	N.D.		d
33) Cyclohexene		12.487	12.548	0.979	0m	N.D.		d
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.		d
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.		d
36) 2-Pentanone		13.402	13.396	1.050	0m	N.D.		d
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.560	13.475	1.063	0m	N.D.		d
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O117.D
Acq On : 02 Jul 2018 20:41
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-15|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[B]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 03 07:35:22 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.981	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		0.000	15.413	0.000	0	N.D.		
50)	1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.		
51)	Tetrachloroethylene		15.389	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		15.840	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.358	16.352	1.003	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.		
56)	Ethylbenzene		16.419	16.425	1.006	0m	N.D.	d	
57)	m,p-Xylenes		16.535	16.541	1.013	0m	N.D.	d	
58)	o-Xylene		0.000	16.986	0.000	0	N.D.		
59)	Styrene		16.992	16.992	1.041	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.535	17.663	0.933	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.761	17.767	0.945	0m	N.D.	d	
67)	n-Propylbenzene		17.785	17.791	0.946	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.943	17.949	0.955	0m	N.D.	d	
69)	2-Chlorotoluene		17.937	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.358	18.364	0.977	0m	N.D.	d	
73)	sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.730	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.815	18.821	1.001	0m	N.D.	d	
77)	n-Butylbenzene		19.102	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.107	21.113	1.123	0m	N.D.	d	
81)	Hexachlorobutadiene		21.272	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.492	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85)	Acrolein	56	7.927	7.927	0.621	130917	111.93	ug/L	98
86)	Trichlorotrifluoroethane	101	8.159	8.165	0.639	871617	104.06	ug/L	99
87)	Isopropyl Alcohol	45	8.470	8.464	0.664	572082	1108.48	ug/L	97
88)	Allyl chloride	76	8.848	8.842	0.693	405104	106.60	ug/L	98
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	959250	1130.62	ug/L	98
90)	Acrylonitrile	53	9.530	9.531	0.747	228710	103.13	ug/L	100
91)	Isopropyl ether	45	10.323	10.317	0.809	443743	21.55	ug/L	99
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	208446	21.05	ug/L	99
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	460718	22.25	ug/L	100
94)	Ethyl acetate	43	11.219	11.225	0.879	650737	111.34	ug/L	99
95)	Propionitrile	54	11.305	11.305	0.886	95534	107.57	ug/L	100
96)	Methacrylonitrile	67	11.512	11.512	0.902	265455	108.58	ug/L	96
97)	Tetrahydrofuran	42	11.597	11.597	0.909	206720	106.62	ug/L	98
98)	Isobutyl alcohol	43	12.176	12.176	0.954	347693	1143.45	ug/L	98
99)	Methyl tert-amyl ether	73	12.499	12.500	0.979	401919	21.14	ug/L	98
100)	Methyl methacrylate	69	13.560	13.560	1.063	428530	112.93	ug/L	99
101)	1,4-Dioxane	88	13.658	13.652	1.070	81018	1068.93	ug/L	97
102)	2-Nitropropane	43	14.103	14.103	1.105	207529	99.01	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O117.D
Acq On : 02 Jul 2018 20:41
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-15|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[B]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 03 07:35:22 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

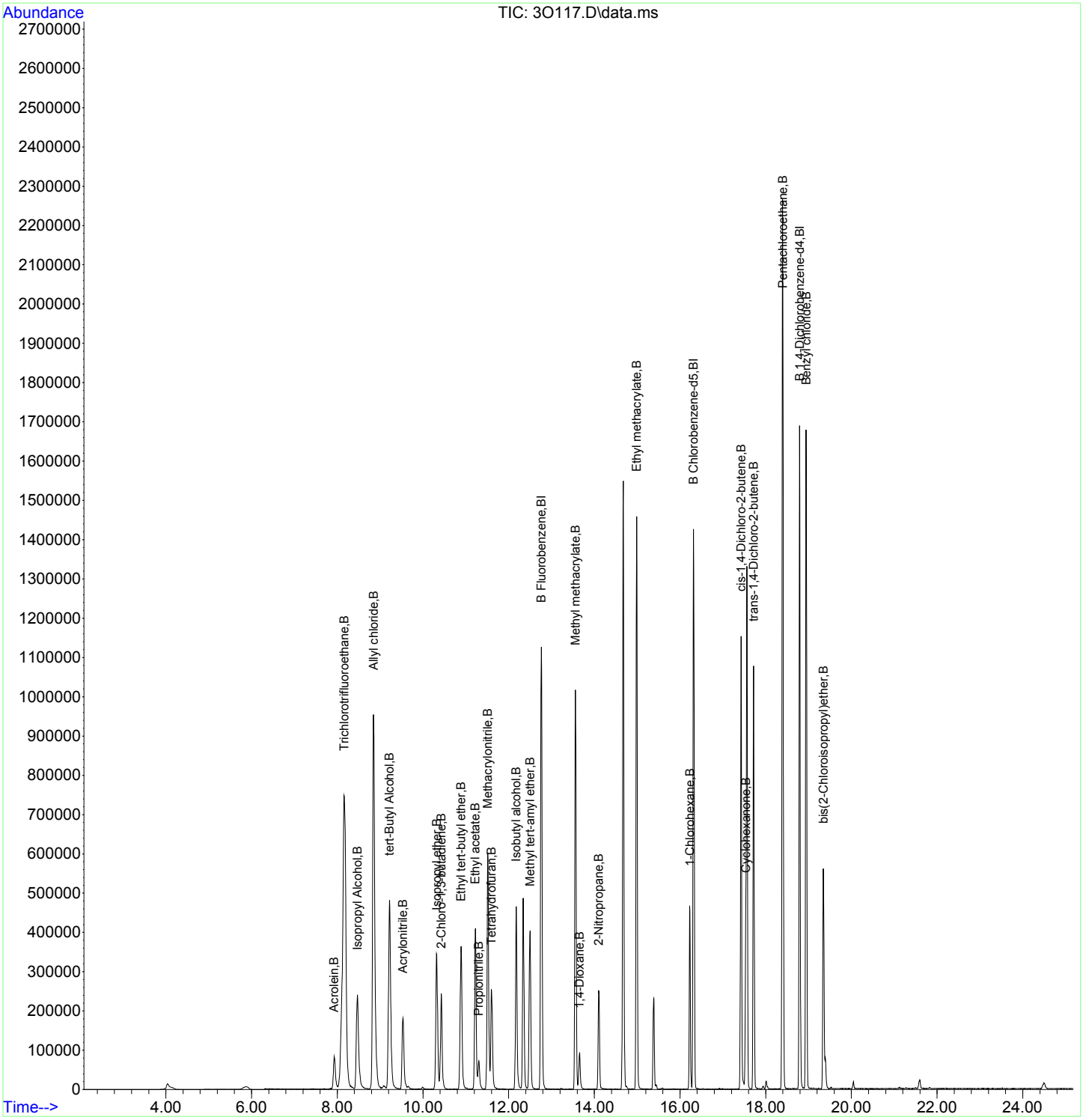
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	784311	107.03	ug/L	99
106) 1-Chlorohexane	91	16.230	16.231	0.864	159505	21.34	ug/L	98
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	256003	109.76	ug/L	98
108) Cyclohexanone	55	17.535	17.535	0.933	105780	540.32	ug/L	99
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	236847	112.85	ug/L	96
110) Pentachloroethane	167	18.395	18.395	0.979	493847	104.47	ug/L	97
111) Benzyl chloride	91	18.943	18.943	1.008	1354205	111.96	ug/L	99
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	373536	106.18	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O117.D
Acq On : 02 Jul 2018 20:41
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-15|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[B]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 03 07:35:22 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O118.D
Acq On : 02 Jul 2018 21:12
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-16|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD250 5UL/5ML N/A MIX[B]
ALS Vial : 18 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:35:24 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1165552	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	497910	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	444888	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.062	7.061	0.553	0m	N.D.	d	
8) Ethyl ether		7.616	7.610	0.597	0m	N.D.	d	
9) Acetone		8.171	8.232	0.640	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.147	8.177	0.638	0m	N.D.	d	
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.842	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.848	8.854	0.693	0m	N.D.	d	
14) Carbon disulfide		8.842	8.665	0.693	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.988	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.427	10.286	0.817	0m	N.D.	d	
21) 2-Butanone		11.225	11.183	0.880	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.628	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.170	12.127	0.954	0m	N.D.	d	
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.445	12.438	0.975	0m	N.D.	d	
32) Benzene		12.432	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.493	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.030	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.377	13.396	1.048	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.554	13.475	1.062	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.341	14.353	1.124	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O118.D
Acq On : 02 Jul 2018 21:12
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-16|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD250 5UL/5ML N/A MIX[B]
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 03 07:35:24 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46)	Toluene		14.749	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.975	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		0.000	15.413	0.000	0	N.D.		
50)	1,3-Dichloropropane		15.401	15.401	0.944	0m	N.D.	d	
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		15.846	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		16.407	16.419	1.006	0m	N.D.	d	
56)	Ethylbenzene		16.419	16.425	1.006	0m	N.D.	d	
57)	m,p-Xylenes		16.535	16.541	1.013	0m	N.D.	d	
58)	o-Xylene		0.000	16.986	0.000	0	N.D.		
59)	Styrene		17.005	16.992	1.042	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.352	17.358	0.923	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.718	17.663	0.943	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		0.000	17.767	0.000	0	N.D.		
67)	n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.950	17.949	0.955	0m	N.D.	d	
69)	2-Chlorotoluene		17.944	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.358	18.364	0.977	0m	N.D.	d	
73)	sec-Butylbenzene		18.547	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.828	18.821	1.002	0m	N.D.	d	
77)	n-Butylbenzene		19.102	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.266	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85)	Acrolein	56	7.927	7.927	0.621	316835	274.61	ug/L	100
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	2122450	256.88	ug/L	100
87)	Isopropyl Alcohol	45	8.464	8.464	0.663	1319379	2591.71	ug/L	100
88)	Allyl chloride	76	8.842	8.842	0.693	981056	261.71	ug/L	100
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	2139466	2556.44	ug/L	100
90)	Acrylonitrile	53	9.531	9.531	0.747	552591	252.62	ug/L	100
91)	Isopropyl ether	45	10.317	10.317	0.808	1035585	50.98	ug/L	100
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	537865	55.08	ug/L	100
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	1074103	52.58	ug/L	100
94)	Ethyl acetate	43	11.225	11.225	0.880	1430664	248.15	ug/L	100
95)	Propionitrile	54	11.305	11.305	0.886	219417	250.47	ug/L	100
96)	Methacrylonitrile	67	11.512	11.512	0.902	603157	250.11	ug/L	100
97)	Tetrahydrofuran	42	11.597	11.597	0.909	453467	237.11	ug/L	100
98)	Isobutyl alcohol	43	12.176	12.176	0.954	773809	2579.88	ug/L	100
99)	Methyl tert-amyl ether	73	12.500	12.500	0.979	971635	51.81	ug/L	100
100)	Methyl methacrylate	69	13.560	13.560	1.063	974858	260.44	ug/L	100
101)	1,4-Dioxane	88	13.652	13.652	1.070	183402	2453.11	ug/L	100
102)	2-Nitropropane	43	14.103	14.103	1.105	524270	248.38	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O118.D
Acq On : 02 Jul 2018 21:12
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-16|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD250 5UL/5ML N/A MIX[B]
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 03 07:35:24 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

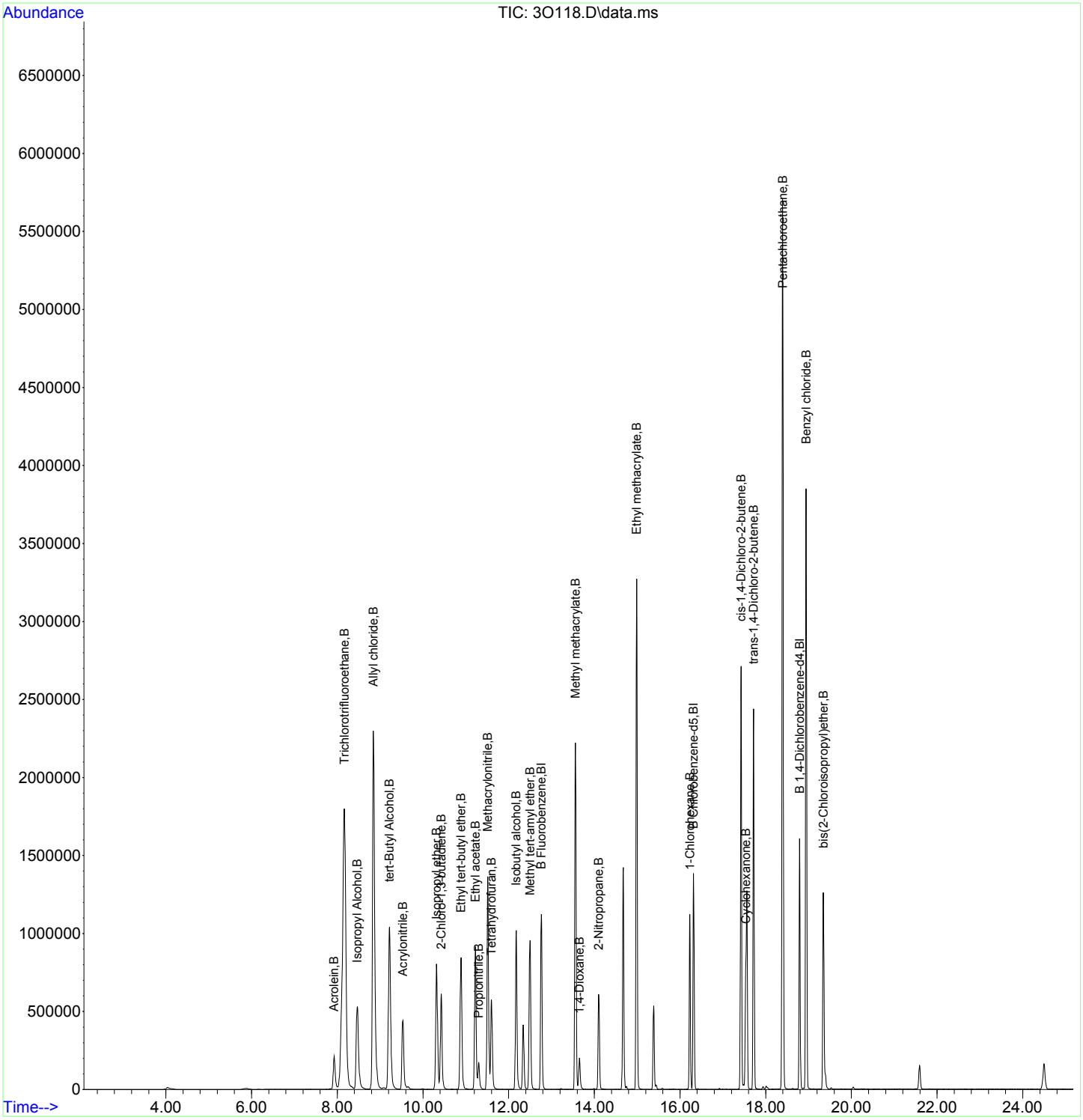
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	1774047	252.94	ug/L	100
106) 1-Chlorohexane	91	16.231	16.231	0.864	397969	55.59	ug/L	100
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	634806	284.15	ug/L	100
108) Cyclohexanone	55	17.535	17.535	0.933	233663	1246.05	ug/L	100
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	526181	261.74	ug/L	100
110) Pentachloroethane	167	18.395	18.395	0.979	1274137	281.40	ug/L	100
111) Benzyl chloride	91	18.943	18.943	1.008	3100265	267.59	ug/L	100
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	845266	250.84	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O118.D
Acq On : 02 Jul 2018 21:12
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-16|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD250 5UL/5ML N/A MIX[B]
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 03 07:35:24 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O119.D
Acq On : 02 Jul 2018 21:44
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-17|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD300 3UL/5ML N/A MIX[B]
ALS Vial : 19 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:35:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.761	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	1150837	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	535888	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	474921	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.559	17.559	0.934	0d	0.00	ug/L	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.037	7.061	0.551	0m	N.D.	d	
8) Ethyl ether		7.604	7.610	0.596	0m	N.D.	d	
9) Acetone		8.171	8.232	0.640	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.079	8.177	0.633	0m	N.D.	d	
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.854	8.854	0.694	0m	N.D.	d	
14) Carbon disulfide		8.848	8.665	0.693	0m	N.D.	d	
15) Methylene chloride		9.085	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		10.000	9.988	0.784	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.433	10.286	0.818	0m	N.D.	d	
21) 2-Butanone		11.231	11.183	0.880	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.628	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.170	12.127	0.954	0m	N.D.	d	
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.463	12.438	0.977	0m	N.D.	d	
32) Benzene		12.432	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.493	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.219	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.420	13.396	1.052	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.560	13.475	1.063	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O119.D
Acq On : 02 Jul 2018 21:44
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-17|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD300 3UL/5ML N/A MIX[B]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 03 07:35:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.981	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		0.000	15.413	0.000	0	N.D.		
50)	1,3-Dichloropropane		15.450	15.401	0.947	0m	N.D.	d	
51)	Tetrachloroethylene		15.389	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		15.852	15.840	0.972	0m	N.D.	d	
54)	Chlorobenzene		16.364	16.352	1.003	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		16.419	16.419	1.006	0m	N.D.	d	
56)	Ethylbenzene		16.419	16.425	1.006	0m	N.D.	d	
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58)	o-Xylene		16.998	16.986	1.042	0m	N.D.	d	
59)	Styrene		16.998	16.992	1.042	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.718	17.663	0.943	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.773	17.767	0.946	0m	N.D.	d	
67)	n-Propylbenzene		17.785	17.791	0.946	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.949	17.949	0.955	0m	N.D.	d	
69)	2-Chlorotoluene		17.937	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.364	18.364	0.977	0m	N.D.	d	
73)	sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.815	18.821	1.001	0m	N.D.	d	
77)	n-Butylbenzene		19.248	19.108	1.024	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.113	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.272	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85)	Acrolein	56	7.933	7.927	0.622	366125	321.39	ug/L	98
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	2508600	307.49	ug/L	100
87)	Isopropyl Alcohol	45	8.464	8.464	0.663	1717285	3416.46	ug/L	99
88)	Allyl chloride	76	8.848	8.842	0.693	1138579	307.61	ug/L	98
89)	tert-Butyl Alcohol	59	9.219	9.220	0.722	2796561	3384.32	ug/L	100
90)	Acrylonitrile	53	9.536	9.531	0.747	686300	317.76	ug/L	99
91)	Isopropyl ether	45	10.317	10.317	0.808	1305708	65.10	ug/L	100
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	639835	66.36	ug/L	100
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	1263995	62.67	ug/L	99
94)	Ethyl acetate	43	11.219	11.225	0.879	1703240	299.21	ug/L	100
95)	Propionitrile	54	11.298	11.305	0.885	275457	318.46	ug/L	99
96)	Methacrylonitrile	67	11.518	11.512	0.903	770417	323.56	ug/L	99
97)	Tetrahydrofuran	42	11.603	11.597	0.909	581472	307.93	ug/L	99
98)	Isobutyl alcohol	43	12.176	12.176	0.954	1009397	3408.36	ug/L	100
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	1207756	65.22	ug/L	100
100)	Methyl methacrylate	69	13.560	13.560	1.063	1254247	339.36	ug/L	99
101)	1,4-Dioxane	88	13.652	13.652	1.070	260775	3532.62	ug/L	100
102)	2-Nitropropane	43	14.103	14.103	1.105	666527	318.86	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O119.D
Acq On : 02 Jul 2018 21:44
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-17|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD300 3UL/5ML N/A MIX[B]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 03 07:35:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

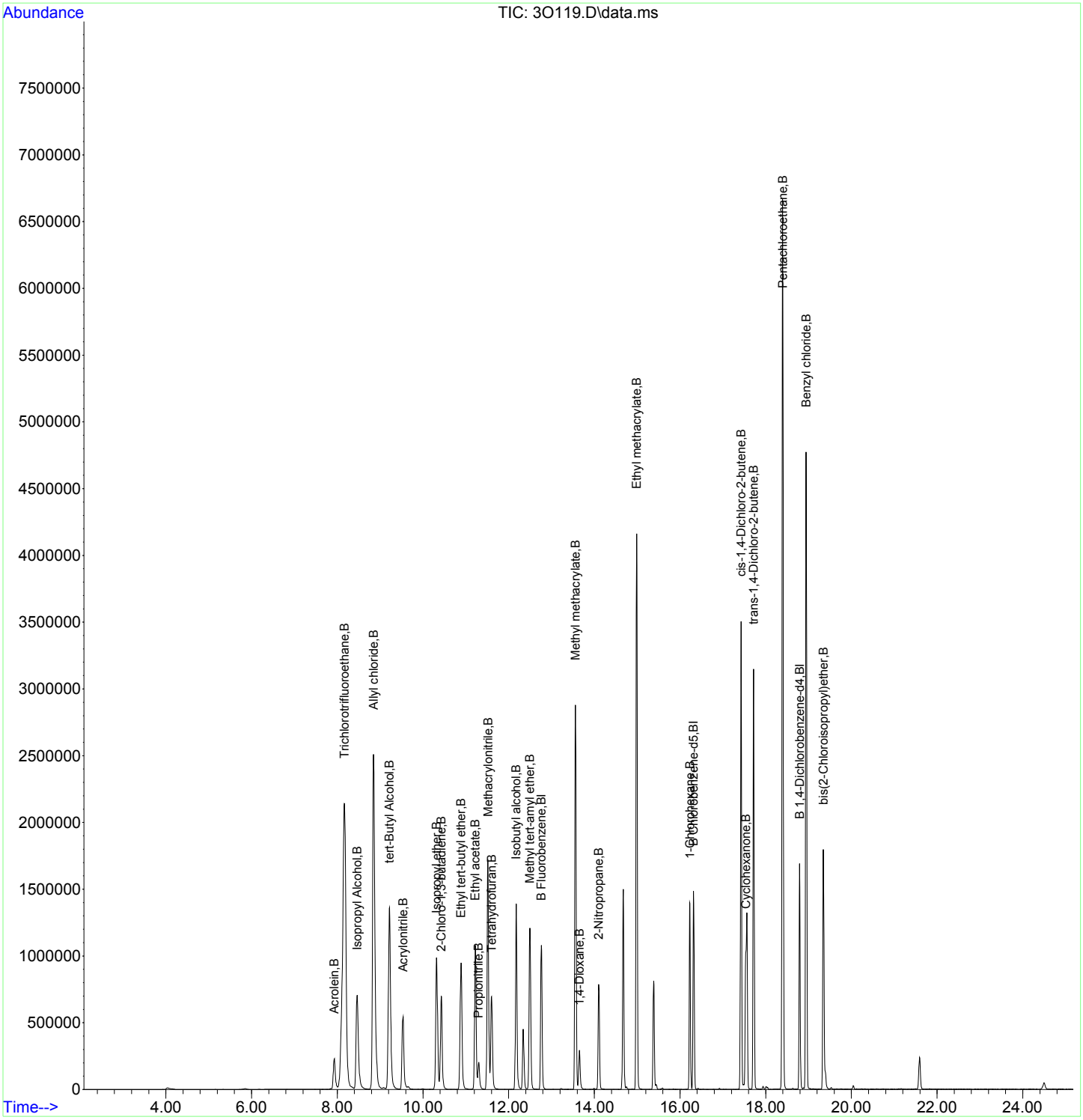
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	2392701	316.96	ug/L	99
106) 1-Chlorohexane	91	16.230	16.231	0.864	503353	65.87	ug/L	99
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	787116	330.04	ug/L	99
108) Cyclohexanone	55	17.535	17.535	0.933	307926	1538.23	ug/L	99
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	687269	320.25	ug/L	99
110) Pentachloroethane	167	18.395	18.395	0.979	1471146	304.36	ug/L	99
111) Benzyl chloride	91	18.943	18.943	1.008	3919423	316.90	ug/L	99
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	1197154	332.80	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O119.D
Acq On : 02 Jul 2018 21:44
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-17|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD300 3UL/5ML N/A MIX[B]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 03 07:35:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O120.D
Acq On : 02 Jul 2018 22:15
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-18|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD500 5UL/5ML N/A MIX[B]
ALS Vial : 20 Sample Multiplier: 1

EM
07/03/2018

Quant Time: Jul 03 07:35:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1167503	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	501134	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	476050	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.		d
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.056	7.061	0.553	0m	N.D.		d
8) Ethyl ether		7.616	7.610	0.597	0m	N.D.		d
9) Acetone		8.159	8.232	0.639	0m	N.D.		d
10) 1,1-Dichloroethylene		8.165	8.177	0.640	0m	N.D.		d
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.		d
13) Methyl acetate		8.854	8.854	0.694	0m	N.D.		d
14) Carbon disulfide		8.848	8.665	0.693	0m	N.D.		d
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.		d
16) tert-Butyl methyl ether		9.525	9.537	0.746	0m	N.D.		d
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.994	9.988	0.783	0m	N.D.		d
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.		d
20) 1,1-Dichloroethane		10.299	10.286	0.807	0m	N.D.		d
21) 2-Butanone		11.201	11.183	0.878	0m	N.D.		d
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		11.183	11.195	0.876	0m	N.D.		d
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.640	11.628	0.912	0m	N.D.		d
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		12.000	11.999	0.940	0m	N.D.		d
28) 1,1-Dichloropropene		12.183	12.127	0.955	0m	N.D.		d
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.439	12.438	0.975	0m	N.D.		d
32) Benzene		12.432	12.426	0.974	0m	N.D.		d
33) Cyclohexene		12.493	12.548	0.979	0m	N.D.		d
34) n-Butyl alcohol		13.024	13.024	1.021	0m	N.D.		d
35) Trichloroethylene		13.219	13.225	1.036	0m	N.D.		d
36) 2-Pentanone		13.414	13.396	1.051	0m	N.D.		d
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.554	13.475	1.062	0m	N.D.		d
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.359	14.353	1.125	0m	N.D.		d

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O120.D
Acq On : 02 Jul 2018 22:15
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-18|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD500 5UL/5ML N/A MIX[B]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 03 07:35:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.			
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d		
47)	trans-1,3-Dichloroprop...		14.987	14.968	0.919	0m	N.D.	d		
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.			
49)	2-Hexanone		0.000	15.413	0.000	0	N.D.			
50)	1,3-Dichloropropane		15.401	15.401	0.944	0m	N.D.	d		
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d		
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.			
53)	1,2-Dibromoethane		15.846	15.840	0.971	0m	N.D.	d		
54)	Chlorobenzene		16.359	16.352	1.003	0m	N.D.	d		
55)	1,1,1,2-Tetrachloroethane		16.407	16.419	1.006	0m	N.D.	d		
56)	Ethylbenzene		16.426	16.425	1.007	0m	N.D.	d		
57)	m,p-Xylenes		16.535	16.541	1.013	0m	N.D.	d		
58)	o-Xylene		16.993	16.986	1.041	0m	N.D.	d		
59)	Styrene		16.993	16.992	1.041	0m	N.D.	d		
61)	Bromoform		0.000	17.261	0.000	0	N.D.			
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d		
64)	1,1,2,2-Tetrachloroethane		17.718	17.663	0.943	0m	N.D.	d		
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d		
66)	Bromobenzene		0.000	17.767	0.000	0	N.D.			
67)	n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d		
68)	1,3,5-Trimethylbenzene		17.950	17.949	0.955	0m	N.D.	d		
69)	2-Chlorotoluene		17.938	17.937	0.955	0m	N.D.	d		
70)	4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d		
71)	tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d		
72)	1,2,4-Trimethylbenzene		18.364	18.364	0.977	0m	N.D.	d		
73)	sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d		
74)	4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d		
75)	1,3-Dichlorobenzene		18.730	18.730	0.997	0m	N.D.	d		
76)	1,4-Dichlorobenzene		18.822	18.821	1.002	0m	N.D.	d		
77)	n-Butylbenzene		19.242	19.108	1.024	0m	N.D.	d		
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d		
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.			
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d		
81)	Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d		
82)	Naphthalene		21.492	21.491	1.144	0m	N.D.	d		
83)	1,2,3-Trichlorobenzene		21.833	21.821	1.162	0m	N.D.	d		
85)	Acrolein	56	7.927	7.927	0.621	615522	532.60	ug/L	98	A
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	4068873	491.63	ug/L	99	
87)	Isopropyl Alcohol	45	8.464	8.464	0.663	2526439	4954.49	ug/L	98	
88)	Allyl chloride	76	8.848	8.842	0.693	1863809	496.36	ug/L	95	
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	4171378	4976.03	ug/L	99	
90)	Acrylonitrile	53	9.531	9.531	0.747	1109423	506.33	ug/L	99	A
91)	Isopropyl ether	45	10.323	10.317	0.809	2096868	103.06	ug/L	99	A
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	1071746	109.56	ug/L	100	A
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	2203931	107.71	ug/L	100	A
94)	Ethyl acetate	43	11.219	11.225	0.879	2534137	438.82	ug/L	100	
95)	Propionitrile	54	11.305	11.305	0.886	427430	487.11	ug/L	99	
96)	Methacrylonitrile	67	11.512	11.512	0.902	1192455	493.66	ug/L	100	
97)	Tetrahydrofuran	42	11.603	11.597	0.909	890862	465.03	ug/L	100	
98)	Isobutyl alcohol	43	12.176	12.176	0.954	1525863	5078.73	ug/L	99	A
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	1987054	105.77	ug/L	99	A
100)	Methyl methacrylate	69	13.560	13.560	1.063	1815207	484.13	ug/L	99	
101)	1,4-Dioxane	88	13.652	13.652	1.070	372061	4968.22	ug/L	99	
102)	2-Nitropropane	43	14.103	14.103	1.105	1043063	490.06	ug/L	98	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O120.D
Acq On : 02 Jul 2018 22:15
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-18|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD500 5UL/5ML N/A MIX[B]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 03 07:35:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

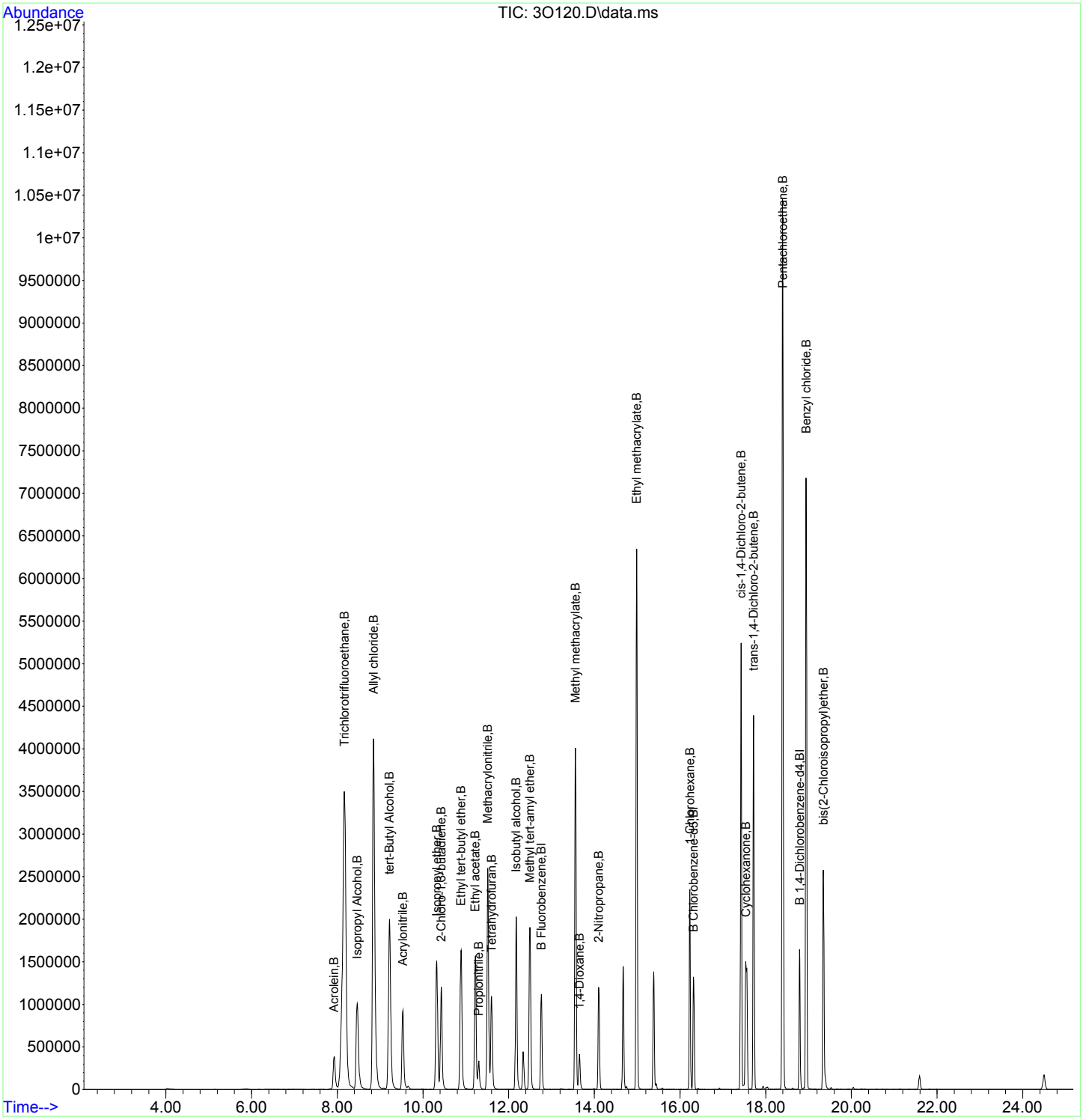
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
104) Ethyl methacrylate	69	14.987	14.987	0.919	3589200	508.44	ug/L	98	A
106) 1-Chlorohexane	91	16.231	16.231	0.864	861557	112.47	ug/L	99	A
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	1188924	497.34	ug/L	98	
108) Cyclohexanone	55	17.535	17.535	0.933	468032	2332.48	ug/L	98	
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	987353	458.99	ug/L	97	
110) Pentachloroethane	167	18.395	18.395	0.979	2379681	491.16	ug/L	98	
111) Benzyl chloride	91	18.943	18.943	1.008	5837448	470.87	ug/L	97	
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	1771335	491.25	ug/L	97	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O120.D
Acq On : 02 Jul 2018 22:15
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-18|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD500 5UL/5ML N/A MIX[B]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 03 07:35:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: VOA3.I

Injection Date: 02-JUL-18 23:17

Data File: 070218V3\3O122.D

Init. Cal. Date(s) 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180702-19

Method: 070218V3\VOA3-8260C-070218.M

Quant Type ISTD

Method Update: 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.18254		.01		-2.4372	30		Averaged
S	Toluene-d8	2.3294	2.35214		.01		0.97622	30		Averaged
S	Bromofluorobenzene	0.9829	0.92642		.01		-5.74626	30		Averaged
	Trichlorotrifluoroethane	0.3544	0.32549		.01		-8.15745	30		Averaged
	1,4-Dioxane	0.0032	0.00313		.01		-2.1875	30		Averaged

Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O122.D
Acq On : 02 Jul 2018 23:17
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-19|ICV|1|VOA|1|VOA8260CL|
Misc : ICV250 5UL/5ML N/A MIX[B]
ALS Vial : 22 Sample Multiplier: 1

GEL
07/03/2018

Quant Time: Jul 03 07:35:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.768	12.761	1.000	1219498	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	510525	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	500370	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.768	12.762	1.000	1221311	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	518737	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	500730	50.00	ug/L	0.00
System Monitoring Compounds								
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	222610	48.78	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1200828	50.49	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	463551	47.13	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.389	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.019	7.061	0.550	0m	N.D.	d	
8) Ethyl ether		7.610	7.610	0.596	0m	N.D.	d	
9) Acetone		8.153	8.232	0.639	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.165	8.177	0.639	0m	N.D.	d	
11) Iodomethane		8.482	8.500	0.664	0m	N.D.	d	
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.836	8.854	0.692	0m	N.D.	d	
14) Carbon disulfide		8.665	8.665	0.679	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		9.537	9.537	0.747	0m	N.D.	d	
17) trans-1,2-Dichloroethy...		9.561	9.567	0.749	0m	N.D.	d	
18) Hexane		9.994	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.286	10.286	0.806	0m	N.D.	d	
21) 2-Butanone		11.213	11.183	0.878	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		11.201	11.183	0.877	0m	N.D.	d	
23) 2,2-Dichloropropane		11.195	11.195	0.877	0m	N.D.	d	
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.628	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		11.914	11.914	0.933	0m	N.D.	d	
27) Cyclohexane		12.006	11.999	0.940	0m	N.D.	d	
28) 1,1-Dichloropropene		12.128	12.127	0.950	0m	N.D.	d	
29) Carbon tetrachloride		12.152	12.146	0.952	0m	N.D.	d	
31) 1,2-Dichloroethane		12.451	12.438	0.975	0m	N.D.	d	
32) Benzene		12.426	12.426	0.973	0m	N.D.	d	
33) Cyclohexene		12.481	12.548	0.978	0m	N.D.	d	
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.402	13.396	1.050	0m	N.D.	d	
37) 1,2-Dichloropropane		13.524	13.524	1.059	0m	N.D.	d	
38) Methylcyclohexane		13.475	13.475	1.055	0m	N.D.	d	
39) Dibromomethane		13.688	13.682	1.072	0m	N.D.	d	
40) Bromodichloromethane		13.835	13.834	1.084	0m	N.D.	d	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.353	14.353	1.124	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O122.D
Acq On : 02 Jul 2018 23:17
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-19|ICV|1|VOA|1|VOA8260CL|
Misc : ICV250 5UL/5ML N/A MIX[B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 03 07:35:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		14.487	14.487	0.888	0m	N.D.	d	
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.968	14.968	0.917	0m	N.D.	d	
48)	1,1,2-Trichloroethane		15.200	15.200	0.932	0m	N.D.	d	
49)	2-Hexanone		15.426	15.413	0.945	0m	N.D.	d	
50)	1,3-Dichloropropane		15.407	15.401	0.944	0m	N.D.	d	
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		15.676	15.676	0.961	0m	N.D.	d	
53)	1,2-Dibromoethane		15.846	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		16.419	16.419	1.006	0m	N.D.	d	
56)	Ethylbenzene		16.426	16.425	1.007	0m	N.D.	d	
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58)	o-Xylene		16.992	16.986	1.041	0m	N.D.	d	
59)	Styrene		16.999	16.992	1.042	0m	N.D.	d	
61)	Bromoform		17.255	17.261	0.918	0m	N.D.	d	
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.718	17.663	0.943	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.761	17.767	0.945	0m	N.D.	d	
67)	n-Propylbenzene		17.785	17.791	0.946	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.950	17.949	0.955	0m	N.D.	d	
69)	2-Chlorotoluene		17.937	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.041	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.315	18.321	0.975	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.370	18.364	0.978	0m	N.D.	d	
73)	sec-Butylbenzene		18.547	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.815	18.821	1.001	0m	N.D.	d	
77)	n-Butylbenzene		19.114	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.236	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.492	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.821	21.821	1.161	0m	N.D.	d	
85)	Acrolein	56	7.927	7.927	0.621	322388	266.67	ug/L	99
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.639	1987614	229.58	ug/L	99
87)	Isopropyl Alcohol	45	8.470	8.464	0.663	1292470	2422.94	ug/L	100
88)	Allyl chloride	76	8.848	8.842	0.693	937065	238.56	ug/L	99
89)	tert-Butyl Alcohol	59	9.226	9.220	0.723	2210405	2520.62	ug/L	100
90)	Acrylonitrile	53	9.531	9.531	0.746	556664	242.86	ug/L	100
91)	Isopropyl ether	45	10.317	10.317	0.808	1031420	48.46	ug/L	99
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	537626	52.54	ug/L	98
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	1039375	48.56	ug/L	100
94)	Ethyl acetate	43	11.219	11.225	0.879	1573920	260.54	ug/L	100
95)	Propionitrile	54	11.305	11.305	0.885	218158	237.67	ug/L	99
96)	Methacrylonitrile	67	11.512	11.512	0.902	593380	234.83	ug/L	99
97)	Tetrahydrofuran	42	11.603	11.597	0.909	475381	237.22	ug/L	99
98)	Isobutyl alcohol	43	12.176	12.176	0.954	814842	2592.65	ug/L	99
99)	Methyl tert-amyl ether	73	12.499	12.500	0.979	962933	49.00	ug/L	100
100)	Methyl methacrylate	69	13.554	13.560	1.062	966559	246.43	ug/L	99
101)	1,4-Dioxane	88	13.652	13.652	1.069	190958	2437.57	ug/L	98
102)	2-Nitropropane	43	14.103	14.103	1.105	535628	242.26	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O122.D
Acq On : 02 Jul 2018 23:17
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-19|ICV|1|VOA|1|VOA8260CL|
Misc : ICV250 5UL/5ML N/A MIX[B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 03 07:35:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

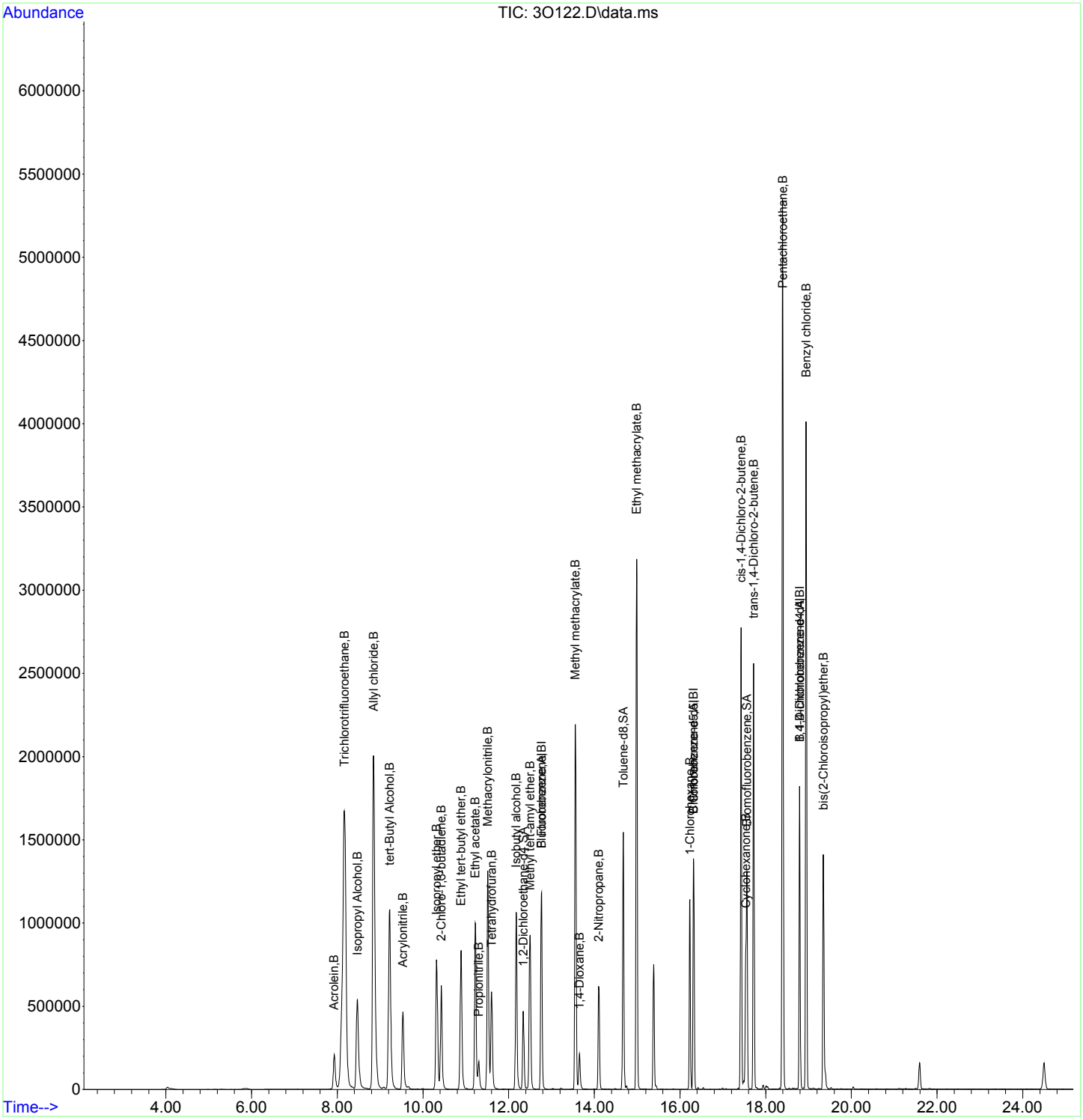
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	1839976	251.80	ug/L	100
106) 1-Chlorohexane	91	16.230	16.231	0.864	400050	49.65	ug/L	100
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	630659	250.81	ug/L	100
108) Cyclohexanone	55	17.535	17.535	0.933	244956	1160.59	ug/L	99
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	558304	246.74	ug/L	100
110) Pentachloroethane	167	18.395	18.395	0.979	1171073	229.79	ug/L	100
111) Benzyl chloride	91	18.943	18.943	1.008	3220574	246.98	ug/L	100
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	930524	245.35	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O122.D
Acq On : 02 Jul 2018 23:17
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-19|ICV|1|VOA|1|VOA8260CL|
Misc : ICV250 5UL/5ML N/A MIX[B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 03 07:35:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: VOA3.I **Injection Date:** 18-JUL-18 10:26

Data File: 071818V3\3Q303.D **Init. Cal. Date(s)** 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180718-02 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD **Method Update:** 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.1879		.01		0.42758	20		Averaged
S	Toluene-d8	2.3294	2.05065		.01		-11.9666	20		Averaged
S	Bromofluorobenzene	0.9829	1.03715		.01		5.51938	20		Averaged
	Dichlorodifluoromethane	0.4299	0.43994		.01		2.33543	20		Averaged
	Chloromethane	0.436	0.44129		.1		1.2133	20		Averaged
	Vinyl chloride	0.4188	0.4278		.01		2.149	20		Averaged
	Bromomethane	0.2977	0.3032		.01		1.8475	20		Averaged
	Chloroethane	0.2918	0.2947		.01		0.99383	20		Averaged
	Trichlorofluoromethane	0.6397	0.66186		.01		3.46412	20		Averaged
	1,1-Dichloroethylene	0.5384	0.59042		.01		9.66196	20		Averaged
	Acetone	0.1805	0.18832		.01		4.33241	20		Averaged
	Carbon disulfide	1.0314	1.11844		.01		8.43901	20		Averaged
	Methyl acetate	0.0508	0.04973		.01		-2.1063	20		Averaged
	Methylene chloride	50	52.11	50			4.22	20		Linear
	tert-Butyl methyl ether	0.8319	0.87887		.01		5.64611	20		Averaged
	trans-1,2-Dichloroethylene	0.4531	0.45461		.01		0.33326	20		Averaged
	1,1-Dichloroethane	0.5764	0.58235		.1		1.03227	20		Averaged
	2-Butanone	0.0435	0.04595		.01		5.63218	20		Averaged
	cis-1,2-Dichloroethylene	0.3015	0.31169		.01		3.37977	20		Averaged
	Bromochloromethane	0.1384	0.12513		.01		-9.58815	20		Averaged
	Chloroform	0.5917	0.6142		.01		3.8026	20		Averaged
	1,1,1-Trichloroethane	0.5413	0.57145		.01		5.56992	20		Averaged
	Cyclohexane	0.4823	0.46435		.01		-3.72175	20		Averaged
	Carbon tetrachloride	0.4989	0.51991		.01		4.21126	20		Averaged
	Benzene	1.1517	1.12554		.01		-2.27142	20		Averaged
	1,2-Dichloroethane	0.4666	0.49444		.01		5.96657	20		Averaged
	Trichloroethylene	0.3016	0.31043		.01		2.92772	20		Averaged
	Methylcyclohexane	0.4919	0.47773		.01		-2.88067	20		Averaged
	1,2-Dichloropropane	0.2921	0.29234		.01		0.08216	20		Averaged
	Bromodichloromethane	0.4344	0.46505		.01		7.05571	20		Averaged
	cis-1,3-Dichloropropylene	0.4666	0.52884		.01		13.33905	20		Averaged
	4-Methyl-2-pentanone	0.2201	0.20318		.01		-7.68741	20		Averaged
	Toluene	2.5146	2.36794		.01		-5.83234	20		Averaged
	trans-1,3-Dichloropropylene	0.9796	1.06389		.01		8.60453	20		Averaged
	1,1,2-Trichloroethane	0.4711	0.44232		.01		-6.10911	20		Averaged
	Tetrachloroethylene	0.5317	0.47417		.01		-10.82001	20		Averaged
	2-Hexanone	0.2758	0.28333		.01		2.73024	20		Averaged

Continuing Calibration Summary

Instrument ID: VOA3.I **Injection Date:** 18-JUL-18 10:26

Data File: 071818V3\3Q303.D **Init. Cal. Date(s)** 02-JUL-18 13:56 02-JUL-18 22:15

Lab Sample ID W3VM180718-02 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
Dibromochloromethane	0.6605	0.63747		.01		-3.48675	20		Averaged
1,2-Dibromoethane	0.5473	0.51133		.01		-6.57226	20		Averaged
Chlorobenzene	1.6589	1.53329		.3		-7.57188	20		Averaged
Ethylbenzene	2.9017	2.81236		.01		-3.07888	20		Averaged
m,p-Xylenes	1.0734	0.95655		.01		-10.88597	20		Averaged
o-Xylene	1.0764	0.994		.01		-7.65515	20		Averaged
Styrene	1.7104	1.65118		.01		-3.46235	20		Averaged
Bromoform	0.4572	0.46514		.1		1.73666	20		Averaged
Isopropylbenzene	3.1716	3.05239		.01		-3.75867	20		Averaged
1,1,2,2-Tetrachloroethane	0.833	0.76435		.3		-8.2413	20		Averaged
1,3-Dichlorobenzene	1.5807	1.48226		.01		-6.22762	20		Averaged
1,4-Dichlorobenzene	1.5657	1.49717		.01		-4.37696	20		Averaged
1,2-Dichlorobenzene	1.5259	1.4415		.01		-5.53116	20		Averaged
1,2-Dibromo-3-chloropropane	0.1727	0.16253		.01		-5.88882	20		Averaged
1,2,4-Trichlorobenzene	1.2723	1.34513		.01		5.72428	20		Averaged
1,2,3-Trichlorobenzene	1.2606	1.27654		.01		1.26448	20		Averaged

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q303.D
Acq On : 18 Jul 2018 10:26
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-02|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10G/0601-10H/0
ALS Vial : 3 Sample Multiplier: 1

EM
07/19/2018

Quant Time: Jul 18 11:57:19 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	1205721	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	580894	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	539269	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1207340	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	589539	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	539671	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	226549	50.21	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1191213	44.02	ug/L	0.00
63) Bromofluorobenzene	95	17.560	17.559	0.934	559303	52.76	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	530443	51.17	ug/L	99
3) Chloromethane	50	5.009	4.990	0.393	532076	50.61	ug/L	100
4) Vinyl chloride	62	5.319	5.319	0.417	515807	51.07	ug/L	99
5) Bromomethane	94	6.105	6.159	0.478	365580	50.93	ug/L	99
6) Chloroethane	64	6.385	6.372	0.500	355331	50.49	ug/L	99
7) Trichlorofluoromethane	101	7.062	7.061	0.553	798014	51.73	ug/L	99
8) Ethyl ether	59	7.610	7.610	0.596	275361	50.14	ug/L	99
9) Acetone	43	8.232	8.232	0.645	1135313	260.81	ug/L	99
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	711878	54.83	ug/L	98
11) Iodomethane	142	8.506	8.500	0.667	2934329	245.74	ug/L	94
12) Acetonitrile	41	8.817	8.817	0.691	957390	1010.02	ug/L	99
13) Methyl acetate	74	8.854	8.854	0.694	299819	244.74	ug/L	90
14) Carbon disulfide	76	8.671	8.665	0.679	6742624	271.10	ug/L	100
15) Methylene chloride	84	9.098	9.091	0.713	409947	52.11	ug/L	98
16) tert-Butyl methyl ether	73	9.531	9.537	0.747	1059676	52.82	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	548136	50.16	ug/L	99
18) Hexane	57	9.988	9.988	0.783	442403	44.24	ug/L	98
19) Vinyl acetate	43	10.317	10.317	0.808	2307563	247.81	ug/L	99
20) 1,1-Dichloroethane	63	10.293	10.286	0.807	702155	50.52	ug/L	99
21) 2-Butanone	72	11.177	11.183	0.876	277042	263.88	ug/L	91
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	375811	51.69	ug/L	98
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	690572	57.69	ug/L	97
24) Bromochloromethane	128	11.549	11.548	0.905	150867	45.22	ug/L	94
25) Chloroform	83	11.628	11.628	0.911	740548	51.90	ug/L	100
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	689008	52.78	ug/L	100
27) Cyclohexane	56	12.000	11.999	0.940	559877	48.14	ug/L	98
28) 1,1-Dichloropropene	75	12.128	12.127	0.950	520912	52.60	ug/L	99
29) Carbon tetrachloride	117	12.146	12.146	0.952	626863	52.10	ug/L	97
31) 1,2-Dichloroethane	62	12.445	12.438	0.975	596151	52.99	ug/L	99
32) Benzene	78	12.426	12.426	0.974	1357084	48.86	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	635684	45.25	ug/L	98
34) n-Butyl alcohol	56	13.024	13.024	1.021	853995	4185.31	ug/L	100
35) Trichloroethylene	95	13.225	13.225	1.036	374293	51.47	ug/L	93
36) 2-Pentanone	43	13.396	13.396	1.050	1168058	247.11	ug/L	99
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	352484	50.03	ug/L	99
38) Methylcyclohexane	83	13.475	13.475	1.056	576010	48.56	ug/L	99
39) Dibromomethane	93	13.682	13.682	1.072	227225	50.76	ug/L	97
40) Bromodichloromethane	83	13.835	13.834	1.084	560723	53.53	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	928235	237.83	ug/L	99
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	637633	56.67	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q303.D
Acq On : 18 Jul 2018 10:26
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-02|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10G/0601-10H/0
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 18 11:57:19 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	590119	230.79	ug/L		99
46)	Toluene	91	14.755	14.755	0.904	1375520	47.08	ug/L		99
47)	trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	618010	54.30	ug/L		98
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	256941	46.94	ug/L		99
49)	2-Hexanone	58	15.414	15.413	0.945	822912	256.78	ug/L		99
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	542264	49.44	ug/L		97
51)	Tetrachloroethylene	164	15.383	15.383	0.943	275441	44.59	ug/L		99
52)	Dibromochloromethane	129	15.676	15.676	0.961	370302	48.26	ug/L		100
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	297030	46.72	ug/L		100
54)	Chlorobenzene	112	16.352	16.352	1.002	890681	46.22	ug/L		96
55)	1,1,1,2-Tetrachloroethane	131	16.420	16.419	1.006	361806	46.34	ug/L		99
56)	Ethylbenzene	91	16.420	16.425	1.006	1633684	48.46	ug/L		96
57)	m,p-Xylenes	106	16.535	16.541	1.013	1111310	89.11	ug/L		91
58)	o-Xylene	106	16.986	16.986	1.041	577411	46.17	ug/L		91
59)	Styrene	104	16.993	16.992	1.041	959158	48.27	ug/L		94
61)	Bromoform	173	17.261	17.261	0.919	250836	50.87	ug/L		100
62)	Isopropylbenzene	105	17.358	17.358	0.924	1646059	48.12	ug/L		97
64)	1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	412188	45.88	ug/L		100
65)	1,2,3-Trichloropropane	75	17.749	17.748	0.945	435744	49.03	ug/L		100
66)	Bromobenzene	156	17.767	17.767	0.945	409336	48.79	ug/L		94
67)	n-Propylbenzene	91	17.791	17.791	0.947	2045181	50.19	ug/L		97
68)	1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1483588	50.28	ug/L		97
69)	2-Chlorotoluene	126	17.938	17.937	0.955	377769	46.99	ug/L	#	85
70)	4-Chlorotoluene	91	18.041	18.041	0.960	1358974	52.18	ug/L		95
71)	tert-Butylbenzene	134	18.322	18.321	0.975	254817	45.48	ug/L	#	86
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1504877	49.76	ug/L		97
73)	sec-Butylbenzene	105	18.547	18.547	0.987	1871729	47.05	ug/L		98
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	1596945	47.75	ug/L		97
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	799337	46.89	ug/L		98
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	807375	47.81	ug/L		98
77)	n-Butylbenzene	91	19.108	19.108	1.017	1667071	49.94	ug/L		98
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	777358	47.23	ug/L		98
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	87647	47.04	ug/L		89
80)	1,2,4-Trichlorobenzene	180	21.114	21.113	1.124	725389	52.86	ug/L		99
81)	Hexachlorobutadiene	225	21.272	21.278	1.132	481268	50.82	ug/L		99
82)	Naphthalene	128	21.492	21.491	1.144	1541387	51.64	ug/L		100
83)	1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	688398	50.63	ug/L		99
85)	Acrolein		7.799	7.927	0.611	0m	N.D.	d		
86)	Trichlorotrifluoroethane		8.159	8.165	0.639	0m	N.D.	d		
87)	Isopropyl Alcohol		8.665	8.464	0.679	0m	N.D.	d		
88)	Allyl chloride		8.671	8.842	0.679	0m	N.D.	d		
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.			
90)	Acrylonitrile		9.518	9.531	0.746	0m	N.D.	d		
91)	Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d		
92)	2-Chloro-1,3-butadiene		10.488	10.427	0.822	0m	N.D.	d		
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94)	Ethyl acetate		11.177	11.225	0.876	0m	N.D.	d		
95)	Propionitrile		11.183	11.305	0.876	0m	N.D.	d		
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97)	Tetrahydrofuran		11.622	11.597	0.911	0m	N.D.	d		
98)	Isobutyl alcohol		12.335	12.176	0.967	0m	N.D.	d		
99)	Methyl tert-amyl ether		12.536	12.500	0.982	0m	N.D.	d		
100)	Methyl methacrylate		13.615	13.560	1.067	0m	N.D.	d		
101)	1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d		
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q303.D
Acq On : 18 Jul 2018 10:26
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-02|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10G/0601-10H/0
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 18 11:57:19 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

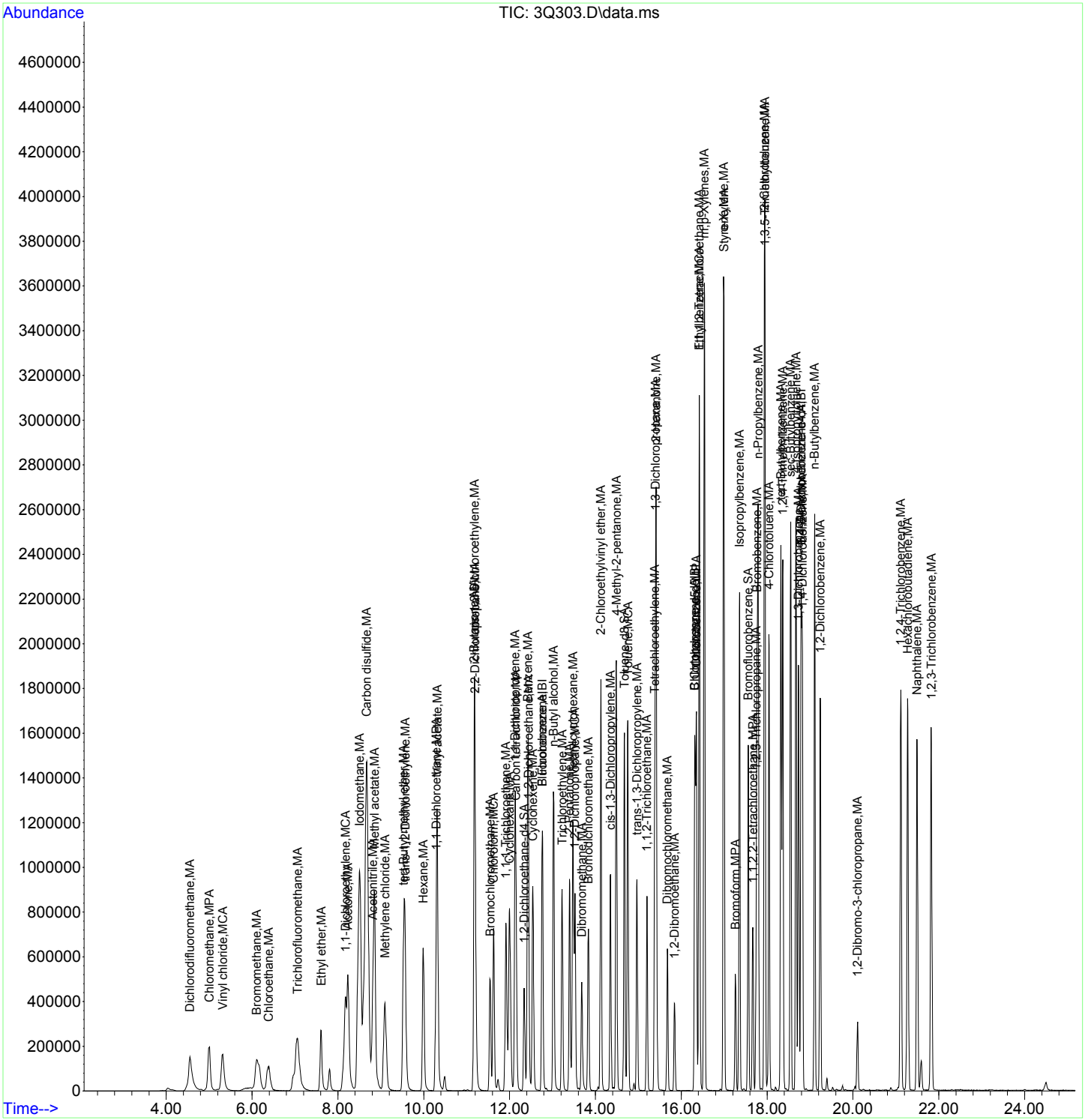
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.560	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.907	18.943	1.006	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.382	19.346	1.031	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q303.D
Acq On : 18 Jul 2018 10:26
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-02|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10G/0601-10H/0
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 18 11:57:19 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: VOA3.I

Injection Date: 18-JUL-18 11:28

Data File: 071818V3\3Q305.D

Init. Cal. Date(s) 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180718-05

Method: 070218V3\VOA3-8260C-070218.M

Quant Type ISTD

Method Update: 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.18529		.01		-0.9674	20		Averaged
S	Toluene-d8	2.3294	2.16525		.01		-7.04688	20		Averaged
S	Bromofluorobenzene	0.9829	1.04602		.01		6.42181	20		Averaged
	Trichlorotrifluoroethane	0.3544	0.35304		.01		-0.38375	20		Averaged
	1,4-Dioxane	0.0032	0.00297		.01		-7.1875	20		Averaged

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q305.D
Acq On : 18 Jul 2018 11:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-05|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

EM
07/19/2018

Quant Time: Jul 18 11:56:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1395523	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	631984	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	555729	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1398610	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	642716	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	555687	50.00	ug/L	0.00
System Monitoring Compounds								
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	258580	49.51	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1368402	46.48	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	581301	53.21	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.991	4.990	0.391	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.086	7.061	0.555	0m	N.D.	d	
8) Ethyl ether		7.616	7.610	0.597	0m	N.D.	d	
9) Acetone		8.153	8.232	0.639	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.153	8.177	0.639	0m	N.D.	d	
11) Iodomethane		8.476	8.500	0.664	0m	N.D.	d	
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.842	8.854	0.693	0m	N.D.	d	
14) Carbon disulfide		8.598	8.665	0.674	0m	N.D.	d	
15) Methylene chloride		9.098	9.091	0.713	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		9.561	9.567	0.749	0m	N.D.	d	
18) Hexane		9.988	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.323	10.317	0.809	0m	N.D.	d	
20) 1,1-Dichloroethane		10.286	10.286	0.806	0m	N.D.	d	
21) 2-Butanone		11.189	11.183	0.877	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		11.195	11.195	0.877	0m	N.D.	d	
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.622	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		11.914	11.914	0.934	0m	N.D.	d	
27) Cyclohexane		11.987	11.999	0.939	0m	N.D.	d	
28) 1,1-Dichloropropene		12.176	12.127	0.954	0m	N.D.	d	
29) Carbon tetrachloride		12.134	12.146	0.951	0m	N.D.	d	
31) 1,2-Dichloroethane		12.432	12.438	0.974	0m	N.D.	d	
32) Benzene		12.426	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.487	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.024	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.231	13.225	1.037	0m	N.D.	d	
36) 2-Pentanone		13.408	13.396	1.051	0m	N.D.	d	
37) 1,2-Dichloropropane		13.536	13.524	1.061	0m	N.D.	d	
38) Methylcyclohexane		13.487	13.475	1.057	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		13.841	13.834	1.085	0m	N.D.	d	
41) 2-Chloroethylvinyl ether		14.139	14.127	1.108	0m	N.D.	d	
42) cis-1,3-Dichloropropylene		14.359	14.353	1.125	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q305.D
Acq On : 18 Jul 2018 11:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-05|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 18 11:56:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		14.487	14.487	0.888	0m	N.D.	d	
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.968	14.968	0.917	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		15.420	15.413	0.945	0m	N.D.	d	
50)	1,3-Dichloropropane		15.407	15.401	0.944	0m	N.D.	d	
51)	Tetrachloroethylene		15.389	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		15.846	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		16.413	16.419	1.006	0m	N.D.	d	
56)	Ethylbenzene		16.425	16.425	1.007	0m	N.D.	d	
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58)	o-Xylene		16.980	16.986	1.041	0m	N.D.	d	
59)	Styrene		16.992	16.992	1.041	0m	N.D.	d	
61)	Bromoform		17.261	17.261	0.919	0m	N.D.	d	
62)	Isopropylbenzene		17.364	17.358	0.924	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.712	17.663	0.943	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.767	17.767	0.945	0m	N.D.	d	
67)	n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.956	17.949	0.956	0m	N.D.	d	
69)	2-Chlorotoluene		17.943	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.321	18.321	0.975	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.364	18.364	0.977	0m	N.D.	d	
73)	sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.821	18.821	1.002	0m	N.D.	d	
77)	n-Butylbenzene		19.108	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		20.120	20.108	1.071	0m	N.D.	d	
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85)	Acrolein	56	7.927	7.927	0.621	363530	262.58	ug/L	99
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	2468850	249.01	ug/L	96
87)	Isopropyl Alcohol	45	8.464	8.464	0.663	1423342	2330.03	ug/L	99
88)	Allyl chloride	76	8.848	8.842	0.693	1126805	250.50	ug/L	93
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	2518437	2507.82	ug/L	99
90)	Acrylonitrile	53	9.530	9.531	0.747	595885	227.02	ug/L	100
91)	Isopropyl ether	45	10.323	10.317	0.809	1167022	47.88	ug/L	98
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	613046	52.31	ug/L	100
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	1220494	49.79	ug/L	99
94)	Ethyl acetate	43	11.219	11.225	0.879	1639230	236.95	ug/L	98
95)	Propionitrile	54	11.305	11.305	0.886	244473	232.57	ug/L	99
96)	Methacrylonitrile	67	11.512	11.512	0.902	722225	249.58	ug/L	94
97)	Tetrahydrofuran	42	11.597	11.597	0.909	507990	221.36	ug/L	96
98)	Isobutyl alcohol	43	12.176	12.176	0.954	874377	2429.40	ug/L	100
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	1141709	50.73	ug/L	98
100)	Methyl methacrylate	69	13.560	13.560	1.063	1174413	261.47	ug/L	94
101)	1,4-Dioxane	88	13.652	13.652	1.070	207728	2315.49	ug/L	99
102)	2-Nitropropane	43	14.103	14.103	1.105	594210	234.79	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q305.D
Acq On : 18 Jul 2018 11:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-05|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 18 11:56:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

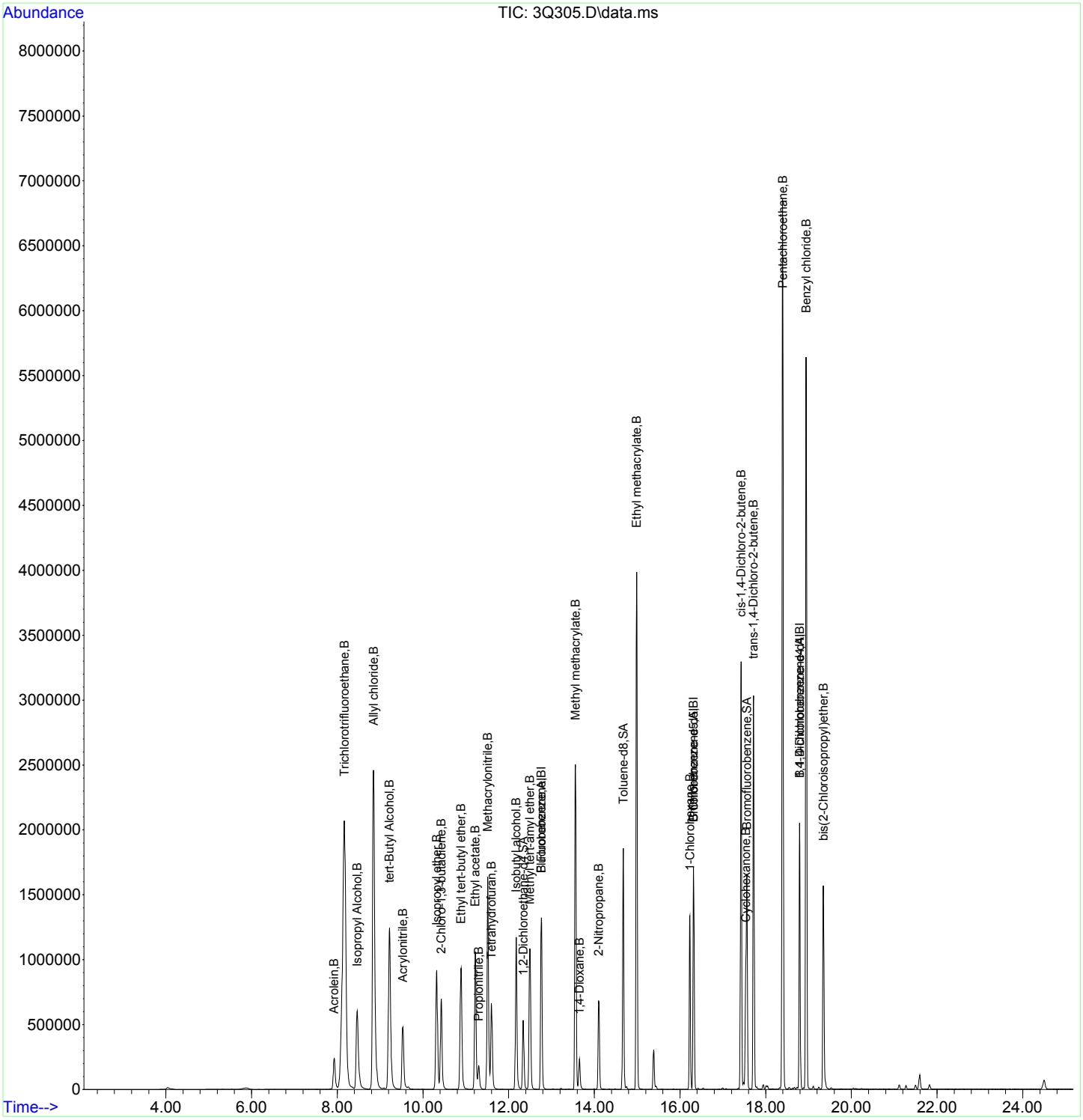
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	2288234	252.74	ug/L	96
106) 1-Chlorohexane	91	16.230	16.231	0.864	494939	55.35	ug/L	98
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	750743	269.04	ug/L	95
108) Cyclohexanone	55	17.535	17.535	0.933	274015	1169.87	ug/L	100
109) trans-1,4-Dichloro-2-b...	53	17.712	17.718	0.943	674068	268.44	ug/L	95
110) Pentachloroethane	167	18.395	18.395	0.979	1509691	266.94	ug/L	100
111) Benzyl chloride	91	18.943	18.943	1.008	4660409	322.05	ug/L	98
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	1029615	244.63	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q305.D
Acq On : 18 Jul 2018 11:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-05|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 18 11:56:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: VOA3.I **Injection Date:** 21-JUL-18 10:55

Data File: 072118V3\3Q603.D **Init. Cal. Date(s)** 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180721-01 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD **Method Update:** 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.19783		.01		5.7349	20		Averaged
S	Toluene-d8	2.3294	2.1205		.01		-8.96797	20		Averaged
S	Bromofluorobenzene	0.9829	0.99796		.01		1.5322	20		Averaged
	Dichlorodifluoromethane	0.4299	0.40387		.01		-6.0549	20		Averaged
	Chloromethane	0.436	0.36894		.1		-15.38073	20		Averaged
	Vinyl chloride	0.4188	0.37712		.01		-9.95224	20		Averaged
	Bromomethane	0.2977	0.2848		.01		-4.33322	20		Averaged
	Chloroethane	0.2918	0.28687		.01		-1.68951	20		Averaged
	Trichlorofluoromethane	0.6397	0.63295		.01		-1.05518	20		Averaged
	1,1-Dichloroethylene	0.5384	0.61903		.01		14.97585	20		Averaged
	Acetone	0.1805	0.19447		.01		7.73961	20		Averaged
	Carbon disulfide	1.0314	1.18761		.01		15.14543	20		Averaged
	Methyl acetate	0.0508	0.0586		.01		15.35433	20		Averaged
	Methylene chloride	50	57.53	50			15.06	20		Linear
	tert-Butyl methyl ether	0.8319	1.01363		.01		21.84517	20	*	Averaged
	trans-1,2-Dichloroethylene	0.4531	0.50029		.01		10.41492	20		Averaged
	1,1-Dichloroethane	0.5764	0.60201		.1		4.4431	20		Averaged
	2-Butanone	0.0435	0.05199		.01		19.51724	20		Averaged
	cis-1,2-Dichloroethylene	0.3015	0.32137		.01		6.59038	20		Averaged
	Bromochloromethane	0.1384	0.13969		.01		0.93208	20		Averaged
	Chloroform	0.5917	0.6585		.01		11.2895	20		Averaged
	1,1,1-Trichloroethane	0.5413	0.57768		.01		6.72086	20		Averaged
	Cyclohexane	0.4823	0.49432		.01		2.49222	20		Averaged
	Carbon tetrachloride	0.4989	0.53779		.01		7.79515	20		Averaged
	Benzene	1.1517	1.2123		.01		5.26179	20		Averaged
	1,2-Dichloroethane	0.4666	0.52157		.01		11.78097	20		Averaged
	Trichloroethylene	0.3016	0.32183		.01		6.70756	20		Averaged
	Methylcyclohexane	0.4919	0.52793		.01		7.32466	20		Averaged
	1,2-Dichloropropane	0.2921	0.31709		.01		8.55529	20		Averaged
	Bromodichloromethane	0.4344	0.50025		.01		15.15884	20		Averaged
	cis-1,3-Dichloropropylene	0.4666	0.58711		.01		25.82726	20	*	Averaged
	4-Methyl-2-pentanone	0.2201	0.22507		.01		2.25806	20		Averaged
	Toluene	2.5146	2.55683		.01		1.67939	20		Averaged
	trans-1,3-Dichloropropylene	0.9796	1.12062		.01		14.39567	20		Averaged
	1,1,2-Trichloroethane	0.4711	0.47976		.01		1.83825	20		Averaged
	Tetrachloroethylene	0.5317	0.49135		.01		-7.58887	20		Averaged
	2-Hexanone	0.2758	0.31026		.01		12.49456	20		Averaged

Continuing Calibration Summary

Instrument ID: VOA3.I **Injection Date:** 21-JUL-18 10:55

Data File: 072118V3\3Q603.D **Init. Cal. Date(s)** 02-JUL-18 13:56 02-JUL-18 22:15

Lab Sample ID W3VM180721-01 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
Dibromochloromethane	0.6605	0.71538		.01		8.30886	20		Averaged
1,2-Dibromoethane	0.5473	0.57911		.01		5.81217	20		Averaged
Chlorobenzene	1.6589	1.54689		.3		-6.75206	20		Averaged
Ethylbenzene	2.9017	2.95949		.01		1.99159	20		Averaged
m,p-Xylenes	1.0734	1.07264		.01		-0.0708	20		Averaged
o-Xylene	1.0764	1.11986		.01		4.03753	20		Averaged
Styrene	1.7104	1.85034		.01		8.18171	20		Averaged
Bromoform	0.4572	0.52692		.1		15.24934	20		Averaged
Isopropylbenzene	3.1716	3.11934		.01		-1.64775	20		Averaged
1,1,2,2-Tetrachloroethane	0.833	0.8673		.3		4.11765	20		Averaged
1,3-Dichlorobenzene	1.5807	1.53766		.01		-2.72284	20		Averaged
1,4-Dichlorobenzene	1.5657	1.54317		.01		-1.43897	20		Averaged
1,2-Dichlorobenzene	1.5259	1.56542		.01		2.58995	20		Averaged
1,2-Dibromo-3-chloropropane	0.1727	0.19837		.01		14.86393	20		Averaged
1,2,4-Trichlorobenzene	1.2723	1.37323		.01		7.93288	20		Averaged
1,2,3-Trichlorobenzene	1.2606	1.3712		.01		8.7736	20		Averaged

Quantitation Report
GEL Laboratories, LLC

JP
07/23/2018

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q603.D
Acq On : 21 Jul 2018 10:55
Operator : JP1
InstName : VOA3
Sample : |W3VM180721-01|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10H/0601-10I/0312-09F/0720-01
ALS Vial : 3 Sample Multiplier: 1

07/23/2018

Quant Time: Jul 21 11:23:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.755	12.761	1.000	1208530	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	579451	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	537301	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.755	12.762	1.000	1210843	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	588147	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	537701	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	239078	52.86	ug/L	0.00
45) Toluene-d8	98	14.670	14.676	0.899	1228724	45.52	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	536206	50.77	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	488095	46.97	ug/L	100
3) Chloromethane	50	5.009	4.990	0.393	445878	42.31	ug/L	100
4) Vinyl chloride	62	5.319	5.319	0.417	455764	45.02	ug/L	99
5) Bromomethane	94	6.105	6.159	0.479	344190	47.84	ug/L	98
6) Chloroethane	64	6.373	6.372	0.500	346695	49.15	ug/L	99
7) Trichlorofluoromethane	101	7.049	7.061	0.553	764936	49.47	ug/L	100
8) Ethyl ether	59	7.598	7.610	0.596	284845	51.75	ug/L	96
9) Acetone	43	8.232	8.232	0.645	1175119	269.33	ug/L	100
10) 1,1-Dichloroethylene	61	8.171	8.177	0.641	748122	57.49	ug/L	99
11) Iodomethane	142	8.500	8.500	0.666	3249520	271.50	ug/L	97
12) Acetonitrile	41	8.811	8.817	0.691	1146942	1207.18	ug/L	99
13) Methyl acetate	74	8.842	8.854	0.693	354093	288.37	ug/L #	87
14) Carbon disulfide	76	8.671	8.665	0.680	7176331	287.87	ug/L	100
15) Methylene chloride	84	9.091	9.091	0.713	452663	57.53	ug/L	95
16) tert-Butyl methyl ether	73	9.524	9.537	0.747	1224999	60.92	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.555	9.567	0.749	604617	55.20	ug/L	98
18) Hexane	57	9.982	9.988	0.783	457270	45.62	ug/L	99
19) Vinyl acetate	43	10.305	10.317	0.808	2402361	257.39	ug/L	98
20) 1,1-Dichloroethane	63	10.280	10.286	0.806	727545	52.23	ug/L	99
21) 2-Butanone	72	11.170	11.183	0.876	314170	298.55	ug/L	88
22) cis-1,2-Dichloroethylene	96	11.176	11.183	0.876	388386	53.30	ug/L	97
23) 2,2-Dichloropropane	77	11.189	11.195	0.877	671074	55.93	ug/L	99
24) Bromochloromethane	128	11.542	11.548	0.905	168825	50.48	ug/L	98
25) Chloroform	83	11.621	11.628	0.911	795814	55.64	ug/L	98
26) 1,1,1-Trichloroethane	97	11.908	11.914	0.934	698141	53.36	ug/L	100
27) Cyclohexane	56	11.993	11.999	0.940	597396	51.24	ug/L	98
28) 1,1-Dichloropropene	75	12.121	12.127	0.950	559353	56.35	ug/L	97
29) Carbon tetrachloride	117	12.134	12.146	0.951	649940	53.89	ug/L	98
31) 1,2-Dichloroethane	62	12.432	12.438	0.975	630328	55.89	ug/L	99
32) Benzene	78	12.420	12.426	0.974	1465099	52.63	ug/L	100
33) Cyclohexene	67	12.536	12.548	0.983	675451	47.96	ug/L	95
34) n-Butyl alcohol	56	13.018	13.024	1.021	1148291	5583.35	ug/L	97
35) Trichloroethylene	95	13.219	13.225	1.036	388936	53.36	ug/L	95
36) 2-Pentanone	43	13.389	13.396	1.050	1234594	260.58	ug/L	99
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	383218	54.27	ug/L	100
38) Methylcyclohexane	83	13.475	13.475	1.056	638023	53.66	ug/L	97
39) Dibromomethane	93	13.676	13.682	1.072	247638	55.20	ug/L	97
40) Bromodichloromethane	83	13.828	13.834	1.084	604565	57.58	ug/L	98
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.108	974454	249.09	ug/L	99
42) cis-1,3-Dichloropropylene	75	14.347	14.353	1.125	709542	62.91	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q603.D
Acq On : 21 Jul 2018 10:55
Operator : JP1
InstName : VOA3
Sample : |W3VM180721-01|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10H/0601-10I/0312-09F/0720-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 21 11:23:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.481	14.487	0.888	652081	255.66	ug/L	97
46)	Toluene	91	14.749	14.755	0.904	1481557	50.84	ug/L	99
47)	trans-1,3-Dichloroprop...	75	14.962	14.968	0.917	649343	57.20	ug/L	97
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	277996	50.92	ug/L	99
49)	2-Hexanone	58	15.413	15.413	0.945	898914	281.20	ug/L	98
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	586111	53.57	ug/L	99
51)	Tetrachloroethylene	164	15.383	15.383	0.943	284712	46.20	ug/L	99
52)	Dibromochloromethane	129	15.676	15.676	0.961	414527	54.16	ug/L	100
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	335565	52.91	ug/L	99
54)	Chlorobenzene	112	16.346	16.352	1.002	896345	46.62	ug/L	97
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	386626	49.64	ug/L	99
56)	Ethylbenzene	91	16.419	16.425	1.006	1714882	51.00	ug/L	98
57)	m,p-Xylenes	106	16.535	16.541	1.013	1243086	99.93	ug/L	96
58)	o-Xylene	106	16.986	16.986	1.041	648902	52.02	ug/L	96
59)	Styrene	104	16.992	16.992	1.041	1072181	54.09	ug/L	97
61)	Bromoform	173	17.261	17.261	0.919	283116	57.63	ug/L	99
62)	Isopropylbenzene	105	17.358	17.358	0.924	1676023	49.18	ug/L	98
64)	1,1,2,2-Tetrachloroethane	83	17.663	17.663	0.940	465999	52.06	ug/L	99
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	470631	53.15	ug/L	91
66)	Bromobenzene	156	17.767	17.767	0.945	414771	49.62	ug/L	95
67)	n-Propylbenzene	91	17.791	17.791	0.947	2052493	50.55	ug/L	98
68)	1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1489761	50.68	ug/L	98
69)	2-Chlorotoluene	126	17.937	17.937	0.955	388480	48.50	ug/L	91
70)	4-Chlorotoluene	91	18.047	18.041	0.960	1362122	52.49	ug/L	97
71)	tert-Butylbenzene	134	18.321	18.321	0.975	273494	49.00	ug/L #	92
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1536620	50.99	ug/L	98
73)	sec-Butylbenzene	105	18.547	18.547	0.987	1953821	49.29	ug/L	99
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	1665036	49.97	ug/L	98
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	826186	48.64	ug/L	99
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	829149	49.28	ug/L	99
77)	n-Butylbenzene	91	19.108	19.108	1.017	1747525	52.54	ug/L	99
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	841100	51.29	ug/L	98
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	106587	57.42	ug/L	95
80)	1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	737836	53.97	ug/L	100
81)	Hexachlorobutadiene	225	21.278	21.278	1.132	487869	51.70	ug/L	99
82)	Naphthalene	128	21.498	21.491	1.144	1675954	56.35	ug/L	100
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	736747	54.38	ug/L	98
85)	Acrolein		7.799	7.927	0.611	0m	N.D.	d	
86)	Trichlorotrifluoroethane		8.134	8.165	0.638	0m	N.D.	d	
87)	Isopropyl Alcohol		8.653	8.464	0.678	0m	N.D.	d	
88)	Allyl chloride		8.671	8.842	0.680	0m	N.D.	d	
89)	tert-Butyl Alcohol		9.018	9.220	0.707	0m	N.D.	d	
90)	Acrylonitrile		9.524	9.531	0.747	0m	N.D.	d	
91)	Isopropyl ether		10.305	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		10.481	10.427	0.822	0m	N.D.	d	
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.170	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		11.170	11.305	0.876	0m	N.D.	d	
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.609	11.597	0.910	0m	N.D.	d	
98)	Isobutyl alcohol		12.341	12.176	0.968	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.524	12.500	0.982	0m	N.D.	d	
100)	Methyl methacrylate		13.621	13.560	1.068	0m	N.D.	d	
101)	1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d	
102)	2-Nitropropane		13.987	14.103	1.097	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q603.D
Acq On : 21 Jul 2018 10:55
Operator : JP1
InstName : VOA3
Sample : |W3VM180721-01|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10H/0601-10I/0312-09F/0720-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 21 11:23:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

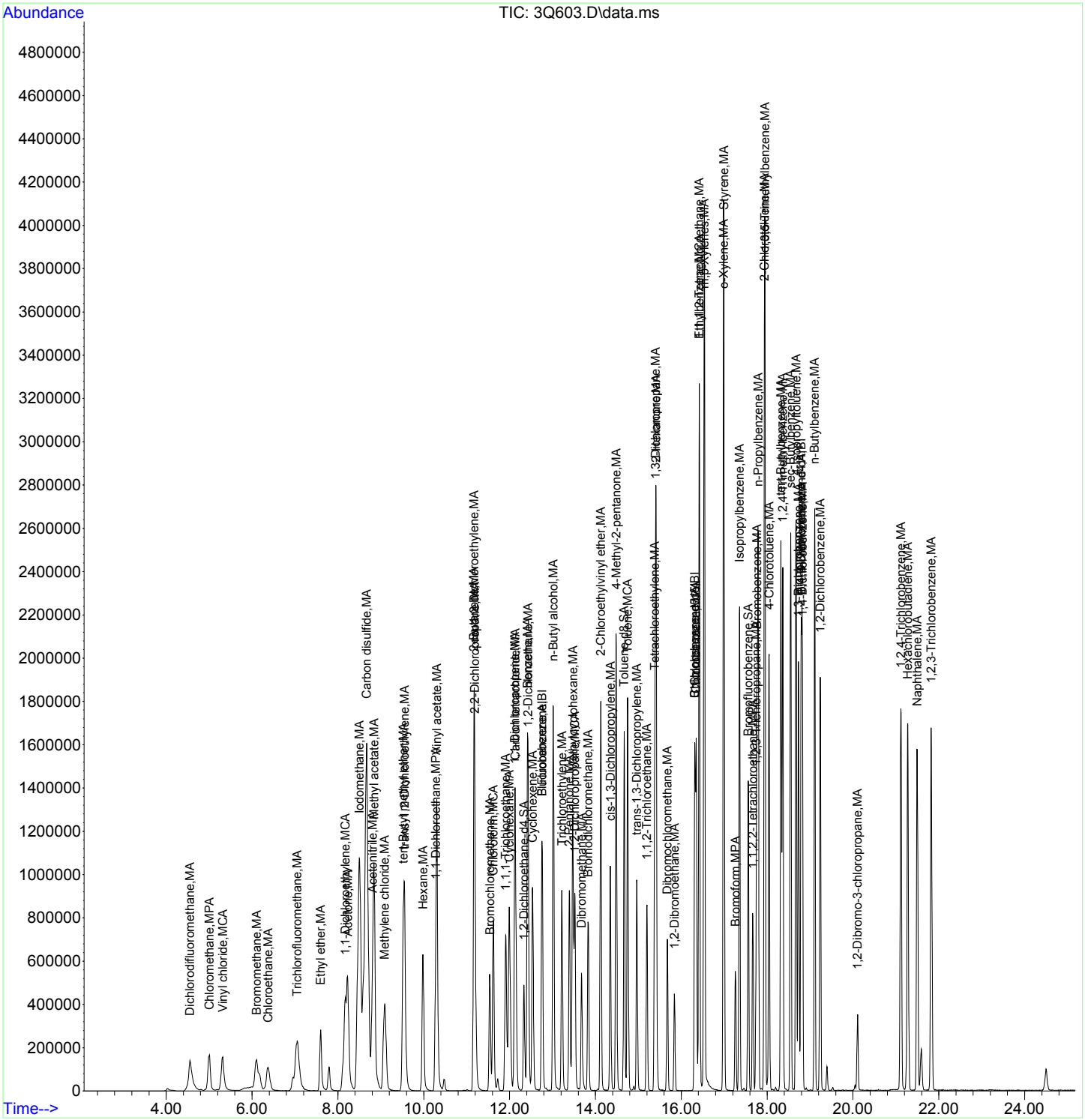
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		14.889	14.987	0.913	0m	N.D.	d
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.553	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.388	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.986	18.943	1.010	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q603.D
Acq On : 21 Jul 2018 10:55
Operator : JP1
InstName : VOA3
Sample : |W3VM180721-01|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10H/0601-10I/0312-09F/0720-01
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 21 11:23:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: VOA3.I

Injection Date: 21-JUL-18 11:57

Data File: 072118V3\3Q605.D

Init. Cal. Date(s) 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180721-04

Method: 070218V3\VOA3-8260C-070218.M

Quant Type ISTD

Method Update: 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.18794		.01		0.44896	20		Averaged
S	Toluene-d8	2.3294	2.09434		.01		-10.09101	20		Averaged
S	Bromofluorobenzene	0.9829	1.03728		.01		5.53261	20		Averaged
	Trichlorotrifluoroethane	0.3544	0.34403		.01		-2.92607	20		Averaged
	1,4-Dioxane	0.0032	0.00317		.01		-0.9375	20		Averaged

Quantitation Report
GEL Laboratories, LLC

JP
07/23/2018

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q605.D
Acq On : 21 Jul 2018 11:57
Operator : JP1
InstName : VOA3
Sample : |W3VM180721-04|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

EM
07/23/2018

Quant Time: Jul 23 08:34:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1430880	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	704413	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	623322	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1434026	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	715318	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	624087	50.00	ug/L	0.00
System Monitoring Compounds								
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	268926	50.22	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1475280	44.95	ug/L	0.00
63) Bromofluorobenzene	95	17.560	17.559	0.934	646559	52.77	ug/L	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.991	4.990	0.391	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.062	7.061	0.553	0m	N.D.	d	
8) Ethyl ether		7.604	7.610	0.596	0m	N.D.	d	
9) Acetone		8.165	8.232	0.640	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.159	8.177	0.639	0m	N.D.	d	
11) Iodomethane		8.452	8.500	0.662	0m	N.D.	d	
12) Acetonitrile		8.842	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.848	8.854	0.693	0m	N.D.	d	
14) Carbon disulfide		8.592	8.665	0.673	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		9.537	9.537	0.747	0m	N.D.	d	
17) trans-1,2-Dichloroethy...		9.567	9.567	0.750	0m	N.D.	d	
18) Hexane		9.994	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.280	10.286	0.806	0m	N.D.	d	
21) 2-Butanone		11.183	11.183	0.876	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		11.177	11.183	0.876	0m	N.D.	d	
23) 2,2-Dichloropropane		11.189	11.195	0.877	0m	N.D.	d	
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.634	11.628	0.912	0m	N.D.	d	
26) 1,1,1-Trichloroethane		11.908	11.914	0.933	0m	N.D.	d	
27) Cyclohexane		12.012	11.999	0.941	0m	N.D.	d	
28) 1,1-Dichloropropene		12.170	12.127	0.954	0m	N.D.	d	
29) Carbon tetrachloride		12.158	12.146	0.953	0m	N.D.	d	
31) 1,2-Dichloroethane		12.445	12.438	0.975	0m	N.D.	d	
32) Benzene		12.426	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.493	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.030	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.402	13.396	1.050	0m	N.D.	d	
37) 1,2-Dichloropropane		13.530	13.524	1.060	0m	N.D.	d	
38) Methylcyclohexane		13.481	13.475	1.056	0m	N.D.	d	
39) Dibromomethane		13.682	13.682	1.072	0m	N.D.	d	
40) Bromodichloromethane		13.841	13.834	1.085	0m	N.D.	d	
41) 2-Chloroethylvinyl ether		14.127	14.127	1.107	0m	N.D.	d	
42) cis-1,3-Dichloropropylene		14.359	14.353	1.125	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q605.D
Acq On : 21 Jul 2018 11:57
Operator : JP1
InstName : VOA3
Sample : |W3VM180721-04|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 23 08:34:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44) 4-Methyl-2-pentanone		14.487	14.487	0.888	0m	N.D.	d	
46) Toluene		14.755	14.755	0.904	0m	N.D.	d	
47) trans-1,3-Dichloroprop...		14.962	14.968	0.917	0m	N.D.	d	
48) 1,1,2-Trichloroethane		15.200	15.200	0.932	0m	N.D.	d	
49) 2-Hexanone		15.420	15.413	0.945	0m	N.D.	d	
50) 1,3-Dichloropropane		15.401	15.401	0.944	0m	N.D.	d	
51) Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52) Dibromochloromethane		15.682	15.676	0.961	0m	N.D.	d	
53) 1,2-Dibromoethane		15.846	15.840	0.971	0m	N.D.	d	
54) Chlorobenzene		16.352	16.352	1.002	0m	N.D.	d	
55) 1,1,1,2-Tetrachloroethane		16.420	16.419	1.006	0m	N.D.	d	
56) Ethylbenzene		16.426	16.425	1.007	0m	N.D.	d	
57) m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58) o-Xylene		16.993	16.986	1.041	0m	N.D.	d	
59) Styrene		16.999	16.992	1.042	0m	N.D.	d	
61) Bromoform		17.267	17.261	0.919	0m	N.D.	d	
62) Isopropylbenzene		17.352	17.358	0.923	0m	N.D.	d	
64) 1,1,2,2-Tetrachloroethane		17.718	17.663	0.943	0m	N.D.	d	
65) 1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66) Bromobenzene		17.767	17.767	0.945	0m	N.D.	d	
67) n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d	
68) 1,3,5-Trimethylbenzene		17.950	17.949	0.955	0m	N.D.	d	
69) 2-Chlorotoluene		17.931	17.937	0.954	0m	N.D.	d	
70) 4-Chlorotoluene		18.041	18.041	0.960	0m	N.D.	d	
71) tert-Butylbenzene		18.322	18.321	0.975	0m	N.D.	d	
72) 1,2,4-Trimethylbenzene		18.364	18.364	0.977	0m	N.D.	d	
73) sec-Butylbenzene		18.547	18.547	0.987	0m	N.D.	d	
74) 4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d	
75) 1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76) 1,4-Dichlorobenzene		18.815	18.821	1.001	0m	N.D.	d	
77) n-Butylbenzene		19.108	19.108	1.017	0m	N.D.	d	
78) 1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79) 1,2-Dibromo-3-chloropr...		20.108	20.108	1.070	0m	N.D.	d	
80) 1,2,4-Trichlorobenzene		21.120	21.113	1.124	0m	N.D.	d	
81) Hexachlorobutadiene		21.272	21.278	1.132	0m	N.D.	d	
82) Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83) 1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85) Acrolein	56	7.927	7.927	0.621	369239	260.12	ug/L	98
86) Trichlorotrifluoroethane	101	8.165	8.165	0.640	2466716	242.65	ug/L	96
87) Isopropyl Alcohol	45	8.464	8.464	0.663	1532316	2446.47	ug/L	99
88) Allyl chloride	76	8.842	8.842	0.693	1156743	250.80	ug/L	92
89) tert-Butyl Alcohol	59	9.220	9.220	0.722	2613064	2537.78	ug/L	97
90) Acrylonitrile	53	9.531	9.531	0.747	645341	239.79	ug/L	98
91) Isopropyl ether	45	10.317	10.317	0.808	1274351	50.99	ug/L	98
92) 2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	628894	52.34	ug/L	96
93) Ethyl tert-butyl ether	59	10.890	10.890	0.853	1349396	53.69	ug/L	99
94) Ethyl acetate	43	11.219	11.225	0.879	1739521	245.24	ug/L	97
95) Propionitrile	54	11.299	11.305	0.885	242732	225.21	ug/L	98
96) Methacrylonitrile	67	11.512	11.512	0.902	769422	259.33	ug/L	93
97) Tetrahydrofuran	42	11.603	11.597	0.909	526894	223.92	ug/L	95
98) Isobutyl alcohol	43	12.176	12.176	0.954	960686	2603.29	ug/L	98
99) Methyl tert-amyl ether	73	12.493	12.500	0.979	1218989	52.83	ug/L	97
100) Methyl methacrylate	69	13.560	13.560	1.063	1308308	284.08	ug/L	93
101) 1,4-Dioxane	88	13.652	13.652	1.070	227475	2472.99	ug/L	99
102) 2-Nitropropane	43	14.103	14.103	1.105	610128	235.12	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q605.D
Acq On : 21 Jul 2018 11:57
Operator : JP1
InstName : VOA3
Sample : |W3VM180721-04|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 23 08:34:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

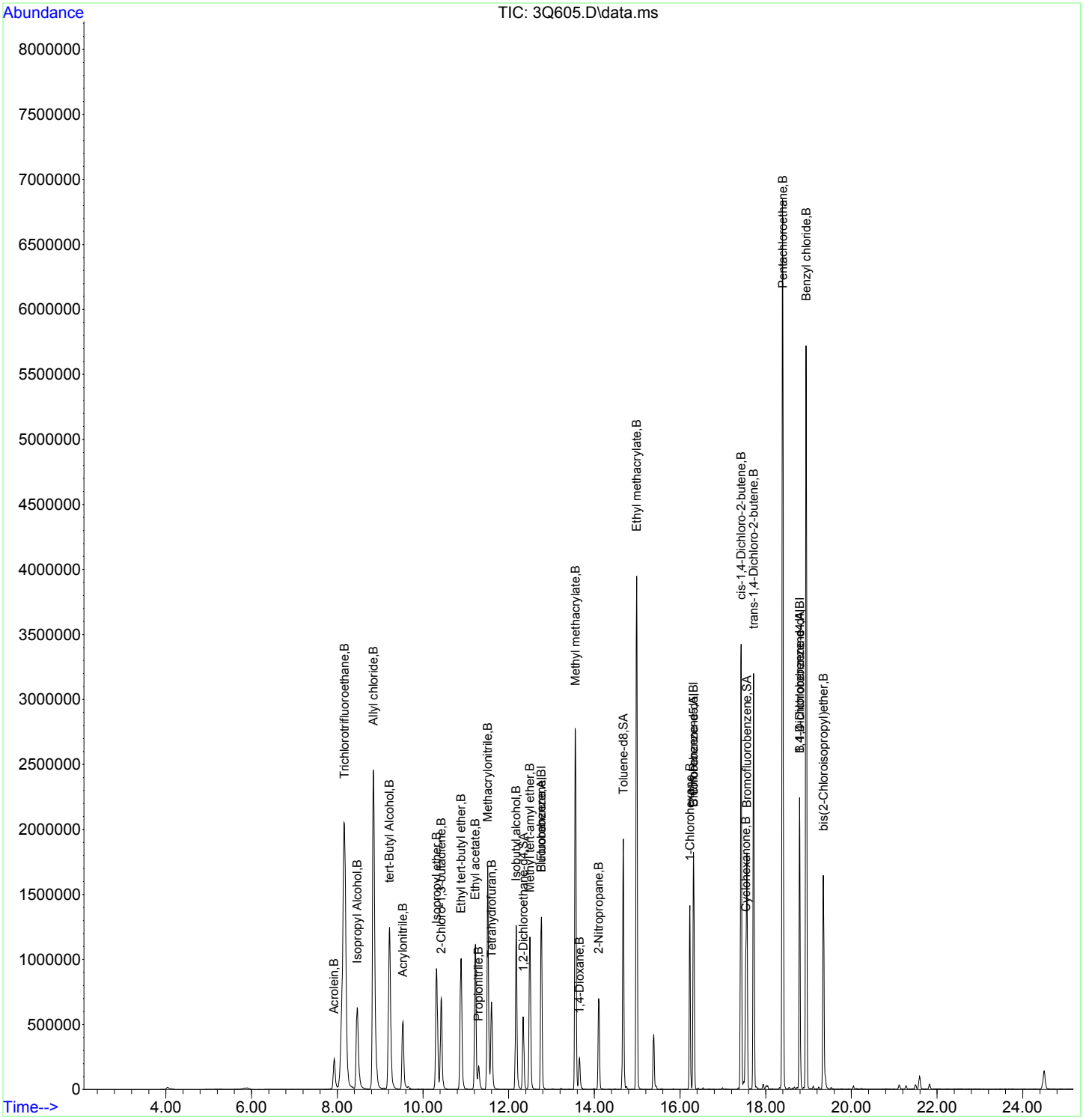
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	2362996	234.51	ug/L	95
106) 1-Chlorohexane	91	16.231	16.231	0.864	518430	51.63	ug/L	96
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	777634	248.13	ug/L	94
108) Cyclohexanone	55	17.535	17.535	0.933	287278	1092.07	ug/L	99
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	674575	239.20	ug/L	92
110) Pentachloroethane	167	18.395	18.395	0.979	1562085	245.93	ug/L	97
111) Benzyl chloride	91	18.943	18.943	1.008	4719842	290.41	ug/L	100
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	1111521	235.14	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q605.D
Acq On : 21 Jul 2018 11:57
Operator : JP1
InstName : VOA3
Sample : |W3VM180721-04|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 23 08:34:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quality Control Data

Tune Report
GEL Laboratories, LLC

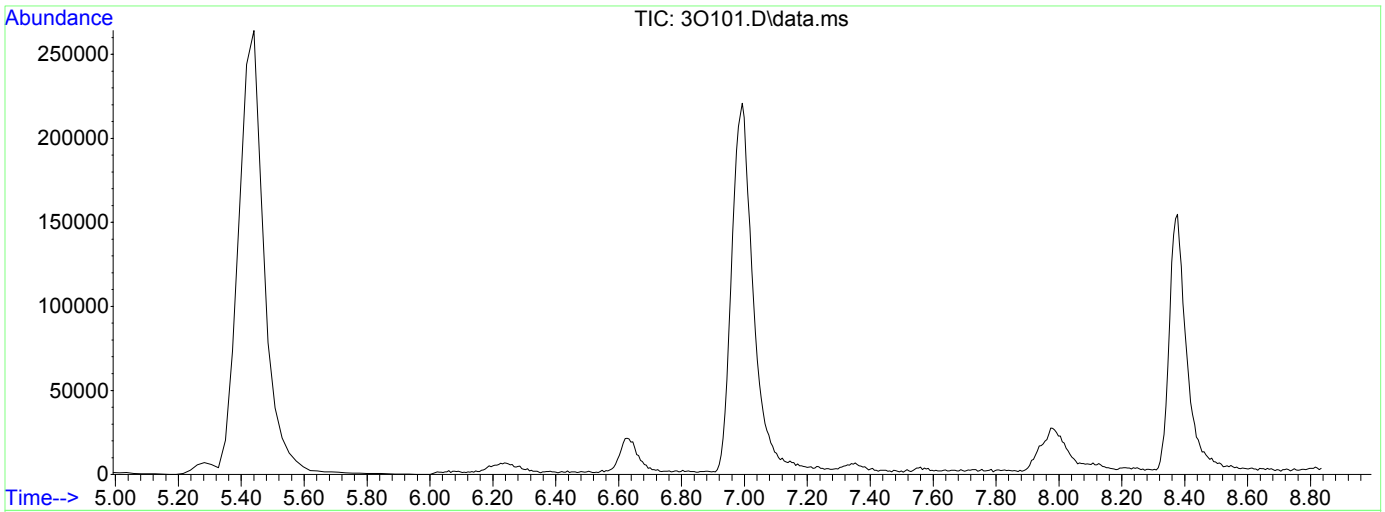
JP
07/03/2018

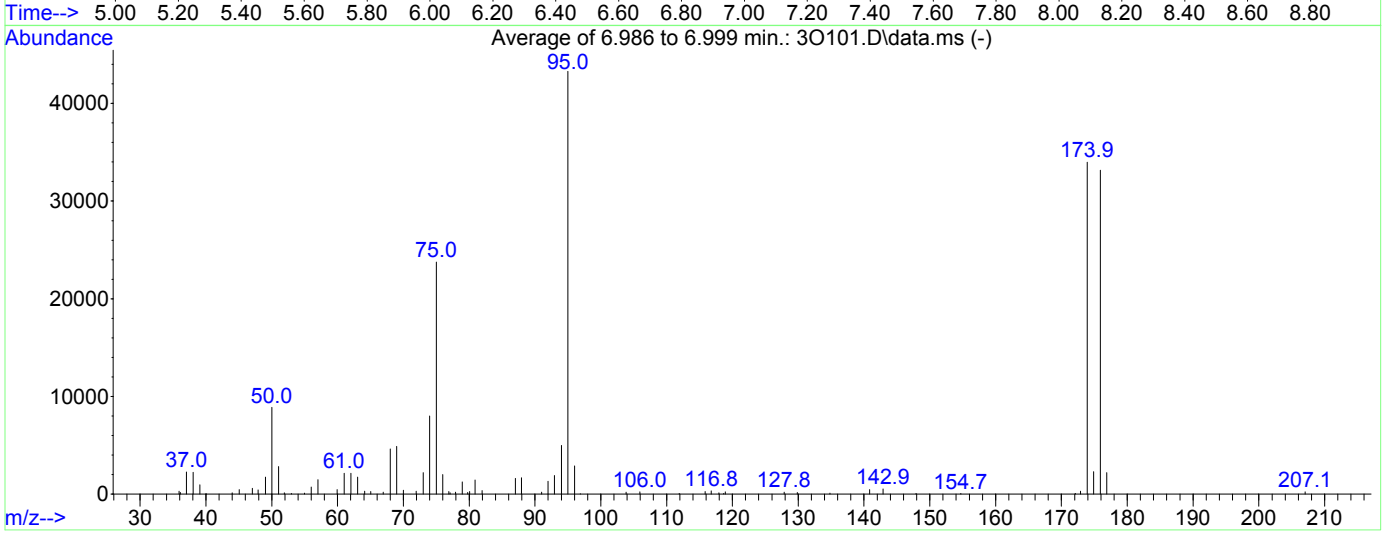
Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O101.D
Acq On : 02 Jul 2018 12:28
Operator : JP1
Sample : |IVM180702-01|BFB|1|VOA|1|VOA8260BL|
Misc : BFB 5ML n/a
ALS Vial : 1 Sample Multiplier: 1

EM
07/03/2018

Integration File:

Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Title : Volatile Organics 8260B SubList :
Last Update : Tue Jul 03 07:30:47 2018





AutoFind: Scans 223, 224, 225; Background Corrected with Scan 206

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.5	8870	PASS
75	95	30	60	54.9	23771	PASS
95	95	100	100	100.0	43285	PASS
96	95	5	9	6.6	2877	PASS
173	174	0.00	2	0.8	282	PASS
174	95	50	100	78.5	33971	PASS
175	174	5	9	6.7	2288	PASS
176	174	95	101	97.6	33155	PASS
177	176	5	9	6.7	2210	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

Tune Report
GEL Laboratories, LLC

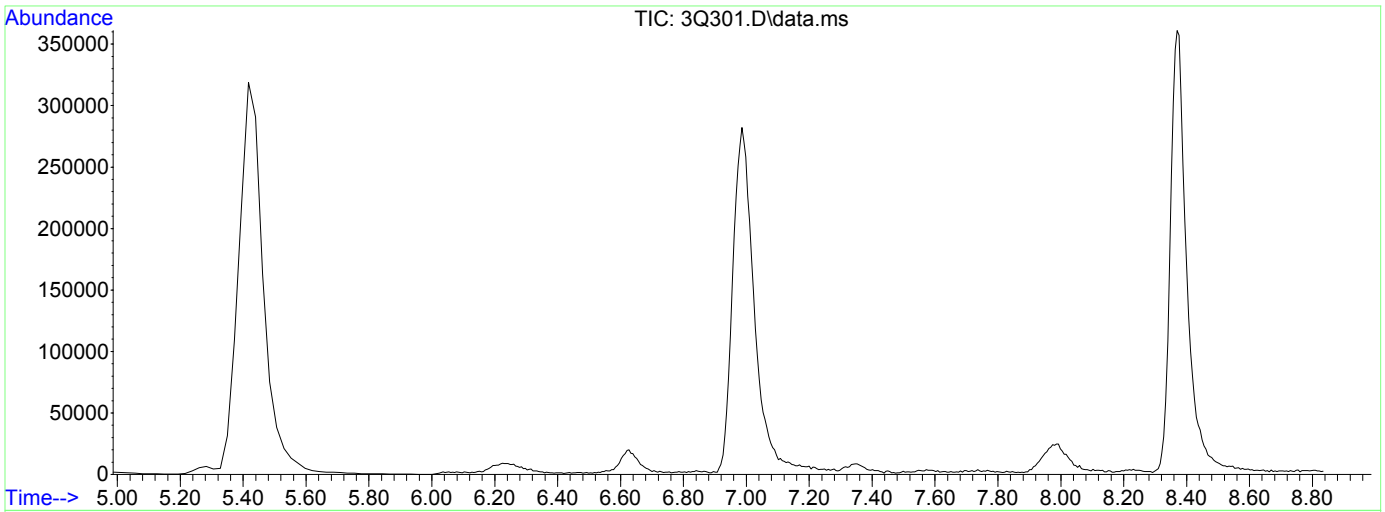
JP
07/19/2018

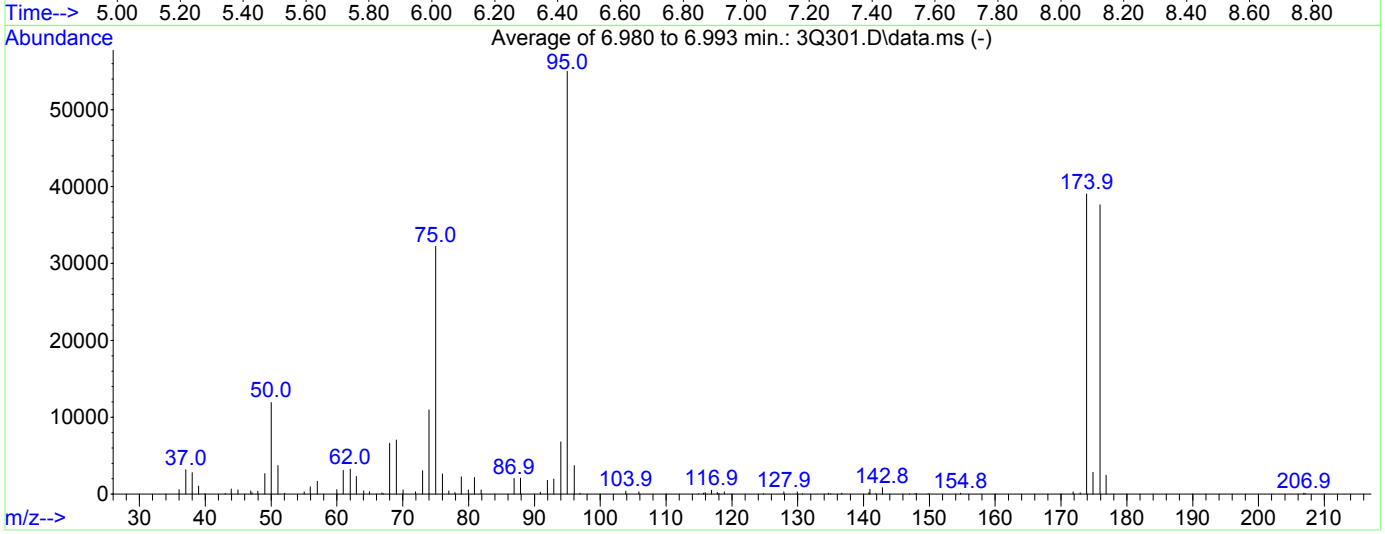
Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q301.D
Acq On : 18 Jul 2018 09:28
Operator : JP1
Sample : |IVM180702-01|BFB|1|VOA|1|VOA8260BL|
Misc : BFB 5ML n/a
ALS Vial : 1 Sample Multiplier: 1

07/19/2018

Integration File:

Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Title : Volatile Organics 8260B SubList :
Last Update : Tue Jul 03 07:30:47 2018





AutoFind: Scans 222, 223, 224; Background Corrected with Scan 206

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	11916	PASS
75	95	30	60	58.6	32205	PASS
95	95	100	100	100.0	54995	PASS
96	95	5	9	6.8	3720	PASS
173	174	0.00	2	0.5	179	PASS
174	95	50	100	71.0	39035	PASS
175	174	5	9	7.2	2820	PASS
176	174	95	101	96.4	37627	PASS
177	176	5	9	6.5	2453	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

Tune Report
GEL Laboratories, LLC

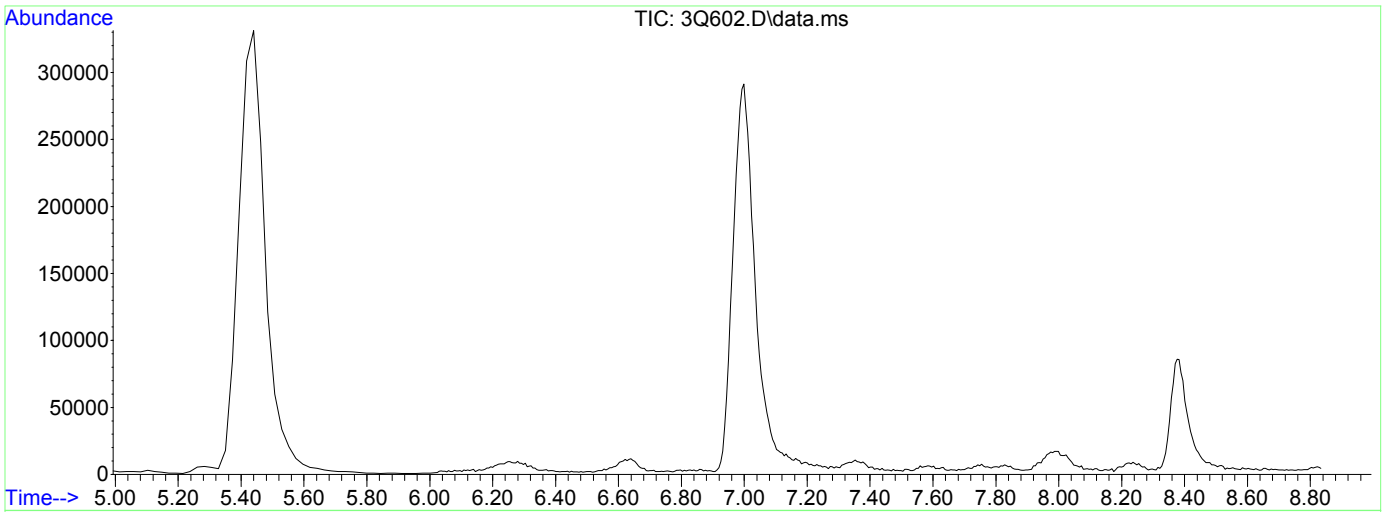
JP
07/23/2018

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q602.D
Acq On : 21 Jul 2018 10:29
Operator : JP1
Sample : |IVM180702-01|BFB|1|VOA|1|VOA8260BL|
Misc : BFB 5ML n/a
ALS Vial : 2 Sample Multiplier: 1

EM
07/23/2018

Integration File:

Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Title : Volatile Organics 8260B SubList :
Last Update : Tue Jul 03 07:30:47 2018



AutoFind: Scans 223, 224, 225; Background Corrected with Scan 208

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.4	11233	PASS
75	95	30	60	56.8	32960	PASS
95	95	100	100	100.0	58048	PASS
96	95	5	9	7.3	4209	PASS
173	174	0.00	2	0.6	245	PASS
174	95	50	100	72.8	42285	PASS
175	174	5	9	7.1	2994	PASS
176	174	95	101	99.8	42221	PASS
177	176	5	9	6.4	2717	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070948**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**MB for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 12:30**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 09:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q307B81.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	2.00	ug/kg	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane	U	2.00	ug/kg	0.300	2.00
79-00-5	1,1,2-Trichloroethane	U	2.00	ug/kg	0.300	2.00
75-34-3	1,1-Dichloroethane	U	2.00	ug/kg	0.300	2.00
75-35-4	1,1-Dichloroethylene	U	2.00	ug/kg	0.300	2.00
87-61-6	1,2,3-Trichlorobenzene	U	2.00	ug/kg	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene	U	2.00	ug/kg	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane	U	2.00	ug/kg	0.500	2.00
106-93-4	1,2-Dibromoethane	U	2.00	ug/kg	0.300	2.00
95-50-1	1,2-Dichlorobenzene	U	2.00	ug/kg	0.300	2.00
107-06-2	1,2-Dichloroethane	U	2.00	ug/kg	0.300	2.00
78-87-5	1,2-Dichloropropane	U	2.00	ug/kg	0.300	2.00
541-73-1	1,3-Dichlorobenzene	U	2.00	ug/kg	0.300	2.00
106-46-7	1,4-Dichlorobenzene	U	2.00	ug/kg	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/kg	15.0	50.0
78-93-3	2-Butanone	U	10.0	ug/kg	3.00	10.0
591-78-6	2-Hexanone	U	10.0	ug/kg	3.00	10.0
108-10-1	4-Methyl-2-pentanone	U	10.0	ug/kg	3.00	10.0
67-64-1	Acetone	U	10.0	ug/kg	3.00	10.0
71-43-2	Benzene	U	2.00	ug/kg	0.300	2.00
74-97-5	Bromochloromethane	U	2.00	ug/kg	0.300	2.00
75-27-4	Bromodichloromethane	U	2.00	ug/kg	0.300	2.00
75-25-2	Bromoform	U	2.00	ug/kg	0.300	2.00
74-83-9	Bromomethane	U	2.00	ug/kg	0.300	2.00
75-15-0	Carbon disulfide	U	10.0	ug/kg	1.60	10.0
56-23-5	Carbon tetrachloride	U	2.00	ug/kg	0.300	2.00
108-90-7	Chlorobenzene	U	2.00	ug/kg	0.300	2.00
75-00-3	Chloroethane	U	2.00	ug/kg	0.300	2.00
67-66-3	Chloroform	U	2.00	ug/kg	0.300	2.00
74-87-3	Chloromethane	U	2.00	ug/kg	0.300	2.00
110-82-7	Cyclohexane	U	2.00	ug/kg	0.300	2.00
124-48-1	Dibromochloromethane	U	2.00	ug/kg	0.300	2.00
75-71-8	Dichlorodifluoromethane	U	2.00	ug/kg	0.300	2.00
100-41-4	Ethylbenzene	U	2.00	ug/kg	0.300	2.00
98-82-8	Isopropylbenzene	U	2.00	ug/kg	0.300	2.00
79-20-9	Methyl acetate	U	5.00	ug/kg	1.50	5.00
108-87-2	Methylcyclohexane	U	2.00	ug/kg	0.300	2.00
75-09-2	Methylene chloride	U	5.00	ug/kg	1.60	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070948**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**MB for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 12:30**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 09:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q307B81.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	2.00	ug/kg	0.300	2.00
127-18-4	Tetrachloroethylene	U	2.00	ug/kg	0.300	2.00
108-88-3	Toluene	U	2.00	ug/kg	0.300	2.00
79-01-6	Trichloroethylene	U	2.00	ug/kg	0.300	2.00
75-69-4	Trichlorofluoromethane	U	2.00	ug/kg	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/kg	1.60	5.00
75-01-4	Vinyl chloride	U	2.00	ug/kg	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene	U	2.00	ug/kg	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene	U	2.00	ug/kg	0.300	2.00
179601-23-1	m,p-Xylenes	U	4.00	ug/kg	0.300	4.00
95-47-6	o-Xylene	U	2.00	ug/kg	0.300	2.00
1634-04-4	tert-Butyl methyl ether	U	2.00	ug/kg	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene	U	2.00	ug/kg	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene	U	2.00	ug/kg	0.300	2.00

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q307B81.D
Acq On : 18 Jul 2018 12:30
Operator : JP1
InstName : VOA3
Sample : |1204070948|1782981|1|VOA|1|VOA3560C_S|
Misc : BLANK 5ML N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

EM
07/19/2018

Quant Time: Jul 18 13:58:11 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.761	12.761	1.000	1226605	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	583334	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	467199	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	1229018	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	591781	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	467806	50.00	ug/L	0.00
System Monitoring Compounds								
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	242560	52.84	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1238009	45.55	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	511665	55.71	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	71 - 136	106%
45) Toluene-d8	50.000	85 - 116	91%
63) Bromofluorobenzene	50.000	79 - 119	111%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane	50	4.990	4.990	0.391	1239	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.226	8.232	0.645	158	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.671	8.665	0.679	193	N.D.		
15) Methylene chloride	84	9.085	9.091	0.712	3011	Below Cal		92
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		0.000	9.988	0.000	0	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	664	N.D.		
32) Benzene	78	12.426	12.426	0.974	452	N.D.		
33) Cyclohexene	67	12.493	12.548	0.979	101	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.395	13.396	1.050	110	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q307B81.D
Acq On : 18 Jul 2018 12:30
Operator : JP1
InstName : VOA3
Sample : |1204070948|1782981|1|VOA|1|VOA3560C_S|
Misc : BLANK 5ML N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 18 13:58:11 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.749	14.755	0.904	595	N.D.	
47) trans-1,3-Dichloroprop...	75	14.981	14.968	0.918	255	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone	58	15.419	15.413	0.945	297	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene	112	16.352	16.352	1.002	596	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene	91	16.425	16.425	1.007	684	N.D.	
57) m,p-Xylenes	106	16.547	16.541	1.014	348	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene	104	16.998	16.992	1.042	414	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene	105	17.352	17.358	0.923	332	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane	75	17.767	17.748	0.945	148	N.D.	
66) Bromobenzene	156	17.773	17.767	0.946	290	N.D.	
67) n-Propylbenzene	91	17.791	17.791	0.947	1165	N.D.	
68) 1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	858	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.041	18.041	0.960	1277	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	18.358	18.364	0.977	934	N.D.	
73) sec-Butylbenzene	105	18.553	18.547	0.987	1056	N.D.	
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	1081	N.D.	
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	1065	N.D.	
76) 1,4-Dichlorobenzene	146	18.815	18.821	1.001	1483	N.D.	
77) n-Butylbenzene	91	19.114	19.108	1.017	1780	N.D.	
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	1004	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.126	21.113	1.124	2631	N.D.	
81) Hexachlorobutadiene	225	21.278	21.278	1.132	1810	N.D.	
82) Naphthalene	128	21.498	21.491	1.144	5809	N.D.	
83) 1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	3005	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol		0.000	8.464	0.000	0	N.D.	
88) Allyl chloride	76	8.671	8.842	0.679	193	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.231	11.225	0.880	291	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.621	11.597	0.911	1481	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q307B81.D
Acq On : 18 Jul 2018 12:30
Operator : JP1
InstName : VOA3
Sample : |1204070948|1782981|1|VOA|1|VOA3560C_S|
Misc : BLANK 5ML N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 18 13:58:11 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

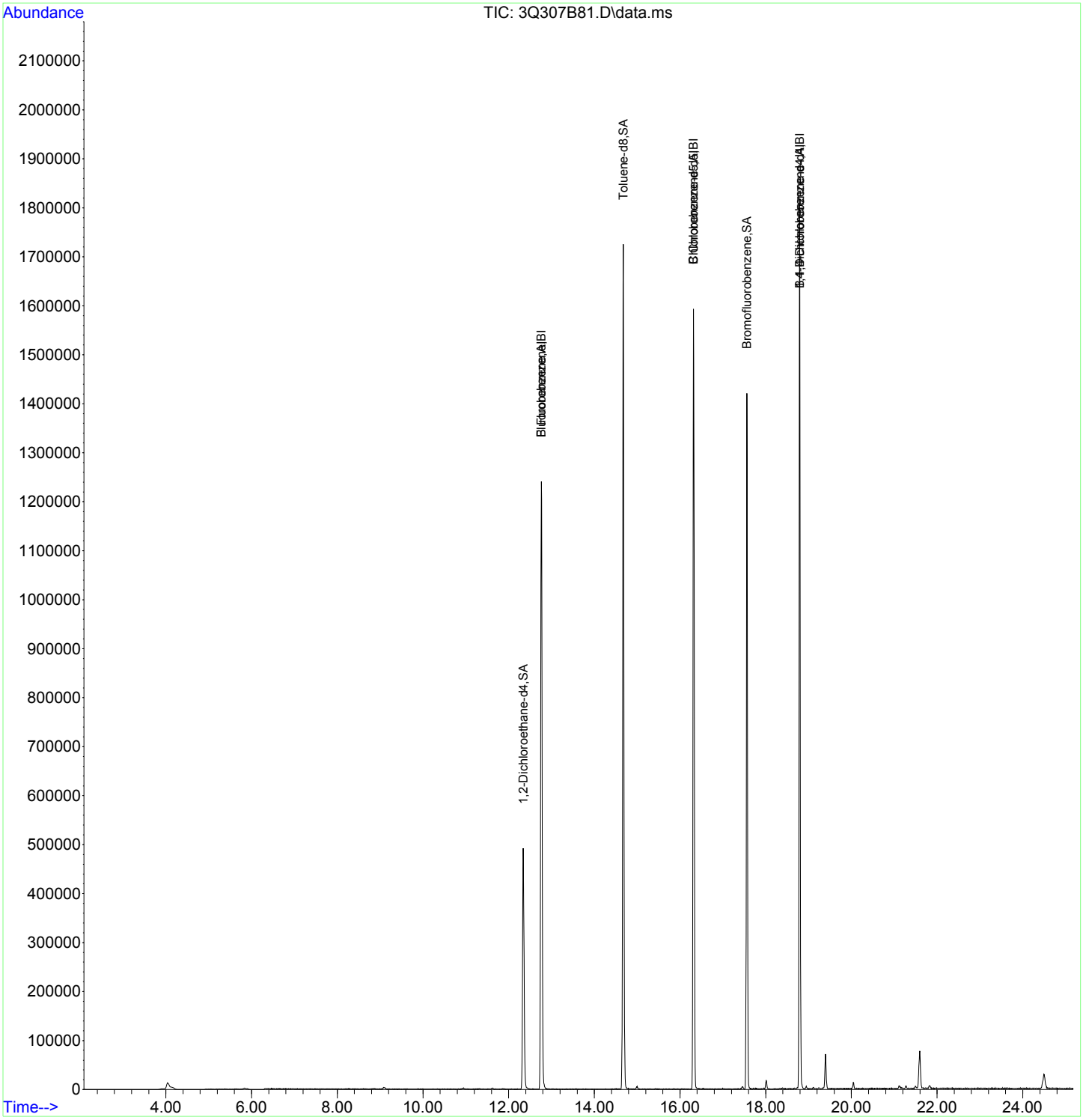
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0	N.D.	
104)	Ethyl methacrylate	69	14.981	14.987	0.918	163	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene	53	17.413	17.425	0.927	319	N.D.	
108)	Cyclohexanone	55	17.559	17.535	0.934	1775	N.D.	
109)	trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	342	N.D.	
110)	Pentachloroethane	167	18.388	18.395	0.979	550	N.D.	
111)	Benzyl chloride	91	18.949	18.943	1.008	4286	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	769	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q307B81.D
Acq On : 18 Jul 2018 12:30
Operator : JP1
InstName : VOA3
Sample : |1204070948|1782981|1|VOA|1|VOA3560C_S|
Misc : BLANK 5ML N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 18 13:58:11 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**WATER**
Lab Sample ID:	**1204074477**				
Client Sample:	**QC for batch 1784646**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**MB for batch 1784646**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 12:28**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 12:28**				
Data File:	**072118V3\3Q606B46.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
56-23-5	Carbon tetrachloride	U	2.00	ug/L	0.300	2.00
106-46-7	1,4-Dichlorobenzene	U	2.00	ug/L	0.300	2.00
100-41-4	Ethylbenzene	U	2.00	ug/L	0.300	2.00
71-55-6	1,1,1-Trichloroethane	U	2.00	ug/L	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane	U	2.00	ug/L	0.300	2.00
79-00-5	1,1,2-Trichloroethane	U	2.00	ug/L	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane	U	2.00	ug/L	0.500	2.00
106-93-4	1,2-Dibromoethane	U	2.00	ug/L	0.300	2.00
107-06-2	1,2-Dichloroethane	U	2.00	ug/L	0.300	2.00
78-87-5	1,2-Dichloropropane	U	2.00	ug/L	0.300	2.00
71-43-2	Benzene	U	2.00	ug/L	0.300	2.00
75-27-4	Bromodichloromethane	U	2.00	ug/L	0.300	2.00
75-25-2	Bromoform	U	2.00	ug/L	0.300	2.00
75-15-0	Carbon disulfide	U	10.0	ug/L	1.60	10.0
108-90-7	Chlorobenzene	U	2.00	ug/L	0.300	2.00
67-66-3	Chloroform	U	2.00	ug/L	0.300	2.00
124-48-1	Dibromochloromethane	U	2.00	ug/L	0.300	2.00
75-09-2	Methylene chloride	U	5.00	ug/L	1.60	5.00
100-42-5	Styrene	U	2.00	ug/L	0.300	2.00
127-18-4	Tetrachloroethylene	U	2.00	ug/L	0.300	2.00
108-88-3	Toluene	U	2.00	ug/L	0.300	2.00
79-01-6	Trichloroethylene	U	2.00	ug/L	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene	U	2.00	ug/L	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene	U	2.00	ug/L	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene	U	2.00	ug/L	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene	U	2.00	ug/L	0.300	2.00
75-34-3	1,1-Dichloroethane	U	2.00	ug/L	0.300	2.00
75-35-4	1,1-Dichloroethylene	U	2.00	ug/L	0.300	2.00
78-93-3	2-Butanone	U	10.0	ug/L	3.00	10.0
108-10-1	4-Methyl-2-pentanone	U	10.0	ug/L	3.00	10.0
74-83-9	Bromomethane	U	2.00	ug/L	0.300	2.00
75-00-3	Chloroethane	U	2.00	ug/L	0.300	2.00
74-87-3	Chloromethane	U	2.00	ug/L	0.300	2.00
75-71-8	Dichlorodifluoromethane	U	2.00	ug/L	0.300	2.00
75-69-4	Trichlorofluoromethane	U	2.00	ug/L	0.300	2.00
75-01-4	Vinyl chloride	U	2.00	ug/L	0.300	2.00
591-78-6	2-Hexanone	U	10.0	ug/L	3.00	10.0
67-64-1	Acetone	U	10.0	ug/L	3.00	10.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**WATER**
Lab Sample ID:	**1204074477**				
Client Sample:	**QC for batch 1784646**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**MB for batch 1784646**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 12:28**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 12:28**				
Data File:	**072118V3\3Q606B46.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
87-61-6	1,2,3-Trichlorobenzene	J	0.420	ug/L	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene	J	0.320	ug/L	0.300	2.00
95-50-1	1,2-Dichlorobenzene	U	2.00	ug/L	0.300	2.00
541-73-1	1,3-Dichlorobenzene	U	2.00	ug/L	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/L	15.0	50.0
74-97-5	Bromochloromethane	U	2.00	ug/L	0.300	2.00
110-82-7	Cyclohexane	U	2.00	ug/L	0.300	2.00
98-82-8	Isopropylbenzene	U	2.00	ug/L	0.300	2.00
79-20-9	Methyl acetate	U	5.00	ug/L	1.50	5.00
108-87-2	Methylcyclohexane	U	2.00	ug/L	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.60	5.00
179601-23-1	m,p-Xylenes	U	4.00	ug/L	0.300	4.00
95-47-6	o-Xylene	U	2.00	ug/L	0.300	2.00
1634-04-4	tert-Butyl methyl ether	U	2.00	ug/L	0.300	2.00

Quantitation Report
GEL Laboratories, LLC

JP
07/23/2018

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q606B46.D
Acq On : 21 Jul 2018 12:28
Operator : JP1
InstName : VOA3
Sample : |1204074477|1784646|1|VOA|1|VOA8260CNL|
Misc : BLANK 5ML N/A
ALS Vial : 6 Sample Multiplier: 1

EM
07/23/2018

Quant Time: Jul 23 08:34:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1530090	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	690796	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	600237	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1534358	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	700385	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	601025	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	267286	46.68	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1462497	45.44	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	635950	53.90	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	70 - 130	93%
45) Toluene-d8	50.000	70 - 130	91%
63) Bromofluorobenzene	50.000	70 - 130	108%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane	50	4.991	4.990	0.391	603	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.262	8.232	0.647	1475	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile	41	8.848	8.817	0.693	3266	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.604	8.665	0.674	2781	N.D.		
15) Methylene chloride	84	9.085	9.091	0.712	4038	Below Cal		87
16) tert-Butyl methyl ether	73	9.543	9.537	0.748	172	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		0.000	9.988	0.000	0	N.D.		
19) Vinyl acetate	43	10.329	10.317	0.809	974	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.432	12.438	0.974	697	N.D.		
32) Benzene	78	12.426	12.426	0.974	976	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0m	N.D.	d	
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.408	13.396	1.051	1090	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q606B46.D
Acq On : 21 Jul 2018 12:28
Operator : JP1
InstName : VOA3
Sample : |1204074477|1784646|1|VOA|1|VOA8260CNL|
Misc : BLANK 5ML N/A
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 23 08:34:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene	75	14.359	14.353	1.125	107	N.D.		
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46) Toluene	91	14.761	14.755	0.905	1307	N.D.		
47) trans-1,3-Dichloroprop...	75	14.962	14.968	0.917	443	N.D.		
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49) 2-Hexanone	58	15.420	15.413	0.945	705	N.D.		
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.		
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.		
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53) 1,2-Dibromoethane	107	15.846	15.840	0.971	164	N.D.		
54) Chlorobenzene	112	16.352	16.352	1.002	977	N.D.		
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.		
56) Ethylbenzene	91	16.425	16.425	1.007	1390	N.D.		
57) m,p-Xylenes	106	16.541	16.541	1.014	1059	N.D.		
58) o-Xylene	106	16.992	16.986	1.041	381	N.D.		
59) Styrene	104	16.998	16.992	1.042	941	N.D.		
61) Bromoform		0.000	17.261	0.000	0	N.D.		
62) Isopropylbenzene	105	17.358	17.358	0.924	1296	N.D.		
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.		
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0m	N.D.	d	
66) Bromobenzene	156	17.773	17.767	0.946	736	N.D.		
67) n-Propylbenzene	91	17.791	17.791	0.947	2388	N.D.		
68) 1,3,5-Trimethylbenzene	105	17.943	17.949	0.955	2053	N.D.		
69) 2-Chlorotoluene	126	17.931	17.937	0.954	156	N.D.		
70) 4-Chlorotoluene	91	18.041	18.041	0.960	2591	N.D.		
71) tert-Butylbenzene	134	18.395	18.321	0.979	316	N.D.		
72) 1,2,4-Trimethylbenzene	105	18.370	18.364	0.978	2402	N.D.		
73) sec-Butylbenzene	105	18.547	18.547	0.987	2475	N.D.		
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	2547	N.D.		
75) 1,3-Dichlorobenzene	146	18.736	18.730	0.997	2363	N.D.		
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	3112	N.D.		
77) n-Butylbenzene	91	19.114	19.108	1.017	4470	N.D.		
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	2469	N.D.		
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80) 1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	4933	0.32	ug/L	97
81) Hexachlorobutadiene	225	21.278	21.278	1.132	3217	0.31	ug/L	97
82) Naphthalene	128	21.498	21.491	1.144	12123	N.D.		
83) 1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	6382	0.42	ug/L	92
85) Acrolein		0.000	7.927	0.000	0	N.D.		
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.		
87) Isopropyl Alcohol	45	8.464	8.464	0.663	225	N.D.		
88) Allyl chloride		0.000	8.842	0.000	0	N.D.		
89) tert-Butyl Alcohol	59	9.207	9.220	0.721	680	N.D.		
90) Acrylonitrile	53	9.537	9.531	0.747	809	N.D.		
91) Isopropyl ether	45	10.311	10.317	0.808	181	N.D.		
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.		
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94) Ethyl acetate	43	11.231	11.225	0.880	1669	N.D.		
95) Propionitrile	54	11.311	11.305	0.886	336	N.D.		
96) Methacrylonitrile	67	11.518	11.512	0.903	749	N.D.		
97) Tetrahydrofuran	42	11.609	11.597	0.910	3475	N.D.		
98) Isobutyl alcohol	43	12.195	12.176	0.956	795	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q606B46.D
Acq On : 21 Jul 2018 12:28
Operator : JP1
InstName : VOA3
Sample : |1204074477|1784646|1|VOA|1|VOA8260CNL|
Misc : BLANK 5ML N/A
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 23 08:34:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

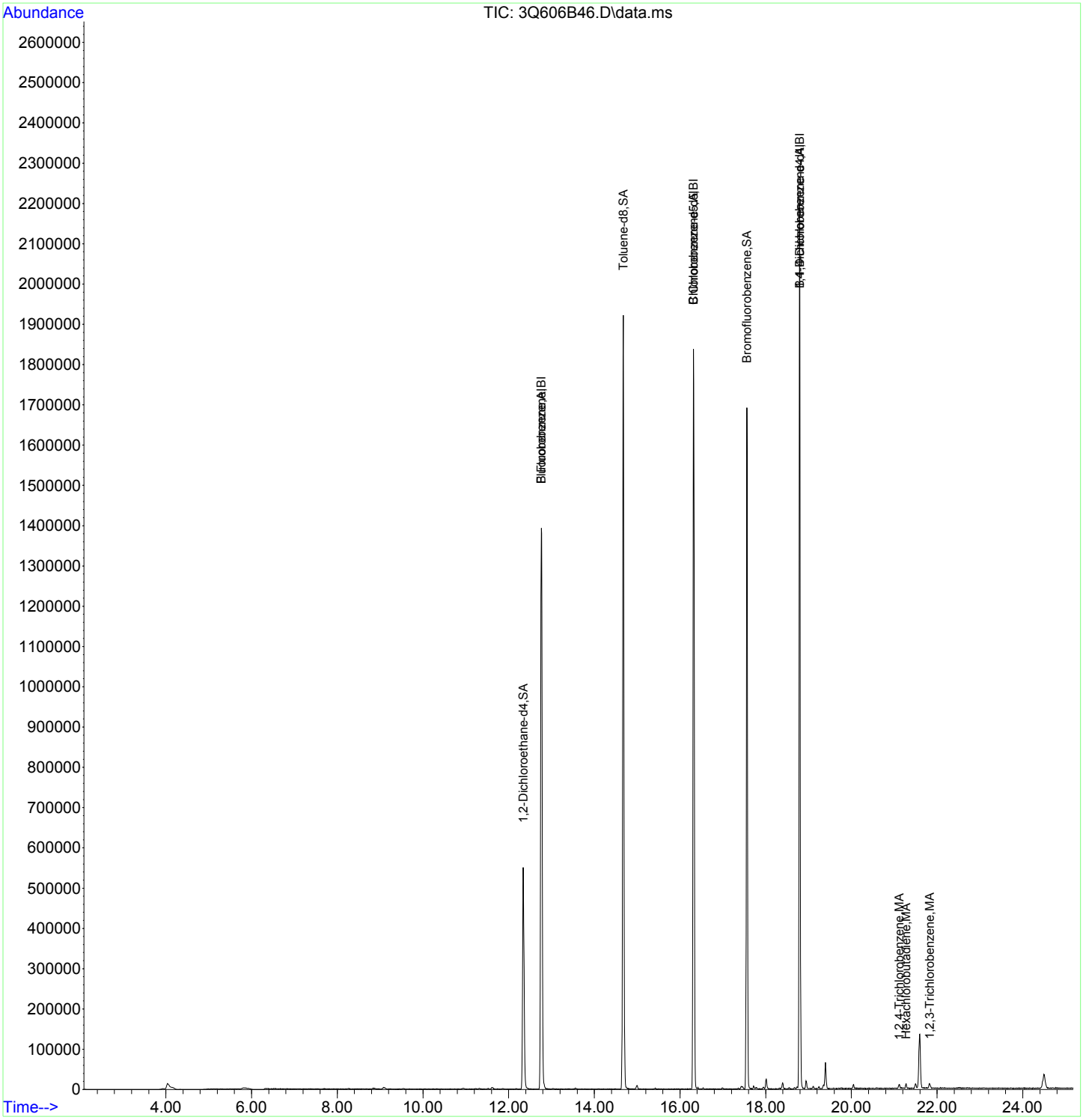
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate	69	13.560	13.560	1.063	1402	N.D.	
101)	1,4-Dioxane	88	13.670	13.652	1.071	104	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0m	N.D.	d
104)	Ethyl methacrylate	69	14.987	14.987	0.919	2502	N.D.	
106)	1-Chlorohexane	91	16.218	16.231	0.863	541	N.D.	
107)	cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	1412	N.D.	
108)	Cyclohexanone	55	17.565	17.535	0.935	3142	N.D.	
109)	trans-1,4-Dichloro-2-b...	53	17.712	17.718	0.943	2073	N.D.	
110)	Pentachloroethane	167	18.401	18.395	0.979	2944	N.D.	
111)	Benzyl chloride	91	18.949	18.943	1.008	17093	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	4472	N.D.	

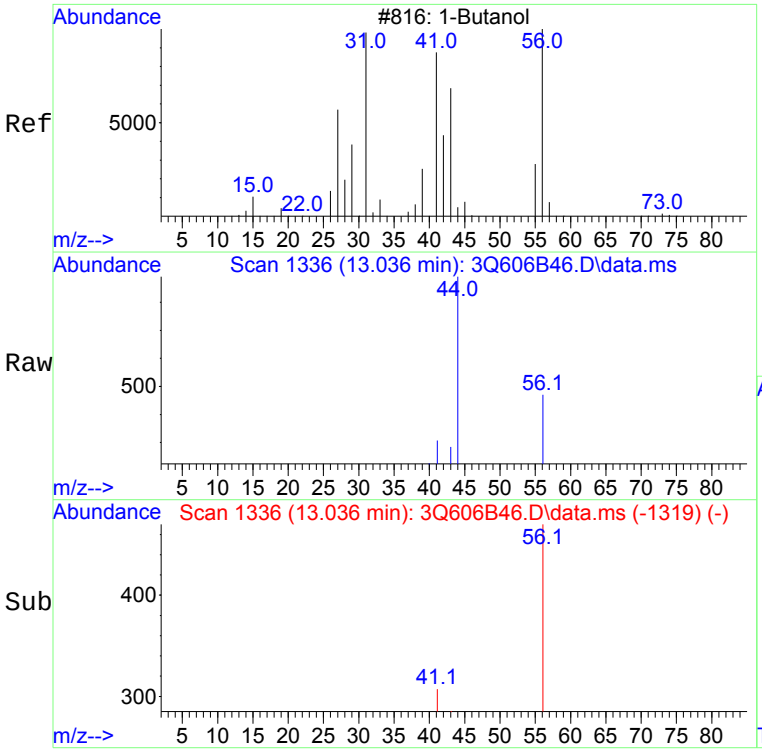
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q606B46.D
Acq On : 21 Jul 2018 12:28
Operator : JP1
InstName : VOA3
Sample : |1204074477|1784646|1|VOA|1|VOA8260CNL|
Misc : BLANK 5ML N/A
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 23 08:34:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

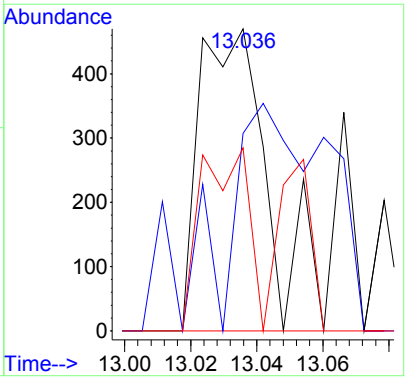


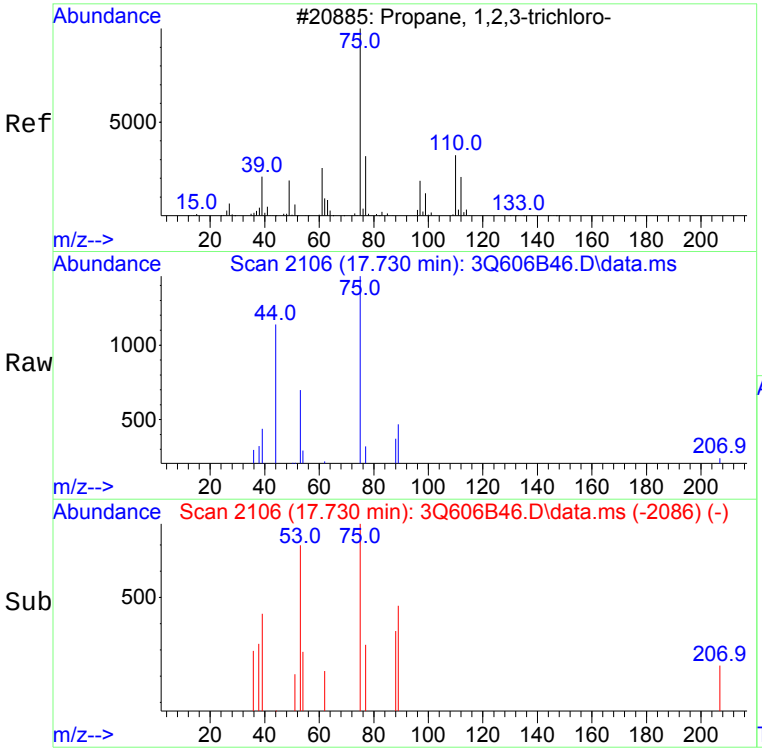


#34 BEFORE analyst DELETION
n-Butyl alcohol
Concen: 93.87 ug/L
RT: 13.036 min Scan# 1336
Delta R.T. 0.012 min
Lab File: 3Q606B46.D
Acq: 21 Jul 2018 12:28

Tgt Ion: 56 Resp: 680

Ion	Ratio	Lower	Upper
56	100		
41	64.9	48.1	108.1
43	41.8	28.0	88.0

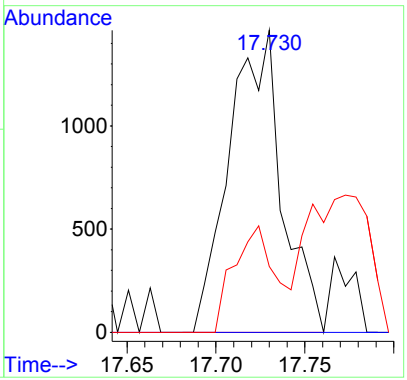


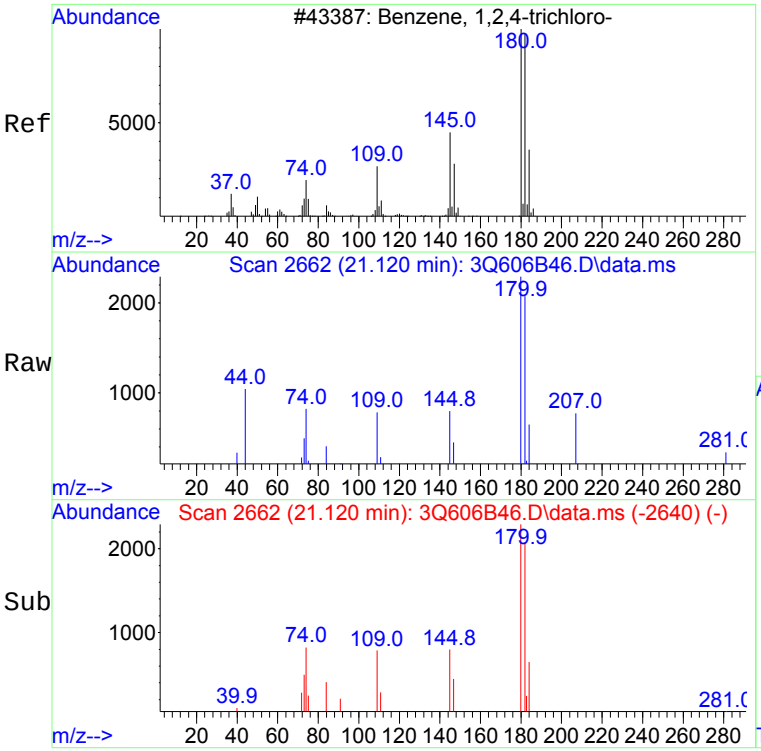


#65 BEFORE analyst DELETION
1,2,3-Trichloropropane
Concen: 0.30 ug/L
RT: 17.730 min Scan# 2106
Delta R.T. -0.018 min
Lab File: 3Q606B46.D
Acq: 21 Jul 2018 12:28

Tgt Ion: 75 Resp: 3016

Ion	Ratio	Lower	Upper
75	100		
110	0.0	0.0	56.8
77	28.4	190.9	250.9#

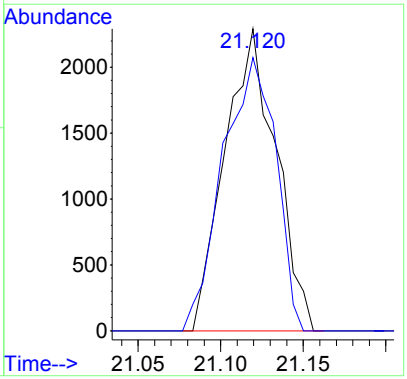


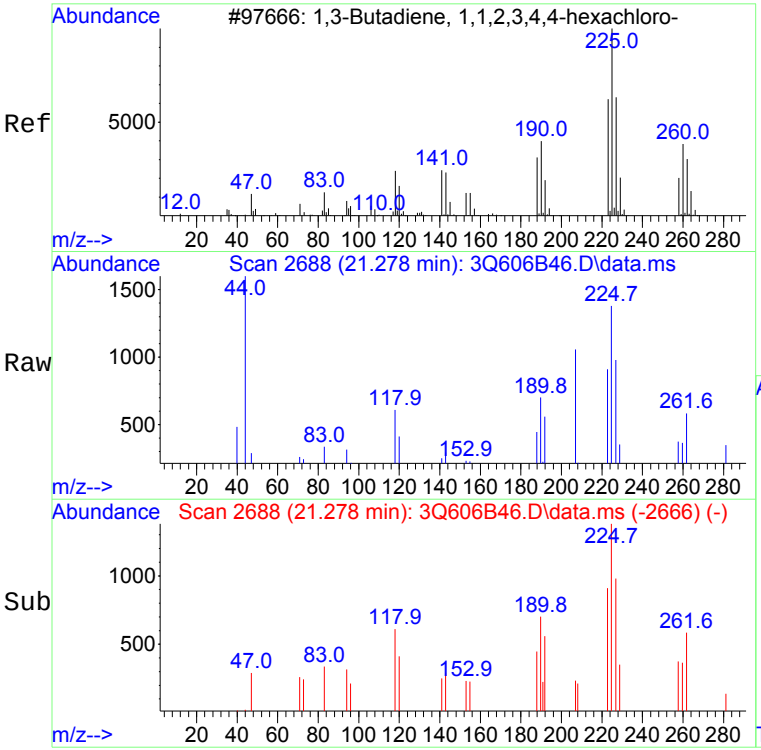


#80
1,2,4-Trichlorobenzene
Concen: 0.32 ug/L
RT: 21.120 min Scan# 2662
Delta R.T. 0.006 min
Lab File: 3Q606B46.D
Acq: 21 Jul 2018 12:28

Tgt Ion:180 Resp: 4933

Ion	Ratio	Lower	Upper
180	100		
182	93.9	66.7	126.7

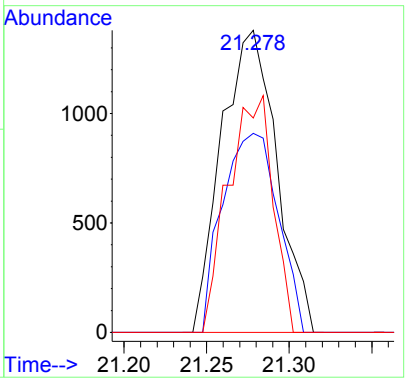


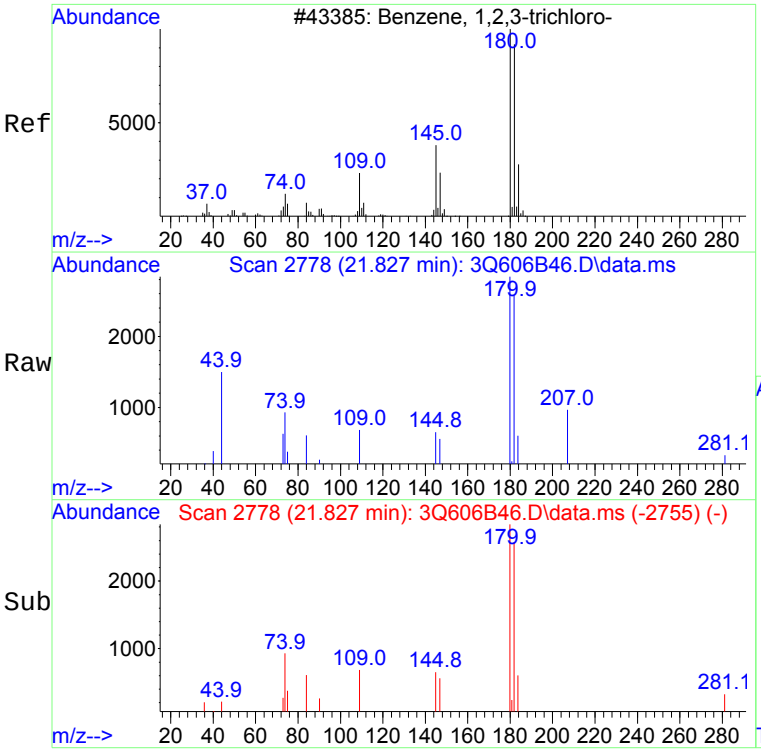


#81
Hexachlorobutadiene
Concen: 0.31 ug/L
RT: 21.278 min Scan# 2688
Delta R.T. 0.000 min
Lab File: 3Q606B46.D
Acq: 21 Jul 2018 12:28

Tgt Ion:225 Resp: 3217

Ion	Ratio	Lower	Upper
225	100		
223	66.3	32.9	92.9
227	63.5	34.3	94.3

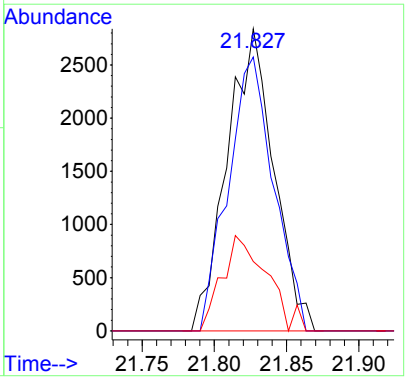


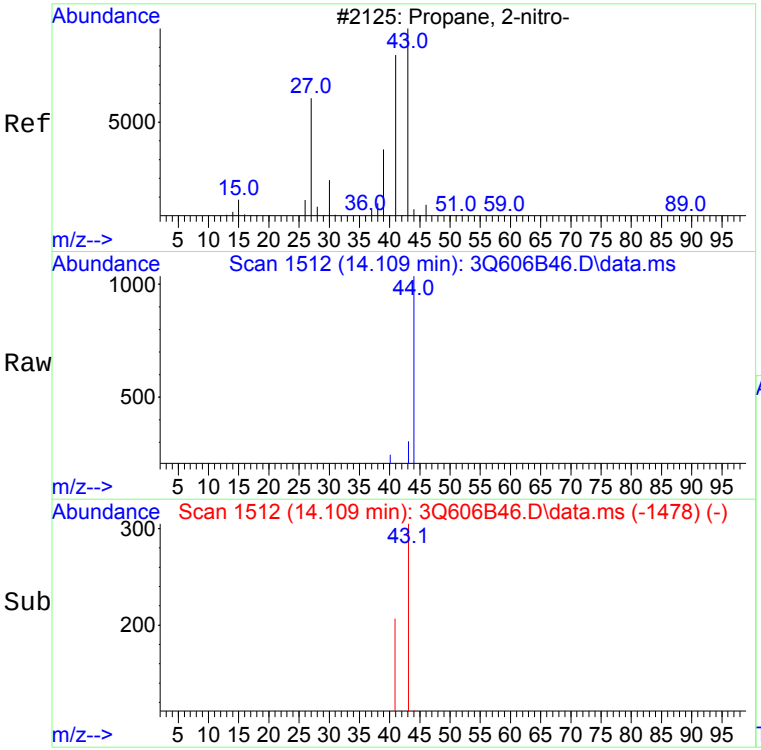


#83
1,2,3-Trichlorobenzene
Concen: 0.42 ug/L
RT: 21.827 min Scan# 2778
Delta R.T. 0.006 min
Lab File: 3Q606B46.D
Acq: 21 Jul 2018 12:28

Tgt Ion:180 Resp: 6382

Ion	Ratio	Lower	Upper
180	100		
182	88.0	67.4	127.4
145	30.2	2.3	62.3

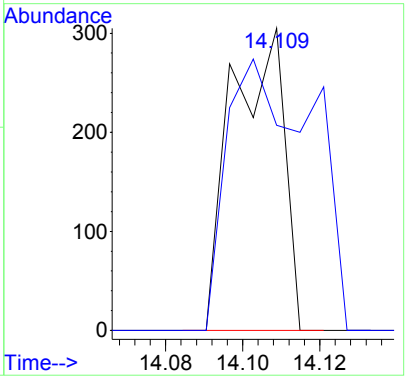




#102 BEFORE analyst DELETION
2-Nitropropane
Concen: 3.43 ug/L
RT: 14.109 min Scan# 1512
Delta R.T. 0.006 min
Lab File: 3Q606B46.D
Acq: 21 Jul 2018 12:28

Tgt Ion: 43 Resp: 289

Ion	Ratio	Lower	Upper
43	100		
41	145.7	55.3	115.3#



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070949**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**HB for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 14:04**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:35**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q310.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	100	ug/kg	15.0	100
79-34-5	1,1,2,2-Tetrachloroethane	U	100	ug/kg	15.0	100
79-00-5	1,1,2-Trichloroethane	U	100	ug/kg	15.0	100
75-34-3	1,1-Dichloroethane	U	100	ug/kg	15.0	100
75-35-4	1,1-Dichloroethylene	U	100	ug/kg	15.0	100
87-61-6	1,2,3-Trichlorobenzene	U	100	ug/kg	15.0	100
120-82-1	1,2,4-Trichlorobenzene	U	100	ug/kg	15.0	100
96-12-8	1,2-Dibromo-3-chloropropane	U	100	ug/kg	25.0	100
106-93-4	1,2-Dibromoethane	U	100	ug/kg	15.0	100
95-50-1	1,2-Dichlorobenzene	U	100	ug/kg	15.0	100
107-06-2	1,2-Dichloroethane	U	100	ug/kg	15.0	100
78-87-5	1,2-Dichloropropane	U	100	ug/kg	15.0	100
541-73-1	1,3-Dichlorobenzene	U	100	ug/kg	15.0	100
106-46-7	1,4-Dichlorobenzene	U	100	ug/kg	15.0	100
123-91-1	1,4-Dioxane	U	2500	ug/kg	750	2500
78-93-3	2-Butanone	U	500	ug/kg	150	500
591-78-6	2-Hexanone	U	500	ug/kg	150	500
108-10-1	4-Methyl-2-pentanone	U	500	ug/kg	150	500
67-64-1	Acetone	U	500	ug/kg	150	500
71-43-2	Benzene	U	100	ug/kg	15.0	100
74-97-5	Bromochloromethane	U	100	ug/kg	15.0	100
75-27-4	Bromodichloromethane	U	100	ug/kg	15.0	100
75-25-2	Bromoform	U	100	ug/kg	15.0	100
74-83-9	Bromomethane	U	100	ug/kg	15.0	100
75-15-0	Carbon disulfide	U	500	ug/kg	80.0	500
56-23-5	Carbon tetrachloride	U	100	ug/kg	15.0	100
108-90-7	Chlorobenzene	U	100	ug/kg	15.0	100
75-00-3	Chloroethane	U	100	ug/kg	15.0	100
67-66-3	Chloroform	U	100	ug/kg	15.0	100
74-87-3	Chloromethane	U	100	ug/kg	15.0	100
110-82-7	Cyclohexane	U	100	ug/kg	15.0	100
124-48-1	Dibromochloromethane	U	100	ug/kg	15.0	100
75-71-8	Dichlorodifluoromethane	U	100	ug/kg	15.0	100
100-41-4	Ethylbenzene	U	100	ug/kg	15.0	100
98-82-8	Isopropylbenzene	U	100	ug/kg	15.0	100
79-20-9	Methyl acetate	U	250	ug/kg	75.0	250
108-87-2	Methylcyclohexane	U	100	ug/kg	15.0	100
75-09-2	Methylene chloride	U	250	ug/kg	80.0	250

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070949**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**HB for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 14:04**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:35**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q310.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	100	ug/kg	15.0	100
127-18-4	Tetrachloroethylene	U	100	ug/kg	15.0	100
108-88-3	Toluene	U	100	ug/kg	15.0	100
79-01-6	Trichloroethylene	U	100	ug/kg	15.0	100
75-69-4	Trichlorofluoromethane	U	100	ug/kg	15.0	100
76-13-1	Trichlorotrifluoroethane	U	250	ug/kg	80.0	250
75-01-4	Vinyl chloride	U	100	ug/kg	15.0	100
156-59-2	cis-1,2-Dichloroethylene	U	100	ug/kg	15.0	100
10061-01-5	cis-1,3-Dichloropropylene	U	100	ug/kg	15.0	100
179601-23-1	m,p-Xylenes	U	200	ug/kg	15.0	200
95-47-6	o-Xylene	U	100	ug/kg	15.0	100
1634-04-4	tert-Butyl methyl ether	U	100	ug/kg	15.0	100
156-60-5	trans-1,2-Dichloroethylene	U	100	ug/kg	15.0	100
10061-02-6	trans-1,3-Dichloropropylene	U	100	ug/kg	15.0	100

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q310.D
Acq On : 18 Jul 2018 14:04
Operator : JP1
InstName : VOA3
Sample : |1204070949|1782981|50|VOA|1|VOA3560C_S|
Misc : GEL 100UL N/A SOIL HB
ALS Vial : 10 Sample Multiplier: 1

GEL
07/19/2018

Quant Time: Jul 18 15:04:49 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1110510	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	538311	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.797	18.791	1.000	437128	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1113379	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	548108	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.797	18.791	1.000	437655	50.00	ug/L	0.00
System Monitoring Compounds								
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	230996	55.58	ug/L	0.00
45) Toluene-d8	98	14.670	14.676	0.899	1052533	41.97	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	486277	56.59	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	111%
45) Toluene-d8	50.000	81 - 120	84%
63) Bromofluorobenzene	50.000	70 - 130	113%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		0.000	4.990	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	6.251	6.159	0.490	652	N.D.		
6) Chloroethane	64	6.342	6.372	0.497	223	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.269	8.232	0.648	899	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide		0.000	8.665	0.000	0	N.D.		
15) Methylene chloride	84	9.067	9.091	0.711	3012	Below Cal		90
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.969	9.988	0.781	327	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.195	11.183	0.877	1243	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	556	N.D.		
32) Benzene	78	12.420	12.426	0.973	582	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.408	13.396	1.051	2313	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q310.D
Acq On : 18 Jul 2018 14:04
Operator : JP1
InstName : VOA3
Sample : |1204070949|1782981|50|VOA|1|VOA3560C_S|
Misc : GEL 100UL N/A SOIL HB
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 18 15:04:49 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.761	14.755	0.905	320	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene	112	16.346	16.352	1.002	159	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene		0.000	16.425	0.000	0	N.D.	
57) m,p-Xylenes	106	16.541	16.541	1.014	284	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene		0.000	17.791	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	17.949	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.047	18.041	0.960	580	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	271	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	18.675	0.000	0	N.D.	
75) 1,3-Dichlorobenzene	146	18.736	18.730	0.997	465	N.D.	
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.001	865	N.D.	
77) n-Butylbenzene	91	19.114	19.108	1.017	237	N.D.	
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.023	211	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	928	N.D.	
81) Hexachlorobutadiene	225	21.278	21.278	1.132	587	N.D.	
82) Naphthalene	128	21.498	21.491	1.144	3694	N.D.	
83) 1,2,3-Trichlorobenzene	180	21.815	21.821	1.161	1379	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.677	8.464	0.680	668	N.D.	
88) Allyl chloride		0.000	8.842	0.000	0	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.195	11.225	0.877	6682	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.603	11.597	0.909	1796	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q310.D
Acq On : 18 Jul 2018 14:04
Operator : JP1
InstName : VOA3
Sample : |1204070949|1782981|50|VOA|1|VOA3560C_S|
Misc : GEL 100UL N/A SOIL HB
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 18 15:04:49 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

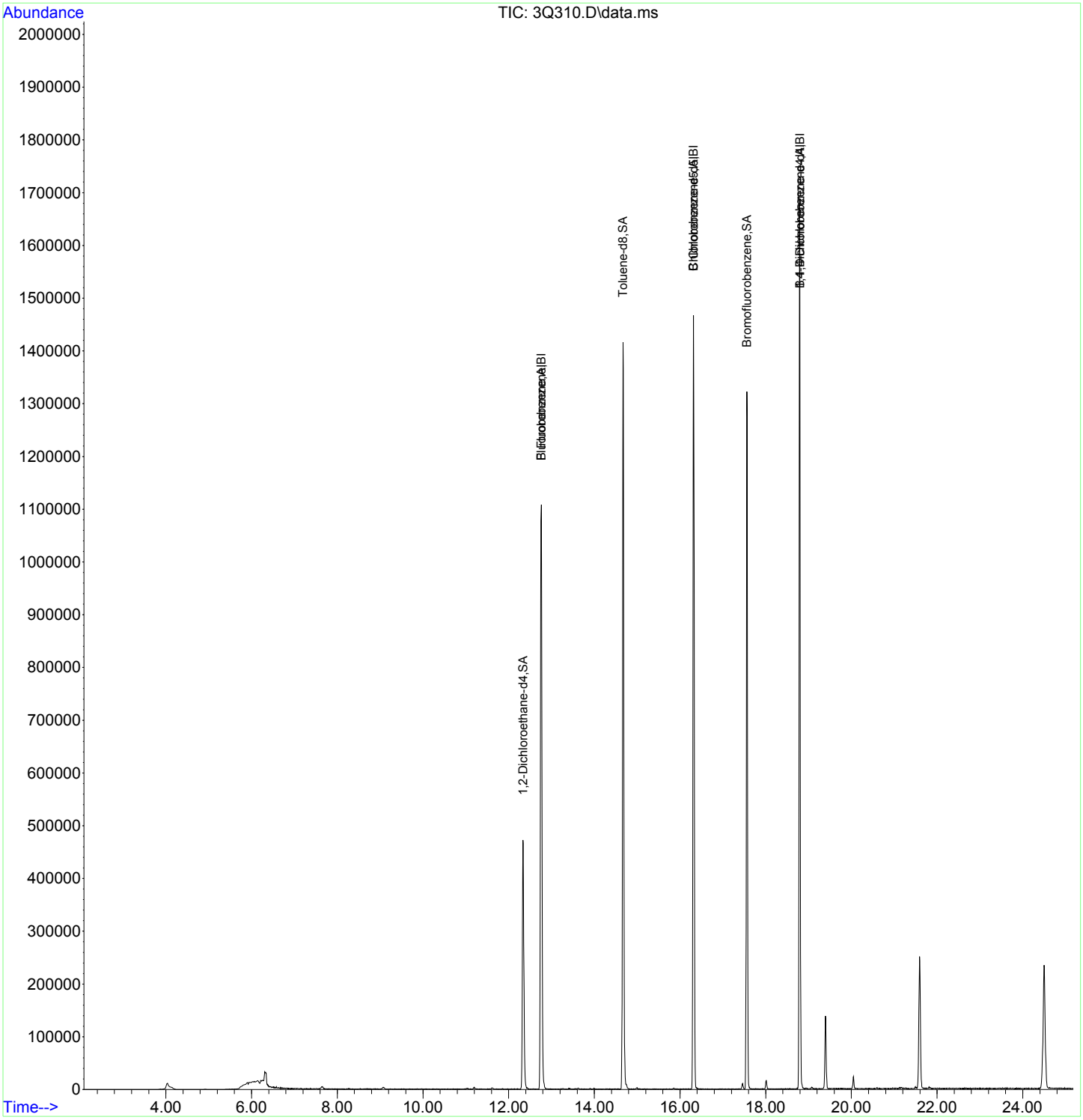
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0	N.D.	
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone	55	17.566	17.535	0.934	1331	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110)	Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111)	Benzyl chloride	91	18.949	18.943	1.008	860	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.394	19.346	1.032	5870	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q310.D
Acq On : 18 Jul 2018 14:04
Operator : JP1
InstName : VOA3
Sample : |1204070949|1782981|50|VOA|1|VOA3560C_S|
Misc : GEL 100UL N/A SOIL HB
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 18 15:04:49 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070950**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**LCS for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 10:57**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 09:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q304L81.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane		51.0	ug/kg	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane		46.5	ug/kg	0.300	2.00
79-00-5	1,1,2-Trichloroethane		45.1	ug/kg	0.300	2.00
75-34-3	1,1-Dichloroethane		49.4	ug/kg	0.300	2.00
75-35-4	1,1-Dichloroethylene		53.2	ug/kg	0.300	2.00
87-61-6	1,2,3-Trichlorobenzene		49.5	ug/kg	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene		50.9	ug/kg	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane		47.7	ug/kg	0.500	2.00
106-93-4	1,2-Dibromoethane		46.2	ug/kg	0.300	2.00
95-50-1	1,2-Dichlorobenzene		45.6	ug/kg	0.300	2.00
107-06-2	1,2-Dichloroethane		50.8	ug/kg	0.300	2.00
78-87-5	1,2-Dichloropropane		50.8	ug/kg	0.300	2.00
541-73-1	1,3-Dichlorobenzene		45.1	ug/kg	0.300	2.00
106-46-7	1,4-Dichlorobenzene		45.5	ug/kg	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/kg	15.0	50.0
78-93-3	2-Butanone		264	ug/kg	3.00	10.0
591-78-6	2-Hexanone		237	ug/kg	3.00	10.0
108-10-1	4-Methyl-2-pentanone		225	ug/kg	3.00	10.0
67-64-1	Acetone		258	ug/kg	3.00	10.0
71-43-2	Benzene		48.3	ug/kg	0.300	2.00
74-97-5	Bromochloromethane		45.1	ug/kg	0.300	2.00
75-27-4	Bromodichloromethane		54.1	ug/kg	0.300	2.00
75-25-2	Bromoform		50.2	ug/kg	0.300	2.00
74-83-9	Bromomethane		50.3	ug/kg	0.300	2.00
75-15-0	Carbon disulfide		268	ug/kg	1.60	10.0
56-23-5	Carbon tetrachloride		50.3	ug/kg	0.300	2.00
108-90-7	Chlorobenzene		43.5	ug/kg	0.300	2.00
75-00-3	Chloroethane		50.5	ug/kg	0.300	2.00
67-66-3	Chloroform		51.2	ug/kg	0.300	2.00
74-87-3	Chloromethane		47.3	ug/kg	0.300	2.00
110-82-7	Cyclohexane		46.3	ug/kg	0.300	2.00
124-48-1	Dibromochloromethane		45.5	ug/kg	0.300	2.00
75-71-8	Dichlorodifluoromethane		49.4	ug/kg	0.300	2.00
100-41-4	Ethylbenzene		46.0	ug/kg	0.300	2.00
98-82-8	Isopropylbenzene		44.4	ug/kg	0.300	2.00
79-20-9	Methyl acetate		251	ug/kg	1.50	5.00
108-87-2	Methylcyclohexane		49.2	ug/kg	0.300	2.00
75-09-2	Methylene chloride		51.1	ug/kg	1.60	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070950**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**LCS for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 10:57**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 09:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q304L81.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene		47.8	ug/kg	0.300	2.00
127-18-4	Tetrachloroethylene		40.1	ug/kg	0.300	2.00
108-88-3	Toluene		44.7	ug/kg	0.300	2.00
79-01-6	Trichloroethylene		50.7	ug/kg	0.300	2.00
75-69-4	Trichlorofluoromethane		49.7	ug/kg	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/kg	1.60	5.00
75-01-4	Vinyl chloride		51.2	ug/kg	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene		51.0	ug/kg	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene		56.8	ug/kg	0.300	2.00
179601-23-1	m,p-Xylenes		86.5	ug/kg	0.300	4.00
95-47-6	o-Xylene		45.7	ug/kg	0.300	2.00
1634-04-4	tert-Butyl methyl ether		54.7	ug/kg	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene		50.6	ug/kg	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene		51.8	ug/kg	0.300	2.00

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q304L81.D
Acq On : 18 Jul 2018 10:57
Operator : JP1
InstName : VOA3
Sample : |1204070950|1782981|1|VOA|1|VOA3560C_S|
Misc : LCS 5UL/5ML N/A SOIL MIX[A]0411-10G/0601-10H/
ALS Vial : 4 Sample Multiplier: 1

EM
07/19/2018

Quant Time: Jul 18 13:58:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.761	12.761	1.000	1265620	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	622409	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	567034	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	1268205	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	631970	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	567231	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	248447	52.46	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1273357	43.91	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	583790	52.37	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	71 - 136	105%
45) Toluene-d8	50.000	85 - 116	88%
63) Bromofluorobenzene	50.000	79 - 119	105%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	537717	49.41	ug/L	100
3) Chloromethane	50	5.009	4.990	0.392	521555	47.26	ug/L	99
4) Vinyl chloride	62	5.319	5.319	0.417	543141	51.23	ug/L	99
5) Bromomethane	94	6.159	6.159	0.483	378725	50.27	ug/L	98
6) Chloroethane	64	6.385	6.372	0.500	373001	50.49	ug/L	100
7) Trichlorofluoromethane	101	7.061	7.061	0.553	805468	49.74	ug/L	100
8) Ethyl ether	59	7.610	7.610	0.596	291928	50.64	ug/L	98
9) Acetone	43	8.238	8.232	0.646	1178506	257.92	ug/L	100
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	724479	53.16	ug/L	99
11) Iodomethane	142	8.506	8.500	0.667	3119264	248.86	ug/L	97
12) Acetonitrile	41	8.817	8.817	0.691	982533	987.49	ug/L	100
13) Methyl acetate	74	8.854	8.854	0.694	323252	251.38	ug/L #	88
14) Carbon disulfide	76	8.671	8.665	0.679	6986451	267.61	ug/L	100
15) Methylene chloride	84	9.098	9.091	0.713	421929	51.07	ug/L	97
16) tert-Butyl methyl ether	73	9.536	9.537	0.747	1151844	54.70	ug/L	99
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	579760	50.55	ug/L	99
18) Hexane	57	9.988	9.988	0.783	487908	46.48	ug/L	99
19) Vinyl acetate	43	10.317	10.317	0.808	2416715	247.25	ug/L	98
20) 1,1-Dichloroethane	63	10.292	10.286	0.807	721153	49.43	ug/L	100
21) 2-Butanone	72	11.176	11.183	0.876	291330	264.36	ug/L	93
22) cis-1,2-Dichloroethylene	96	11.182	11.183	0.876	389251	51.01	ug/L	98
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	692704	55.13	ug/L	97
24) Bromochloromethane	128	11.548	11.548	0.905	157798	45.05	ug/L	97
25) Chloroform	83	11.628	11.628	0.911	766917	51.20	ug/L	98
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	698725	50.99	ug/L	100
27) Cyclohexane	56	11.999	11.999	0.940	565600	46.33	ug/L	97
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	539653	51.92	ug/L	97
29) Carbon tetrachloride	117	12.146	12.146	0.952	635070	50.28	ug/L	98
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	600409	50.84	ug/L	100
32) Benzene	78	12.426	12.426	0.974	1407291	48.27	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	663828	45.01	ug/L	97
34) n-Butyl alcohol	56	13.024	13.024	1.021	843394	3943.13	ug/L	99
35) Trichloroethylene	95	13.225	13.225	1.036	386992	50.70	ug/L	93
36) 2-Pentanone	43	13.395	13.396	1.050	1318047	265.65	ug/L	100
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	375531	50.78	ug/L	99
38) Methylcyclohexane	83	13.481	13.475	1.056	612109	49.16	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q304L81.D
Acq On : 18 Jul 2018 10:57
Operator : JP1
InstName : VOA3
Sample : |1204070950|1782981|1|VOA|1|VOA3560C_S|
Misc : LCS 5UL/5ML N/A SOIL MIX[A]0411-10G/0601-10H/
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 18 13:58:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
39) Dibromomethane	93	13.682	13.682	1.072	241703	51.44	ug/L		97
40) Bromodichloromethane	83	13.834	13.834	1.084	594418	54.06	ug/L		99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	1017219	248.29	ug/L		99
42) cis-1,3-Dichloropropylene	75	14.347	14.353	1.124	670954	56.81	ug/L		98
44) 4-Methyl-2-pentanone	58	14.487	14.487	0.888	617595	225.42	ug/L		98
46) Toluene	91	14.755	14.755	0.904	1400264	44.73	ug/L		100
47) trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	631590	51.79	ug/L		97
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	264403	45.08	ug/L		98
49) 2-Hexanone	58	15.413	15.413	0.945	814225	237.13	ug/L		99
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	535168	45.54	ug/L		98
51) Tetrachloroethylene	164	15.383	15.383	0.943	265696	40.14	ug/L		99
52) Dibromochloromethane	129	15.676	15.676	0.961	373668	45.45	ug/L		99
53) 1,2-Dibromoethane	107	15.846	15.840	0.971	314871	46.22	ug/L		99
54) Chlorobenzene	112	16.352	16.352	1.002	898173	43.50	ug/L		96
55) 1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	368033	43.99	ug/L		99
56) Ethylbenzene	91	16.419	16.425	1.006	1662640	46.03	ug/L		97
57) m,p-Xylenes	106	16.535	16.541	1.013	1155387	86.47	ug/L		93
58) o-Xylene	106	16.986	16.986	1.041	612845	45.74	ug/L		94
59) Styrene	104	16.992	16.992	1.041	1016760	47.75	ug/L		96
61) Bromoform	173	17.261	17.261	0.919	260041	50.16	ug/L		99
62) Isopropylbenzene	105	17.358	17.358	0.924	1596310	44.38	ug/L		97
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	438948	46.46	ug/L		99
65) 1,2,3-Trichloropropane	75	17.748	17.748	0.945	459173	49.13	ug/L		93
66) Bromobenzene	156	17.767	17.767	0.945	409977	46.47	ug/L		94
67) n-Propylbenzene	91	17.791	17.791	0.947	1977314	46.14	ug/L		96
68) 1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	1425495	45.95	ug/L		97
69) 2-Chlorotoluene	126	17.937	17.937	0.955	366824	43.39	ug/L		88
70) 4-Chlorotoluene	91	18.047	18.041	0.960	1354842	49.48	ug/L		95
71) tert-Butylbenzene	134	18.321	18.321	0.975	258958	43.96	ug/L	#	90
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1470172	46.23	ug/L		98
73) sec-Butylbenzene	105	18.547	18.547	0.987	1930669	46.15	ug/L		98
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	1606654	45.69	ug/L		97
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	808062	45.08	ug/L		98
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	807786	45.49	ug/L		98
77) n-Butylbenzene	91	19.108	19.108	1.017	1675257	47.72	ug/L		98
78) 1,2-Dichlorobenzene	146	19.242	19.236	1.024	788905	45.59	ug/L		99
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	93359	47.66	ug/L		94
80) 1,2,4-Trichlorobenzene	180	21.113	21.113	1.124	734082	50.88	ug/L		100
81) Hexachlorobutadiene	225	21.278	21.278	1.132	487054	48.91	ug/L		100
82) Naphthalene	128	21.491	21.491	1.144	1582939	50.43	ug/L		100
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	707113	49.46	ug/L		99
85) Acrolein		7.811	7.927	0.612	0m	N.D.	d		
86) Trichlorotrifluoroethane		8.183	8.165	0.641	0m	N.D.	d		
87) Isopropyl Alcohol		8.653	8.464	0.678	0m	N.D.	d		
88) Allyl chloride		8.671	8.842	0.679	0m	N.D.	d		
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.			
90) Acrylonitrile		9.530	9.531	0.747	0m	N.D.	d		
91) Isopropyl ether		10.311	10.317	0.808	0m	N.D.	d		
92) 2-Chloro-1,3-butadiene		10.494	10.427	0.822	0m	N.D.	d		
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94) Ethyl acetate		11.176	11.225	0.876	0m	N.D.	d		
95) Propionitrile		11.182	11.305	0.876	0m	N.D.	d		
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97) Tetrahydrofuran		11.621	11.597	0.911	0m	N.D.	d		
98) Isobutyl alcohol		12.377	12.176	0.970	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q304L81.D
Acq On : 18 Jul 2018 10:57
Operator : JP1
InstName : VOA3
Sample : |1204070950|1782981|1|VOA|1|VOA3560C_S|
Misc : LCS 5UL/5ML N/A SOIL MIX[A]0411-10G/0601-10H/
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 18 13:58:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

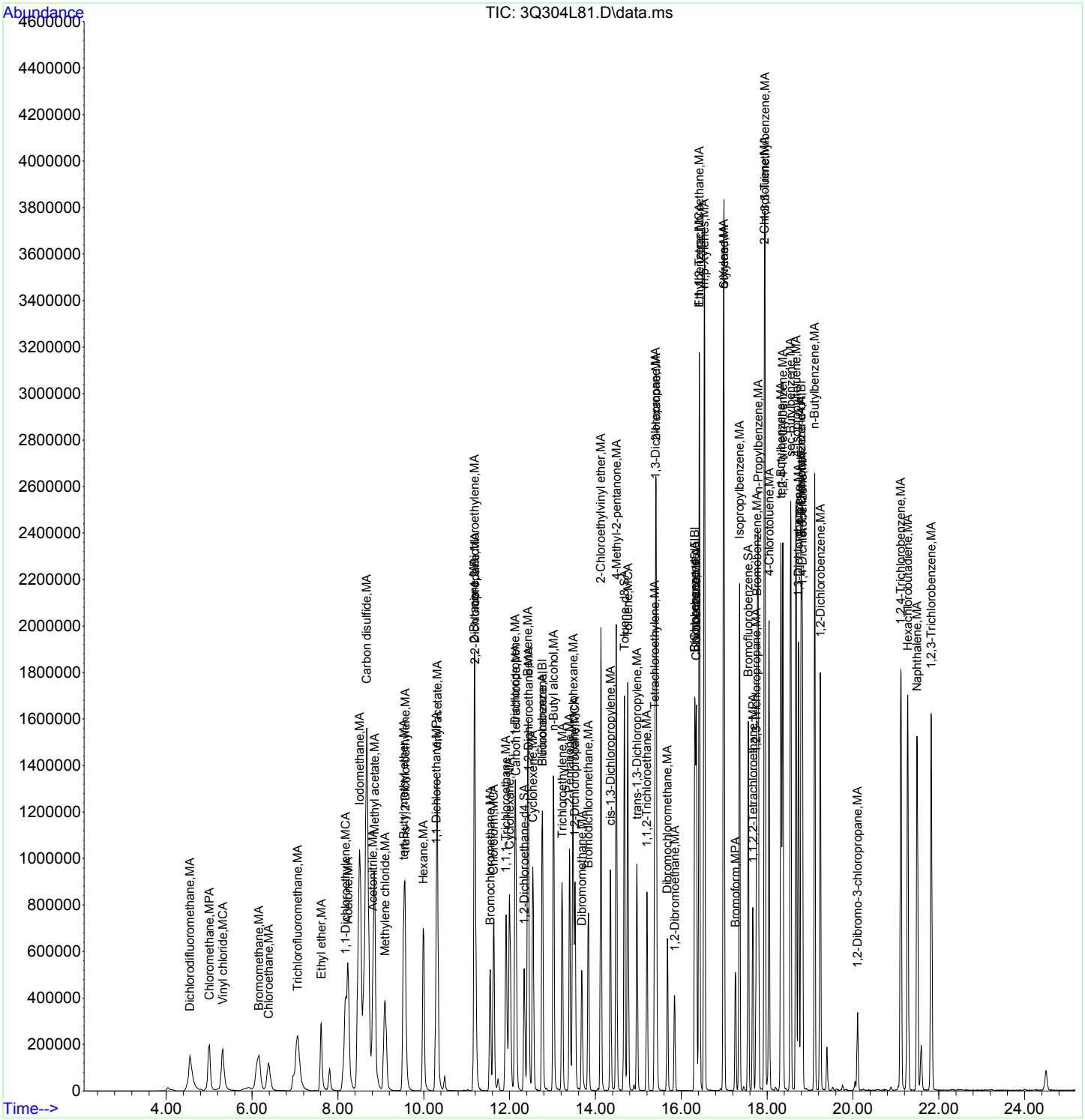
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		12.542	12.500	0.983	0m	N.D.	d
100)	Methyl methacrylate		13.475	13.560	1.056	0m	N.D.	d
101)	1,4-Dioxane		13.682	13.652	1.072	0m	N.D.	d
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110)	Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111)	Benzyl chloride		18.907	18.943	1.006	0m	N.D.	d
112)	bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q304L81.D
Acq On : 18 Jul 2018 10:57
Operator : JP1
InstName : VOA3
Sample : |1204070950|1782981|1|VOA|1|VOA3560C_S|
Misc : LCS 5UL/5ML N/A SOIL MIX[A]0411-10G/0601-10H/
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 18 13:58:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**WATER**
Lab Sample ID:	**1204074478**				
Client Sample:	**QC for batch 1784646**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**LCS for batch 1784646**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 10:55**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 10:55**				
Data File:	**072118V3\3Q603L46.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
56-23-5	Carbon tetrachloride		53.9	ug/L	0.300	2.00
106-46-7	1,4-Dichlorobenzene		49.3	ug/L	0.300	2.00
100-41-4	Ethylbenzene		51.0	ug/L	0.300	2.00
71-55-6	1,1,1-Trichloroethane		53.4	ug/L	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane		52.1	ug/L	0.300	2.00
79-00-5	1,1,2-Trichloroethane		50.9	ug/L	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane		57.4	ug/L	0.500	2.00
106-93-4	1,2-Dibromoethane		52.9	ug/L	0.300	2.00
107-06-2	1,2-Dichloroethane		55.9	ug/L	0.300	2.00
78-87-5	1,2-Dichloropropane		54.3	ug/L	0.300	2.00
71-43-2	Benzene		52.6	ug/L	0.300	2.00
75-27-4	Bromodichloromethane		57.6	ug/L	0.300	2.00
75-25-2	Bromoform		57.6	ug/L	0.300	2.00
75-15-0	Carbon disulfide		288	ug/L	1.60	10.0
108-90-7	Chlorobenzene		46.6	ug/L	0.300	2.00
67-66-3	Chloroform		55.6	ug/L	0.300	2.00
124-48-1	Dibromochloromethane		54.2	ug/L	0.300	2.00
75-09-2	Methylene chloride		57.5	ug/L	1.60	5.00
100-42-5	Styrene		54.1	ug/L	0.300	2.00
127-18-4	Tetrachloroethylene		46.2	ug/L	0.300	2.00
108-88-3	Toluene		50.8	ug/L	0.300	2.00
79-01-6	Trichloroethylene		53.4	ug/L	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene		53.3	ug/L	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene		62.9	ug/L	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene		55.2	ug/L	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene		57.2	ug/L	0.300	2.00
75-34-3	1,1-Dichloroethane		52.2	ug/L	0.300	2.00
75-35-4	1,1-Dichloroethylene		57.5	ug/L	0.300	2.00
78-93-3	2-Butanone		299	ug/L	3.00	10.0
108-10-1	4-Methyl-2-pentanone		256	ug/L	3.00	10.0
74-83-9	Bromomethane		47.8	ug/L	0.300	2.00
75-00-3	Chloroethane		49.2	ug/L	0.300	2.00
74-87-3	Chloromethane		42.3	ug/L	0.300	2.00
75-71-8	Dichlorodifluoromethane		47.0	ug/L	0.300	2.00
75-69-4	Trichlorofluoromethane		49.5	ug/L	0.300	2.00
75-01-4	Vinyl chloride		45.0	ug/L	0.300	2.00
591-78-6	2-Hexanone		281	ug/L	3.00	10.0
67-64-1	Acetone		269	ug/L	3.00	10.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**WATER**
Lab Sample ID:	**1204074478**				
Client Sample:	**QC for batch 1784646**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**LCS for batch 1784646**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 10:55**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 10:55**				
Data File:	**072118V3\3Q603L46.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
87-61-6	1,2,3-Trichlorobenzene	B	54.4	ug/L	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene	B	54.0	ug/L	0.300	2.00
95-50-1	1,2-Dichlorobenzene		51.3	ug/L	0.300	2.00
541-73-1	1,3-Dichlorobenzene		48.6	ug/L	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/L	15.0	50.0
74-97-5	Bromochloromethane		50.5	ug/L	0.300	2.00
110-82-7	Cyclohexane		51.2	ug/L	0.300	2.00
98-82-8	Isopropylbenzene		49.2	ug/L	0.300	2.00
79-20-9	Methyl acetate		288	ug/L	1.50	5.00
108-87-2	Methylcyclohexane		53.7	ug/L	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.60	5.00
179601-23-1	m,p-Xylenes		99.9	ug/L	0.300	4.00
95-47-6	o-Xylene		52.0	ug/L	0.300	2.00
1634-04-4	tert-Butyl methyl ether		60.9	ug/L	0.300	2.00

Quantitation Report
GEL Laboratories, LLC

JP
07/23/2018

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q603L46.D
Acq On : 21 Jul 2018 10:55
Operator : JP1
InstName : VOA3
Sample : |1204074478|1784646|1|VOA|1|VOA8260CNL|
Misc : LCS 5UL/5ML N/A MIX[A]0411-10H/0601-10I/0312-
ALS Vial : 3 Sample Multiplier: 1

EM
07/23/2018

Quant Time: Jul 21 11:23:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.755	12.761	1.000	1208530	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	579451	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	537301	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.755	12.762	1.000	1210843	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	588147	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	537701	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	239078	52.86	ug/L	0.00
45) Toluene-d8	98	14.670	14.676	0.899	1228724	45.52	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	536206	50.77	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	70 - 130	106%
45) Toluene-d8	50.000	70 - 130	91%
63) Bromofluorobenzene	50.000	70 - 130	102%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	488095	46.97	ug/L	100
3) Chloromethane	50	5.009	4.990	0.393	445878	42.31	ug/L	100
4) Vinyl chloride	62	5.319	5.319	0.417	455764	45.02	ug/L	99
5) Bromomethane	94	6.105	6.159	0.479	344190	47.84	ug/L	98
6) Chloroethane	64	6.373	6.372	0.500	346695	49.15	ug/L	99
7) Trichlorofluoromethane	101	7.049	7.061	0.553	764936	49.47	ug/L	100
8) Ethyl ether	59	7.598	7.610	0.596	284845	51.75	ug/L	96
9) Acetone	43	8.232	8.232	0.645	1175119	269.33	ug/L	100
10) 1,1-Dichloroethylene	61	8.171	8.177	0.641	748122	57.49	ug/L	99
11) Iodomethane	142	8.500	8.500	0.666	3249520	271.50	ug/L	97
12) Acetonitrile	41	8.811	8.817	0.691	1146942	1207.18	ug/L	99
13) Methyl acetate	74	8.842	8.854	0.693	354093	288.37	ug/L #	87
14) Carbon disulfide	76	8.671	8.665	0.680	7176331	287.87	ug/L	100
15) Methylene chloride	84	9.091	9.091	0.713	452663	57.53	ug/L	95
16) tert-Butyl methyl ether	73	9.524	9.537	0.747	1224999	60.92	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.555	9.567	0.749	604617	55.20	ug/L	98
18) Hexane	57	9.982	9.988	0.783	457270	45.62	ug/L	99
19) Vinyl acetate	43	10.305	10.317	0.808	2402361	257.39	ug/L	98
20) 1,1-Dichloroethane	63	10.280	10.286	0.806	727545	52.23	ug/L	99
21) 2-Butanone	72	11.170	11.183	0.876	314170	298.55	ug/L	88
22) cis-1,2-Dichloroethylene	96	11.176	11.183	0.876	388386	53.30	ug/L	97
23) 2,2-Dichloropropane	77	11.189	11.195	0.877	671074	55.93	ug/L	99
24) Bromochloromethane	128	11.542	11.548	0.905	168825	50.48	ug/L	98
25) Chloroform	83	11.621	11.628	0.911	795814	55.64	ug/L	98
26) 1,1,1-Trichloroethane	97	11.908	11.914	0.934	698141	53.36	ug/L	100
27) Cyclohexane	56	11.993	11.999	0.940	597396	51.24	ug/L	98
28) 1,1-Dichloropropene	75	12.121	12.127	0.950	559353	56.35	ug/L	97
29) Carbon tetrachloride	117	12.134	12.146	0.951	649940	53.89	ug/L	98
31) 1,2-Dichloroethane	62	12.432	12.438	0.975	630328	55.89	ug/L	99
32) Benzene	78	12.420	12.426	0.974	1465099	52.63	ug/L	100
33) Cyclohexene	67	12.536	12.548	0.983	675451	47.96	ug/L	95
34) n-Butyl alcohol	56	13.018	13.024	1.021	1148291	5583.35	ug/L	97
35) Trichloroethylene	95	13.219	13.225	1.036	388936	53.36	ug/L	95
36) 2-Pentanone	43	13.389	13.396	1.050	1234594	260.58	ug/L	99
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	383218	54.27	ug/L	100
38) Methylcyclohexane	83	13.475	13.475	1.056	638023	53.66	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q603L46.D
Acq On : 21 Jul 2018 10:55
Operator : JP1
InstName : VOA3
Sample : |1204074478|1784646|1|VOA|1|VOA8260CNL|
Misc : LCS 5UL/5ML N/A MIX[A]0411-10H/0601-10I/0312-
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 21 11:23:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
39) Dibromomethane	93	13.676	13.682	1.072	247638	55.20	ug/L		97
40) Bromodichloromethane	83	13.828	13.834	1.084	604565	57.58	ug/L		98
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.108	974454	249.09	ug/L		99
42) cis-1,3-Dichloropropylene	75	14.347	14.353	1.125	709542	62.91	ug/L		98
44) 4-Methyl-2-pentanone	58	14.481	14.487	0.888	652081	255.66	ug/L		97
46) Toluene	91	14.749	14.755	0.904	1481557	50.84	ug/L		99
47) trans-1,3-Dichloroprop...	75	14.962	14.968	0.917	649343	57.20	ug/L		97
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	277996	50.92	ug/L		99
49) 2-Hexanone	58	15.413	15.413	0.945	898914	281.20	ug/L		98
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	586111	53.57	ug/L		99
51) Tetrachloroethylene	164	15.383	15.383	0.943	284712	46.20	ug/L		99
52) Dibromochloromethane	129	15.676	15.676	0.961	414527	54.16	ug/L		100
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	335565	52.91	ug/L		99
54) Chlorobenzene	112	16.346	16.352	1.002	896345	46.62	ug/L		97
55) 1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	386626	49.64	ug/L		99
56) Ethylbenzene	91	16.419	16.425	1.006	1714882	51.00	ug/L		98
57) m,p-Xylenes	106	16.535	16.541	1.013	1243086	99.93	ug/L		96
58) o-Xylene	106	16.986	16.986	1.041	648902	52.02	ug/L		96
59) Styrene	104	16.992	16.992	1.041	1072181	54.09	ug/L		97
61) Bromoform	173	17.261	17.261	0.919	283116	57.63	ug/L		99
62) Isopropylbenzene	105	17.358	17.358	0.924	1676023	49.18	ug/L		98
64) 1,1,2,2-Tetrachloroethane	83	17.663	17.663	0.940	465999	52.06	ug/L		99
65) 1,2,3-Trichloropropane	75	17.748	17.748	0.945	470631	53.15	ug/L		91
66) Bromobenzene	156	17.767	17.767	0.945	414771	49.62	ug/L		95
67) n-Propylbenzene	91	17.791	17.791	0.947	2052493	50.55	ug/L		98
68) 1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1489761	50.68	ug/L		98
69) 2-Chlorotoluene	126	17.937	17.937	0.955	388480	48.50	ug/L		91
70) 4-Chlorotoluene	91	18.047	18.041	0.960	1362122	52.49	ug/L		97
71) tert-Butylbenzene	134	18.321	18.321	0.975	273494	49.00	ug/L	#	92
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1536620	50.99	ug/L		98
73) sec-Butylbenzene	105	18.547	18.547	0.987	1953821	49.29	ug/L		99
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	1665036	49.97	ug/L		98
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	826186	48.64	ug/L		99
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	829149	49.28	ug/L		99
77) n-Butylbenzene	91	19.108	19.108	1.017	1747525	52.54	ug/L		99
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	841100	51.29	ug/L		98
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	106587	57.42	ug/L		95
80) 1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	737836	53.97	ug/L		100
81) Hexachlorobutadiene	225	21.278	21.278	1.132	487869	51.70	ug/L		99
82) Naphthalene	128	21.498	21.491	1.144	1675954	56.35	ug/L		100
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	736747	54.38	ug/L		98
85) Acrolein		7.799	7.927	0.611	0m	N.D.	d		
86) Trichlorotrifluoroethane		8.134	8.165	0.638	0m	N.D.	d		
87) Isopropyl Alcohol		8.653	8.464	0.678	0m	N.D.	d		
88) Allyl chloride		8.671	8.842	0.680	0m	N.D.	d		
89) tert-Butyl Alcohol		9.018	9.220	0.707	0m	N.D.	d		
90) Acrylonitrile		9.524	9.531	0.747	0m	N.D.	d		
91) Isopropyl ether		10.305	10.317	0.808	0m	N.D.	d		
92) 2-Chloro-1,3-butadiene		10.481	10.427	0.822	0m	N.D.	d		
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94) Ethyl acetate		11.170	11.225	0.876	0m	N.D.	d		
95) Propionitrile		11.170	11.305	0.876	0m	N.D.	d		
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97) Tetrahydrofuran		11.609	11.597	0.910	0m	N.D.	d		
98) Isobutyl alcohol		12.341	12.176	0.968	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q603L46.D
Acq On : 21 Jul 2018 10:55
Operator : JP1
InstName : VOA3
Sample : |1204074478|1784646|1|VOA|1|VOA8260CNL|
Misc : LCS 5UL/5ML N/A MIX[A]0411-10H/0601-10I/0312-
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 21 11:23:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

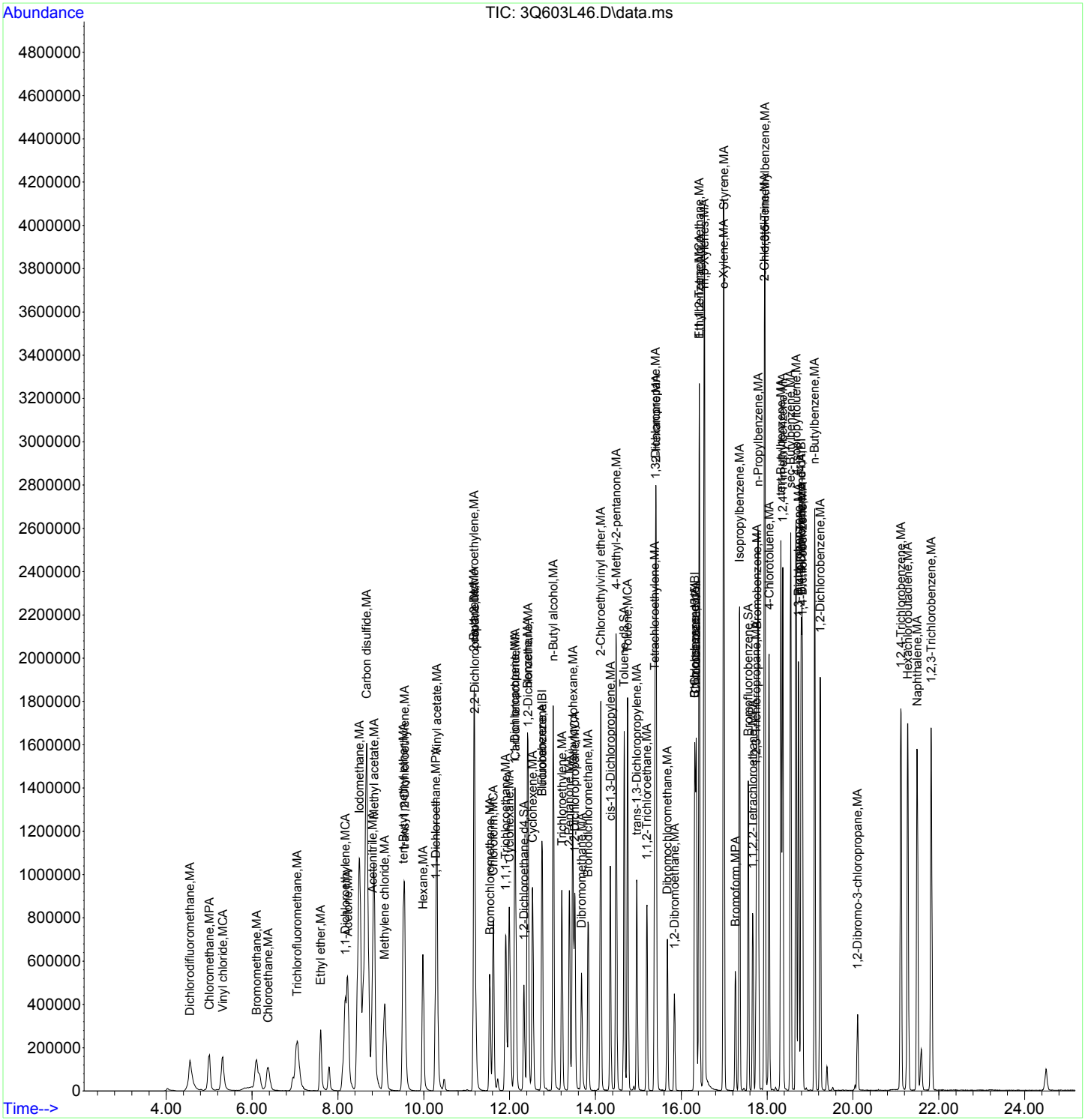
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		12.524	12.500	0.982	0m	N.D.	d
100)	Methyl methacrylate		13.621	13.560	1.068	0m	N.D.	d
101)	1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d
102)	2-Nitropropane		13.987	14.103	1.097	0m	N.D.	d
104)	Ethyl methacrylate		14.889	14.987	0.913	0m	N.D.	d
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone		17.553	17.535	0.934	0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110)	Pentachloroethane		18.388	18.395	0.979	0m	N.D.	d
111)	Benzyl chloride		18.986	18.943	1.010	0m	N.D.	d
112)	bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q603L46.D
Acq On : 21 Jul 2018 10:55
Operator : JP1
InstName : VOA3
Sample : |1204074478|1784646|1|VOA|1|VOA8260CNL|
Misc : LCS 5UL/5ML N/A MIX[A]0411-10H/0601-10I/0312-
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 21 11:23:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204070951**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonPS**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 19:46**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:26**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q321.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane		2670	ug/kg	16.1	107
79-34-5	1,1,2,2-Tetrachloroethane		2460	ug/kg	16.1	107
79-00-5	1,1,2-Trichloroethane		2320	ug/kg	16.1	107
75-34-3	1,1-Dichloroethane		2500	ug/kg	16.1	107
75-35-4	1,1-Dichloroethylene		2650	ug/kg	16.1	107
87-61-6	1,2,3-Trichlorobenzene		2130	ug/kg	16.1	107
120-82-1	1,2,4-Trichlorobenzene		2080	ug/kg	16.1	107
96-12-8	1,2-Dibromo-3-chloropropane		2330	ug/kg	26.8	107
106-93-4	1,2-Dibromoethane		2350	ug/kg	16.1	107
95-50-1	1,2-Dichlorobenzene		2160	ug/kg	16.1	107
107-06-2	1,2-Dichloroethane		2790	ug/kg	16.1	107
78-87-5	1,2-Dichloropropane		2630	ug/kg	16.1	107
541-73-1	1,3-Dichlorobenzene		2060	ug/kg	16.1	107
106-46-7	1,4-Dichlorobenzene		2070	ug/kg	16.1	107
123-91-1	1,4-Dioxane	U	2680	ug/kg	803	2680
78-93-3	2-Butanone		11800	ug/kg	161	535
591-78-6	2-Hexanone		11500	ug/kg	161	535
108-10-1	4-Methyl-2-pentanone		11100	ug/kg	161	535
67-64-1	Acetone		12000	ug/kg	161	535
71-43-2	Benzene		2410	ug/kg	16.1	107
74-97-5	Bromochloromethane		2200	ug/kg	16.1	107
75-27-4	Bromodichloromethane		2780	ug/kg	16.1	107
75-25-2	Bromoform		2430	ug/kg	16.1	107
74-83-9	Bromomethane		878	ug/kg	16.1	107
75-15-0	Carbon disulfide		12600	ug/kg	85.6	535
56-23-5	Carbon tetrachloride		2650	ug/kg	16.1	107
108-90-7	Chlorobenzene		2110	ug/kg	16.1	107
75-00-3	Chloroethane		256	ug/kg	16.1	107
67-66-3	Chloroform		2650	ug/kg	16.1	107
74-87-3	Chloromethane		2410	ug/kg	16.1	107
110-82-7	Cyclohexane		2240	ug/kg	16.1	107
124-48-1	Dibromochloromethane		2300	ug/kg	16.1	107
75-71-8	Dichlorodifluoromethane		2420	ug/kg	16.1	107
100-41-4	Ethylbenzene		2220	ug/kg	16.1	107
98-82-8	Isopropylbenzene		2200	ug/kg	16.1	107
79-20-9	Methyl acetate		13400	ug/kg	80.3	268
108-87-2	Methylcyclohexane		2410	ug/kg	16.1	107
75-09-2	Methylene chloride		2500	ug/kg	85.6	268

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204070951**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonPS**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 19:46**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:26**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q321.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene		2280	ug/kg	16.1	107
127-18-4	Tetrachloroethylene		1970	ug/kg	16.1	107
108-88-3	Toluene		2190	ug/kg	16.1	107
79-01-6	Trichloroethylene		2590	ug/kg	16.1	107
75-69-4	Trichlorofluoromethane		2970	ug/kg	16.1	107
76-13-1	Trichlorotrifluoroethane	U	268	ug/kg	85.6	268
75-01-4	Vinyl chloride		2470	ug/kg	16.1	107
156-59-2	cis-1,2-Dichloroethylene		2440	ug/kg	16.1	107
10061-01-5	cis-1,3-Dichloropropylene		2750	ug/kg	16.1	107
179601-23-1	m,p-Xylenes		3970	ug/kg	16.1	214
95-47-6	o-Xylene		2190	ug/kg	16.1	107
1634-04-4	tert-Butyl methyl ether		2660	ug/kg	16.1	107
156-60-5	trans-1,2-Dichloroethylene		2550	ug/kg	16.1	107
10061-02-6	trans-1,3-Dichloropropylene		2620	ug/kg	16.1	107

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q321.D
Acq On : 18 Jul 2018 19:46
Operator : JP1
InstName : VOA3
Sample : |1204070951|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PS
ALS Vial : 21 Sample Multiplier: 1

EM
07/19/2018

Quant Time: Jul 19 08:40:41 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	1069789	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	537249	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	483068	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1072239	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	545890	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	483267	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	214340	53.54	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1094234	43.72	ug/L	0.00
63) Bromofluorobenzene	95	17.560	17.559	0.934	498311	52.48	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	107%
45) Toluene-d8	50.000	81 - 120	87%
63) Bromofluorobenzene	50.000	70 - 130	105%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.534	4.552	0.355	415391	45.16	ug/L	100
3) Chloromethane	50	4.991	4.990	0.391	420045	45.03	ug/L	99
4) Vinyl chloride	62	5.301	5.319	0.415	412693	46.06	ug/L	99
5) Bromomethane	94	6.050	6.159	0.474	104461	16.40	ug/L	96
6) Chloroethane	64	6.251	6.372	0.490	29853	4.78	ug/L	87
7) Trichlorofluoromethane	101	6.958	7.061	0.545	759476	55.49	ug/L	100
8) Ethyl ether	59	7.604	7.610	0.596	224600	46.09	ug/L	93
9) Acetone	43	8.263	8.232	0.647	867080	224.50	ug/L	96
10) 1,1-Dichloroethylene	61	8.135	8.177	0.637	570652	49.54	ug/L	97
11) Iodomethane	142	8.476	8.500	0.664	2301812	217.26	ug/L	90
12) Acetonitrile	41	8.854	8.817	0.694	911775	1084.12	ug/L	98
13) Methyl acetate	74	8.860	8.854	0.694	272943	251.11	ug/L	96
14) Carbon disulfide	76	8.628	8.665	0.676	5175611	234.54	ug/L	100
15) Methylene chloride	84	9.079	9.091	0.711	326509	46.66	ug/L	100
16) tert-Butyl methyl ether	73	9.543	9.537	0.748	883395	49.63	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.549	9.567	0.748	461374	47.59	ug/L	96
18) Hexane	57	9.970	9.988	0.781	364299	41.06	ug/L	94
19) Vinyl acetate	43	10.317	10.317	0.808	1864957	225.73	ug/L	98
20) 1,1-Dichloroethane	63	10.280	10.286	0.806	575834	46.70	ug/L	99
21) 2-Butanone	72	11.195	11.183	0.877	205314	220.41	ug/L	99
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	293882	45.56	ug/L	95
23) 2,2-Dichloropropane	77	11.189	11.195	0.877	545770	51.38	ug/L	100
24) Bromochloromethane	128	11.542	11.548	0.904	121876	41.17	ug/L	95
25) Chloroform	83	11.628	11.628	0.911	627101	49.53	ug/L	99
26) 1,1,1-Trichloroethane	97	11.908	11.914	0.933	577598	49.87	ug/L	99
27) Cyclohexane	56	11.987	11.999	0.939	431166	41.78	ug/L	97
28) 1,1-Dichloropropene	75	12.122	12.127	0.950	428397	48.76	ug/L	96
29) Carbon tetrachloride	117	12.134	12.146	0.951	528169	49.48	ug/L	97
31) 1,2-Dichloroethane	62	12.439	12.438	0.975	519831	52.07	ug/L	99
32) Benzene	78	12.420	12.426	0.973	1109266	45.01	ug/L	100
33) Cyclohexene	67	12.536	12.548	0.982	517537	41.52	ug/L	98
34) n-Butyl alcohol	56	13.042	13.024	1.022	491598	2747.45	ug/L	96
35) Trichloroethylene	95	13.219	13.225	1.036	312586	48.45	ug/L	92
36) 2-Pentanone	43	13.408	13.396	1.051	1081801	257.94	ug/L	99
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	306965	49.11	ug/L	98
38) Methylcyclohexane	83	13.475	13.475	1.056	473919	45.03	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q321.D
Acq On : 18 Jul 2018 19:46
Operator : JP1
InstName : VOA3
Sample : |1204070951|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PS
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 19 08:40:41 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
39) Dibromomethane	93	13.682	13.682	1.072	197046	49.62	ug/L	96
40) Bromodichloromethane	83	13.835	13.834	1.084	482836	51.95	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	818112	236.25	ug/L	99
42) cis-1,3-Dichloropropylene	75	14.347	14.353	1.124	512956	51.38	ug/L	98
44) 4-Methyl-2-pentanone	58	14.493	14.487	0.888	491533	207.85	ug/L	97
46) Toluene	91	14.749	14.755	0.904	1103471	40.84	ug/L	100
47) trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	515900	49.01	ug/L	98
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	219486	43.36	ug/L	99
49) 2-Hexanone	58	15.420	15.413	0.945	634281	214.00	ug/L	95
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	450323	44.39	ug/L	95
51) Tetrachloroethylene	164	15.383	15.383	0.943	210514	36.85	ug/L	99
52) Dibromochloromethane	129	15.676	15.676	0.961	305499	43.05	ug/L	99
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	258585	43.97	ug/L	100
54) Chlorobenzene	112	16.352	16.352	1.002	702438	39.41	ug/L	95
55) 1,1,1,2-Tetrachloroethane	131	16.420	16.419	1.006	300846	41.66	ug/L	98
56) Ethylbenzene	91	16.420	16.425	1.006	1290571	41.39	ug/L	96
57) m,p-Xylenes	106	16.535	16.541	1.013	855642	74.19	ug/L	88
58) o-Xylene	106	16.986	16.986	1.041	473570	40.94	ug/L	92
59) Styrene	104	16.993	16.992	1.041	782829	42.60	ug/L	92
61) Bromoform	173	17.261	17.261	0.919	200449	45.38	ug/L	100
62) Isopropylbenzene	105	17.358	17.358	0.924	1260031	41.12	ug/L	97
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	369964	45.97	ug/L	99
65) 1,2,3-Trichloropropane	75	17.749	17.748	0.945	381044	47.86	ug/L	87
66) Bromobenzene	156	17.767	17.767	0.945	316132	42.06	ug/L	92
67) n-Propylbenzene	91	17.791	17.791	0.947	1449922	39.72	ug/L	96
68) 1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1048570	39.67	ug/L	97
69) 2-Chlorotoluene	126	17.938	17.937	0.955	274287	38.08	ug/L #	85
70) 4-Chlorotoluene	91	18.047	18.041	0.960	967849	41.49	ug/L	96
71) tert-Butylbenzene	134	18.322	18.321	0.975	186106	37.08	ug/L #	83
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1086363	40.10	ug/L	96
73) sec-Butylbenzene	105	18.547	18.547	0.987	1380142	38.73	ug/L	98
74) 4-Isopropyltoluene	119	18.669	18.675	0.994	1120575	37.41	ug/L	96
75) 1,3-Dichlorobenzene	146	18.736	18.730	0.997	587682	38.48	ug/L	98
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	585705	38.72	ug/L	99
77) n-Butylbenzene	91	19.108	19.108	1.017	1100246	36.79	ug/L	97
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	595267	40.38	ug/L	99
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	72760	43.60	ug/L	90
80) 1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	476871	38.80	ug/L	99
81) Hexachlorobutadiene	225	21.278	21.278	1.132	282037	33.25	ug/L	99
82) Naphthalene	128	21.498	21.491	1.144	1086730	40.64	ug/L	100
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	485743	39.88	ug/L	99
85) Acrolein		7.769	7.927	0.609	0m	N.D.	d	
86) Trichlorotrifluoroethane		8.110	8.165	0.636	0m	N.D.	d	
87) Isopropyl Alcohol		8.622	8.464	0.676	0m	N.D.	d	
88) Allyl chloride		9.025	8.842	0.707	0m	N.D.	d	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.		
90) Acrylonitrile		9.543	9.531	0.748	0m	N.D.	d	
91) Isopropyl ether		10.323	10.317	0.809	0m	N.D.	d	
92) 2-Chloro-1,3-butadiene		10.323	10.427	0.809	0m	N.D.	d	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94) Ethyl acetate		11.195	11.225	0.877	0m	N.D.	d	
95) Propionitrile		11.195	11.305	0.877	0m	N.D.	d	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97) Tetrahydrofuran		11.622	11.597	0.911	0m	N.D.	d	
98) Isobutyl alcohol		12.213	12.176	0.957	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q321.D
Acq On : 18 Jul 2018 19:46
Operator : JP1
InstName : VOA3
Sample : |1204070951|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PS
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 19 08:40:41 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

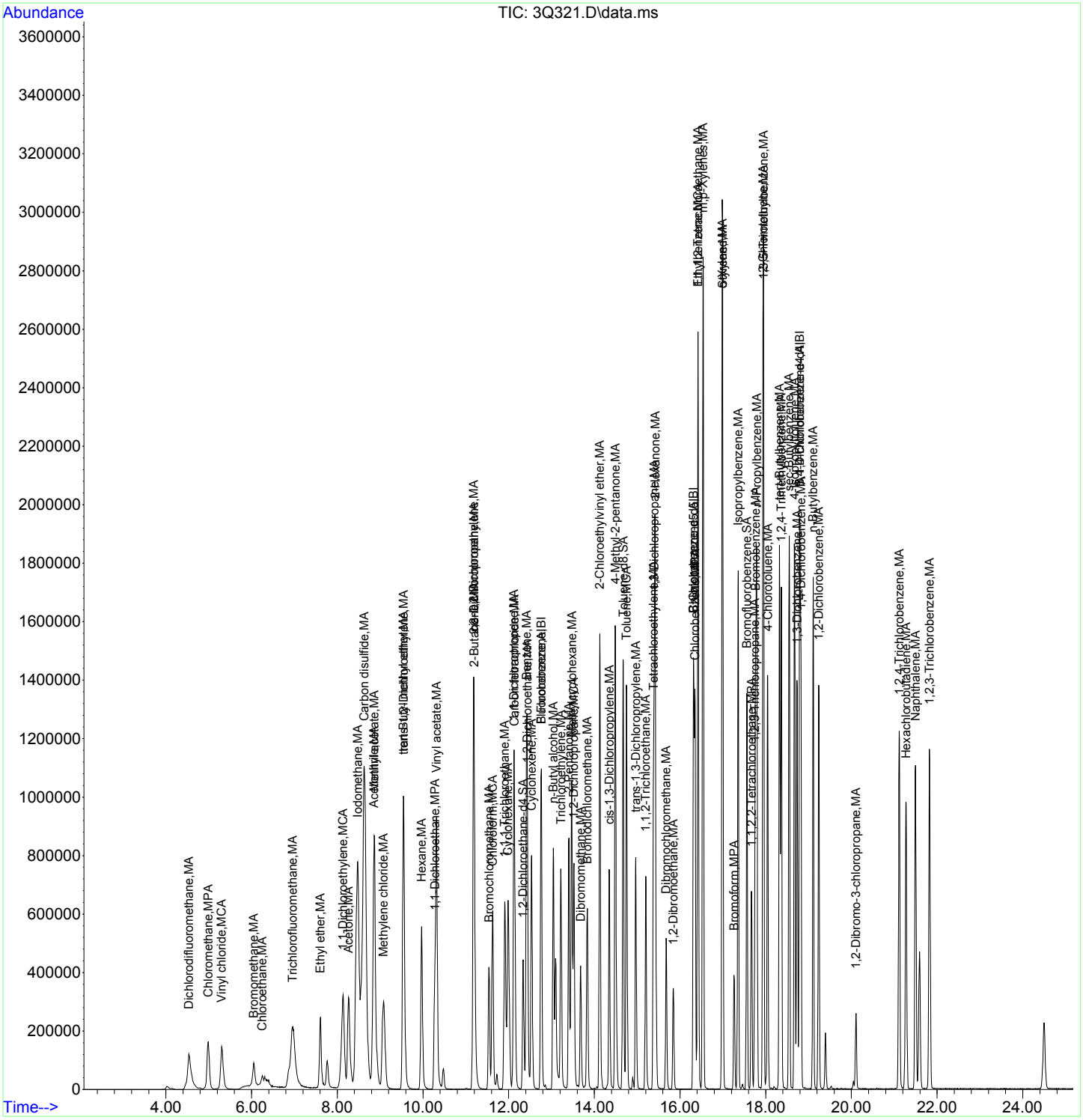
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		12.530	12.500	0.982	0m	N.D.	d
100)	Methyl methacrylate		13.560	13.560	1.063	0m	N.D.	d
101)	1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone		17.560	17.535	0.934	0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110)	Pentachloroethane		18.395	18.395	0.979	0m	N.D.	d
111)	Benzyl chloride		18.901	18.943	1.006	0m	N.D.	d
112)	bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q321.D
Acq On : 18 Jul 2018 19:46
Operator : JP1
InstName : VOA3
Sample : |1204070951|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PS
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 19 08:40:41 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 11:56**	**Matrix:**	**WATER**
Lab Sample ID:	**1204074479**	**Date Received:**	**07/17/2018 08:55**		
Client Sample:	**QC for batch 1784646**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**B3JVK9PS**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 21:48**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 21:48**				
Data File:	**072118V3\3Q624.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
56-23-5	Carbon tetrachloride		54.5	ug/L	0.300	2.00
106-46-7	1,4-Dichlorobenzene		42.7	ug/L	0.300	2.00
100-41-4	Ethylbenzene		45.4	ug/L	0.300	2.00
71-55-6	1,1,1-Trichloroethane		54.4	ug/L	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane		49.5	ug/L	0.300	2.00
79-00-5	1,1,2-Trichloroethane		46.2	ug/L	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane		51.0	ug/L	0.500	2.00
106-93-4	1,2-Dibromoethane		46.7	ug/L	0.300	2.00
107-06-2	1,2-Dichloroethane		55.8	ug/L	0.300	2.00
78-87-5	1,2-Dichloropropane		51.4	ug/L	0.300	2.00
71-43-2	Benzene		49.2	ug/L	0.300	2.00
75-27-4	Bromodichloromethane		55.5	ug/L	0.300	2.00
75-25-2	Bromoform		52.2	ug/L	0.300	2.00
75-15-0	Carbon disulfide		275	ug/L	1.60	10.0
108-90-7	Chlorobenzene		43.3	ug/L	0.300	2.00
67-66-3	Chloroform		55.1	ug/L	0.300	2.00
124-48-1	Dibromochloromethane		48.6	ug/L	0.300	2.00
75-09-2	Methylene chloride		55.1	ug/L	1.60	5.00
100-42-5	Styrene		46.7	ug/L	0.300	2.00
127-18-4	Tetrachloroethylene		41.0	ug/L	0.300	2.00
108-88-3	Toluene		44.9	ug/L	0.300	2.00
79-01-6	Trichloroethylene		51.1	ug/L	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene		52.9	ug/L	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene		56.9	ug/L	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene		52.8	ug/L	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene		51.3	ug/L	0.300	2.00
75-34-3	1,1-Dichloroethane		52.7	ug/L	0.300	2.00
75-35-4	1,1-Dichloroethylene		56.4	ug/L	0.300	2.00
78-93-3	2-Butanone		182	ug/L	3.00	10.0
108-10-1	4-Methyl-2-pentanone		218	ug/L	3.00	10.0
74-83-9	Bromomethane		46.2	ug/L	0.300	2.00
75-00-3	Chloroethane		46.4	ug/L	0.300	2.00
74-87-3	Chloromethane		41.8	ug/L	0.300	2.00
75-71-8	Dichlorodifluoromethane		45.5	ug/L	0.300	2.00
75-69-4	Trichlorofluoromethane		48.9	ug/L	0.300	2.00
75-01-4	Vinyl chloride		44.5	ug/L	0.300	2.00
591-78-6	2-Hexanone		175	ug/L	3.00	10.0
67-64-1	Acetone		125	ug/L	3.00	10.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 11:56**	**Matrix:**	**WATER**
Lab Sample ID:	**1204074479**	**Date Received:**	**07/17/2018 08:55**		
Client Sample:	**QC for batch 1784646**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**B3JVK9PS**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 21:48**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 21:48**				
Data File:	**072118V3\3Q624.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
87-61-6	1,2,3-Trichlorobenzene	B	41.8	ug/L	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene	B	40.3	ug/L	0.300	2.00
95-50-1	1,2-Dichlorobenzene		42.9	ug/L	0.300	2.00
541-73-1	1,3-Dichlorobenzene		42.5	ug/L	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/L	15.0	50.0
74-97-5	Bromochloromethane		48.9	ug/L	0.300	2.00
110-82-7	Cyclohexane		48.1	ug/L	0.300	2.00
98-82-8	Isopropylbenzene		47.0	ug/L	0.300	2.00
79-20-9	Methyl acetate		260	ug/L	1.50	5.00
108-87-2	Methylcyclohexane		50.9	ug/L	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.60	5.00
179601-23-1	m,p-Xylenes		87.2	ug/L	0.300	4.00
95-47-6	o-Xylene		44.9	ug/L	0.300	2.00
1634-04-4	tert-Butyl methyl ether		57.0	ug/L	0.300	2.00

Quantitation Report
GEL Laboratories, LLC

JP
07/23/2018

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q624.D
Acq On : 21 Jul 2018 21:48
Operator : JP1
InstName : VOA3
Sample : |1204074479|1784646|1|VOA|1|VOA8260CL|
Misc : CPRC 5ML PH<2 MIX[A] 454685016PS
ALS Vial : 24 Sample Multiplier: 1

EM
07/23/2018

Quant Time: Jul 23 08:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1059944	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	534153	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	476541	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1061877	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	542081	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	476730	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	205824	51.89	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1091675	43.87	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	494813	52.82	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	70 - 130	104%
45) Toluene-d8	50.000	70 - 130	88%
63) Bromofluorobenzene	50.000	70 - 130	106%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	414273	45.46	ug/L	100
3) Chloromethane	50	4.991	4.990	0.391	386283	41.80	ug/L	100
4) Vinyl chloride	62	5.319	5.319	0.417	394922	44.48	ug/L	99
5) Bromomethane	94	6.159	6.159	0.483	291664	46.22	ug/L	98
6) Chloroethane	64	6.385	6.372	0.500	286796	46.36	ug/L	100
7) Trichlorofluoromethane	101	7.062	7.061	0.553	662546	48.85	ug/L	99
8) Ethyl ether	59	7.610	7.610	0.596	237449	49.18	ug/L	96
9) Acetone	43	8.238	8.232	0.646	477984	124.91	ug/L	98
10) 1,1-Dichloroethylene	61	8.183	8.177	0.641	643138	56.35	ug/L	98
11) Iodomethane	142	8.506	8.500	0.667	2718179	258.94	ug/L	93
12) Acetonitrile	41	8.817	8.817	0.691	937405	1124.95	ug/L	99
13) Methyl acetate	74	8.854	8.854	0.694	280470	260.43	ug/L #	88
14) Carbon disulfide	76	8.671	8.665	0.679	6015129	275.12	ug/L	100
15) Methylene chloride	84	9.098	9.091	0.713	380847	55.14	ug/L	96
16) tert-Butyl methyl ether	73	9.537	9.537	0.747	1004888	56.98	ug/L	97
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	506905	52.77	ug/L	97
18) Hexane	57	9.988	9.988	0.783	346261	39.39	ug/L	95
19) Vinyl acetate	43	10.317	10.317	0.808	1979188	241.78	ug/L	99
20) 1,1-Dichloroethane	63	10.293	10.286	0.807	643781	52.69	ug/L	99
21) 2-Butanone	72	11.183	11.183	0.876	168391	182.45	ug/L #	87
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	338298	52.93	ug/L	97
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	562415	53.44	ug/L	98
24) Bromochloromethane	128	11.548	11.548	0.905	143444	48.90	ug/L	98
25) Chloroform	83	11.628	11.628	0.911	691320	55.11	ug/L	99
26) 1,1,1-Trichloroethane	97	11.920	11.914	0.934	624323	54.41	ug/L	99
27) Cyclohexane	56	12.000	11.999	0.940	492106	48.13	ug/L	97
28) 1,1-Dichloropropene	75	12.128	12.127	0.950	467804	53.74	ug/L	98
29) Carbon tetrachloride	117	12.146	12.146	0.952	576208	54.48	ug/L	98
31) 1,2-Dichloroethane	62	12.445	12.438	0.975	551798	55.79	ug/L	99
32) Benzene	78	12.426	12.426	0.974	1202099	49.23	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	565152	45.76	ug/L	96
34) n-Butyl alcohol	56	13.024	13.024	1.021	870338	4837.49	ug/L	99
35) Trichloroethylene	95	13.225	13.225	1.036	326590	51.09	ug/L	94
36) 2-Pentanone	43	13.396	13.396	1.050	950729	228.80	ug/L	99
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	318364	51.41	ug/L	98
38) Methylcyclohexane	83	13.475	13.475	1.056	531149	50.93	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q624.D
Acq On : 21 Jul 2018 21:48
Operator : JP1
InstName : VOA3
Sample : |1204074479|1784646|1|VOA|1|VOA8260CL|
Misc : CPRC 5ML PH<2 MIX[A] 454685016PS
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 23 08:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
39) Dibromomethane	93	13.682	13.682	1.072	210659	53.54	ug/L	96
40) Bromodichloromethane	83	13.835	13.834	1.084	510757	55.46	ug/L	99
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	562345	56.85	ug/L	99
44) 4-Methyl-2-pentanone	58	14.487	14.487	0.888	513429	218.37	ug/L	98
46) Toluene	91	14.755	14.755	0.904	1206414	44.91	ug/L	99
47) trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	537053	51.32	ug/L	98
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	232290	46.15	ug/L	99
49) 2-Hexanone	58	15.414	15.413	0.945	516344	175.22	ug/L	99
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	490803	48.66	ug/L	92
51) Tetrachloroethylene	164	15.383	15.383	0.943	232720	40.97	ug/L	100
52) Dibromochloromethane	129	15.682	15.676	0.961	342648	48.56	ug/L	100
53) 1,2-Dibromoethane	107	15.846	15.840	0.971	272858	46.67	ug/L	99
54) Chlorobenzene	112	16.352	16.352	1.002	767642	43.32	ug/L	96
55) 1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	331005	46.11	ug/L	99
56) Ethylbenzene	91	16.419	16.425	1.006	1408368	45.43	ug/L	97
57) m,p-Xylenes	106	16.535	16.541	1.013	1000022	87.21	ug/L	93
58) o-Xylene	106	16.986	16.986	1.041	515703	44.85	ug/L	93
59) Styrene	104	16.993	16.992	1.041	853290	46.70	ug/L	94
61) Bromoform	173	17.261	17.261	0.919	227351	52.18	ug/L	99
62) Isopropylbenzene	105	17.358	17.358	0.924	1419072	46.95	ug/L	98
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	392953	49.49	ug/L	100
65) 1,2,3-Trichloropropane	75	17.748	17.748	0.945	410024	52.21	ug/L	89
66) Bromobenzene	156	17.767	17.767	0.945	344117	46.41	ug/L	91
67) n-Propylbenzene	91	17.791	17.791	0.947	1651132	45.85	ug/L	97
68) 1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1194978	45.83	ug/L	97
69) 2-Chlorotoluene	126	17.937	17.937	0.955	305236	42.96	ug/L #	85
70) 4-Chlorotoluene	91	18.041	18.041	0.960	1101373	47.86	ug/L	96
71) tert-Butylbenzene	134	18.322	18.321	0.975	220668	44.57	ug/L #	88
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1229103	45.99	ug/L	97
73) sec-Butylbenzene	105	18.547	18.547	0.987	1513727	43.06	ug/L	98
74) 4-Isopropyltoluene	119	18.669	18.675	0.994	1218917	41.25	ug/L	97
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	640336	42.50	ug/L	98
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	637743	42.74	ug/L	98
77) n-Butylbenzene	91	19.108	19.108	1.017	1190977	40.37	ug/L	98
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	623537	42.87	ug/L	97
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	83895	50.96	ug/L	89
80) 1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	488010	40.25	ug/L	100
81) Hexachlorobutadiene	225	21.272	21.278	1.132	289956	34.65	ug/L	99
82) Naphthalene	128	21.498	21.491	1.144	1221307	46.30	ug/L	100
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	502095	41.79	ug/L	98
85) Acrolein		0.000	7.927	0.000	0	N.D.		
86) Trichlorotrifluoroethane		8.165	8.165	0.640	0m	N.D.	d	
87) Isopropyl Alcohol		8.665	8.464	0.679	0m	N.D.	d	
88) Allyl chloride		8.671	8.842	0.679	0m	N.D.	d	
89) tert-Butyl Alcohol		9.256	9.220	0.725	0m	N.D.	d	
90) Acrylonitrile		9.531	9.531	0.747	0m	N.D.	d	
91) Isopropyl ether		10.311	10.317	0.808	0m	N.D.	d	
92) 2-Chloro-1,3-butadiene		10.323	10.427	0.809	0m	N.D.	d	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94) Ethyl acetate		11.183	11.225	0.876	0m	N.D.	d	
95) Propionitrile		11.177	11.305	0.876	0m	N.D.	d	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97) Tetrahydrofuran		11.622	11.597	0.911	0m	N.D.	d	
98) Isobutyl alcohol		12.164	12.176	0.953	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q624.D
Acq On : 21 Jul 2018 21:48
Operator : JP1
InstName : VOA3
Sample : |1204074479|1784646|1|VOA|1|VOA8260CL|
Misc : CPRC 5ML PH<2 MIX[A] 454685016PS
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 23 08:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

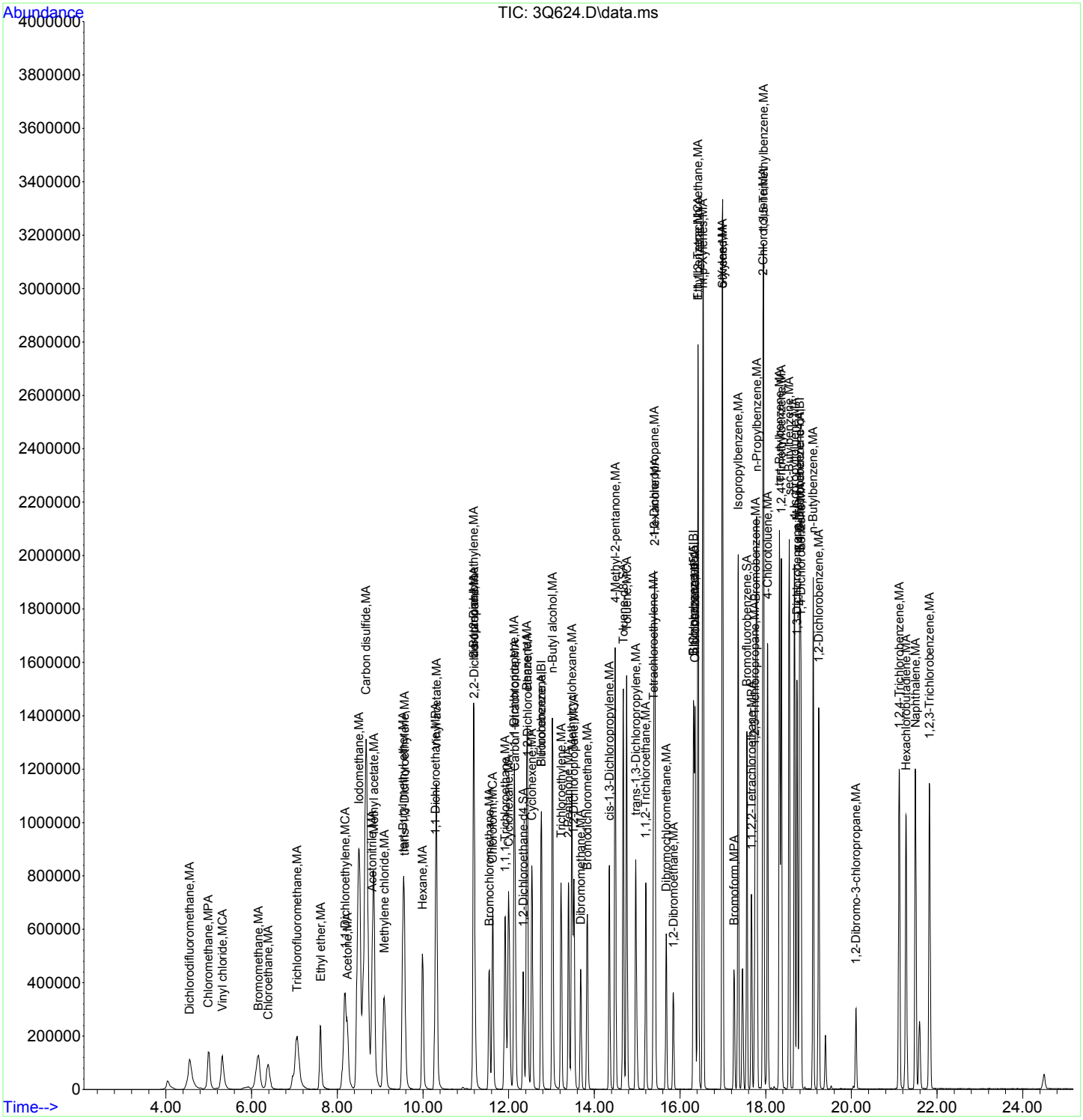
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		12.548	12.500	0.983	0m	N.D.	d
100)	Methyl methacrylate		13.475	13.560	1.056	0m	N.D.	d
101)	1,4-Dioxane		13.682	13.652	1.072	0m	N.D.	d
102)	2-Nitropropane		14.206	14.103	1.113	0m	N.D.	d
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110)	Pentachloroethane		18.395	18.395	0.979	0m	N.D.	d
111)	Benzyl chloride		18.913	18.943	1.006	0m	N.D.	d
112)	bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q624.D
Acq On : 21 Jul 2018 21:48
Operator : JP1
InstName : VOA3
Sample : |1204074479|1784646|1|VOA|1|VOA8260CL|
Misc : CPRC 5ML PH<2 MIX[A] 454685016PS
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 23 08:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204070952**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonPSD**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 20:17**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:26**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q322.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane		2700	ug/kg	16.1	107
79-34-5	1,1,2,2-Tetrachloroethane		2290	ug/kg	16.1	107
79-00-5	1,1,2-Trichloroethane		2360	ug/kg	16.1	107
75-34-3	1,1-Dichloroethane		2570	ug/kg	16.1	107
75-35-4	1,1-Dichloroethylene		2880	ug/kg	16.1	107
87-61-6	1,2,3-Trichlorobenzene		2310	ug/kg	16.1	107
120-82-1	1,2,4-Trichlorobenzene		2280	ug/kg	16.1	107
96-12-8	1,2-Dibromo-3-chloropropane		2290	ug/kg	26.8	107
106-93-4	1,2-Dibromoethane		2300	ug/kg	16.1	107
95-50-1	1,2-Dichlorobenzene		2260	ug/kg	16.1	107
107-06-2	1,2-Dichloroethane		2880	ug/kg	16.1	107
78-87-5	1,2-Dichloropropane		2650	ug/kg	16.1	107
541-73-1	1,3-Dichlorobenzene		2250	ug/kg	16.1	107
106-46-7	1,4-Dichlorobenzene		2260	ug/kg	16.1	107
123-91-1	1,4-Dioxane	U	2680	ug/kg	803	2680
78-93-3	2-Butanone		11800	ug/kg	161	535
591-78-6	2-Hexanone		10500	ug/kg	161	535
108-10-1	4-Methyl-2-pentanone		10900	ug/kg	161	535
67-64-1	Acetone		11300	ug/kg	161	535
71-43-2	Benzene		2470	ug/kg	16.1	107
74-97-5	Bromochloromethane		2340	ug/kg	16.1	107
75-27-4	Bromodichloromethane		2880	ug/kg	16.1	107
75-25-2	Bromoform		2470	ug/kg	16.1	107
74-83-9	Bromomethane		863	ug/kg	16.1	107
75-15-0	Carbon disulfide		13300	ug/kg	85.6	535
56-23-5	Carbon tetrachloride		2710	ug/kg	16.1	107
108-90-7	Chlorobenzene		2150	ug/kg	16.1	107
75-00-3	Chloroethane		247	ug/kg	16.1	107
67-66-3	Chloroform		2720	ug/kg	16.1	107
74-87-3	Chloromethane		2780	ug/kg	16.1	107
110-82-7	Cyclohexane		2340	ug/kg	16.1	107
124-48-1	Dibromochloromethane		2310	ug/kg	16.1	107
75-71-8	Dichlorodifluoromethane		2680	ug/kg	16.1	107
100-41-4	Ethylbenzene		2310	ug/kg	16.1	107
98-82-8	Isopropylbenzene		2270	ug/kg	16.1	107
79-20-9	Methyl acetate		13100	ug/kg	80.3	268
108-87-2	Methylcyclohexane		2350	ug/kg	16.1	107
75-09-2	Methylene chloride		2550	ug/kg	85.6	268

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204070952**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonPSD**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 20:17**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:26**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q322.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene		2270	ug/kg	16.1	107
127-18-4	Tetrachloroethylene		2040	ug/kg	16.1	107
108-88-3	Toluene		2300	ug/kg	16.1	107
79-01-6	Trichloroethylene		2640	ug/kg	16.1	107
75-69-4	Trichlorofluoromethane		3000	ug/kg	16.1	107
76-13-1	Trichlorotrifluoroethane	U	268	ug/kg	85.6	268
75-01-4	Vinyl chloride		2930	ug/kg	16.1	107
156-59-2	cis-1,2-Dichloroethylene		2470	ug/kg	16.1	107
10061-01-5	cis-1,3-Dichloropropylene		2990	ug/kg	16.1	107
179601-23-1	m,p-Xylenes		4350	ug/kg	16.1	214
95-47-6	o-Xylene		2170	ug/kg	16.1	107
1634-04-4	tert-Butyl methyl ether		2600	ug/kg	16.1	107
156-60-5	trans-1,2-Dichloroethylene		2520	ug/kg	16.1	107
10061-02-6	trans-1,3-Dichloropropylene		2680	ug/kg	16.1	107

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q322.D
Acq On : 18 Jul 2018 20:17
Operator : JP1
InstName : VOA3
Sample : |1204070952|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PSD
ALS Vial : 22 Sample Multiplier: 1

EM
07/19/2018

Quant Time: Jul 19 08:40:43 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	1056892	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	546341	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	483451	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1058991	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	555484	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	483754	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	215215	54.41	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1108152	43.54	ug/L	0.00
63) Bromofluorobenzene	95	17.560	17.559	0.934	497667	52.37	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	109%
45) Toluene-d8	50.000	81 - 120	87%
63) Bromofluorobenzene	50.000	70 - 130	105%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.534	4.552	0.355	454785	50.05	ug/L	100
3) Chloromethane	50	4.991	4.990	0.391	478490	51.92	ug/L	100
4) Vinyl chloride	62	5.301	5.319	0.415	484908	54.78	ug/L	99
5) Bromomethane	94	6.050	6.159	0.474	101493	16.13	ug/L	98
6) Chloroethane	64	6.251	6.372	0.490	28417	4.61	ug/L	96
7) Trichlorofluoromethane	101	6.946	7.061	0.544	758067	56.06	ug/L	100
8) Ethyl ether	59	7.604	7.610	0.596	231436	48.08	ug/L	93
9) Acetone	43	8.269	8.232	0.648	804236	210.77	ug/L	96
10) 1,1-Dichloroethylene	61	8.135	8.177	0.637	611836	53.76	ug/L	99
11) Iodomethane	142	8.476	8.500	0.664	2506584	239.48	ug/L	93
12) Acetonitrile	41	8.848	8.817	0.693	897233	1079.85	ug/L	98
13) Methyl acetate	74	8.866	8.854	0.695	263739	245.60	ug/L	97
14) Carbon disulfide	76	8.628	8.665	0.676	5437860	249.43	ug/L	100
15) Methylene chloride	84	9.079	9.091	0.711	328936	47.60	ug/L	100
16) tert-Butyl methyl ether	73	9.549	9.537	0.748	853450	48.53	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.549	9.567	0.748	450590	47.04	ug/L	97
18) Hexane	57	9.970	9.988	0.781	366598	41.82	ug/L	92
19) Vinyl acetate	43	10.317	10.317	0.808	1933172	236.84	ug/L	98
20) 1,1-Dichloroethane	63	10.280	10.286	0.806	585331	48.05	ug/L	99
21) 2-Butanone	72	11.201	11.183	0.878	203521	221.15	ug/L	98
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	293771	46.10	ug/L	95
23) 2,2-Dichloropropane	77	11.189	11.195	0.877	542938	51.74	ug/L	100
24) Bromochloromethane	128	11.542	11.548	0.904	127603	43.63	ug/L	94
25) Chloroform	83	11.628	11.628	0.911	636502	50.89	ug/L	99
26) 1,1,1-Trichloroethane	97	11.908	11.914	0.933	578254	50.54	ug/L	99
27) Cyclohexane	56	11.987	11.999	0.939	445550	43.70	ug/L	98
28) 1,1-Dichloropropene	75	12.122	12.127	0.950	437735	50.43	ug/L	98
29) Carbon tetrachloride	117	12.134	12.146	0.951	533910	50.62	ug/L	98
31) 1,2-Dichloroethane	62	12.439	12.438	0.975	530638	53.80	ug/L	99
32) Benzene	78	12.420	12.426	0.973	1121509	46.07	ug/L	100
33) Cyclohexene	67	12.536	12.548	0.982	509771	41.39	ug/L	98
34) n-Butyl alcohol	56	13.042	13.024	1.022	516572	2916.44	ug/L	97
35) Trichloroethylene	95	13.225	13.225	1.036	314868	49.40	ug/L	93
36) 2-Pentanone	43	13.408	13.396	1.051	1070682	258.41	ug/L	98
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	305986	49.55	ug/L	100
38) Methylcyclohexane	83	13.475	13.475	1.056	456391	43.89	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q322.D
Acq On : 18 Jul 2018 20:17
Operator : JP1
InstName : VOA3
Sample : |1204070952|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PSD
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 19 08:40:43 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
39) Dibromomethane	93	13.682	13.682	1.072	196714	50.14	ug/L		95
40) Bromodichloromethane	83	13.835	13.834	1.084	493817	53.78	ug/L		99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	821990	240.26	ug/L		99
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	551030	55.87	ug/L		97
44) 4-Methyl-2-pentanone	58	14.487	14.487	0.888	488348	203.07	ug/L		98
46) Toluene	91	14.755	14.755	0.904	1179428	42.93	ug/L		100
47) trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	536377	50.11	ug/L		99
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	226703	44.04	ug/L		99
49) 2-Hexanone	58	15.420	15.413	0.945	591950	196.40	ug/L		96
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	464755	45.05	ug/L		100
51) Tetrachloroethylene	164	15.383	15.383	0.943	221918	38.20	ug/L		99
52) Dibromochloromethane	129	15.682	15.676	0.961	311567	43.17	ug/L		99
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	256468	42.89	ug/L		99
54) Chlorobenzene	112	16.352	16.352	1.002	727687	40.15	ug/L		96
55) 1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	318472	43.37	ug/L		98
56) Ethylbenzene	91	16.419	16.425	1.006	1367531	43.13	ug/L		96
57) m,p-Xylenes	106	16.535	16.541	1.013	952890	81.24	ug/L		91
58) o-Xylene	106	16.986	16.986	1.041	476082	40.48	ug/L		91
59) Styrene	104	16.993	16.992	1.041	793532	42.46	ug/L		94
61) Bromoform	173	17.261	17.261	0.919	203814	46.11	ug/L		100
62) Isopropylbenzene	105	17.358	17.358	0.924	1301346	42.44	ug/L		97
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	344847	42.81	ug/L		100
65) 1,2,3-Trichloropropane	75	17.748	17.748	0.945	365249	45.84	ug/L		93
66) Bromobenzene	156	17.767	17.767	0.945	325912	43.33	ug/L		94
67) n-Propylbenzene	91	17.791	17.791	0.947	1551658	42.47	ug/L		97
68) 1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1152403	43.57	ug/L		97
69) 2-Chlorotoluene	126	17.937	17.937	0.955	296936	41.20	ug/L		88
70) 4-Chlorotoluene	91	18.047	18.041	0.960	1047389	44.86	ug/L		95
71) tert-Butylbenzene	134	18.322	18.321	0.975	199392	39.70	ug/L	#	84
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1176094	43.38	ug/L		97
73) sec-Butylbenzene	105	18.547	18.547	0.987	1431800	40.14	ug/L		98
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	1157984	38.62	ug/L		96
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	642470	42.04	ug/L		98
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	638906	42.20	ug/L		98
77) n-Butylbenzene	91	19.108	19.108	1.017	1260769	42.13	ug/L		97
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	623663	42.27	ug/L		98
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	71334	42.71	ug/L		92
80) 1,2,4-Trichlorobenzene	180	21.114	21.113	1.124	524469	42.63	ug/L		100
81) Hexachlorobutadiene	225	21.278	21.278	1.132	333097	39.23	ug/L		100
82) Naphthalene	128	21.498	21.491	1.144	1173572	43.85	ug/L		100
83) 1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	526406	43.19	ug/L		98
85) Acrolein		8.055	7.927	0.631	0m	N.D.	d		
86) Trichlorotrifluoroethane		8.122	8.165	0.636	0m	N.D.	d		
87) Isopropyl Alcohol		8.628	8.464	0.676	0m	N.D.	d		
88) Allyl chloride		9.073	8.842	0.711	0m	N.D.	d		
89) tert-Butyl Alcohol		9.025	9.220	0.707	0m	N.D.	d		
90) Acrylonitrile		9.555	9.531	0.749	0m	N.D.	d		
91) Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d		
92) 2-Chloro-1,3-butadiene		10.476	10.427	0.821	0m	N.D.	d		
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94) Ethyl acetate		11.195	11.225	0.877	0m	N.D.	d		
95) Propionitrile		11.189	11.305	0.877	0m	N.D.	d		
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97) Tetrahydrofuran		11.634	11.597	0.912	0m	N.D.	d		
98) Isobutyl alcohol		12.231	12.176	0.958	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q322.D
Acq On : 18 Jul 2018 20:17
Operator : JP1
InstName : VOA3
Sample : |1204070952|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PSD
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 19 08:40:43 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

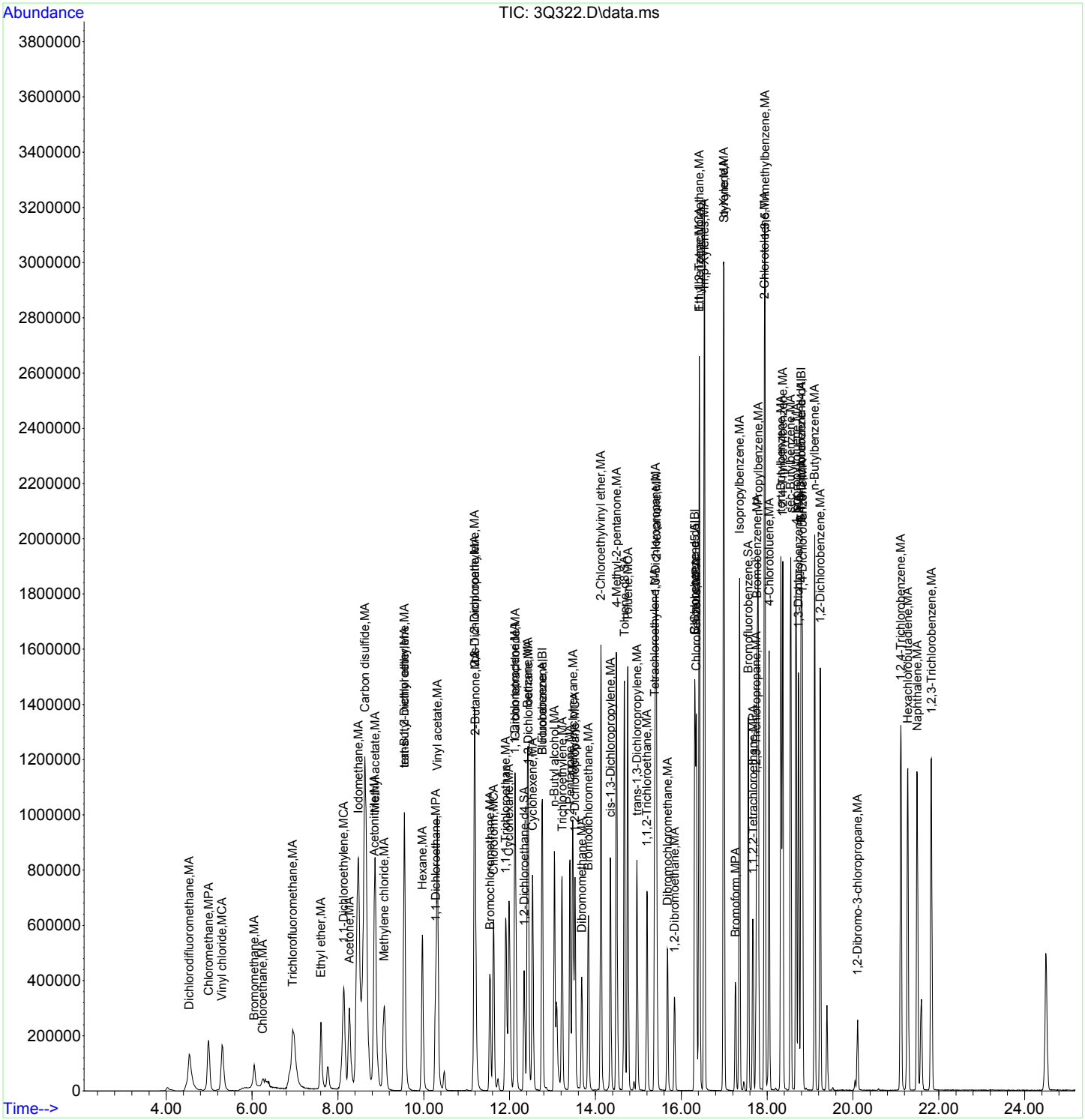
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		12.542	12.500	0.983	0m	N.D.	d
100)	Methyl methacrylate		13.585	13.560	1.064	0m	N.D.	d
101)	1,4-Dioxane		13.670	13.652	1.071	0m	N.D.	d
102)	2-Nitropropane		14.237	14.103	1.116	0m	N.D.	d
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone		17.560	17.535	0.934	0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110)	Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111)	Benzyl chloride		18.919	18.943	1.007	0m	N.D.	d
112)	bis(2-Chloroisopropyl)...		19.395	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q322.D
Acq On : 18 Jul 2018 20:17
Operator : JP1
InstName : VOA3
Sample : |1204070952|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PSD
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 19 08:40:43 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 11:56**	**Matrix:**	**WATER**
Lab Sample ID:	**1204074480**	**Date Received:**	**07/17/2018 08:55**		
Client Sample:	**QC for batch 1784646**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**B3JVK9PSD**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 22:19**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 22:19**				
Data File:	**072118V3\3Q625.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
56-23-5	Carbon tetrachloride		52.6	ug/L	0.300	2.00
106-46-7	1,4-Dichlorobenzene		37.0	ug/L	0.300	2.00
100-41-4	Ethylbenzene		42.2	ug/L	0.300	2.00
71-55-6	1,1,1-Trichloroethane		53.2	ug/L	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane		48.9	ug/L	0.300	2.00
79-00-5	1,1,2-Trichloroethane		46.8	ug/L	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane		51.3	ug/L	0.500	2.00
106-93-4	1,2-Dibromoethane		45.8	ug/L	0.300	2.00
107-06-2	1,2-Dichloroethane		55.4	ug/L	0.300	2.00
78-87-5	1,2-Dichloropropane		51.7	ug/L	0.300	2.00
71-43-2	Benzene		50.5	ug/L	0.300	2.00
75-27-4	Bromodichloromethane		55.8	ug/L	0.300	2.00
75-25-2	Bromoform		52.4	ug/L	0.300	2.00
75-15-0	Carbon disulfide		273	ug/L	1.60	10.0
108-90-7	Chlorobenzene		41.2	ug/L	0.300	2.00
67-66-3	Chloroform		53.9	ug/L	0.300	2.00
124-48-1	Dibromochloromethane		49.4	ug/L	0.300	2.00
75-09-2	Methylene chloride		55.7	ug/L	1.60	5.00
100-42-5	Styrene		43.5	ug/L	0.300	2.00
127-18-4	Tetrachloroethylene		38.1	ug/L	0.300	2.00
108-88-3	Toluene		43.3	ug/L	0.300	2.00
79-01-6	Trichloroethylene		50.3	ug/L	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene		53.1	ug/L	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene		56.1	ug/L	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene		52.7	ug/L	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene		52.4	ug/L	0.300	2.00
75-34-3	1,1-Dichloroethane		52.2	ug/L	0.300	2.00
75-35-4	1,1-Dichloroethylene		56.7	ug/L	0.300	2.00
78-93-3	2-Butanone		184	ug/L	3.00	10.0
108-10-1	4-Methyl-2-pentanone		234	ug/L	3.00	10.0
74-83-9	Bromomethane		47.4	ug/L	0.300	2.00
75-00-3	Chloroethane		45.4	ug/L	0.300	2.00
74-87-3	Chloromethane		41.5	ug/L	0.300	2.00
75-71-8	Dichlorodifluoromethane		44.9	ug/L	0.300	2.00
75-69-4	Trichlorofluoromethane		46.4	ug/L	0.300	2.00
75-01-4	Vinyl chloride		44.8	ug/L	0.300	2.00
591-78-6	2-Hexanone		181	ug/L	3.00	10.0
67-64-1	Acetone		123	ug/L	3.00	10.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 11:56**	**Matrix:**	**WATER**
Lab Sample ID:	**1204074480**	**Date Received:**	**07/17/2018 08:55**		
Client Sample:	**QC for batch 1784646**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**B3JVK9PSD**	**Method:**	**SW846 8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1784646**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/21/2018 22:19**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/21/2018 22:19**				
Data File:	**072118V3\3Q625.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
87-61-6	1,2,3-Trichlorobenzene	B	41.6	ug/L	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene	B	39.0	ug/L	0.300	2.00
95-50-1	1,2-Dichlorobenzene		41.2	ug/L	0.300	2.00
541-73-1	1,3-Dichlorobenzene		38.1	ug/L	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/L	15.0	50.0
74-97-5	Bromochloromethane		49.3	ug/L	0.300	2.00
110-82-7	Cyclohexane		46.9	ug/L	0.300	2.00
98-82-8	Isopropylbenzene		39.2	ug/L	0.300	2.00
79-20-9	Methyl acetate		263	ug/L	1.50	5.00
108-87-2	Methylcyclohexane		48.8	ug/L	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/L	1.60	5.00
179601-23-1	m,p-Xylenes		76.1	ug/L	0.300	4.00
95-47-6	o-Xylene		41.9	ug/L	0.300	2.00
1634-04-4	tert-Butyl methyl ether		58.7	ug/L	0.300	2.00

Quantitation Report
GEL Laboratories, LLC

JP
07/23/2018

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q625.D
Acq On : 21 Jul 2018 22:19
Operator : JP1
InstName : VOA3
Sample : |1204074480|1784646|1|VOA|1|VOA8260CL|
Misc : CPRC 5ML PH<2 MIX[A] 454685016PSD
ALS Vial : 25 Sample Multiplier: 1

EM
07/23/2018

Quant Time: Jul 23 08:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.768	12.761	1.000	1090674	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	528640	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	477556	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.768	12.762	1.000	1092779	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	536235	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	477657	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	212572	52.08	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1167126	47.39	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	511756	54.51	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	70 - 130	104%
45) Toluene-d8	50.000	70 - 130	95%
63) Bromofluorobenzene	50.000	70 - 130	109%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	421271	44.92	ug/L	100
3) Chloromethane	50	5.009	4.990	0.392	394508	41.48	ug/L	99
4) Vinyl chloride	62	5.319	5.319	0.417	408848	44.75	ug/L	100
5) Bromomethane	94	6.159	6.159	0.482	307617	47.38	ug/L	99
6) Chloroethane	64	6.379	6.372	0.500	288841	45.37	ug/L	99
7) Trichlorofluoromethane	101	7.055	7.061	0.553	647929	46.43	ug/L	100
8) Ethyl ether	59	7.610	7.610	0.596	251260	50.58	ug/L	95
9) Acetone	43	8.238	8.232	0.645	485145	123.21	ug/L	99
10) 1,1-Dichloroethylene	61	8.177	8.177	0.640	665450	56.66	ug/L	98
11) Iodomethane	142	8.506	8.500	0.666	2851348	263.98	ug/L	94
12) Acetonitrile	41	8.817	8.817	0.691	960764	1120.50	ug/L	99
13) Methyl acetate	74	8.854	8.854	0.693	291432	262.98	ug/L #	86
14) Carbon disulfide	76	8.677	8.665	0.680	6131055	272.52	ug/L	100
15) Methylene chloride	84	9.098	9.091	0.713	395441	55.65	ug/L	95
16) tert-Butyl methyl ether	73	9.537	9.537	0.747	1065057	58.69	ug/L	97
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.749	521290	52.74	ug/L	98
18) Hexane	57	9.988	9.988	0.782	353306	39.06	ug/L	98
19) Vinyl acetate	43	10.317	10.317	0.808	1973036	234.24	ug/L	100
20) 1,1-Dichloroethane	63	10.293	10.286	0.806	656773	52.24	ug/L	98
21) 2-Butanone	72	11.177	11.183	0.875	174333	183.57	ug/L #	85
22) cis-1,2-Dichloroethylene	96	11.189	11.183	0.876	349202	53.10	ug/L	98
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	593409	54.80	ug/L	95
24) Bromochloromethane	128	11.548	11.548	0.905	148653	49.25	ug/L	97
25) Chloroform	83	11.628	11.628	0.911	695164	53.86	ug/L	99
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.933	628704	53.24	ug/L	99
27) Cyclohexane	56	12.000	11.999	0.940	492956	46.86	ug/L	96
28) 1,1-Dichloropropene	75	12.128	12.127	0.950	467399	52.18	ug/L	97
29) Carbon tetrachloride	117	12.146	12.146	0.951	572303	52.58	ug/L	98
31) 1,2-Dichloroethane	62	12.445	12.438	0.975	563943	55.41	ug/L	99
32) Benzene	78	12.426	12.426	0.973	1268294	50.48	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.982	582869	45.86	ug/L	96
34) n-Butyl alcohol	56	13.024	13.024	1.020	914892	4939.88	ug/L	97
35) Trichloroethylene	95	13.225	13.225	1.036	330967	50.31	ug/L	94
36) 2-Pentanone	43	13.396	13.396	1.049	919525	215.05	ug/L	98
37) 1,2-Dichloropropane	63	13.524	13.524	1.059	329331	51.68	ug/L	98
38) Methylcyclohexane	83	13.475	13.475	1.055	523889	48.82	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q625.D
Acq On : 21 Jul 2018 22:19
Operator : JP1
InstName : VOA3
Sample : |1204074480|1784646|1|VOA|1|VOA8260CL|
Misc : CPRC 5ML PH<2 MIX[A] 454685016PSD
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 23 08:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
39) Dibromomethane	93	13.682	13.682	1.072	215843	53.31	ug/L	96
40) Bromodichloromethane	83	13.835	13.834	1.084	529109	55.83	ug/L	100
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.124	570774	56.08	ug/L	100
44) 4-Methyl-2-pentanone	58	14.487	14.487	0.888	543434	233.54	ug/L	97
46) Toluene	91	14.755	14.755	0.904	1151619	43.32	ug/L	99
47) trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	542554	52.38	ug/L	98
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	233170	46.81	ug/L	99
49) 2-Hexanone	58	15.420	15.413	0.945	528935	181.36	ug/L	99
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	496003	49.69	ug/L	89
51) Tetrachloroethylene	164	15.389	15.383	0.943	214196	38.10	ug/L	99
52) Dibromochloromethane	129	15.676	15.676	0.961	345071	49.42	ug/L	100
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	265064	45.81	ug/L	100
54) Chlorobenzene	112	16.352	16.352	1.002	721935	41.16	ug/L	97
55) 1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	325189	45.77	ug/L	99
56) Ethylbenzene	91	16.419	16.425	1.006	1293561	42.16	ug/L	97
57) m,p-Xylenes	106	16.541	16.541	1.014	864090	76.14	ug/L	93
58) o-Xylene	106	16.986	16.986	1.041	476817	41.90	ug/L	95
59) Styrene	104	16.993	16.992	1.041	787137	43.53	ug/L	95
61) Bromoform	173	17.261	17.261	0.919	228678	52.37	ug/L	99
62) Isopropylbenzene	105	17.358	17.358	0.924	1185803	39.15	ug/L	98
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	389185	48.92	ug/L	99
65) 1,2,3-Trichloropropane	75	17.755	17.748	0.945	393407	49.99	ug/L	84
66) Bromobenzene	156	17.767	17.767	0.945	322173	43.36	ug/L	94
67) n-Propylbenzene	91	17.791	17.791	0.947	1358452	37.64	ug/L	97
68) 1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1034377	39.59	ug/L	97
69) 2-Chlorotoluene	126	17.937	17.937	0.955	271104	38.08	ug/L	87
70) 4-Chlorotoluene	91	18.047	18.041	0.960	910302	39.47	ug/L	96
71) tert-Butylbenzene	134	18.322	18.321	0.975	172051	34.68	ug/L #	81
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1050557	39.22	ug/L	97
73) sec-Butylbenzene	105	18.547	18.547	0.987	1278781	36.30	ug/L	98
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	970644	32.77	ug/L	97
75) 1,3-Dichlorobenzene	146	18.736	18.730	0.997	575787	38.14	ug/L	98
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	552759	36.96	ug/L	98
77) n-Butylbenzene	91	19.108	19.108	1.017	939307	31.77	ug/L	98
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	600459	41.20	ug/L	98
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	84623	51.29	ug/L	94
80) 1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	473396	38.96	ug/L	99
81) Hexachlorobutadiene	225	21.278	21.278	1.132	235031	28.02	ug/L	98
82) Naphthalene	128	21.492	21.491	1.144	1246367	47.15	ug/L	100
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	500864	41.60	ug/L	99
85) Acrolein		0.000	7.927	0.000	0	N.D.		
86) Trichlorotrifluoroethane		8.171	8.165	0.640	0m	N.D.	d	
87) Isopropyl Alcohol		8.665	8.464	0.679	0m	N.D.	d	
88) Allyl chloride		8.677	8.842	0.680	0m	N.D.	d	
89) tert-Butyl Alcohol		9.031	9.220	0.707	0m	N.D.	d	
90) Acrylonitrile		9.537	9.531	0.747	0m	N.D.	d	
91) Isopropyl ether		10.311	10.317	0.808	0m	N.D.	d	
92) 2-Chloro-1,3-butadiene		10.317	10.427	0.808	0m	N.D.	d	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94) Ethyl acetate		11.177	11.225	0.875	0m	N.D.	d	
95) Propionitrile		11.183	11.305	0.876	0m	N.D.	d	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97) Tetrahydrofuran		11.603	11.597	0.909	0m	N.D.	d	
98) Isobutyl alcohol		12.176	12.176	0.954	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q625.D
Acq On : 21 Jul 2018 22:19
Operator : JP1
InstName : VOA3
Sample : |1204074480|1784646|1|VOA|1|VOA8260CL|
Misc : CPRC 5ML PH<2 MIX[A] 454685016PSD
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 23 08:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

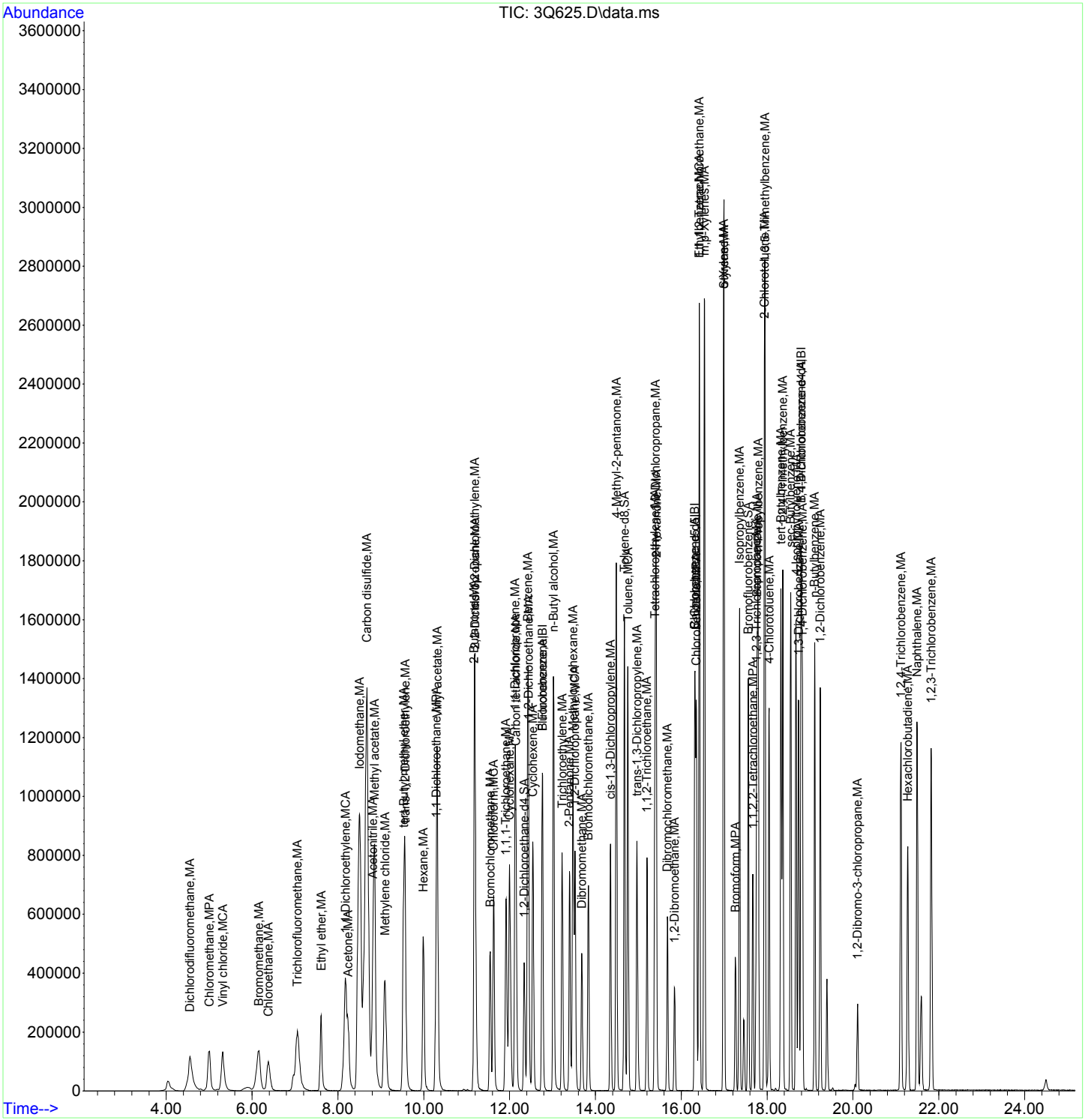
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		12.542	12.500	0.982	0m	N.D.	d
100)	Methyl methacrylate		13.475	13.560	1.055	0m	N.D.	d
101)	1,4-Dioxane		13.694	13.652	1.073	0m	N.D.	d
102)	2-Nitropropane		14.097	14.103	1.104	0m	N.D.	d
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone		17.566	17.535	0.935	0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110)	Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111)	Benzyl chloride		18.919	18.943	1.007	0m	N.D.	d
112)	bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\072118V3\
Data File : 3Q625.D
Acq On : 21 Jul 2018 22:19
Operator : JP1
InstName : VOA3
Sample : |1204074480|1784646|1|VOA|1|VOA8260CL|
Misc : CPRC 5ML PH<2 MIX[A] 454685016PSD
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 23 08:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Miscellaneous

Prep Logbook

Closed-System Purge-and-Trap Collection and Extraction: Volatile Organics in Soil and Waste Samples

Batch ID: **1782978**
Analyst: James Pressley
Method: SW846 5035A
Lab SOP: GL-OA-E-039 REV# 12
Instrument: OH AUS Balance

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units

Sample ID	Prep Date	Matrix	Tare Wt (g)	Final Wt (g)	Sample Wt (g)	Preservative	Final Volume (mL)	Prep Factor (mL/g)
454398001	10-JUL-2018 08:20:00	Soil	34.32	40.42	6.1	DI WATER	5	0.81967
454398003	10-JUL-2018 08:45:00	Soil	34.57	40.86	6.29	DI WATER	5	0.79491
1204070948 MB	18-JUL-2018 09:00:00	Soil			5	DI WATER	5	1
1204070950 LCS	18-JUL-2018 09:00:00	Soil			5	DI WATER	5	1
454474001	18-JUL-2018 12:20:00	Soil			5	DT961	5	1
454474002	18-JUL-2018 12:21:00	Soil			5	DT961	5	1
454474003	18-JUL-2018 12:22:00	Soil			5	DT961	5	1
454474004	18-JUL-2018 12:23:00	Soil			5	DT961	5	1
454474005	18-JUL-2018 12:24:00	Soil			5	DT961	5	1
454474006	18-JUL-2018 12:25:00	Soil			5	DT961	5	1
454688003	18-JUL-2018 12:26:00	Soil			5	DT961	5	1
1204070951 PS (454688003)	18-JUL-2018 12:26:00	Soil			5	DT961	5	1
1204070952 PSD (454688003)	18-JUL-2018 12:26:00	Soil			5	DT961	5	1
454715001	18-JUL-2018 12:27:00	Soil			5.1	DT961	5	0.98039
454715002	18-JUL-2018 12:28:00	Soil			5.2	DT961	5	0.96154
454715003	18-JUL-2018 12:29:00	Soil			5	DT961	5	1
1204070949 HB	18-JUL-2018 12:35:00	Soil			5	DT961	5	1

Reagent/Solvent Lot ID	Description	Amount

Comments:

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

JP
07/03/2018

Date: 7/2/2018 Method 8260C Operator: JP1

REVIEWED BY: _____
DATE: _____

07/03/2018

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1647

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/2/2018

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV			5uL ea.		
IS	UVM180620-01	1	1	1	
SS	UVM18620-01A	1	1	1	
LCS/MS				5uL ea.	
BFB	IVM180702-01				1
SHORT			5uL ea.	5uL ea.	
SHORT LCS					

CI test lot # 80315C

Sequence Number: 070218V3

Purge Amount

5ML	Water Purge Vol:
5G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
2 Jul 2018 12:28	3O101.D	IVM180702-01	GEL	BFB	10ML	1	N/A	1	w	JP1	N/A	O	
2 Jul 2018 12:54	3O102.D	W3VM180702-01	VSTD0005	ICAL	5UL/5ML	1	N/A	2	w	JP1	N/A	O	MIX[A] UVM180612-01/UVM180601-01D/UVM180628-01A
2 Jul 2018 13:25	3O103.D	W3VM180702-02	VSTD001	ICAL	5UL/5ML	1	N/A	3	w	JP1	N/A	O	MIX[A] UVM180612-02/UVM180601-02D/UVM180628-02A
2 Jul 2018 13:56	3O104.D	W3VM180702-03	VSTD002	ICAL	5UL/5ML	1	N/A	4	w	JP1	N/A	O	MIX[A] UVM180612-03/UVM180601-03D/UVM180628-03A
2 Jul 2018 14:28	3O105.D	W3VM180702-04	VSTD005	ICAL	5UL/5ML	1	N/A	5	w	JP1	N/A	O	MIX[A] UVM180612-04/UVM180601-04D/UVM180628-04A
2 Jul 2018 14:59	3O106.D	W3VM180702-05	VSTD010	ICAL	5UL/5ML	1	N/A	6	w	JP1	N/A	O	MIX[A] UVM180612-05/UVM180601-05D/UVM180628-05A
2 Jul 2018 15:30	3O107.D	W3VM180702-06	VSTD020	ICAL	5UL/5ML	1	N/A	7	w	JP1	N/A	O	MIX[A] UVM180612-06/UVM180601-06D/UVM180628-06A
2 Jul 2018 16:01	3O108.D	W3VM180702-07	VSTD050	ICAL	5UL/5ML	1	N/A	8	w	JP1	N/A	O	MIX[A] UVM180612-07(LOT AU-01265)/UVM180601-07D(LOT AU-01241)/UVM180628-07A(LOT 310314)
2 Jul 2018 16:32	3O109.D	W3VM180702-08	VSTD080	ICAL	4UL/5ML	1	N/A	9	w	JP1	N/A	O	MIX[A] UVM180612-08/UVM180601-08D/UVM180628-08A
2 Jul 2018 17:03	3O110.D	W3VM180702-09	VSTD100	ICAL	5UL/5ML	1	N/A	10	w	JP1	N/A	O	MIX[A] UVM180612-08/UVM180601-08D/UVM180628-08A
2 Jul 2018 17:34	3O111.D	120406----	GEL	BLANK	5ML	1	N/A	11	w	JP1	N/A	X	RINSE
2 Jul 2018 18:05	3O112.D	W3VM180702-10	ICV50	ICV	5UL/5ML	1	N/A	12	w	JP1	N/A	O	MIX[A] UVM180411-10E(LOT AU-01221)/UVM180601 10F(AU-01235)/UVM180312-09D(LOT 338329)/IVM180628-01
2 Jul 2018 18:36	3O113.D	W3VM180702-11	VSTD005	ICAL	5UL/5ML	1	N/A	13	w	JP1	N/A	O	MIX[B] UVM180503-01B/UVM180613-01A
2 Jul 2018 19:07	3O114.D	W3VM180702-12	VSTD010	ICAL	5UL/5ML	1	N/A	14	w	JP1	N/A	O	MIX[B] UVM180503-02B/UVM180613-02A
2 Jul 2018 19:38	3O115.D	W3VM180702-13	VSTD025	ICAL	5UL/5ML	1	N/A	15	w	JP1	N/A	O	MIX[B] UVM180503-03B/UVM180613-03A
2 Jul 2018 20:10	3O116.D	W3VM180702-14	VSTD050	ICAL	5UL/5ML	1	N/A	16	w	JP1	N/A	O	MIX[B] UVM180503-04B/UVM180613-04A
2 Jul 2018 20:41	3O117.D	W3VM180702-15	VSTD100	ICAL	5UL/5ML	1	N/A	17	w	JP1	N/A	O	MIX[B] UVM180503-05B/UVM180613-05A
2 Jul 2018 21:12	3O118.D	W3VM180702-16	VSTD250	ICAL	5UL/5ML	1	N/A	18	w	JP1	N/A	O	MIX[B] UVM180503-06B(LOT 343576)/UVM180613-06A(LOT 347118)
2 Jul 2018 21:44	3O119.D	W3VM180702-17	VSTD300	ICAL	3UL/5ML	1	N/A	19	w	JP1	N/A	O	MIX[B] UVM180503-07B/UVM180613-07A
2 Jul 2018 22:15	3O120.D	W3VM180702-18	VSTD500	ICAL	5UL/5ML	1	N/A	20	w	JP1	N/A	O	MIX[B] UVM180503-07B/UVM180613-07A

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

Date: 7/2/2018 Method 8260C Operator: JP1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1647

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/2/2018

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV			5uL ea.		
IS	UVM180620-01	1	1	1	
SS	UVM18620-01A	1	1	1	
LCS/MS				5uL ea.	
BFB	IVM180702-01				1
SHORT			5uL ea.	5uL ea.	
SHORT LCS					

Cl test lot # 80315C

Sequence Number: 070218V3

Purge Amount

5ML	Water Purge Vol:
5G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
2 Jul 2018 22:46	3O121.D	120406----	GEL	BLANK	5ML	1	N/A	21	w	JP1	N/A	X	RINSE
2 Jul 2018 23:17	3O122.D	W3VM180702-19	ICV250	ICV	5UL/5ML	1	N/A	22	w	JP1	N/A	O	MIX[B] UVM180503-08C(LOT 343583)/UVM180613-08B(LOT 347133)

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

JP 07/19/2018

Date: 7/18/2018 Method 8260C Operator: JP1

REVIEWED BY: _____
DATE: _____ 07/19/2018

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1647

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/2/2018

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W3VM180718-02/06		5uL ea.		
IS	UVM180620-01	1	1	1	
SS	UVM18620-01A	1	1	1	
LCS/MS	W3VM180718-03/04			5uL ea.	
BFB	IVM180702-01				1
SHORT	W3VM180718-05		5uL ea.	5uL ea.	
SHORT LCS					

CI test lot # 80315C

Sequence Number: 071818V3

Purge Amount

5ML	Water Purge Vol:
5G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
7/18/2018 9:28	3Q301.D	IVM180702-01	GEL	BFB	10ML	1	N/A	1	w	JP1	N/A	O	
7/18/2018 9:55	3Q302.D	W3VM180718-01	GEL	CCV	5ML	1	N/A	2	w	JP1	N/A	X	MIX[A] UVM180411-10F/UVM180601-10H/IVM180713 01/UVM180312-09F. LOW
7/18/2018 10:26	3Q303.D	W3VM180718-02	GEL	CCV	5ML	1	N/A	3	w	JP1	N/A	O	MIX[A] UVM180411-10G/UVM180601-10H/IVM180713-01/UVM180312-09F
7/18/2018 10:26	3Q303L.D	W3VM180718-03	GEL	LCS	5ML	1	N/A	3	w	JP1	N/A	O	MIX[A] UVM180411-10G/UVM180601-10H/IVM180713-01/UVM180312-09F
7/18/2018 10:57	3Q304.D	W3VM180718-04	GEL	LCS	5ML	1	N/A	4	S	JP1	N/A	O	SOIL MIX[A] UVM180411-10G/UVM180601-10H/IVM180713-01/UVM180312-09F
7/18/2018 11:28	3Q305.D	W3VM180718-05	GEL	CCV	5ML	1	N/A	5	W	JP1	N/A	O	MIX[B] UVM180503-08D/UVM180613-08C
7/18/2018 11:59	3Q306.D	120406----	GEL	BLANK	5ML	1	N/A	6	W	JP1	N/A	O	
7/18/2018 12:30	3Q307.D	120406----	GEL	BLANK	5ML	1	N/A	7	S	JP1	N/A	O	SOIL
7/18/2018 13:02	3Q308.D	454398001	BBES	1782981	6.1G	1	N/A	8	S	JP1	N/A	O	SOIL. FROM 3Q210(1X). SS HIGH NO TARGET ANALYTE HITS.
7/18/2018 13:33	3Q309.D	454398003	BBES	1782981	6.3G	1	N/A	9	S	JP1	N/A	O	SOIL. FROM 3Q211(1X). SS HIGH NO TARGET ANALYTE HITS.
7/18/2018 14:04	3Q310.D	1204070949	GEL	1782981	100UL	50	N/A	10	S	JP1	N/A	O	SOIL HB
7/18/2018 14:35	3Q311.D	454688003	DMAX	1782981	100UL	50	N/A	11	S	JP1	N/A	O	SOIL
7/18/2018 15:06	3Q312.D	454474001	URSC	1782981	100UL	50	N/A	12	S	JP1	N/A	O	SOIL
7/18/2018 15:37	3Q313.D	454474002	URSC	1782981	100UL	50	N/A	13	S	JP1	N/A	O	SOIL
7/18/2018 16:08	3Q314.D	454474003	URSC	1782981	100UL	50	N/A	14	S	JP1	N/A	O	SOIL
7/18/2018 16:40	3Q315.D	454474004	URSC	1782981	100UL	50	N/A	15	S	JP1	N/A	O	SOIL
7/18/2018 17:11	3Q316.D	454474005	URSC	1782981	100UL	50	N/A	16	S	JP1	N/A	O	SOIL
7/18/2018 17:42	3Q317.D	454474006	URSC	1782981	100UL	50	N/A	17	S	JP1	N/A	O	SOIL
7/18/2018 18:12	3Q318.D	454715001	URSC	1782981	100UL	50	N/A	18	S	JP1	N/A	O	SOIL
7/18/2018 18:44	3Q319.D	454715002	URSC	1782981	100UL	50	N/A	19	S	JP1	N/A	O	SOIL
7/18/2018 19:15	3Q320.D	454715003	URSC	1782981	100UL	50	N/A	20	S	JP1	N/A	O	SOIL
7/18/2018 19:46	3Q321.D	1204070951	DMAX	1782981	100UL	50	N/A	21	S	JP1	N/A	O	SOIL MIX[A] 454688003PS
7/18/2018 20:17	3Q322.D	1204070952	DMAX	1782981	100UL	50	N/A	22	S	JP1	N/A	O	SOIL MIX[A] 454688003PSD

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

Date: 7/18/2018 Method 8260C Operator: JP1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1647

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/2/2018

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W3VM180718-02/06		5uL ea.		
IS	UVM180620-01	1	1	1	
SS	UVM18620-01A	1	1	1	
LCS/MS	W3VM180718-03/04			5uL ea.	
BFB	IVM180702-01				1
SHORT	W3VM180718-05		5uL ea.	5uL ea.	
SHORT LCS					

Cl test lot # 80315C

Sequence Number: 071818V3

Purge Amount

5ML	Water Purge Vol:
5G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
7/18/2018	20:48	3Q323.D	W3VM180718-06	GEL	CCV	5ML	1	N/A	23	W	JP1	N/A	O	MIX[A] UVM180411-10G/UVM180601-10H/IVM180713-01/UVM180312-09F. DODQSM5.0 CLOSING CHECK.

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

JP
07/23/2018

Date: 7/21/2018 Method 8260C Operator: JP1

REVIEWED BY: _____
DATE: _____

07/23/2018

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1647

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/2/2018

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W3VM180721-01		5uL ea.		
IS	UVM180620-01	1	1	1	
SS	UVM18620-01A	1	1	1	
LCS/MS	W3VM180721-02/03			5uL ea.	
BFB	IVM180702-01				1
SHORT	W3VM180721-04		5uL ea.	5uL ea.	
SHORT LCS					

Cl test lot # 80315C

Sequence Number: 072118V3

Purge Amount

5ML	Water Purge Vol:
5G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
100	ul
DT961	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
7/21/2018 10:04	3Q601.D	IVM180702-01	GEL	BFB	10ML	1	N/A	1	w	JP1	N/A	X	
7/21/2018 10:29	3Q602.D	IVM180702-01	GEL	BFB	5ML	1	N/A	2	w	JP1	N/A	O	
7/21/2018 10:55	3Q603.D	W3VM180721-01	GEL	CCV	5ML	1	N/A	3	w	JP1	N/A	O	MIX[A] UVM180411-10H/UVM180601-10I/UVM180312 09F/IVM180720-01
7/21/2018 10:55	3Q603L.D	W3VM180721-02	GEL	LCS	5ML	1	N/A	3	w	JP1	N/A	O	MIX[A] UVM180411-10H/UVM180601-10I/UVM180312 09F/IVM180720-02
7/21/2018 11:26	3Q604.D	W3VM180721-03	GEL	LCS	5ML	1	N/A	4	S	JP1	N/A	O	SOIL MIX[A] UVM180411-10H/UVM180601-10I/UVM180312-09F/IVM180720-04
7/21/2018 11:57	3Q605.D	W3VM180721-04	GEL	CCV	5ML	1	N/A	5	w	JP1	N/A	O	MIX[B] UVM180503-08D/UVM180613-08C
7/21/2018 12:28	3Q606.D	120406----	GEL	BLANK	5ML	1	N/A	6	w	JP1	N/A	O	
7/21/2018 12:59	3Q607.D	120406----	GEL	BLANK	5ML	1	N/A	7	S	JP1	N/A	O	SOIL
7/21/2018 13:30	3Q608.D	454715004	URSC	1784646	5ML	1	PH<2	8	w	JP1	N	O	
7/21/2018 14:01	3Q609.D	454595001	KAPL	1784645	100UL	50	N/A	9	S	JP1	N/A	O	SOIL
7/21/2018 14:32	3Q610.D	454595002	KAPL	1784645	100UL	50	N/A	10	S	JP1	N/A	O	SOIL
7/21/2018 15:03	3Q611.D	454595003	KAPL	1784645	100UL	50	N/A	11	S	JP1	N/A	O	SOIL
7/21/2018 15:35	3Q612.D	455067003	URSC	1784645	100UL	50	N/A	12	S	JP1	N/A	O	SOIL
7/21/2018 16:06	3Q613.D	455067004	URSC	1784645	100UL	50	N/A	13	S	JP1	N/A	O	SOIL
7/21/2018 16:37	3Q614.D	455067005	URSC	1784645	100UL	50	N/A	14	S	JP1	N/A	O	SOIL
7/21/2018 17:08	3Q615.D	455067006	URSC	1784645	100UL	50	N/A	15	S	JP1	N/A	O	SOIL
7/21/2018 17:39	3Q616.D	455067007	URSC	1784645	100UL	50	N/A	16	S	JP1	N/A	O	SOIL
7/21/2018 18:10	3Q617.D	455067008	URSC	1784645	100UL	50	N/A	17	S	JP1	N/A	O	SOIL
7/21/2018 18:41	3Q618.D	455067009	URSC	1784645	100UL	50	N/A	18	S	JP1	N/A	O	SOIL
7/21/2018 19:12	3Q619.D	455067010	URSC	1784645	100UL	50	N/A	19	S	JP1	N/A	O	SOIL
7/21/2018 19:43	3Q620.D	455067011	URSC	1784645	100UL	50	N/A	20	S	JP1	N/A	O	SOIL
7/21/2018 20:15	3Q621.D	455067012	URSC	1784645	100UL	50	N/A	21	S	JP1	N/A	O	SOIL
7/21/2018 20:46	3Q622.D	455067013	URSC	1784645	100UL	50	N/A	22	S	JP1	N/A	O	SOIL
7/21/2018 21:17	3Q623.D	454685016	CPRC	1784646	5ML	1	PH<2	23	w	JP1	N	O	
7/21/2018 21:48	3Q624.D	1204074479	CPRC	1784646	5ML	1	PH<2	24	w	JP1	N	O	MIX[A] 454685016PS
7/21/2018 22:19	3Q625.D	1204074480	CPRC	1784646	5ML	1	PH<2	25	w	JP1	N	O	MIX[A] 454685016PSD

Semi-Volatile Analysis

Case Narrative

GC/MS Semivolatile
Technical Case Narrative
URS Energy & Construction (URSC)
SDG #: 454715

Product: **Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method: SW846 3541/8270D
Analytical Procedure: GL-OA-E-009 REV# 40
Analytical Batch: 1783053

Preparation Method: SW846 3541
Preparation Procedure: GL-OA-E-066 REV# 8
Preparation Batch: 1783052

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
454715001	SW01
454715002	SW02
454715003	SW03
1204071088	Method Blank (MB)
1204071089	Laboratory Control Sample (LCS)
1204071090	454688003(NonSDG) Matrix Spike (MS)
1204071091	454688003(NonSDG) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CCV Requirements
All Calibration Verification Standards (CCV) did not meet the acceptance criteria as outlined in Method 8270D for samples 454715001 (SW01), 454715002 (SW02) and 454715003 (SW03) and the associated QC. However, the method allows for a designated number of outliers dependent on the requested analyte list. This SDG satisfied the 8270D outlier acceptance criteria. If required, a CRDL was analyzed after the CCVs to demonstrate that there is adequate sensitivity to detect the failed compounds at the applicable lower quantitation limit.

Quality Control (QC) Information

Surrogate Recoveries
Sample (See Below) did not meet surrogate recovery acceptance criteria. Since the parent sample and associated MS/MSD pair displayed similar recoveries, the failures were attributed to matrix interference and the data results are reported.

Sample	Analyte	Value
1204071090 (Non SDG 454688003MS)	2, 4, 6-Tribromophenol	34* (39%-115%)

	2-Fluorophenol	35* (36%-104%)
	Phenol-d5	37* (39%-106%)
	p-Terphenyl-d14	44* (45%-119%)

Spike Recovery Statement
The MS or MSD (See Below) recovered spiked analytes outside of the established acceptance limits. As similar recoveries were displayed in the MS and MSD, the failures were attributed to sample matrix interference and that the samples were analyzed at a dilution. The data were reported.

Sample	Analyte	Value
1204071090 (Non SDG 454688003MS)	Several	See applicable report
1204071091 (Non SDG 454688003MSD)	Several	See applicable report

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent differences (RPD) for the MS and MSD, (See Below), were not within the acceptance limits. The failures were attributed to matrix interference and that the samples were analyzed at a dilution. The data were reported.

Sample	Analyte	Value
1204071090MS and 1204071091MSD (Non SDG 454688003)	Several	See applicable report

Technical Information

Sample Dilutions
Samples 1204071090 (Non SDG 454688003MS) and 1204071091 (Non SDG 454688003MSD) were diluted because the extracts were very dark and/or viscous. The data from the dilutions are reported.

Sample Re-extraction/Re-analysis
Sample 454715003 (SW03) was re-analyzed because a target analyte was detected that recovered high in the daily calibration verification standard. The re-analysis data were reported.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

URSC013 URS Energy & Construction (2012-SC-SPRU-29463-171)

Client SDG: 454715 GEL Work Order: 454715

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Barbara Bailey **Name: Barbara Bailey**

Date: 23 JUL 2018 **Title: Data Validator**

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:05**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715001**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.6**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW01**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 22:22**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.14 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1825.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl	U	359	ug/kg	108	359
95-94-3	1,2,4,5-Tetrachlorobenzene	U	359	ug/kg	108	359
58-90-2	2,3,4,6-Tetrachlorophenol	U	359	ug/kg	108	359
95-95-4	2,4,5-Trichlorophenol	U	359	ug/kg	108	359
88-06-2	2,4,6-Trichlorophenol	U	359	ug/kg	108	359
120-83-2	2,4-Dichlorophenol	U	359	ug/kg	108	359
105-67-9	2,4-Dimethylphenol	U	359	ug/kg	108	359
51-28-5	2,4-Dinitrophenol	U	718	ug/kg	108	718
121-14-2	2,4-Dinitrotoluene	U	359	ug/kg	108	359
606-20-2	2,6-Dinitrotoluene	U	359	ug/kg	108	359
91-58-7	2-Chloronaphthalene	U	35.9	ug/kg	10.8	35.9
95-57-8	2-Chlorophenol	U	359	ug/kg	108	359
534-52-1	2-Methyl-4,6-dinitrophenol	U	359	ug/kg	108	359
91-57-6	2-Methylnaphthalene	U	35.9	ug/kg	10.8	35.9
88-75-5	2-Nitrophenol	U	359	ug/kg	108	359
91-94-1	3,3'-Dichlorobenzidine	U	359	ug/kg	108	359
101-55-3	4-Bromophenylphenylether	U	359	ug/kg	108	359
59-50-7	4-Chloro-3-methylphenol	U	359	ug/kg	144	359
106-47-8	4-Chloroaniline	U	359	ug/kg	108	359
7005-72-3	4-Chlorophenylphenylether	U	359	ug/kg	108	359
100-02-7	4-Nitrophenol	U	359	ug/kg	108	359
83-32-9	Acenaphthene	U	35.9	ug/kg	10.8	35.9
208-96-8	Acenaphthylene	U	35.9	ug/kg	10.8	35.9
98-86-2	Acetophenone	U	359	ug/kg	108	359
120-12-7	Anthracene	U	35.9	ug/kg	10.8	35.9
1912-24-9	Atrazine	U	359	ug/kg	144	359
100-52-7	Benzaldehyde	U	359	ug/kg	108	359
56-55-3	Benzo(a)anthracene	U	35.9	ug/kg	10.8	35.9
50-32-8	Benzo(a)pyrene	U	35.9	ug/kg	10.8	35.9
205-99-2	Benzo(b)fluoranthene	U	35.9	ug/kg	10.8	35.9
191-24-2	Benzo(ghi)perylene	U	35.9	ug/kg	10.8	35.9
207-08-9	Benzo(k)fluoranthene	U	35.9	ug/kg	10.8	35.9
85-68-7	Butylbenzylphthalate	U	35.9	ug/kg	10.8	35.9
105-60-2	Caprolactam	U	359	ug/kg	108	359
86-74-8	Carbazole	U	35.9	ug/kg	10.8	35.9
218-01-9	Chrysene	U	35.9	ug/kg	10.8	35.9
84-74-2	Di-n-butylphthalate	U	35.9	ug/kg	10.8	35.9
117-84-0	Di-n-octylphthalate	U	35.9	ug/kg	10.8	35.9

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:05**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715001**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.6**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW01**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 22:22**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.14 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1825.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene	U	35.9	ug/kg	10.8	35.9
132-64-9	Dibenzofuran	U	359	ug/kg	108	359
84-66-2	Diethylphthalate	U	35.9	ug/kg	10.8	35.9
131-11-3	Dimethylphthalate	U	35.9	ug/kg	10.8	35.9
122-39-4	Diphenylamine	U	359	ug/kg	108	359
206-44-0	Fluoranthene	U	35.9	ug/kg	10.8	35.9
86-73-7	Fluorene	U	35.9	ug/kg	10.8	35.9
118-74-1	Hexachlorobenzene	U	359	ug/kg	108	359
87-68-3	Hexachlorobutadiene	U	359	ug/kg	108	359
77-47-4	Hexachlorocyclopentadiene	U	359	ug/kg	108	359
67-72-1	Hexachloroethane	U	359	ug/kg	108	359
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.9	ug/kg	10.8	35.9
78-59-1	Isophorone	U	359	ug/kg	108	359
621-64-7	N-Nitrosodipropylamine	U	359	ug/kg	108	359
91-20-3	Naphthalene	U	35.9	ug/kg	10.8	35.9
98-95-3	Nitrobenzene	U	359	ug/kg	108	359
87-86-5	Pentachlorophenol	U	359	ug/kg	108	359
85-01-8	Phenanthrene	U	35.9	ug/kg	10.8	35.9
108-95-2	Phenol	U	359	ug/kg	108	359
129-00-0	Pyrene	U	35.9	ug/kg	10.8	35.9
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	359	ug/kg	108	359
111-91-1	bis(2-Chloroethoxy)methane	U	359	ug/kg	108	359
111-44-4	bis(2-Chloroethyl) ether	U	359	ug/kg	108	359
117-81-7	bis(2-Ethylhexyl)phthalate	U	35.9	ug/kg	10.8	35.9
65794-96-9	m,p-Cresols	U	359	ug/kg	108	359
99-09-2	m-Nitroaniline	U	359	ug/kg	108	359
95-48-7	o-Cresol	U	359	ug/kg	108	359
88-74-4	o-Nitroaniline	U	359	ug/kg	118	359
100-01-6	p-Nitroaniline	U	359	ug/kg	108	359

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:25**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715002**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.3**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW02**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 22:52**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.5 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1826.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl	U	354	ug/kg	106	354
95-94-3	1,2,4,5-Tetrachlorobenzene	U	354	ug/kg	106	354
58-90-2	2,3,4,6-Tetrachlorophenol	U	354	ug/kg	106	354
95-95-4	2,4,5-Trichlorophenol	U	354	ug/kg	106	354
88-06-2	2,4,6-Trichlorophenol	U	354	ug/kg	106	354
120-83-2	2,4-Dichlorophenol	U	354	ug/kg	106	354
105-67-9	2,4-Dimethylphenol	U	354	ug/kg	106	354
51-28-5	2,4-Dinitrophenol	U	707	ug/kg	106	707
121-14-2	2,4-Dinitrotoluene	U	354	ug/kg	106	354
606-20-2	2,6-Dinitrotoluene	U	354	ug/kg	106	354
91-58-7	2-Chloronaphthalene	U	35.4	ug/kg	10.6	35.4
95-57-8	2-Chlorophenol	U	354	ug/kg	106	354
534-52-1	2-Methyl-4,6-dinitrophenol	U	354	ug/kg	106	354
91-57-6	2-Methylnaphthalene	U	35.4	ug/kg	10.6	35.4
88-75-5	2-Nitrophenol	U	354	ug/kg	106	354
91-94-1	3,3'-Dichlorobenzidine	U	354	ug/kg	106	354
101-55-3	4-Bromophenylphenylether	U	354	ug/kg	106	354
59-50-7	4-Chloro-3-methylphenol	U	354	ug/kg	141	354
106-47-8	4-Chloroaniline	U	354	ug/kg	106	354
7005-72-3	4-Chlorophenylphenylether	U	354	ug/kg	106	354
100-02-7	4-Nitrophenol	U	354	ug/kg	106	354
83-32-9	Acenaphthene	U	35.4	ug/kg	10.6	35.4
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4
98-86-2	Acetophenone	U	354	ug/kg	106	354
120-12-7	Anthracene	U	35.4	ug/kg	10.6	35.4
1912-24-9	Atrazine	U	354	ug/kg	141	354
100-52-7	Benzaldehyde	U	354	ug/kg	106	354
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4
85-68-7	Butylbenzylphthalate	U	35.4	ug/kg	10.6	35.4
105-60-2	Caprolactam	U	354	ug/kg	106	354
86-74-8	Carbazole	U	35.4	ug/kg	10.6	35.4
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4
84-74-2	Di-n-butylphthalate	U	35.4	ug/kg	10.6	35.4
117-84-0	Di-n-octylphthalate	U	35.4	ug/kg	10.6	35.4

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:25**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715002**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.3**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW02**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 22:52**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.5 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1826.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4
132-64-9	Dibenzofuran	U	354	ug/kg	106	354
84-66-2	Diethylphthalate	U	35.4	ug/kg	10.6	35.4
131-11-3	Dimethylphthalate	U	35.4	ug/kg	10.6	35.4
122-39-4	Diphenylamine	U	354	ug/kg	106	354
206-44-0	Fluoranthene	U	35.4	ug/kg	10.6	35.4
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4
118-74-1	Hexachlorobenzene	U	354	ug/kg	106	354
87-68-3	Hexachlorobutadiene	U	354	ug/kg	106	354
77-47-4	Hexachlorocyclopentadiene	U	354	ug/kg	106	354
67-72-1	Hexachloroethane	U	354	ug/kg	106	354
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4
78-59-1	Isophorone	U	354	ug/kg	106	354
621-64-7	N-Nitrosodipropylamine	U	354	ug/kg	106	354
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4
98-95-3	Nitrobenzene	U	354	ug/kg	106	354
87-86-5	Pentachlorophenol	U	354	ug/kg	106	354
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4
108-95-2	Phenol	U	354	ug/kg	106	354
129-00-0	Pyrene	U	35.4	ug/kg	10.6	35.4
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	354	ug/kg	106	354
111-91-1	bis(2-Chloroethoxy)methane	U	354	ug/kg	106	354
111-44-4	bis(2-Chloroethyl) ether	U	354	ug/kg	106	354
117-81-7	bis(2-Ethylhexyl)phthalate	U	35.4	ug/kg	10.6	35.4
65794-96-9	m,p-Cresols	U	354	ug/kg	106	354
99-09-2	m-Nitroaniline	U	354	ug/kg	106	354
95-48-7	o-Cresol	U	354	ug/kg	106	354
88-74-4	o-Nitroaniline	U	354	ug/kg	117	354
100-01-6	p-Nitroaniline	U	354	ug/kg	106	354

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:55**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715003**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**8.5**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW03**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/20/2018 13:30**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.49 g**	**Final Volume:**	**1 mL**
Data File:	**s072018.B\s5g2010.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl	U	358	ug/kg	108	358
95-94-3	1,2,4,5-Tetrachlorobenzene	U	358	ug/kg	108	358
58-90-2	2,3,4,6-Tetrachlorophenol	U	358	ug/kg	108	358
95-95-4	2,4,5-Trichlorophenol	U	358	ug/kg	108	358
88-06-2	2,4,6-Trichlorophenol	U	358	ug/kg	108	358
120-83-2	2,4-Dichlorophenol	U	358	ug/kg	108	358
105-67-9	2,4-Dimethylphenol	U	358	ug/kg	108	358
51-28-5	2,4-Dinitrophenol	U	717	ug/kg	108	717
121-14-2	2,4-Dinitrotoluene	U	358	ug/kg	108	358
606-20-2	2,6-Dinitrotoluene	U	358	ug/kg	108	358
91-58-7	2-Chloronaphthalene	U	35.8	ug/kg	10.8	35.8
95-57-8	2-Chlorophenol	U	358	ug/kg	108	358
534-52-1	2-Methyl-4,6-dinitrophenol	U	358	ug/kg	108	358
91-57-6	2-Methylnaphthalene	U	35.8	ug/kg	10.8	35.8
88-75-5	2-Nitrophenol	U	358	ug/kg	108	358
91-94-1	3,3'-Dichlorobenzidine	U	358	ug/kg	108	358
101-55-3	4-Bromophenylphenylether	U	358	ug/kg	108	358
59-50-7	4-Chloro-3-methylphenol	U	358	ug/kg	143	358
106-47-8	4-Chloroaniline	U	358	ug/kg	108	358
7005-72-3	4-Chlorophenylphenylether	U	358	ug/kg	108	358
100-02-7	4-Nitrophenol	U	358	ug/kg	108	358
83-32-9	Acenaphthene	U	35.8	ug/kg	10.8	35.8
208-96-8	Acenaphthylene	U	35.8	ug/kg	10.8	35.8
98-86-2	Acetophenone	U	358	ug/kg	108	358
120-12-7	Anthracene	U	35.8	ug/kg	10.8	35.8
1912-24-9	Atrazine	U	358	ug/kg	143	358
100-52-7	Benzaldehyde	U	358	ug/kg	108	358
56-55-3	Benzo(a)anthracene	U	35.8	ug/kg	10.8	35.8
50-32-8	Benzo(a)pyrene	U	35.8	ug/kg	10.8	35.8
205-99-2	Benzo(b)fluoranthene	U	35.8	ug/kg	10.8	35.8
191-24-2	Benzo(ghi)perylene	U	35.8	ug/kg	10.8	35.8
207-08-9	Benzo(k)fluoranthene	U	35.8	ug/kg	10.8	35.8
85-68-7	Butylbenzylphthalate	U	35.8	ug/kg	10.8	35.8
105-60-2	Caprolactam	U	358	ug/kg	108	358
86-74-8	Carbazole	U	35.8	ug/kg	10.8	35.8
218-01-9	Chrysene	U	35.8	ug/kg	10.8	35.8
84-74-2	Di-n-butylphthalate	U	35.8	ug/kg	10.8	35.8
117-84-0	Di-n-octylphthalate	U	35.8	ug/kg	10.8	35.8

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:55**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715003**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**8.5**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW03**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/20/2018 13:30**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.49 g**	**Final Volume:**	**1 mL**
Data File:	**s072018.B\s5g2010.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene	U	35.8	ug/kg	10.8	35.8
132-64-9	Dibenzofuran	U	358	ug/kg	108	358
84-66-2	Diethylphthalate	U	35.8	ug/kg	10.8	35.8
131-11-3	Dimethylphthalate	U	35.8	ug/kg	10.8	35.8
122-39-4	Diphenylamine	U	358	ug/kg	108	358
206-44-0	Fluoranthene	U	35.8	ug/kg	10.8	35.8
86-73-7	Fluorene	U	35.8	ug/kg	10.8	35.8
118-74-1	Hexachlorobenzene	U	358	ug/kg	108	358
87-68-3	Hexachlorobutadiene	U	358	ug/kg	108	358
77-47-4	Hexachlorocyclopentadiene	U	358	ug/kg	108	358
67-72-1	Hexachloroethane	U	358	ug/kg	108	358
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.8	ug/kg	10.8	35.8
78-59-1	Isophorone	U	358	ug/kg	108	358
621-64-7	N-Nitrosodipropylamine	U	358	ug/kg	108	358
91-20-3	Naphthalene	U	35.8	ug/kg	10.8	35.8
98-95-3	Nitrobenzene	U	358	ug/kg	108	358
87-86-5	Pentachlorophenol	U	358	ug/kg	108	358
85-01-8	Phenanthrene	U	35.8	ug/kg	10.8	35.8
108-95-2	Phenol	U	358	ug/kg	108	358
129-00-0	Pyrene	U	35.8	ug/kg	10.8	35.8
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	358	ug/kg	108	358
111-91-1	bis(2-Chloroethoxy)methane	U	358	ug/kg	108	358
111-44-4	bis(2-Chloroethyl) ether	U	358	ug/kg	108	358
117-81-7	bis(2-Ethylhexyl)phthalate	U	35.8	ug/kg	10.8	35.8
65794-96-9	m,p-Cresols	U	358	ug/kg	108	358
99-09-2	m-Nitroaniline	U	358	ug/kg	108	358
95-48-7	o-Cresol	U	358	ug/kg	108	358
88-74-4	o-Nitroaniline	U	358	ug/kg	118	358
100-01-6	p-Nitroaniline	U	358	ug/kg	108	358

Quality Control Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 454715

Matrix Type: SOLID

Sample ID	Client ID	2FP %REC		PHL %REC		NBZ %REC		FBP %REC		TBP %REC		TPH %REC	
1204071088	MB for batch 1783052	61		65		76		70		69		64	
1204071089	LCS for batch 1783052	61		63		69		62		68		63	
1204071090	CHEM Backfill/WinzingtonMS	35 *	D	37 *	D	40	D	42	D	34 *	D	44 *	D
1204071091	CHEM Backfill/WinzingtonMSD	51	D	55	D	56	D	60	D	61	D	73	D
454715001	SW01	47		50		55		52		54		57	
454715002	SW02	44		48		54		48		47		54	
454715003	SW03	66		73		76		74		79		93	

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(36%-104%)
PHL	= Phenol-d5	(39%-106%)
NBZ	= Nitrobenzene-d5	(34%-109%)
FBP	= 2-Fluorobiphenyl	(35%-107%)
TBP	= 2,4,6-Tribromophenol	(39%-115%)
TPH	= p-Terphenyl-d14	(45%-119%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **LCS for batch 1783052**
Lab Sample ID **1204071089**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Laboratory Control Sample**
Matrix: **SOIL**
Analysis Date: **07/18/2018 17:37**
Prep Batch ID: **1783052**
Batch ID: **1783053**
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
108-95-2	LCS	Phenol	1660	0.0	1080	65	54-106
111-44-4	LCS	bis(2-Chloroethyl) ether	1660	0.0	1090	66	50-111
95-57-8	LCS	2-Chlorophenol	1660	0.0	1140	68	54-106
108-60-1	LCS	bis(2-Chloro-1-methylethyl)ether	1660	0.0	1160	70	44-128
95-48-7	LCS	o-Cresol	1660	0.0	1140	69	54-108
65794-96-9	LCS	m,p-Cresols	1660	0.0	1240	75	56-122
621-64-7	LCS	N-Nitrosodipropylamine	1660	0.0	1060	64	51-111
67-72-1	LCS	Hexachloroethane	1660	0.0	1070	64	51-105
98-95-3	LCS	Nitrobenzene	1660	0.0	1180	71	55-111
78-59-1	LCS	Isophorone	1660	0.0	1030	62	41-134
88-75-5	LCS	2-Nitrophenol	1660	0.0	1230	74	53-109
105-67-9	LCS	2,4-Dimethylphenol	1660	0.0	973	59	53-103
111-91-1	LCS	bis(2-Chloroethoxy)methane	1660	0.0	1050	63	52-110
120-83-2	LCS	2,4-Dichlorophenol	1660	0.0	1150	69	55-105
106-47-8	LCS	4-Chloroaniline	1660	0.0	826	50	38-99
87-68-3	LCS	Hexachlorobutadiene	1660	0.0	1090	66	52-112
59-50-7	LCS	4-Chloro-3-methylphenol	1660	0.0	1170	70	56-111
91-57-6	LCS	2-Methylnaphthalene	1660	0.0	1010	61	50-105
91-20-3	LCS	Naphthalene	1660	0.0	1070	64	54-106
77-47-4	LCS	Hexachlorocyclopentadiene	1660	0.0	731	44	38-83
88-06-2	LCS	2,4,6-Trichlorophenol	1660	0.0	1150	69	54-112
95-95-4	LCS	2,4,5-Trichlorophenol	1660	0.0	1120	67	58-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **LCS for batch 1783052**
Lab Sample ID **1204071089**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Laboratory Control Sample**
Matrix: **SOIL**
Analysis Date: **07/18/2018 17:37**
Prep Batch ID: **1783052**
Batch ID: **1783053**
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
91-58-7	LCS	2-Chloronaphthalene	1660	0.0	978	59	55-102
88-74-4	LCS	o-Nitroaniline	1660	0.0	1110	67	53-110
99-09-2	LCS	m-Nitroaniline	1660	0.0	964	58	42-112
131-11-3	LCS	Dimethylphthalate	1660	0.0	1090	66	59-109
606-20-2	LCS	2,6-Dinitrotoluene	1660	0.0	1140	69	59-109
121-14-2	LCS	2,4-Dinitrotoluene	1660	0.0	1130	68	57-114
208-96-8	LCS	Acenaphthylene	1660	0.0	1080	65	55-107
83-32-9	LCS	Acenaphthene	1660	0.0	1070	64	57-104
51-28-5	LCS	2,4-Dinitrophenol	1660	0.0	639	39	26-113
132-64-9	LCS	Dibenzofuran	1660	0.0	1050	63	55-105
58-90-2	LCS	2,3,4,6-Tetrachlorophenol	1660	0.0	1120	68	57-116
84-66-2	LCS	Diethylphthalate	1660	0.0	1130	68	59-111
100-02-7	LCS	4-Nitrophenol	1660	0.0	1240	75	42-116
86-73-7	LCS	Fluorene	1660	0.0	1030	62	54-108
7005-72-3	LCS	4-Chlorophenylphenylether	1660	0.0	1060	64	53-119
100-01-6	LCS	p-Nitroaniline	1660	0.0	1080	65	41-126
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1660	0.0	750	45	35-110
122-39-4	LCS	Diphenylamine	1660	0.0	1000	60	56-102
101-55-3	LCS	4-Bromophenylphenylether	1660	0.0	1030	62	56-110
118-74-1	LCS	Hexachlorobenzene	1660	0.0	1030	62	56-103
87-86-5	LCS	Pentachlorophenol	1660	0.0	1160	70	44-111
85-01-8	LCS	Phenanthrene	1660	0.0	1020	62	58-101

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **LCS for batch 1783052**
Lab Sample ID **1204071089**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Laboratory Control Sample**
Matrix: **SOIL**
Analysis Date: **07/18/2018 17:37**
Prep Batch ID: **1783052**
Batch ID: **1783053**
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
120-12-7	LCS	Anthracene	1660	0.0	1030	62	58-102
86-74-8	LCS	Carbazole	1660	0.0	1130	68	58-113
84-74-2	LCS	Di-n-butylphthalate	1660	0.0	1190	71	58-127
206-44-0	LCS	Fluoranthene	1660	0.0	1180	71	56-114
129-00-0	LCS	Pyrene	1660	0.0	901	54	50-109
85-68-7	LCS	Butylbenzylphthalate	1660	0.0	1170	70	57-117
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1660	0.0	1320	79	58-122
56-55-3	LCS	Benzo(a)anthracene	1660	0.0	1080	65	60-106
218-01-9	LCS	Chrysene	1660	0.0	1110	67	62-111
117-84-0	LCS	Di-n-octylphthalate	1660	0.0	1400	84	53-128
205-99-2	LCS	Benzo(b)fluoranthene	1660	0.0	1060	64	40-115
207-08-9	LCS	Benzo(k)fluoranthene	1660	0.0	1080	65	41-117
50-32-8	LCS	Benzo(a)pyrene	1660	0.0	1060	64	41-115
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1660	0.0	957	58	36-123
53-70-3	LCS	Dibenzo(a,h)anthracene	1660	0.0	969	58	39-129
191-24-2	LCS	Benzo(ghi)perylene	1660	0.0	909	55	35-126
100-52-7	LCS	Benzaldehyde	1660	0.0	469	28	25-79
98-86-2	LCS	Acetophenone	1660	0.0	1130	68	53-112
105-60-2	LCS	Caprolactam	1660	0.0	1350	81	53-121
95-94-3	LCS	1,2,4,5-Tetrachlorobenzene	1660	0.0	1090	66	52-109
92-52-4	LCS	1,1'-Biphenyl	1660	0.0	1230	74	54-113
1912-24-9	LCS	Atrazine	1660	0.0	1280	77	53-130

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **LCS for batch 1783052**
Lab Sample ID **1204071089**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Laboratory Control Sample**
Matrix: **SOIL**
Analysis Date: **07/18/2018 17:37**
Dilution: 1
Prep Batch ID: **1783052**
Batch ID: **1783053**

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
91-94-1	LCS	3,3'-Dichlorobenzidine	1660	0.0	1020	62	36-111

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonMS**
Lab Sample ID **1204071090**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 21:22**
Prep Batch ID: **1783052**
Batch ID: **1783053**

Dilution: 10

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
108-95-2	MS	Phenol	1770	0.00	U	0.00	0 *	34-109
111-44-4	MS	bis(2-Chloroethyl) ether	1770	0.00	U	0.00	0 *	35-108
95-57-8	MS	2-Chlorophenol	1770	0.00	U	0.00	0 *	36-107
108-60-1	MS	bis(2-Chloro-1-methylethyl)ether	1770	0.00	U	0.00	0 *	30-121
95-48-7	MS	o-Cresol	1770	0.00	U	0.00	0 *	35-111
65794-96-9	MS	m,p-Cresols	1770	0.00	U	0.00	0 *	40-123
621-64-7	MS	N-Nitrosodipropylamine	1770	0.00	U	0.00	0 *	36-108
67-72-1	MS	Hexachloroethane	1770	0.00	U	0.00	0 *	29-101
98-95-3	MS	Nitrobenzene	1770	0.00	U	0.00	0 *	36-111
78-59-1	MS	Isophorone	1770	0.00	U	0.00	0 *	20-130
88-75-5	MS	2-Nitrophenol	1770	0.00	U	0.00	0 *	36-108
105-67-9	MS	2,4-Dimethylphenol	1770	0.00	U	0.00	0 *	37-103
111-91-1	MS	bis(2-Chloroethoxy)methane	1770	0.00	U	0.00	0 *	38-107
120-83-2	MS	2,4-Dichlorophenol	1770	0.00	U	0.00	0 *	38-107
106-47-8	MS	4-Chloroaniline	1770	0.00	U	0.00	0 *	30-94
87-68-3	MS	Hexachlorobutadiene	1770	0.00	U	0.00	0 *	34-108
59-50-7	MS	4-Chloro-3-methylphenol	1770	0.00	U	0.00	0 *	44-114
91-57-6	MS	2-Methylnaphthalene	1770	0.00	U	717	41	34-107
91-20-3	MS	Naphthalene	1770	0.00	U	686	39	34-108
77-47-4	MS	Hexachlorocyclopentadiene	1770	0.00	U	0.00	0 *	24-80
88-06-2	MS	2,4,6-Trichlorophenol	1770	0.00	U	0.00	0 *	38-116
95-95-4	MS	2,4,5-Trichlorophenol	1770	0.00	U	0.00	0 *	44-113

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonMS**
Lab Sample ID **1204071090**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 21:22**
Prep Batch ID: **1783052**
Batch ID: **1783053**

Dilution: 10

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
91-58-7	MS	2-Chloronaphthalene	1770	0.00	U	746	42	36-106
88-74-4	MS	o-Nitroaniline	1770	0.00	U	0.00	0 *	39-114
99-09-2	MS	m-Nitroaniline	1770	0.00	U	0.00	0 *	33-113
131-11-3	MS	Dimethylphthalate	1770	0.00	U	770	44	42-114
606-20-2	MS	2,6-Dinitrotoluene	1770	0.00	U	0.00	0 *	44-113
121-14-2	MS	2,4-Dinitrotoluene	1770	0.00	U	0.00	0 *	46-116
208-96-8	MS	Acenaphthylene	1770	0.00	U	813	46	41-108
83-32-9	MS	Acenaphthene	1770	0.00	U	710	40	35-113
51-28-5	MS	2,4-Dinitrophenol	1770	0.00	U	3840	217 *	13-121
132-64-9	MS	Dibenzofuran	1770	0.00	U	0.00	0 *	38-111
58-90-2	MS	2,3,4,6-Tetrachlorophenol	1770	0.00	U	0.00	0 *	42-122
84-66-2	MS	Diethylphthalate	1770	0.00	U	816	46	46-114
100-02-7	MS	4-Nitrophenol	1770	0.00	U	0.00	0 *	27-123
86-73-7	MS	Fluorene	1770	0.00	U	788	45	38-114
7005-72-3	MS	4-Chlorophenylphenylether	1770	0.00	U	0.00	0 *	41-121
100-01-6	MS	p-Nitroaniline	1770	0.00	U	0.00	0 *	28-126
534-52-1	MS	2-Methyl-4,6-dinitrophenol	1770	0.00	U	2220	125 *	25-117
122-39-4	MS	Diphenylamine	1770	0.00	U	0.00	0 *	43-109
101-55-3	MS	4-Bromophenylphenylether	1770	0.00	U	0.00	0 *	42-116
118-74-1	MS	Hexachlorobenzene	1770	0.00	U	0.00	0 *	44-106
87-86-5	MS	Pentachlorophenol	1770	0.00	U	2040	115	34-116
85-01-8	MS	Phenanthrene	1770	0.00	U	908	51	36-116

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonMS**
Lab Sample ID **1204071090**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 21:22**
Prep Batch ID: **1783052**
Batch ID: **1783053**

Dilution: 10

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
120-12-7	MS	Anthracene	1770	0.00	U	788	45	41-111
86-74-8	MS	Carbazole	1770	0.00	U	806	46	43-116
84-74-2	MS	Di-n-butylphthalate	1770	0.00	U	898	51	45-119
206-44-0	MS	Fluoranthene	1770	0.00	U	1260	71	41-115
129-00-0	MS	Pyrene	1770	0.00	U	1040	59	36-125
85-68-7	MS	Butylbenzylphthalate	1770	0.00	U	816	46	43-130
117-81-7	MS	bis(2-Ethylhexyl)phthalate	1770	0.00	U	898	51	41-132
56-55-3	MS	Benzo(a)anthracene	1770	0.00	U	961	54	42-115
218-01-9	MS	Chrysene	1770	0.00	U	968	55	42-121
117-84-0	MS	Di-n-octylphthalate	1770	0.00	U	975	55	41-129
205-99-2	MS	Benzo(b)fluoranthene	1770	0.00	U	1020	58	30-124
207-08-9	MS	Benzo(k)fluoranthene	1770	0.00	U	855	48	30-128
50-32-8	MS	Benzo(a)pyrene	1770	0.00	U	873	49	32-119
193-39-5	MS	Indeno(1,2,3-cd)pyrene	1770	0.00	U	643	36	15-126
53-70-3	MS	Dibenzo(a,h)anthracene	1770	0.00	U	622	35	20-129
191-24-2	MS	Benzo(ghi)perylene	1770	0.00	U	611	35	13-126
100-52-7	MS	Benzaldehyde	1770	0.00	U	0.00	0 *	19-93
98-86-2	MS	Acetophenone	1770	0.00	U	0.00	0 *	37-109
105-60-2	MS	Caprolactam	1770	0.00	U	0.00	0 *	39-125
95-94-3	MS	1,2,4,5-Tetrachlorobenzene	1770	0.00	U	0.00	0 *	36-109
92-52-4	MS	1,1'-Biphenyl	1770	0.00	U	0.00	0 *	35-115
1912-24-9	MS	Atrazine	1770	0.00	U	0.00	0 *	49-126

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	**454715**	**Sample Type:**	**Matrix Spike**	
Client ID:	**CHEM Backfill/WinzingtonMS**	**Matrix:**	**Soil**	
Lab Sample ID	**1204071090**	**%Moisture:**	**6.6**	
Instrument:	**MSD5.I**	**Analysis Date:**	**07/18/2018 21:22**	**Dilution: 10**
Analyst:	**JLD1**	**Prep Batch ID:**	**1783052**	
Inj. Vol:	**1 uL**	**Batch ID:**	**1783053**	

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
91-94-1	MS	3,3'-Dichlorobenzidine	1770	0.00	U	0.00	0 *	25-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonMSD**
Lab Sample ID **1204071091**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike Duplicate**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 21:52**
Prep Batch ID: **1783052**
Batch ID: **1783053**
Dilution: 10

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
108-95-2	MSD	Phenol	1780	0.00	U	1100	62	34-109	200 *	0-30
111-44-4	MSD	bis(2-Chloroethyl) ether	1780	0.00	U	0.00	0 *	35-108	0	0-30
95-57-8	MSD	2-Chlorophenol	1780	0.00	U	1100	62	36-107	200 *	0-30
108-60-1	MSD	bis(2-Chloro-1-methylethyl)ether	1780	0.00	U	1120	63	30-121	200 *	0-30
95-48-7	MSD	o-Cresol	1780	0.00	U	1100	62	35-111	200 *	0-30
65794-96-9	MSD	m,p-Cresols	1780	0.00	U	1210	68	40-123	200 *	0-30
621-64-7	MSD	N-Nitrosodipropylamine	1780	0.00	U	1120	63	36-108	200 *	0-30
67-72-1	MSD	Hexachloroethane	1780	0.00	U	0.00	0 *	29-101	0	0-30
98-95-3	MSD	Nitrobenzene	1780	0.00	U	1160	65	36-111	200 *	0-30
78-59-1	MSD	Isophorone	1780	0.00	U	0.00	0 *	20-130	0	0-30
88-75-5	MSD	2-Nitrophenol	1780	0.00	U	0.00	0 *	36-108	0	0-30
105-67-9	MSD	2,4-Dimethylphenol	1780	0.00	U	0.00	0 *	37-103	0	0-30
111-91-1	MSD	bis(2-Chloroethoxy)methane	1780	0.00	U	0.00	0 *	38-107	0	0-30
120-83-2	MSD	2,4-Dichlorophenol	1780	0.00	U	1120	63	38-107	200 *	0-30
106-47-8	MSD	4-Chloroaniline	1780	0.00	U	0.00	0 *	30-94	0	0-30
87-68-3	MSD	Hexachlorobutadiene	1780	0.00	U	0.00	0 *	34-108	0	0-30
59-50-7	MSD	4-Chloro-3-methylphenol	1780	0.00	U	0.00	0 *	44-114	0	0-30
91-57-6	MSD	2-Methylnaphthalene	1780	0.00	U	1060	60	34-107	39 *	0-30
91-20-3	MSD	Naphthalene	1780	0.00	U	1020	58	34-108	40 *	0-30
77-47-4	MSD	Hexachlorocyclopentadiene	1780	0.00	U	0.00	0 *	24-80	0	0-30
88-06-2	MSD	2,4,6-Trichlorophenol	1780	0.00	U	1240	70	38-116	200 *	0-30
95-95-4	MSD	2,4,5-Trichlorophenol	1780	0.00	U	1260	71	44-113	200 *	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonMSD**
Lab Sample ID **1204071091**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike Duplicate**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 21:52**
Prep Batch ID: **1783052**
Batch ID: **1783053**
Dilution: 10

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
91-58-7	MSD	2-Chloronaphthalene	1780	0.00	U	1120	63	36-106	40 *	0-30
88-74-4	MSD	o-Nitroaniline	1780	0.00	U	0.00	0 *	39-114	0	0-30
99-09-2	MSD	m-Nitroaniline	1780	0.00	U	1120	63	33-113	200 *	0-30
131-11-3	MSD	Dimethylphthalate	1780	0.00	U	1250	70	42-114	47 *	0-30
606-20-2	MSD	2,6-Dinitrotoluene	1780	0.00	U	1170	66	44-113	200 *	0-30
121-14-2	MSD	2,4-Dinitrotoluene	1780	0.00	U	1170	66	46-116	200 *	0-30
208-96-8	MSD	Acenaphthylene	1780	0.00	U	1250	70	41-108	42 *	0-30
83-32-9	MSD	Acenaphthene	1780	0.00	U	1080	61	35-113	42 *	0-30
51-28-5	MSD	2,4-Dinitrophenol	1780	0.00	U	4060	228 *	13-121	6	0-30
132-64-9	MSD	Dibenzofuran	1780	0.00	U	1220	69	38-111	200 *	0-30
58-90-2	MSD	2,3,4,6-Tetrachlorophenol	1780	0.00	U	1170	66	42-122	200 *	0-30
84-66-2	MSD	Diethylphthalate	1780	0.00	U	1320	74	46-114	47 *	0-30
100-02-7	MSD	4-Nitrophenol	1780	0.00	U	1120	63	27-123	200 *	0-30
86-73-7	MSD	Fluorene	1780	0.00	U	1270	71	38-114	47 *	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	1780	0.00	U	1240	70	41-121	200 *	0-30
100-01-6	MSD	p-Nitroaniline	1780	0.00	U	1220	69	28-126	200 *	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	1780	0.00	U	2620	147 *	25-117	17	0-30
122-39-4	MSD	Diphenylamine	1780	0.00	U	1330	75	43-109	200 *	0-30
101-55-3	MSD	4-Bromophenylphenylether	1780	0.00	U	1220	68	42-116	200 *	0-30
118-74-1	MSD	Hexachlorobenzene	1780	0.00	U	1270	72	44-106	200 *	0-30
87-86-5	MSD	Pentachlorophenol	1780	0.00	U	2610	147 *	34-116	25	0-30
85-01-8	MSD	Phenanthrene	1780	0.00	U	1450	81	36-116	46 *	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **454715**
Client ID: **CHEM Backfill/WinzingtonMSD**
Lab Sample ID **1204071091**
Instrument: **MSD5.I**
Analyst: **JLD1**
Inj. Vol: **1 uL**

Sample Type: **Matrix Spike Duplicate**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 21:52**
Prep Batch ID: **1783052**
Batch ID: **1783053**
Dilution: 10

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
120-12-7	MSD	Anthracene	1780	0.00	U	1330	75	41-111	51 *	0-30
86-74-8	MSD	Carbazole	1780	0.00	U	1430	81	43-116	56 *	0-30
84-74-2	MSD	Di-n-butylphthalate	1780	0.00	U	1590	89	45-119	56 *	0-30
206-44-0	MSD	Fluoranthene	1780	0.00	U	1850	104	41-115	38 *	0-30
129-00-0	MSD	Pyrene	1780	0.00	U	1490	84	36-125	35 *	0-30
85-68-7	MSD	Butylbenzylphthalate	1780	0.00	U	1440	81	43-130	56 *	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	1780	0.00	U	1590	89	41-132	56 *	0-30
56-55-3	MSD	Benzo(a)anthracene	1780	0.00	U	1470	82	42-115	42 *	0-30
218-01-9	MSD	Chrysene	1780	0.00	U	1430	80	42-121	38 *	0-30
117-84-0	MSD	Di-n-octylphthalate	1780	0.00	U	1670	94	41-129	53 *	0-30
205-99-2	MSD	Benzo(b)fluoranthene	1780	0.00	U	1450	82	30-124	35 *	0-30
207-08-9	MSD	Benzo(k)fluoranthene	1780	0.00	U	1410	79	30-128	49 *	0-30
50-32-8	MSD	Benzo(a)pyrene	1780	0.00	U	1320	74	32-119	41 *	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	1780	0.00	U	1010	57	15-126	44 *	0-30
53-70-3	MSD	Dibenzo(a,h)anthracene	1780	0.00	U	950	53	20-129	42 *	0-30
191-24-2	MSD	Benzo(ghi)perylene	1780	0.00	U	943	53	13-126	43 *	0-30
100-52-7	MSD	Benzaldehyde	1780	0.00	U	0.00	0 *	19-93	0	0-30
98-86-2	MSD	Acetophenone	1780	0.00	U	1140	64	37-109	200 *	0-30
105-60-2	MSD	Caprolactam	1780	0.00	U	1260	71	39-125	200 *	0-30
95-94-3	MSD	1,2,4,5-Tetrachlorobenzene	1780	0.00	U	1210	68	36-109	200 *	0-30
92-52-4	MSD	1,1'-Biphenyl	1780	0.00	U	1370	77	35-115	200 *	0-30
1912-24-9	MSD	Atrazine	1780	0.00	U	1640	92	49-126	200 *	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	**454715**	**Sample Type:**	**Matrix Spike Duplicate**
Client ID:	**CHEM Backfill/WinzingtonMSD**	**Matrix:**	**Soil**
Lab Sample ID	**1204071091**	**%Moisture:**	**6.6**
Instrument:	**MSD5.I**	**Analysis Date:**	**07/18/2018 21:52**
Analyst:	**JLD1**	**Prep Batch ID:**	**1783052**
Inj. Vol:	**1 uL**	**Batch ID:**	**1783053**

Dilution: 10

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
91-94-1	MSD	3,3'-Dichlorobenzidine	1780	0.00	U	0.00	0 *	25-108	0	0-30

Method Blank Summary

SDG Number:	**454715**	**Client:**	**URSC013**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 1783052**	**Instrument ID:**	**MSD5.I**	**Data File:**	**s071818a.B\s5g1815.D**
Lab Sample ID:	**1204071088**	**Prep Date:**	**07/18/2018 10:12**	**Analyzed:**	**07/18/18 17:07**
Column:	**DB-5ms**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 1783052	1204071089	s071818a.B\s5g1816.D	07/18/18	1737
02	CHEM Backfill/WinzingtonMS	1204071090	s071818a.B\s5g1823.D	07/18/18	2122
03	CHEM Backfill/WinzingtonMSD	1204071091	s071818a.B\s5g1824.D	07/18/18	2152
04	SW01	454715001	s071818a.B\s5g1825.D	07/18/18	2222
05	SW02	454715002	s071818a.B\s5g1826.D	07/18/18	2252
06	SW03	454715003	s072018.B\s5g2010.D	07/20/18	1330

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 454715

Instrument ID: MSD5.I **Injection Date/Time:** 09-JUL-18 16:03

Column Description: DB-5ms **Lab File ID** s070918.B\s5g0911.D

m/e	Ion Abundance Criteria	% Relative Abundance
51	10 - 80% of mass 198	31.7
68	Less than 2% of mass 69	1.4
69	Mass 69 Relative Abundance	36.7
70	Less than 2% of mass 69	0.5
127	10 - 80% of mass 198	46.7
197	Less than 2% of mass 198	0.7
198	Base Peak, 100% Relative Abundance	100
199	5 - 9% of mass 198	6.9
275	10 - 60% of mass 198	25.8
365	Greater than 1% of mass 198	3.2
441	Less than 24% of mass 442	16.3
442	Greater than 50% of mass 198	76.7
443	15 - 24% of mass 442	19.3

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

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[J]	WBN180518-43	s070918.B\s5g0923.D	09-JUL-18 22:51
ICALMIX[J]	WBN180518-44	s070918.B\s5g0924.D	09-JUL-18 23:21
ICALMIX[J]	WBN180518-45.1	s070918.B\s5g0925.D	09-JUL-18 23:51
ICALMIX[J]	WBN180518-46	s070918.B\s5g0926.D	10-JUL-18 00:21
ICALMIX[J]	WBN180518-47	s070918.B\s5g0927.D	10-JUL-18 00:51
ICALMIX[J]	WBN180518-49	s070918.B\s5g0929.D	10-JUL-18 01:52
ICVMIX[J]01	WBN180518-50.4	s070918.B\s5g0930.D	10-JUL-18 02:22

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 454715

Instrument ID: MSD5.I **Injection Date/Time:** 10-JUL-18 09:48

Column Description: DB-5ms **Lab File ID** s070918.B\s5g0931.D

m/e	Ion Abundance Criteria	% Relative Abundance
51	10 - 80% of mass 198	38.2
68	Less than 2% of mass 69	1.4
69	Mass 69 Relative Abundance	42.3
70	Less than 2% of mass 69	0.4
127	10 - 80% of mass 198	49.1
197	Less than 2% of mass 198	0.5
198	Base Peak, 100% Relative Abundance	100
199	5 - 9% of mass 198	7
275	10 - 60% of mass 198	24.6
365	Greater than 1% of mass 198	3.3
441	Less than 24% of mass 442	16
442	Greater than 50% of mass 198	69.5
443	15 - 24% of mass 442	18.7

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

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	WBN180620-08.1	s070918.B\s5g0933.D	10-JUL-18 10:36
ICALMIX[A]	WBN180620-07.1	s070918.B\s5g0934.D	10-JUL-18 11:06
ICALMIX[A]	WBN180620-06.1	s070918.B\s5g0935.D	10-JUL-18 11:44
ICALMIX[A]	WBN180620-05.1	s070918.B\s5g0936.D	10-JUL-18 12:19
ICALMIX[A]	WBN180620-03	s070918.B\s5g0938.D	10-JUL-18 13:35
ICALMIX[A]	WBN180620-02	s070918.B\s5g0939.D	10-JUL-18 14:13
ICALMIX[A]	WBN180620-01	s070918.B\s5g0940.D	10-JUL-18 14:50
ICALMIX[A]	WBN180620-04	s070918.B\s5g0942.D	10-JUL-18 16:34
ICVMIX[A]02	WBN180517-09.1	s070918.B\s5g0944.D	10-JUL-18 17:49

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 454715

Instrument ID: MSD5.I **Injection Date/Time:** 10-JUL-18 22:28

Column Description: DB-5ms **Lab File ID** s070918.B\s5g0953.D

m/e	Ion Abundance Criteria	% Relative Abundance
51	10 - 80% of mass 198	31.9
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	37.1
70	Less than 2% of mass 69	0.4
127	10 - 80% of mass 198	46.5
197	Less than 2% of mass 198	0.6
198	Base Peak, 100% Relative Abundance	100
199	5 - 9% of mass 198	6.9
275	10 - 60% of mass 198	25.5
365	Greater than 1% of mass 198	3.5
441	Less than 24% of mass 442	17.3
442	Greater than 50% of mass 198	77.5
443	15 - 24% of mass 442	19.5

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

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[B]	WBN180709-17	s070918.B\s5g0955.D	10-JUL-18 23:16
ICALMIX[B]	WBN180709-16	s070918.B\s5g0956.D	10-JUL-18 23:46
ICALMIX[B]	WBN180709-18	s070918.B\s5g0957.D	11-JUL-18 00:16
ICALMIX[B]	WBN180709-15.2	s070918.B\s5g0958.D	11-JUL-18 00:46
ICALMIX[B]	WBN180709-14	s070918.B\s5g0959.D	11-JUL-18 01:16
ICALMIX[B]	WBN180709-19	s070918.B\s5g0960.D	11-JUL-18 01:47
ICALMIX[B]	WBN180709-13	s070918.B\s5g0961.D	11-JUL-18 02:17
ICALMIX[B]	WBN180709-12	s070918.B\s5g0962.D	11-JUL-18 02:47
ICALMIX[B]	WBN180709-11	s070918.B\s5g0963.D	11-JUL-18 03:17
ICVMIX[B]03	WBN180517-19	s070918.B\s5g0964.D	11-JUL-18 03:48

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 454715

Instrument ID: MSD5.I **Injection Date/Time:** 18-JUL-18 14:13

Column Description: DB-5ms **Lab File ID** s071818a.B\s5g1809.D

m/e	Ion Abundance Criteria	% Relative Abundance
51	10 - 80% of mass 198	46.2
68	Less than 2% of mass 69	1.1
69	Mass 69 Relative Abundance	46.7
70	Less than 2% of mass 69	0.3
127	10 - 80% of mass 198	51.8
197	Less than 2% of mass 198	0.6
198	Base Peak, 100% Relative Abundance	100
199	5 - 9% of mass 198	7.2
275	10 - 60% of mass 198	23.6
365	Greater than 1% of mass 198	3.3
441	Less than 24% of mass 442	16.9
442	Greater than 50% of mass 198	61.2
443	15 - 24% of mass 442	18.5

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

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVMIX[A]01	WBN180620-05.2	s071818a.B\s5g1810.D	18-JUL-18 14:29
CCVMIX[J]02	WBN180712-45.3	s071818a.B\s5g1812.D	18-JUL-18 15:37
CCVMIX[B]03	WBN180709-15.3	s071818a.B\s5g1813.D	18-JUL-18 16:07
BLK01	1204071088	s071818a.B\s5g1815.D	18-JUL-18 17:07
BLK01LCS	1204071089	s071818a.B\s5g1816.D	18-JUL-18 17:37
CHEM Backfill/WinzingtonMS	1204071090	s071818a.B\s5g1823.D	18-JUL-18 21:22
CHEM Backfill/WinzingtonMSD	1204071091	s071818a.B\s5g1824.D	18-JUL-18 21:52
SW01	454715001	s071818a.B\s5g1825.D	18-JUL-18 22:22
SW02	454715002	s071818a.B\s5g1826.D	18-JUL-18 22:52

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 454715

Instrument ID: MSD5.I **Injection Date/Time:** 20-JUL-18 10:20

Column Description: DB-5ms **Lab File ID** s072018.B\s5g2005.D

m/e	Ion Abundance Criteria	% Relative Abundance
51	10 - 80% of mass 198	35.1
68	Less than 2% of mass 69	1.4
69	Mass 69 Relative Abundance	39.6
70	Less than 2% of mass 69	0.5
127	10 - 80% of mass 198	48.5
197	Less than 2% of mass 198	0.3
198	Base Peak, 100% Relative Abundance	100
199	5 - 9% of mass 198	7.5
275	10 - 60% of mass 198	26.1
365	Greater than 1% of mass 198	3.3
441	Less than 24% of mass 442	16.4
442	Greater than 50% of mass 198	72.6
443	15 - 24% of mass 442	19.4

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

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVMIX[A]04	WBN180620-05.2	s072018.B\s5g2006.D	20-JUL-18 10:37
CCVMIX[B]05	WBN180709-15.3	s072018.B\s5g2007.D	20-JUL-18 11:44
CCVMIX[J]06	WBN180712-45.1	s072018.B\s5g2009.D	20-JUL-18 13:00
SW03	454715003	s072018.B\s5g2010.D	20-JUL-18 13:30

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 454715

Instrument: MSD5.I

STD Analysis Time: 18-JUL-18 14:29

GC Column: DB-5ms

Data File: s071818a.B\s5g1810.D

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	158063		5.78	518845		7.54	276907		9.85	526135		11.7	513305		15.3	473228		18.8
Upper Limit	316126		6.28	1037690		8.04	553814		10.4	1052270		12.2	1026610		15.8	946456		19.3
Lower Limit	79032		5.28	259423		7.04	138454		9.35	263068		11.2	256653		14.8	236614		18.3
Sample ID																		
BLK01	190708		5.78	666519		7.54	372630		9.84	726935		11.7	730240		15.3	609532		18.8
BLK01LCS	176092		5.78	601198		7.54	344876		9.84	689249		11.7	681510		15.3	625643		18.8
CHEM Backfill/WinzingtonMS	216620		5.78	741695		7.54	420412		9.84	788249		11.7	714499		15.3	501307		18.8
CHEM Backfill/WinzingtonMSD	221891		5.77	756004		7.54	425841		9.84	807000		11.7	767773		15.3	564996		18.8
SW01	194194		5.78	689822		7.54	389703		9.84	746736		11.7	723012		15.3	528793		18.8
SW02	204777		5.78	710901		7.54	409898		9.84	791311		11.7	739222		15.3	502706		18.8

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 454715

Instrument: MSD5.I

STD Analysis Time: 20-JUL-18 10:37

GC Column: DB-5ms

Data File: s072018.B\s5g2006.D

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	124956		5.87	430253		7.63	235670		9.93	468700		11.8	425142		15.5	318242		19.0
Upper Limit	249912		6.37	860506		8.13	471340		10.4	937400		12.3	850284		16.0	636484		19.5
Lower Limit	62478		5.37	215127		7.13	117835		9.43	234350		11.3	212571		15.0	159121		18.5
Sample ID																		
SW03	115284		5.87	415087		7.63	220160		9.93	436154		11.8	404629		15.4	286535		19.0

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:05**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715001**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.6**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW01**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 22:22**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.14 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1825.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl	U	359	ug/kg	108	359
95-94-3	1,2,4,5-Tetrachlorobenzene	U	359	ug/kg	108	359
58-90-2	2,3,4,6-Tetrachlorophenol	U	359	ug/kg	108	359
95-95-4	2,4,5-Trichlorophenol	U	359	ug/kg	108	359
88-06-2	2,4,6-Trichlorophenol	U	359	ug/kg	108	359
120-83-2	2,4-Dichlorophenol	U	359	ug/kg	108	359
105-67-9	2,4-Dimethylphenol	U	359	ug/kg	108	359
51-28-5	2,4-Dinitrophenol	U	718	ug/kg	108	718
121-14-2	2,4-Dinitrotoluene	U	359	ug/kg	108	359
606-20-2	2,6-Dinitrotoluene	U	359	ug/kg	108	359
91-58-7	2-Chloronaphthalene	U	35.9	ug/kg	10.8	35.9
95-57-8	2-Chlorophenol	U	359	ug/kg	108	359
534-52-1	2-Methyl-4,6-dinitrophenol	U	359	ug/kg	108	359
91-57-6	2-Methylnaphthalene	U	35.9	ug/kg	10.8	35.9
88-75-5	2-Nitrophenol	U	359	ug/kg	108	359
91-94-1	3,3'-Dichlorobenzidine	U	359	ug/kg	108	359
101-55-3	4-Bromophenylphenylether	U	359	ug/kg	108	359
59-50-7	4-Chloro-3-methylphenol	U	359	ug/kg	144	359
106-47-8	4-Chloroaniline	U	359	ug/kg	108	359
7005-72-3	4-Chlorophenylphenylether	U	359	ug/kg	108	359
100-02-7	4-Nitrophenol	U	359	ug/kg	108	359
83-32-9	Acenaphthene	U	35.9	ug/kg	10.8	35.9
208-96-8	Acenaphthylene	U	35.9	ug/kg	10.8	35.9
98-86-2	Acetophenone	U	359	ug/kg	108	359
120-12-7	Anthracene	U	35.9	ug/kg	10.8	35.9
1912-24-9	Atrazine	U	359	ug/kg	144	359
100-52-7	Benzaldehyde	U	359	ug/kg	108	359
56-55-3	Benzo(a)anthracene	U	35.9	ug/kg	10.8	35.9
50-32-8	Benzo(a)pyrene	U	35.9	ug/kg	10.8	35.9
205-99-2	Benzo(b)fluoranthene	U	35.9	ug/kg	10.8	35.9
191-24-2	Benzo(ghi)perylene	U	35.9	ug/kg	10.8	35.9
207-08-9	Benzo(k)fluoranthene	U	35.9	ug/kg	10.8	35.9
85-68-7	Butylbenzylphthalate	U	35.9	ug/kg	10.8	35.9
105-60-2	Caprolactam	U	359	ug/kg	108	359
86-74-8	Carbazole	U	35.9	ug/kg	10.8	35.9
218-01-9	Chrysene	U	35.9	ug/kg	10.8	35.9
84-74-2	Di-n-butylphthalate	U	35.9	ug/kg	10.8	35.9
117-84-0	Di-n-octylphthalate	U	35.9	ug/kg	10.8	35.9

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:05**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715001**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.6**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW01**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 22:22**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.14 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1825.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene	U	35.9	ug/kg	10.8	35.9
132-64-9	Dibenzofuran	U	359	ug/kg	108	359
84-66-2	Diethylphthalate	U	35.9	ug/kg	10.8	35.9
131-11-3	Dimethylphthalate	U	35.9	ug/kg	10.8	35.9
122-39-4	Diphenylamine	U	359	ug/kg	108	359
206-44-0	Fluoranthene	U	35.9	ug/kg	10.8	35.9
86-73-7	Fluorene	U	35.9	ug/kg	10.8	35.9
118-74-1	Hexachlorobenzene	U	359	ug/kg	108	359
87-68-3	Hexachlorobutadiene	U	359	ug/kg	108	359
77-47-4	Hexachlorocyclopentadiene	U	359	ug/kg	108	359
67-72-1	Hexachloroethane	U	359	ug/kg	108	359
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.9	ug/kg	10.8	35.9
78-59-1	Isophorone	U	359	ug/kg	108	359
621-64-7	N-Nitrosodipropylamine	U	359	ug/kg	108	359
91-20-3	Naphthalene	U	35.9	ug/kg	10.8	35.9
98-95-3	Nitrobenzene	U	359	ug/kg	108	359
87-86-5	Pentachlorophenol	U	359	ug/kg	108	359
85-01-8	Phenanthrene	U	35.9	ug/kg	10.8	35.9
108-95-2	Phenol	U	359	ug/kg	108	359
129-00-0	Pyrene	U	35.9	ug/kg	10.8	35.9
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	359	ug/kg	108	359
111-91-1	bis(2-Chloroethoxy)methane	U	359	ug/kg	108	359
111-44-4	bis(2-Chloroethyl) ether	U	359	ug/kg	108	359
117-81-7	bis(2-Ethylhexyl)phthalate	U	35.9	ug/kg	10.8	35.9
65794-96-9	m,p-Cresols	U	359	ug/kg	108	359
99-09-2	m-Nitroaniline	U	359	ug/kg	108	359
95-48-7	o-Cresol	U	359	ug/kg	108	359
88-74-4	o-Nitroaniline	U	359	ug/kg	118	359
100-01-6	p-Nitroaniline	U	359	ug/kg	108	359

Quantitation Report
GEL Laboratories, LLC

07/19/2018

07/19/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1825.D
Acq On : 18 Jul 2018 22:22
Operator : JLD1
InstName : MSD5
Sample : |454715001|1783053|1|SVM|1|URSC|||
Misc : |MSD827D4_S|SOIL|SW01|MIX[A,B,J,D]||
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 19 08:25:16 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	194194	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.535	7.540	1.000	689822	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.835	9.845	1.000	389703	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.712	11.716	1.000	746736	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.302	15.316	1.000	723012	40.00	ng/uL	-0.01
87) A Perylene-d12	264	18.797	18.816	1.000	528793	40.00	ng/uL	-0.02
95) B 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	194194	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.535	7.540	1.000	689822	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.835	9.845	1.000	389703	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.712	11.716	1.000	746736	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.302	15.316	1.000	723012	40.00	ng/uL	-0.01
147) B Perylene-d12	264	18.797	18.816	1.000	528793	40.00	ng/uL	-0.02
150) J Phenanthrene-d10	188	11.712	11.716	1.000	746736	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.302	15.316	1.000	723012	40.00	ng/uL	-0.01
155) D Naphthalene-d8	136	7.535	7.540	1.000	689822	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.835	9.845	1.000	389703	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.712	11.716	1.000	746736	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.302	15.316	1.000	723012	40.00	ng/uL	-0.01
169) E Naphthalene-d8	136	7.535	7.540	1.000	689822	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.797	18.816	1.000	528793	40.00	ng/uL	-0.02
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.069	4.063	0.704	316659	46.69	ng/uL	0.00
7) Phenol-d5	99	5.226	5.227	0.904	438970	50.00	ng/uL	0.00
22) Nitrobenzene-d5	82	6.545	6.562	0.869	203915	27.44	ng/uL	-0.02
43) 2-Fluorobiphenyl	172	8.964	8.979	0.911	385954	26.02	ng/uL	-0.01
62) 2,4,6-Tribromophenol	330	10.831	10.834	1.101	125469	53.85	ng/uL	0.00
79) p-Terphenyl-d14	244	13.688	13.674	0.895	570276	28.33	ng/uL	0.01

Compound	Amount	Range	Recovery
5) 2-Fluorophenol	100.000	36 - 104	47%
7) Phenol-d5	100.000	39 - 106	50%
22) Nitrobenzene-d5	50.000	34 - 109	55%
43) 2-Fluorobiphenyl	50.000	35 - 107	52%
62) 2,4,6-Tribromophenol	100.000	39 - 115	54%
79) p-Terphenyl-d14	50.000	45 - 119	57%

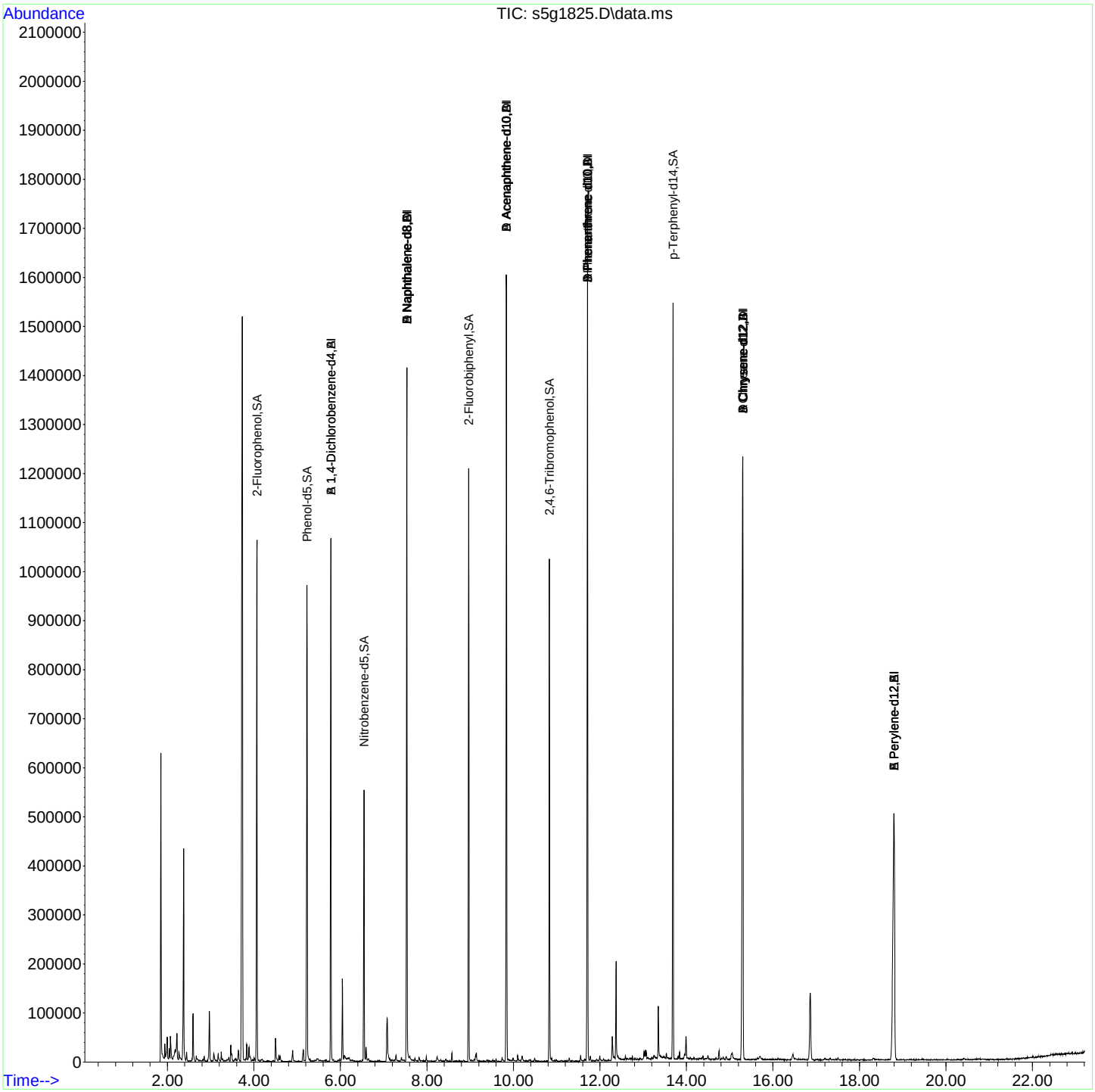
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue

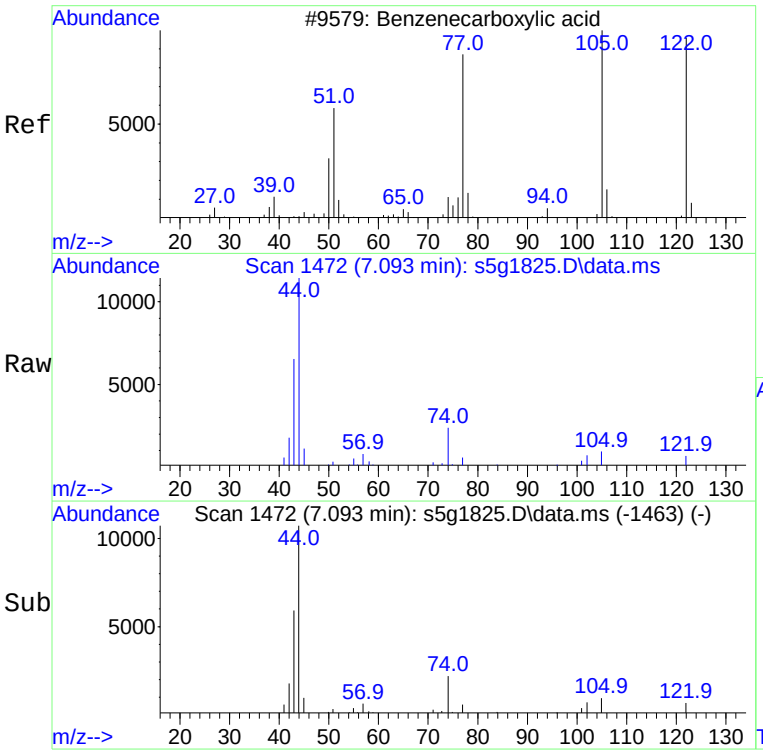
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1825.D
Acq On : 18 Jul 2018 22:22
Operator : JLD1
InstName : MSD5
Sample : |454715001|1783053|1|SVM|1|URSC|||
Misc : |MSD827D4_S|SOIL|SW01|MIX[A,B,J,D]||
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 19 08:25:16 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

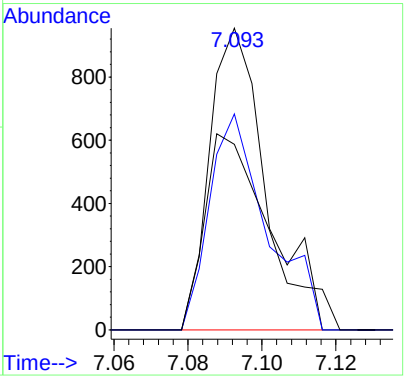




#29 BEFORE analyst DELETION
Benzoic acid
Concen: 10.10 ng/uL
RT: 7.093 min Scan# 1472
Delta R.T. -0.079 min
Lab File: s5g1825.D
Acq: 18 Jul 2018 22:22

Tgt Ion:105 Resp: 1026

Ion	Ratio	Lower	Upper
105	100		
122	73.0	52.1	112.1
77	73.0	45.4	105.4



Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:25**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715002**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.3**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW02**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 22:52**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.5 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1826.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl	U	354	ug/kg	106	354
95-94-3	1,2,4,5-Tetrachlorobenzene	U	354	ug/kg	106	354
58-90-2	2,3,4,6-Tetrachlorophenol	U	354	ug/kg	106	354
95-95-4	2,4,5-Trichlorophenol	U	354	ug/kg	106	354
88-06-2	2,4,6-Trichlorophenol	U	354	ug/kg	106	354
120-83-2	2,4-Dichlorophenol	U	354	ug/kg	106	354
105-67-9	2,4-Dimethylphenol	U	354	ug/kg	106	354
51-28-5	2,4-Dinitrophenol	U	707	ug/kg	106	707
121-14-2	2,4-Dinitrotoluene	U	354	ug/kg	106	354
606-20-2	2,6-Dinitrotoluene	U	354	ug/kg	106	354
91-58-7	2-Chloronaphthalene	U	35.4	ug/kg	10.6	35.4
95-57-8	2-Chlorophenol	U	354	ug/kg	106	354
534-52-1	2-Methyl-4,6-dinitrophenol	U	354	ug/kg	106	354
91-57-6	2-Methylnaphthalene	U	35.4	ug/kg	10.6	35.4
88-75-5	2-Nitrophenol	U	354	ug/kg	106	354
91-94-1	3,3'-Dichlorobenzidine	U	354	ug/kg	106	354
101-55-3	4-Bromophenylphenylether	U	354	ug/kg	106	354
59-50-7	4-Chloro-3-methylphenol	U	354	ug/kg	141	354
106-47-8	4-Chloroaniline	U	354	ug/kg	106	354
7005-72-3	4-Chlorophenylphenylether	U	354	ug/kg	106	354
100-02-7	4-Nitrophenol	U	354	ug/kg	106	354
83-32-9	Acenaphthene	U	35.4	ug/kg	10.6	35.4
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4
98-86-2	Acetophenone	U	354	ug/kg	106	354
120-12-7	Anthracene	U	35.4	ug/kg	10.6	35.4
1912-24-9	Atrazine	U	354	ug/kg	141	354
100-52-7	Benzaldehyde	U	354	ug/kg	106	354
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4
85-68-7	Butylbenzylphthalate	U	35.4	ug/kg	10.6	35.4
105-60-2	Caprolactam	U	354	ug/kg	106	354
86-74-8	Carbazole	U	35.4	ug/kg	10.6	35.4
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4
84-74-2	Di-n-butylphthalate	U	35.4	ug/kg	10.6	35.4
117-84-0	Di-n-octylphthalate	U	35.4	ug/kg	10.6	35.4

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:25**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715002**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**7.3**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW02**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 22:52**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.5 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1826.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4
132-64-9	Dibenzofuran	U	354	ug/kg	106	354
84-66-2	Diethylphthalate	U	35.4	ug/kg	10.6	35.4
131-11-3	Dimethylphthalate	U	35.4	ug/kg	10.6	35.4
122-39-4	Diphenylamine	U	354	ug/kg	106	354
206-44-0	Fluoranthene	U	35.4	ug/kg	10.6	35.4
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4
118-74-1	Hexachlorobenzene	U	354	ug/kg	106	354
87-68-3	Hexachlorobutadiene	U	354	ug/kg	106	354
77-47-4	Hexachlorocyclopentadiene	U	354	ug/kg	106	354
67-72-1	Hexachloroethane	U	354	ug/kg	106	354
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4
78-59-1	Isophorone	U	354	ug/kg	106	354
621-64-7	N-Nitrosodipropylamine	U	354	ug/kg	106	354
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4
98-95-3	Nitrobenzene	U	354	ug/kg	106	354
87-86-5	Pentachlorophenol	U	354	ug/kg	106	354
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4
108-95-2	Phenol	U	354	ug/kg	106	354
129-00-0	Pyrene	U	35.4	ug/kg	10.6	35.4
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	354	ug/kg	106	354
111-91-1	bis(2-Chloroethoxy)methane	U	354	ug/kg	106	354
111-44-4	bis(2-Chloroethyl) ether	U	354	ug/kg	106	354
117-81-7	bis(2-Ethylhexyl)phthalate	U	35.4	ug/kg	10.6	35.4
65794-96-9	m,p-Cresols	U	354	ug/kg	106	354
99-09-2	m-Nitroaniline	U	354	ug/kg	106	354
95-48-7	o-Cresol	U	354	ug/kg	106	354
88-74-4	o-Nitroaniline	U	354	ug/kg	117	354
100-01-6	p-Nitroaniline	U	354	ug/kg	106	354

Quantitation Report
GEL Laboratories, LLC

07/19/2018

07/19/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1826.D
Acq On : 18 Jul 2018 22:52
Operator : JLD1
InstName : MSD5
Sample : |454715002|1783053|1|SVM|1|URSC|||
Misc : |MSD827D4_S|SOIL|SW02|MIX[A,B,J,D]||
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 19 08:25:38 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) A 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	204777	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.535	7.540	1.000	710901	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.840	9.845	1.000	409898	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.712	11.716	1.000	791311	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.302	15.316	1.000	739222	40.00	ng/uL	-0.01
87) A Perylene-d12	264	18.797	18.816	1.000	502706	40.00	ng/uL	-0.02
95) B 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	204777	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.535	7.540	1.000	710901	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.840	9.845	1.000	409898	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.712	11.716	1.000	791311	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.302	15.316	1.000	739222	40.00	ng/uL	-0.01
147) B Perylene-d12	264	18.797	18.816	1.000	502706	40.00	ng/uL	-0.02
150) J Phenanthrene-d10	188	11.712	11.716	1.000	791311	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.302	15.316	1.000	739222	40.00	ng/uL	-0.01
155) D Naphthalene-d8	136	7.535	7.540	1.000	710901	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.840	9.845	1.000	409898	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.712	11.716	1.000	791311	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.302	15.316	1.000	739222	40.00	ng/uL	-0.01
169) E Naphthalene-d8	136	7.535	7.540	1.000	710901	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.797	18.816	1.000	502706	40.00	ng/uL	-0.02
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.069	4.063	0.704	317734	44.42	ng/uL	0.00
7) Phenol-d5	99	5.226	5.227	0.904	443738	47.93	ng/uL	0.00
22) Nitrobenzene-d5	82	6.545	6.562	0.869	206210	26.93	ng/uL	-0.02
43) 2-Fluorobiphenyl	172	8.964	8.979	0.911	375143	24.05	ng/uL	-0.01
62) 2,4,6-Tribromophenol	330	10.831	10.834	1.101	115641	47.19	ng/uL	0.00
79) p-Terphenyl-d14	244	13.688	13.674	0.895	555689	27.00	ng/uL	0.01

Compound	Amount	Range	Recovery
5) 2-Fluorophenol	100.000	36 - 104	44%
7) Phenol-d5	100.000	39 - 106	48%
22) Nitrobenzene-d5	50.000	34 - 109	54%
43) 2-Fluorobiphenyl	50.000	35 - 107	48%
62) 2,4,6-Tribromophenol	100.000	39 - 115	47%
79) p-Terphenyl-d14	50.000	45 - 119	54%

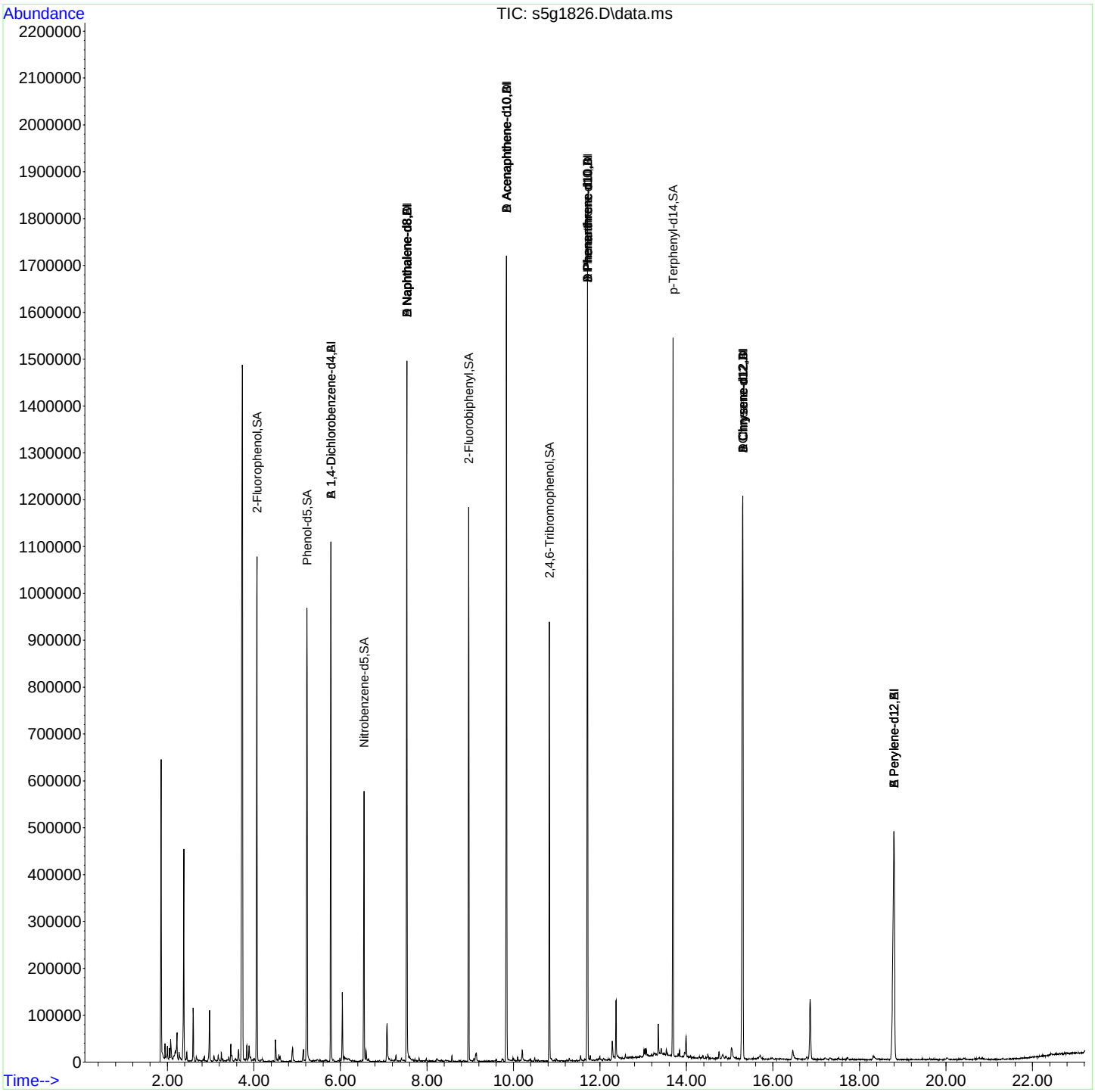
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue

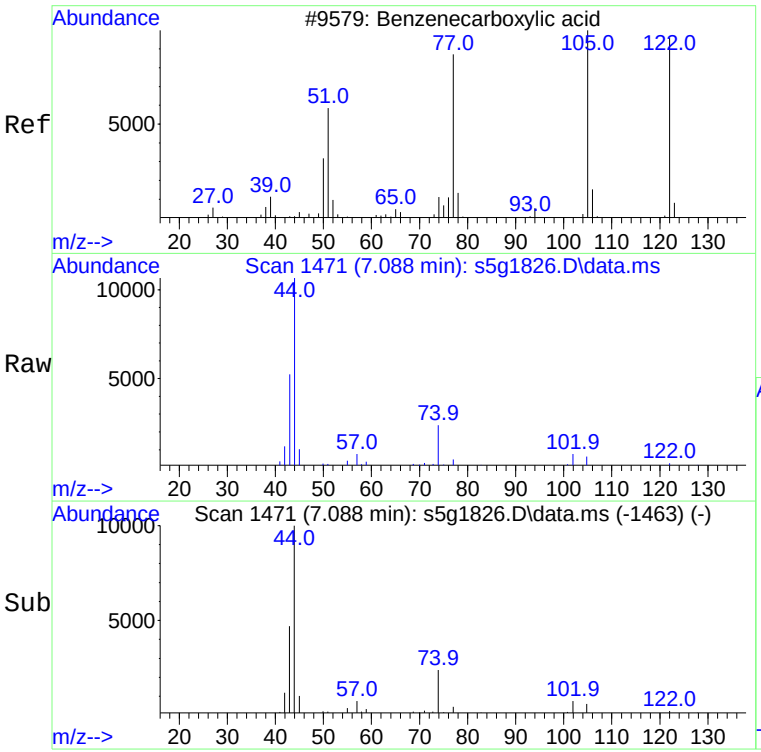
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1826.D
Acq On : 18 Jul 2018 22:52
Operator : JLD1
InstName : MSD5
Sample : |454715002|1783053|1|SVM|1|URSC|||
Misc : |MSD827D4_S|SOIL|SW02|MIX[A,B,J,D]||
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 19 08:25:38 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

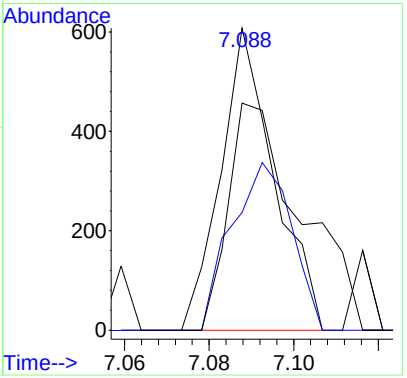




#29 BEFORE analyst DELETION
Benzoic acid
Concen: 9.98 ng/uL
RT: 7.088 min Scan# 1471
Delta R.T. -0.084 min
Lab File: s5g1826.D
Acq: 18 Jul 2018 22:52

Tgt Ion:105 Resp: 535

Ion	Ratio	Lower	Upper
105	100		
122	0.0	52.1	112.1#
77	101.9	45.4	105.4



Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:55**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715003**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**8.5**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW03**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/20/2018 13:30**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.49 g**	**Final Volume:**	**1 mL**
Data File:	**s072018.B\s5g2010.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl	U	358	ug/kg	108	358
95-94-3	1,2,4,5-Tetrachlorobenzene	U	358	ug/kg	108	358
58-90-2	2,3,4,6-Tetrachlorophenol	U	358	ug/kg	108	358
95-95-4	2,4,5-Trichlorophenol	U	358	ug/kg	108	358
88-06-2	2,4,6-Trichlorophenol	U	358	ug/kg	108	358
120-83-2	2,4-Dichlorophenol	U	358	ug/kg	108	358
105-67-9	2,4-Dimethylphenol	U	358	ug/kg	108	358
51-28-5	2,4-Dinitrophenol	U	717	ug/kg	108	717
121-14-2	2,4-Dinitrotoluene	U	358	ug/kg	108	358
606-20-2	2,6-Dinitrotoluene	U	358	ug/kg	108	358
91-58-7	2-Chloronaphthalene	U	35.8	ug/kg	10.8	35.8
95-57-8	2-Chlorophenol	U	358	ug/kg	108	358
534-52-1	2-Methyl-4,6-dinitrophenol	U	358	ug/kg	108	358
91-57-6	2-Methylnaphthalene	U	35.8	ug/kg	10.8	35.8
88-75-5	2-Nitrophenol	U	358	ug/kg	108	358
91-94-1	3,3'-Dichlorobenzidine	U	358	ug/kg	108	358
101-55-3	4-Bromophenylphenylether	U	358	ug/kg	108	358
59-50-7	4-Chloro-3-methylphenol	U	358	ug/kg	143	358
106-47-8	4-Chloroaniline	U	358	ug/kg	108	358
7005-72-3	4-Chlorophenylphenylether	U	358	ug/kg	108	358
100-02-7	4-Nitrophenol	U	358	ug/kg	108	358
83-32-9	Acenaphthene	U	35.8	ug/kg	10.8	35.8
208-96-8	Acenaphthylene	U	35.8	ug/kg	10.8	35.8
98-86-2	Acetophenone	U	358	ug/kg	108	358
120-12-7	Anthracene	U	35.8	ug/kg	10.8	35.8
1912-24-9	Atrazine	U	358	ug/kg	143	358
100-52-7	Benzaldehyde	U	358	ug/kg	108	358
56-55-3	Benzo(a)anthracene	U	35.8	ug/kg	10.8	35.8
50-32-8	Benzo(a)pyrene	U	35.8	ug/kg	10.8	35.8
205-99-2	Benzo(b)fluoranthene	U	35.8	ug/kg	10.8	35.8
191-24-2	Benzo(ghi)perylene	U	35.8	ug/kg	10.8	35.8
207-08-9	Benzo(k)fluoranthene	U	35.8	ug/kg	10.8	35.8
85-68-7	Butylbenzylphthalate	U	35.8	ug/kg	10.8	35.8
105-60-2	Caprolactam	U	358	ug/kg	108	358
86-74-8	Carbazole	U	35.8	ug/kg	10.8	35.8
218-01-9	Chrysene	U	35.8	ug/kg	10.8	35.8
84-74-2	Di-n-butylphthalate	U	35.8	ug/kg	10.8	35.8
117-84-0	Di-n-octylphthalate	U	35.8	ug/kg	10.8	35.8

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 14:55**	**Matrix:**	**SOIL**
Lab Sample ID:	**454715003**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**8.5**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW03**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/20/2018 13:30**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.49 g**	**Final Volume:**	**1 mL**
Data File:	**s072018.B\s5g2010.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene	U	35.8	ug/kg	10.8	35.8
132-64-9	Dibenzofuran	U	358	ug/kg	108	358
84-66-2	Diethylphthalate	U	35.8	ug/kg	10.8	35.8
131-11-3	Dimethylphthalate	U	35.8	ug/kg	10.8	35.8
122-39-4	Diphenylamine	U	358	ug/kg	108	358
206-44-0	Fluoranthene	U	35.8	ug/kg	10.8	35.8
86-73-7	Fluorene	U	35.8	ug/kg	10.8	35.8
118-74-1	Hexachlorobenzene	U	358	ug/kg	108	358
87-68-3	Hexachlorobutadiene	U	358	ug/kg	108	358
77-47-4	Hexachlorocyclopentadiene	U	358	ug/kg	108	358
67-72-1	Hexachloroethane	U	358	ug/kg	108	358
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.8	ug/kg	10.8	35.8
78-59-1	Isophorone	U	358	ug/kg	108	358
621-64-7	N-Nitrosodipropylamine	U	358	ug/kg	108	358
91-20-3	Naphthalene	U	35.8	ug/kg	10.8	35.8
98-95-3	Nitrobenzene	U	358	ug/kg	108	358
87-86-5	Pentachlorophenol	U	358	ug/kg	108	358
85-01-8	Phenanthrene	U	35.8	ug/kg	10.8	35.8
108-95-2	Phenol	U	358	ug/kg	108	358
129-00-0	Pyrene	U	35.8	ug/kg	10.8	35.8
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	358	ug/kg	108	358
111-91-1	bis(2-Chloroethoxy)methane	U	358	ug/kg	108	358
111-44-4	bis(2-Chloroethyl) ether	U	358	ug/kg	108	358
117-81-7	bis(2-Ethylhexyl)phthalate	U	35.8	ug/kg	10.8	35.8
65794-96-9	m,p-Cresols	U	358	ug/kg	108	358
99-09-2	m-Nitroaniline	U	358	ug/kg	108	358
95-48-7	o-Cresol	U	358	ug/kg	108	358
88-74-4	o-Nitroaniline	U	358	ug/kg	118	358
100-01-6	p-Nitroaniline	U	358	ug/kg	108	358

07/20/2018

07/23/2018

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2010.D
Acq On : 20 Jul 2018 13:30
Operator : JLD1
InstName : MSD5
Sample : |454715003|1783053|1|SVM|1|URSC
Misc : |MSD827D4_S|SOIL|MIX[A,B,J]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 20 14:22:22 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.873	5.873	1.000	115284	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.626	7.630	1.000	415087	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.926	9.935	1.000	220160	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.802	11.811	1.000	436154	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.431	15.454	1.000	404629	40.00	ng/uL	-0.02
87) A Perylene-d12	264	19.021	19.045	1.000	286535	40.00	ng/uL	-0.02
95) B 1,4-Dichlorobenzene-d4	152	5.873	5.873	1.000	115284	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.626	7.630	1.000	415087	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.926	9.935	1.000	220160	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.802	11.811	1.000	436154	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.431	15.454	1.000	404629	40.00	ng/uL	-0.02
147) B Perylene-d12	264	19.021	19.045	1.000	286535	40.00	ng/uL	-0.02
150) J Phenanthrene-d10	188	11.802	11.811	1.000	436154	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.431	15.454	1.000	404629	40.00	ng/uL	-0.02
155) D Naphthalene-d8	136	7.626	7.630	1.000	415087	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.926	9.935	1.000	220160	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.802	11.811	1.000	436154	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.431	15.454	1.000	404629	40.00	ng/uL	-0.02
169) E Naphthalene-d8	136	7.626	7.630	1.000	415087	40.00	ng/uL	0.00
171) E Perylene-d12	264	19.021	19.045	1.000	286535	40.00	ng/uL	-0.02
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.159	4.140	0.708	266476	66.18	ng/uL	0.02
7) Phenol-d5	99	5.316	5.311	0.905	382414	73.37	ng/uL	0.00
22) Nitrobenzene-d5	82	6.635	6.645	0.870	170978	38.24	ng/uL	0.00
43) 2-Fluorobiphenyl	172	9.050	9.059	0.912	311504	37.18	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.921	10.931	1.100	104275	79.22	ng/uL	0.00
79) p-Terphenyl-d14	244	13.783	13.788	0.893	521980	46.33	ng/uL	0.00

Compound	Amount	Range	Recovery
5) 2-Fluorophenol	100.000	36 - 104	66%
7) Phenol-d5	100.000	39 - 106	73%
22) Nitrobenzene-d5	50.000	34 - 109	76%
43) 2-Fluorobiphenyl	50.000	35 - 107	74%
62) 2,4,6-Tribromophenol	100.000	39 - 115	79%
79) p-Terphenyl-d14	50.000	45 - 119	93%

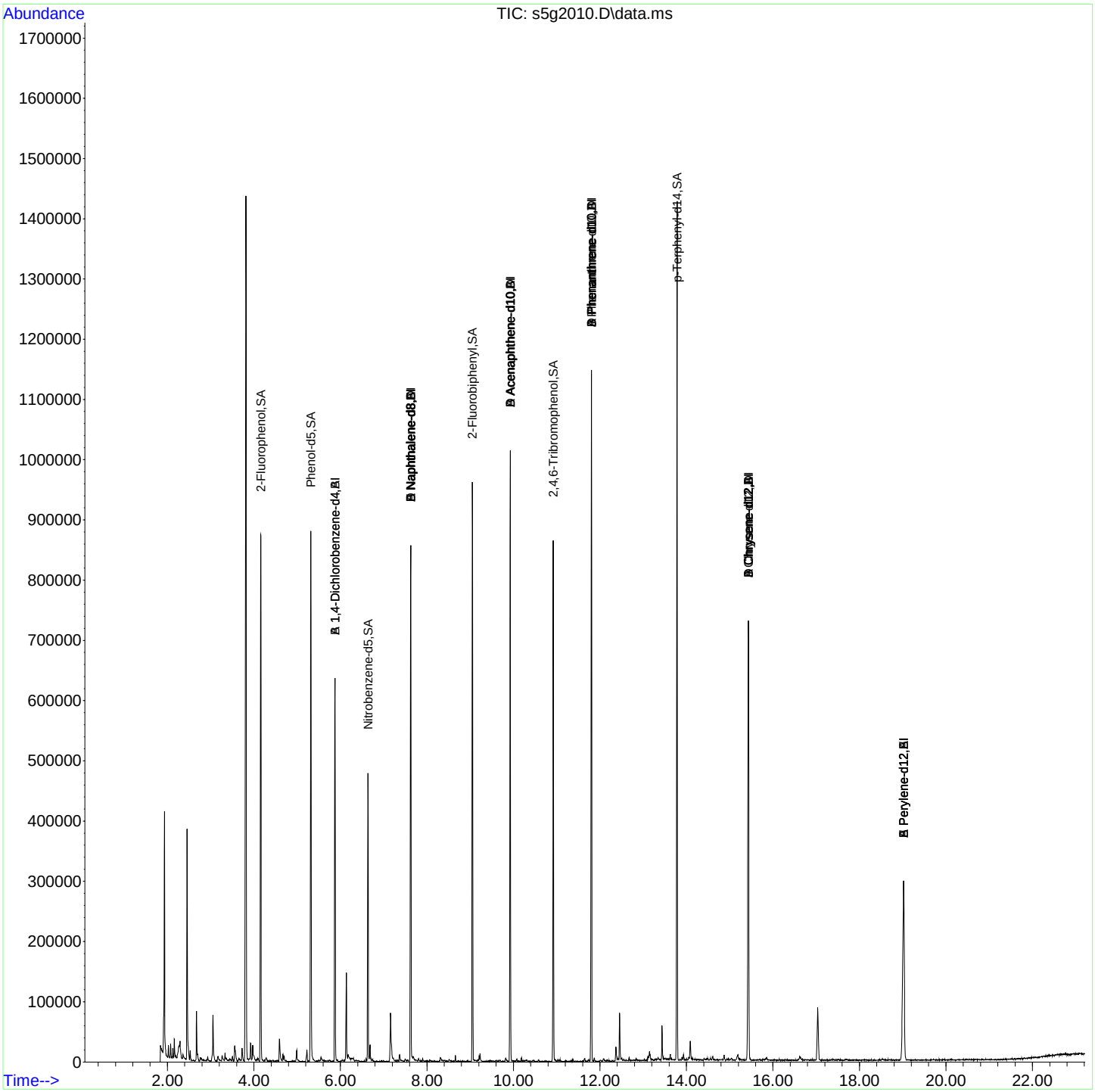
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue

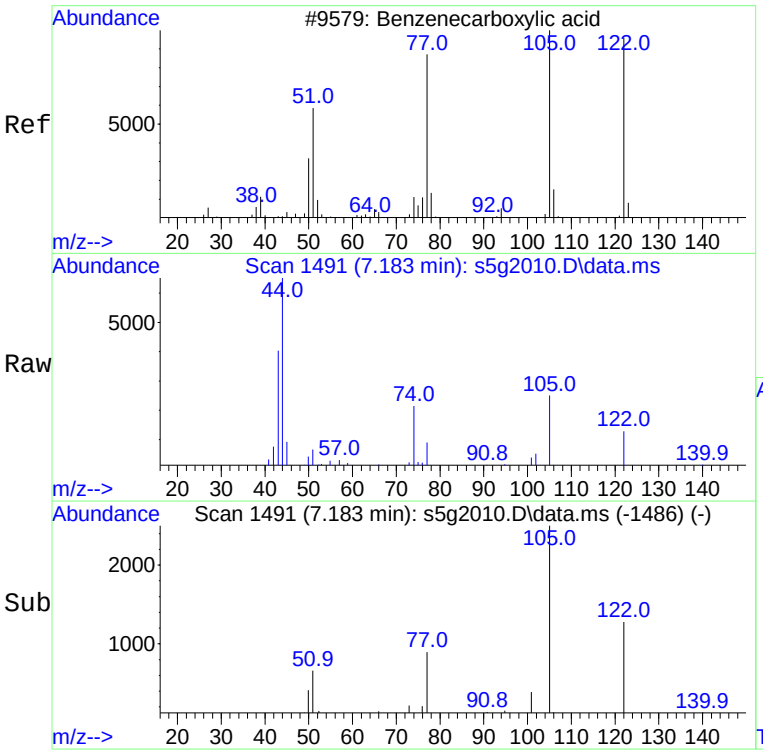
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2010.D
Acq On : 20 Jul 2018 13:30
Operator : JLD1
InstName : MSD5
Sample : |454715003|1783053|1|SVM|1|URSC
Misc : |MSD827D4_S|SOIL|MIX[A,B,J]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 20 14:22:22 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

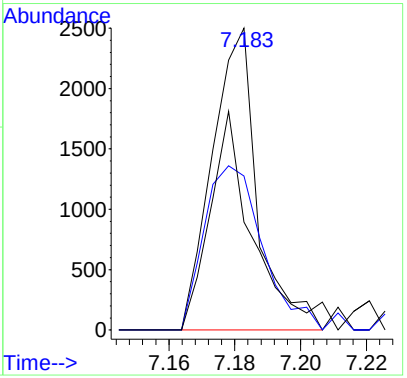




#29 BEFORE analyst DELETION
Benzoic acid
Concen: 10.80 ng/uL
RT: 7.183 min Scan# 1491
Delta R.T. -0.100 min
Lab File: s5g2010.D
Acq: 20 Jul 2018 13:30

Tgt Ion:105 Resp: 2416

Ion	Ratio	Lower	Upper
105	100		
122	69.7	52.1	112.1
77	68.9	45.4	105.4



Standards

SW846 8270/EPA 625										
Calibration Standard Concentration Levels*										
MEGA MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)										
Naphthalene-d8 (INTERNAL STANDARD)										
Acenaphthene-d10 (INTERNAL STANDARD)										
Phenanthrene-d10 (INTERNAL STANDARD)										
Chrysene-d12 (INTERNAL STANDARD)										
Perylene-d12 (INTERNAL STANDARD)										
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120	30	60
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120	30	60
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120	30	60
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120	30	60
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120	30	60
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120	30	60
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120	30	60
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120	30	60
N-Nitrosodimethylamine	1**	10	20	40	50	80	100	120	30	60
Pyridine		10	20	40	50	80	100	120	30	60
Aniline		10	20	40	50	80	100	120	30	60
Phenol		10	20	40	50	80	100	120	30	60
bis(2-Chloroethyl)ether		10	20	40	50	80	100	120	30	60
2-Chlorophenol		10	20	40	50	80	100	120	30	60
n-Decane		10	20	40	50	80	100	120	30	60
1,3-Dichlorobenzene		10	20	40	50	80	100	120	30	60
1,4-Dichlorobenzene		10	20	40	50	80	100	120	30	60
Benzyl Alcohol		10	20	40	50	80	100	120	30	60
1,2-Dichlorobenzene		10	20	40	50	80	100	120	30	60
bis(2-Chloro-1-methylethyl)ether		10	20	40	50	80	100	120	30	60
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120	30	60
N-Nitrosodipropylamine		10	20	40	50	80	100	120	30	60
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120	30	60
Hexachloroethane		10	20	40	50	80	100	120	30	60
Nitrobenzene		10	20	40	50	80	100	120	30	60
Isophorone		10	20	40	50	80	100	120	30	60
2-Nitrophenol		10	20	40	50	80	100	120	30	60
2,4-Dimethylphenol		10	20	40	50	80	100	120	30	60
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120	30	60
2,4-Dichlorophenol		10	20	40	50	80	100	120	30	60
Benzoic Acid			20	40	50	80	100	120	30	60
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120	30	60
Naphthalene	1	10	20	40	50	80	100	120	30	60
alpha-Terpineol		10	20	40	50	80	100	120	30	60
4-Chloroaniline		10	20	40	50	80	100	120	30	60

SW846 8270/EPA 625										
Calibration Standard Concentration Levels*										
MEGA MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
Hexachlorobutadiene		10	20	40	50	80	100	120	30	60
4-Chloro-3-methylphenol		10	20	40	50	80	100	120	30	60
2-Methylnaphthalene	1	10	20	40	50	80	100	120	30	60
1-Methylnaphthalene	1	10	20	40	50	80	100	120	30	60
Hexachlorocyclopentadiene		10	20	40	50	80	100	120	30	60
2,3-Dichloroaniline		10	20	40	50	80	100	120	30	60
2,4,6-Trichlorophenol		10	20	40	50	80	100	120	30	60
2,4,5-Trichlorophenol		10	20	40	50	80	100	120	30	60
2-Chloronaphthalene	1	10	20	40	50	80	100	120	30	60
o-Nitroaniline		10	20	40	50	80	100	120	30	60
m-Nitroaniline		10	20	40	50	80	100	120	30	60
Dimethylphthalate	1**	10	20	40	50	80	100	120	30	60
2,6-Dinitrotoluene		10	20	40	50	80	100	120	30	60
Acenaphthylene	1	10	20	40	50	80	100	120	30	60
Acenaphthene	1	10	20	40	50	80	100	120	30	60
2,4-Dinitrophenol			20	40	50	80	100	120	30	60
Dibenzofuran		10	20	40	50	80	100	120	30	60
2,4-Dinitrotoluene		10	20	40	50	80	100	120	30	60
Diethylphthalate	1**	10	20	40	50	80	100	120	30	60
4-Nitrophenol		10	20	40	50	80	100	120	30	60
Fluorene	1	10	20	40	50	80	100	120	30	60
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120	30	60
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120	30	60
p-Nitroaniline		10	20	40	50	80	100	120	30	60
Diphenylamine		10	20	40	50	80	100	120	30	60
1,2-Diphenylhydrazine		10	20	40	50	80	100	120	30	60
4-Bromophenyl phenyether		10	20	40	50	80	100	120	30	60
Hexachlorobenzene		10	20	40	50	80	100	120	30	60
Pentachlorophenol		10	20	40	50	80	100	120	30	60
n-Octadecane		10	20	40	50	80	100	120	30	60
Phenanthrene	1	10	20	40	50	80	100	120	30	60
Anthracene	1	10	20	40	50	80	100	120	30	60
Di-n-butylphthalate	1**	10	20	40	50	80	100	120	30	60
Fluoranthene	1	10	20	40	50	80	100	120	30	60
Pyrene	1	10	20	40	50	80	100	120	30	60
Butylbenzylphthalate	1**	10	20	40	50	80	100	120	30	60
Benzo(a)anthracene	1	10	20	40	50	80	100	120	30	60
Chrysene	1	10	20	40	50	80	100	120	30	60
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120	30	60
Di-n-octylphthalate	1**	10	20	40	50	80	100	120	30	60

SW846 8270/EPA 625										
Calibration Standard Concentration Levels*										
MEGA MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120	30	60
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120	30	60
Benzo(a)pyrene	1	10	20	40	50	80	100	120	30	60
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120	30	60
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120	30	60
Benzo(ghi)perylene	1	10	20	40	50	80	100	120	30	60
m-Dinitrobenzene		10	20	40	50	80	100	120	30	60
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120	30	60
Dinoseb		10	20	40	50	80	100	120	30	60
Carbazole	1	10	20	40	50	80	100	120	30	60
p-Benzoquinone		10	20	40	50	80	100	120	30	60
Methoxychlor		10	20	40	50	80	100	120	30	60
p-Toluidine		10	20	40	50	80	100	120	30	60
m-Toluidine		10	20	40	50	80	10	120	30	60
1,4-Dinitrobenzene		10	20	40	50	80	100	120	30	60
2-Ethoxyethanol		10	20	40	50	80	100	120	30	60
Phthalic anhydride		10	20	40	50	80	100	120	30	60
Methylenebis(2-chloroaniline)		10	20	40	50	80	100	120	30	60
Dibenzo(a,e)pyrene		10	20	40	50	80	100	120	30	60

SW846 8270/EPA 625										
Calibration Standard Concentration Levels*										
AP MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
Benzaldehyde		10	20	40	50	80	100	120	30	60
Acetophenone		10	20	40	50	80	100	120	30	60
Caprolactam		10	20	40	50	80	100	120	30	60
1,1'-Biphenyl		10	20	40	50	80	100	120	30	60
Atrazine		10	20	40	50	80	100	120	30	60
Benzidine		10	20	40	50	80	100	120	30	60
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120	30	60
1,4-Dioxane		10	20	40	50	80	100	120	30	60
Methyl methacrylate		10	20	40	50	80	100	120	30	60
Ethyl methacrylate		10	20	40	50	80	100	120	30	60
2-Picoline		10	20	40	50	80	100	120	30	60
N-Nitrosomethylethylamine		10	20	40	50	80	100	120	30	60
2-Butoxyethanol		10	20	40	50	80	100	120	30	60
Methyl methanesulfonate		10	20	40	50	80	100	120	30	60
N-Nitrosodiethylamine		10	20	40	50	80	100	120	30	60
Ethyl methanesulfonate		10	20	40	50	80	100	120	30	60
Pentachloroethane		10	20	40	50	80	100	120	30	60
N-Nitrosopyrrolidine		10	20	40	50	80	100	120	30	60
N-Nitrosomorpholine		10	20	40	50	80	100	120	30	60
o-Toluidine		10	20	40	50	80	100	120	30	60
N-Nitrosopiperidine		10	20	40	50	80	100	120	30	60
a,a-Dimethylphenethylamine		10	20	40	50	80	100	120	30	60
2,6-Dichlorophenol		10	20	40	50	80	100	120	30	60

SW846 8270/EPA 625										
Calibration Standard Concentration Levels*										
AP MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
Hexachloropropene		10	20	40	50	80	100	120	30	60
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120	30	60
Safrole		10	20	40	50	80	100	120	30	60
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120	30	60
Isosafrole		10	20	40	50	80	100	120	30	60
1,4-Naphthoquinone		10	20	40	50	80	100	120	30	60
Pentachlorobenzene		10	20	40	50	80	100	120	30	60
1-Naphthylamine		10	20	40	50	80	100	120	30	60
2-Naphthylamine		10	20	40	50	80	100	120	30	60
5-Nitro-o-toluidine		10	20	40	50	80	100	120	30	60
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120	30	60
Phenacetin		10	20	40	50	80	100	120	30	60
Diallate		10	20	40	50	80	100	120	30	60
cis-Diallate		1.5	3	6	7.5	12	15	18	4.5	9
trans-Diallate		8.5	17	34	42	68	85	102	25.5	51
4-Aminobiphenyl		10	20	40	50	80	100	120	30	60
Pentachloronitrobenzene		10	20	40	50	80	100	120	30	60
Pronamide		10	20	40	50	80	100	120	30	60
4-Nitroquinoline-1-oxide		10	20	40	50	80	100	120	30	60
Methapyrilene		10	20	40	50	80	100	120	30	60
Isodrin		10	20	40	50	80	100	120	30	60
Aramite		10	20	40	50	80	100	120	30	60
Kepone		10	20	40	50	80	100	120	30	60
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120	30	60
Chlorobenzilate		10	20	40	50	80	100	120	30	60
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120	30	60
2-Acetylaminofluorene		10	20	40	50	80	100	120	30	60
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120	30	60
3-Methylcholanthrene		10	20	40	50	80	100	120	30	60

SW846 8270/EPA 625										
Calibration Standard Concentration Levels*										
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
Hexachlorophene		500	1000	1250	1500	1750	2000			
p-Phenylenediamine		500	1000	1250	1500	1750	2000			

SW846 8270/EPA 625										
Calibration Standard Concentration Levels*										
PEST MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
bis(Chloromethyl)ether		10	20	40	50	80	100	120	30	60
Tributylphosphate		10	20	40	50	80	100	120	30	60
Triethylphosphorothioate		10	20	40	50	80	100	120	30	60
Thionazin		10	20	40	50	80	100	120	30	60
Sulfotepp		10	20	40	50	80	100	120	30	60
Phorate		10	20	40	50	80	100	120	30	60
Dimethoate		10	20	40	50	80	100	120	30	60
Disulfoton		10	20	40	50	80	100	120	30	60
Methyl parathion		10	20	40	50	80	100	120	30	60
Famphur		10	20	40	50	80	100	120	30	60
Parathion		10	20	40	50	80	100	120	30	60

SW846 8270/EPA 625										
Calibration Standard Concentration Levels*										
NEVADA MIX	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
bis(Chloromethyl)ether		10	20	40	50	80	100	120	30	60
4-Chlorothiophenol		10	20	40	50	80	100	120	30	60
4-Chlorothioanisole		10	20	40	50	80	100	120	30	60
Phthalic acid		10	20	40	50	80	100	120	30	60
Hydroxymethyl phthalimide		10	20	40	50	80	100	120	30	60
Diphenyl sulfide		10	20	40	50	80	100	120	30	60
Diphenyl disulfide		10	20	40	50	80	100	120	30	60
Phenyl sulfone		10	20	40	50	80	100	120	30	60
Octachlorostyrene		10	20	40	50	80	100	120	30	60
Thiophenol		10	20	40	50	80	100	120	30	60
2,2'-Dichlorobenzil		10	20	40	50	80	100	120	30	60
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120	30	60
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	100	120	30	60

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
** This analyte included in this level at special client request.

EPA 522								
Calibration Standard Concentration Levels#								
	Level 1	Level 2	Level 3	Level 4	Level 5	ICV	CCV	
Tetrahydrofuran-d8 (INTERNAL STANDARD)								
1,4-Dioxane-d8 (SURROGATE)	50	100	200	400	500	200	See Method	
1,4-Dioxane	50	100	200	400	500	200	See Method	

All values are ug/L without the prep factor.
Usual calibration levels using SIM methodology

SW846 8270SIM										
Calibration Standard Concentration Levels*										
MEGASIM analytes (A)	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6#	Level 7	Level 8	Level 9	Level 10
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)										
Naphthalene-d8 (INTERNAL STANDARD)										
Acenaphthene-d10 (INTERNAL STANDARD)										
Phenanthrene-d10 (INTERNAL STANDARD)										
Chrysene-d12 (INTERNAL STANDARD)										
Perylene-d12 (INTERNAL STANDARD)										
5-alpha-Androstane (SURROGATE)	$0.1	0.2	0.5	1	2	5	10	20		
$N-Methyl-N-nitrosomethylamine		0.2	0.5	1	2	5	10	20		
$bis(2-Chloroethyl)ether	0.1	0.2	0.5	1	2	5	10	20		
$N-Nitrosodipropylamine	0.1	0.2	0.5	1	2	5	10	20		
Naphthalene	$0.1	0.2	0.5	1	2	5	10	20		
2-Methylnaphthalene	$0.1	0.2	0.5	1	2	5	10	20		
1-Methylnaphthalene	$0.1	0.2	0.5	1	2	5	10	20		
2-Chloronaphthalene	$0.1	0.2	0.5	1	2	5	10	20		
Acenaphthylene	$0.1	0.2	0.5	1	2	5	10	20		
Acenaphthene	$0.1	0.2	0.5	1	2	5	10	20		
Fluorene	$0.1	0.2	0.5	1	2	5	10	20		
Phenanthrene	$0.1	0.2	0.5	1	2	5	10	20		
Anthracene	$0.1	0.2	0.5	1	2	5	10	20		
Fluoranthene	$0.1	0.2	0.5	1	2	5	10	20		
Pyrene	$0.1	0.2	0.5	1	2	5	10	20		
Benzo(a)anthracene	$0.1	0.2	0.5	1	2	5	10	20		
Chrysene	$0.1	0.2	0.5	1	2	5	10	20		
Benzo(b)fluoranthene	$0.1	0.2	0.5	1	2	5	10	20		
Benzo(k)fluoranthene	$0.1	0.2	0.5	1	2	5	10	20		
Benzo(a)pyrene	$0.1	0.2	0.5	1	2	5	10	20		
Indeno-(1,2,3-cd)pyrene	$0.1	0.2	0.5	1	2	5	10	20		
Dibenzo(a,h)anthracene	$0.1	0.2	0.5	1	2	5	10	20		
Benzo(ghi)perylene	$0.1	0.2	0.5	1	2	5	10	20		

$ By special request - Not for regulatory purposes

SW846 8270SIM										
Calibration Standard Concentration Levels*										
APSIM analytes (A)	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6#	Level 7	Level 8	Level 9	Level 10
$N-Nitrosodimethylamine	0.1	0.2	0.5	1	2	5	10	20		
$N-Nitrosopyrrolidine	0.1	0.2	0.5	1	2	5	10	20		
$N-Nitrosodi-n-butylamine	0.1	0.2	0.5	1	2	5	10	20		
$Benzidine			2.5	5	10	25	50	100		
$3,3'-Dichlorobenzidine	0.1	0.2	0.5	1	2	5	10	20		

$ By special request - Not for regulatory purposes
All values are mg/L without prep factor.
# indicates the calibraton verification concentration level used.
* Usual calibration levels using SIM methodology
(10/16/Full list)

07/18/2018

Calibration History Report MSD5
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Last Update : Wed Jul 11 08:32:38 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

07/18/2018

Cal Lvl:1 Amt:1.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0933.D

Injection Date	Mix	Calibration File
10 Jul 2018 10:36	A	C:\msdchem\1\DATA\s070918.B\s5g0933.D

Cal Lvl:2 Amt:10.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0934.D

Injection Date	Mix	Calibration File
10 Jul 2018 11:06	A	C:\msdchem\1\DATA\s070918.B\s5g0934.D
10 Jul 2018 23:16	B	C:\msdchem\1\DATA\s070918.B\s5g0955.D
10 Jul 2018 18:27	D	C:\msdchem\1\DATA\s070918.B\s5g0945.D
11 Jul 2018 04:18	E	C:\msdchem\1\DATA\s070918.B\s5g0965.D
09 Jul 2018 22:51	J	C:\msdchem\1\DATA\s070918.B\s5g0923.D

Cal Lvl:3 Amt:20.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0935.D

Injection Date	Mix	Calibration File
10 Jul 2018 11:44	A	C:\msdchem\1\DATA\s070918.B\s5g0935.D
10 Jul 2018 23:46	B	C:\msdchem\1\DATA\s070918.B\s5g0956.D
10 Jul 2018 18:58	D	C:\msdchem\1\DATA\s070918.B\s5g0946.D
11 Jul 2018 04:48	E	C:\msdchem\1\DATA\s070918.B\s5g0966.D
09 Jul 2018 23:21	J	C:\msdchem\1\DATA\s070918.B\s5g0924.D

Cal Lvl:4 Amt:40.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0936.D

Injection Date	Mix	Calibration File
10 Jul 2018 12:19	A	C:\msdchem\1\DATA\s070918.B\s5g0936.D
11 Jul 2018 00:46	B	C:\msdchem\1\DATA\s070918.B\s5g0958.D
10 Jul 2018 19:28	D	C:\msdchem\1\DATA\s070918.B\s5g0947.D
11 Jul 2018 05:18	E	C:\msdchem\1\DATA\s070918.B\s5g0967.D
09 Jul 2018 23:51	J	C:\msdchem\1\DATA\s070918.B\s5g0925.D

Cal Lvl:5 Amt:50.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0942.D

Injection Date	Mix	Calibration File
10 Jul 2018 16:34	A	C:\msdchem\1\DATA\s070918.B\s5g0942.D
11 Jul 2018 01:16	B	C:\msdchem\1\DATA\s070918.B\s5g0959.D
10 Jul 2018 19:58	D	C:\msdchem\1\DATA\s070918.B\s5g0948.D
11 Jul 2018 05:49	E	C:\msdchem\1\DATA\s070918.B\s5g0968.D
10 Jul 2018 00:21	J	C:\msdchem\1\DATA\s070918.B\s5g0926.D

Cal Lvl:6 Amt:80.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0961.D

Injection Date	Mix	Calibration File
10 Jul 2018 13:35	A	C:\msdchem\1\DATA\s070918.B\s5g0938.D
11 Jul 2018 02:17	B	C:\msdchem\1\DATA\s070918.B\s5g0961.D
10 Jul 2018 20:28	D	C:\msdchem\1\DATA\s070918.B\s5g0949.D
11 Jul 2018 06:19	E	C:\msdchem\1\DATA\s070918.B\s5g0969.D
10 Jul 2018 00:51	J	C:\msdchem\1\DATA\s070918.B\s5g0927.D

Cal Lvl:7 Amt:100.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0962.D

Injection Date	Mix	Calibration File

Calibration History Report MSD5
GEL Laboratories, LLC
Method File : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Last Update : Wed Jul 11 08:32:38 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

10 Jul 2018 14:13	A	C:\msdchem\1\DATA\s070918.B\s5g0939.D
11 Jul 2018 02:47	B	C:\msdchem\1\DATA\s070918.B\s5g0962.D
10 Jul 2018 20:58	D	C:\msdchem\1\DATA\s070918.B\s5g0950.D
11 Jul 2018 06:49	E	C:\msdchem\1\DATA\s070918.B\s5g0970.D

Cal Lvl:8 Amt:120.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0963.D

Injection Date	Mix	Calibration File
10 Jul 2018 14:50	A	C:\msdchem\1\DATA\s070918.B\s5g0940.D
11 Jul 2018 03:17	B	C:\msdchem\1\DATA\s070918.B\s5g0963.D
10 Jul 2018 21:29	D	C:\msdchem\1\DATA\s070918.B\s5g0951.D
10 Jul 2018 01:52	J	C:\msdchem\1\DATA\s070918.B\s5g0929.D

Cal Lvl:9 Amt:30.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0957.D

Injection Date	Mix	Calibration File
11 Jul 2018 00:16	B	C:\msdchem\1\DATA\s070918.B\s5g0957.D

Cal Lvl:10 Amt:60.00 Last Updated with: C:\msdchem\1\DATA\s070918.B\s5g0960.D

Injection Date	Mix	Calibration File
11 Jul 2018 01:47	B	C:\msdchem\1\DATA\s070918.B\s5g0960.D

MSD5_8270C_8270D_070918.m Wed Jul 18 15:25:26 2018

Response Factor Report MSD5
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Last Update : Wed Jul 11 08:32:38 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

07/18/2018

07/18/2018

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
2)A 2-Ethoxyethanol		1.1078229	1.1488183	1.1327355	1.1727617	1.0788274				
	1.0594643	1.0035489					1.1006	AVRG		5.2724
3)AM N-Methyl-N-nitrosomethyl	0.7286289	1.0901132	1.1170507	1.0938086	1.1508594	1.0455090				
	1.0067411	1.0026952					1.0294	AVRG		12.8359
4)AM Pyridine		1.8550932	1.8268843	1.7498895	1.8275664	1.6681963				
	1.6030505	1.5828051					1.7305	AVRG		6.5272
5)SA 2-Fluorophenol		1.4221704	1.4279450	1.4285083	1.4947023	1.3719300				
	1.3349090	1.2996314					1.3971	AVRG		4.7202
6)AM Aniline		2.4347204	2.3526222	2.2389178	2.3147155	2.1077728				
	2.0546952	2.0345678					2.2197	AVRG		7.0594
7)SA Phenol-d5		1.8319907	1.8838927	1.8320406	1.9162979	1.7608306				
	1.7214171	1.7119298					1.8083	AVRG		4.3771
8)AMC Phenol		1.8990679	1.8956377	1.7867516	1.8284374	1.6496743				
	1.6009031	1.6006836					1.7516	AVRG		7.5706
9)AM bis(2-Chloroethyl) ether		1.5619507	1.4987720	1.4119897	1.4611282	1.3349796				
	1.2846320	1.2696612					1.4033	AVRG		7.9306
10)AM 2-Chlorophenol		1.4791278	1.4614293	1.3791811	1.4513455	1.3280456				
	1.2918734	1.2796950					1.3815	AVRG		6.0602
11)AM n-Decane		1.9636818	1.8921533	1.6878000	1.6648604	1.5019788				
	1.4022611	1.3492239					1.6374	AVRG		14.3513
12)AM 1,3-Dichlorobenzene		1.6554594	1.6110379	1.5175167	1.5830167	1.4402891				
	1.4157107	1.3924413					1.5165	AVRG		6.8120
13)AMC 1,4-Dichlorobenzene		1.5052264	1.4845114	1.4474955	1.5110968	1.3736401				
	1.3407631	1.3327419					1.4279	AVRG		5.4308
14)AM 1,2-Dichlorobenzene		1.4607190	1.4773386	1.4107325	1.4621832	1.3188599				
	1.3050761	1.2868750					1.3888	AVRG		5.9642
15)AM bis(2-Chloro-1-methyleth		2.7297270	2.6159926	2.4541700	2.4980910	2.2844055				
	2.1662590	2.1256917					2.4106	AVRG		9.4350
16)AM Benzyl alcohol		0.9798602	0.9453118	0.9444935	0.9918702	0.9084691				
	0.9018989	0.9075681					0.9399	AVRG		3.8423

Response Factor Report MSD5
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Last Update : Wed Jul 11 08:32:38 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
17)AM o-Cresol		1.1179427	1.1329770	1.0924142	1.1396292	1.0399593				
	1.0237870	1.0220279					1.0812	AVRG		4.7862
18)AM m,p-Cresols		1.5092543	1.5206642	1.4546653	1.5368018	1.4072191				
	1.3855465	1.3893711					1.4576	AVRG		4.4559
19)AMP N-Nitrosodipropylamine		1.1293941	1.1341838	1.0635677	1.1141512	1.0112622				
	0.9885451	0.9874601					1.0612	AVRG		6.2026
20)AM Hexachloroethane		0.6369840	0.6177943	0.5818844	0.6098349	0.5549145				
	0.5371441	0.5324351					0.5816	AVRG		7.1175
22)SA Nitrobenzene-d5		0.4630624	0.4481359	0.4367763	0.4467925	0.4204186				
	0.4005600	0.4006157					0.4309	AVRG		5.6577
23)AM Nitrobenzene		0.4633846	0.4549612	0.4230706	0.4327296	0.4032220				
	0.3853910	0.3831504					0.4208	AVRG		7.5816
24)AM Isophorone		0.9162167	0.8834599	0.8584508	0.8829813	0.8180154				
	0.7994003	0.7982556					0.8510	AVRG		5.4526
25)AMC 2-Nitrophenol		0.1795842	0.1950141	0.2019727	0.2216079	0.2016734				
	0.1958493	0.1987035					0.1992	AVRG		6.2489
26)AM 2,4-Dimethylphenol		0.3722583	0.3688631	0.3497424	0.3593358	0.3350230				
	0.3225391	0.3190820					0.3467	AVRG		6.2268
27)AM bis(2-Chloroethoxy)metha		0.5552761	0.5192503	0.4915700	0.5004979	0.4688985				
	0.4457431	0.4431324					0.4892	AVRG		8.2720
28)AMC 2,4-Dichlorophenol		0.3530362	0.3523514	0.3522993	0.3649792	0.3391580				
	0.3271308	0.3251692					0.3449	AVRG		4.2970
29)AM Benzoic acid			24256	80097	123052	176233				
-0.0613 | 0.2487 | 0.00	224304	268976						LINR	#	0.9920
30)AM 1,2,4-Trichlorobenzene		0.4273872	0.4129407	0.3932809	0.4053670	0.3756509				
	0.3611312	0.3574261					0.3905	AVRG		6.8322
31)AM alpha-Terpineol		0.4028486	0.3856942	0.3634119	0.3682172	0.3384044				
	0.3233343	0.3156449					0.3568	AVRG		9.0686
32)AM Naphthalene	1.0018728	1.1272873	1.0828128	1.0327811	1.0400339	0.9555085				
	0.9003636	0.9005573					1.0052	AVRG		8.1801

Response Factor Report MSD5
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Last Update : Wed Jul 11 08:32:38 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
33)AM 4-Chloroaniline		0.4768673	0.4588108	0.4532178	0.4650206	0.4315212				
	0.4140367	0.4152642					0.4450	AVRG		5.5803
34)AMC Hexachlorobutadiene		0.2652630	0.2602368	0.2584091	0.2614144	0.2477144				
	0.2431111	0.2401078					0.2538	AVRG		3.9106
35)AMC 4-Chloro-3-methylphenol		0.3497940	0.3541489	0.3540779	0.3700091	0.3373843				
	0.3328567	0.3359956					0.3478	AVRG		3.8006
36)AM 2-Methylnaphthalene	0.7714027	0.8646423	0.8301404	0.8067685	0.8320538	0.7531494				
	0.7241049	0.7176550					0.7875	AVRG		6.8656
37)AM 1-Methylnaphthalene	0.7483721	0.8005417	0.7524703	0.7259482	0.7428622	0.6691798				
	0.6472277	0.6433735					0.7162	AVRG		7.9229
39)AMP Hexachlorocyclopentadien		0.4390532	0.4647544	0.5128107	0.5224160	0.4923952				
	0.4726433	0.5034953					0.4868	AVRG		6.0599
40)AM 2,3-Dichloroaniline		0.7851481	0.7645489	0.7105352	0.7366077	0.6708175				
	0.6535780	0.6547126					0.7108	AVRG		7.5104
41)AMC 2,4,6-Trichlorophenol		0.4221097	0.4573323	0.4623942	0.4993660	0.4572436				
	0.4477719	0.4452445					0.4559	AVRG		5.1100
42)AM 2,4,5-Trichlorophenol		0.4713697	0.4876159	0.4849131	0.5107285	0.4802750				
	0.4767845	0.4770157					0.4841	AVRG		2.6701
43)SA 2-Fluorobiphenyl		1.6978622	1.6332115	1.5305704	1.5734669	1.4444302				
	1.3925297	1.3848225					1.5224	AVRG		7.9374
44)AM 2-Chloronaphthalene	1.4071912	1.4598954	1.4061311	1.3166890	1.3656111	1.2464822				
	1.1986826	1.1877328					1.3236	AVRG		7.7788
45)AM o-Nitroaniline		0.4239944	0.4338477	0.4270193	0.4560344	0.4158469				
	0.4091508	0.4075586					0.4248	AVRG		3.9455
46)A 1,4-Dinitrobenzene		0.2213189	0.2353488	0.2486946	0.2777010	0.2603409				
	0.2606678	0.2666718					0.2530	AVRG		7.6442
47)AM m-Nitroaniline		0.3686000	0.3554880	0.3650233	0.3898413	0.3587778				
	0.3566085	0.3650390					0.3656	AVRG		3.2109
48)AM Dimethylphthalate	1.5551590	1.6620720	1.6308026	1.4981782	1.5703671	1.4310033				
	1.4128387	1.3896804					1.5188	AVRG		6.7279

Response Factor Report MSD5
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Last Update : Wed Jul 11 08:32:38 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
49)A m-Dinitrobenzene		0.2750504	0.2636792	0.2685406	0.2909546	0.2716063				
	0.2657225	0.2711534					0.2724	AVRG		3.3144
50)AM 2,6-Dinitrotoluene		0.3724248	0.3675233	0.3539271	0.3792196	0.3491689				
	0.3425607	0.3406745					0.3579	AVRG		4.2403
51)AM 2,4-Dinitrotoluene		0.4721088	0.4764084	0.4839381	0.5134026	0.4726215				
	0.4599736	0.4621172					0.4772	AVRG		3.7560
52)AM Acenaphthylene	2.0923499	2.2027863	2.1074435	1.9559414	1.9814323	1.7963030				
	1.7407172	1.7152883					1.9490	AVRG		9.3503
53)AMC Acenaphthene	1.1202376	1.2535984	1.2537273	1.1855584	1.2213555	1.1235677				
	1.1091400	1.0957061					1.1704	AVRG		5.6615
54)AMP 2,4-Dinitrophenol			10442	34112	55368	76119		1/x^2		
-0.0543 | 0.2054 | 0.00	100219	124106						LINR	#	0.9907
55)AM Dibenzofuran		2.0047301	1.9193337	1.7982104	1.8330957	1.6521133				
	1.6256740	1.6017488					1.7764	AVRG		8.7488
56)A 2,3,4,6-Tetrachloropheno		0.3536335	0.3709181	0.4192197	0.4646448	0.4231594				
	0.4240706	0.4315900					0.4125	AVRG		9.1631
57)AM Diethylphthalate	1.5217520	1.6684097	1.6293237	1.5382957	1.6030640	1.4505490				
	1.4107430	1.3894514					1.5264	AVRG		6.7668
58)AMP 4-Nitrophenol		0.1926239	0.2184306	0.2666402	0.2902820	0.2758538				
	0.2758614	0.2919745					0.2588	AVRG		14.7503
59)AM Fluorene	1.5910873	1.6470317	1.5732582	1.4604567	1.5022083	1.3608551				
	1.3216407	1.3135834					1.4713	AVRG		8.7560
60)AM 4-Chlorophenylphenylethe		0.8758707	0.8568691	0.8147763	0.8478090	0.7740312				
	0.7585500	0.7591865					0.8124	AVRG		6.0444
61)AM p-Nitroaniline		0.3353412	0.3179497	0.3296608	0.3548115	0.3372435				
	0.3375788	0.3560966					0.3384	AVRG		3.9804
62)SA 2,4,6-Tribromophenol		0.1904067	0.2053629	0.2353427	0.2662638	0.2520939				
	0.2594561	0.2650643					0.2391	AVRG		12.6818
64)AM 2-Methyl-4,6-dinitrophen		7129	17372	51659	80372	109190		1/x^2		
-0.0195 | 0.1391 | 0.00	143815	170385						LINR	#	0.9908

Response Factor Report MSD5
GEL Laboratories, LLC

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Last Update : Wed Jul 11 08:32:38 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
65)AMC Diphenylamine		0.7250904	0.6977129	0.6748939	0.7031284	0.6485178				
	0.6316566	0.6142627					0.6708	AVRG		6.0739
66)AM 1,2-Diphenylhydrazine		0.8811337	0.8328185	0.7756423	0.7952994	0.7238246				
	0.6979352	0.6630034					0.7671	AVRG		10.0533
67)AM 4-Bromophenylphenylether		0.2744739	0.2764959	0.2704480	0.2946578	0.2733150				
	0.2696668	0.2643676					0.2748	AVRG		3.4959
68)AM Hexachlorobenzene		0.2898140	0.2803102	0.2787550	0.2893724	0.2726692				
	0.2725759	0.2718023					0.2793	AVRG		2.7681
69)AMC Pentachlorophenol		10042	22307	66774	97033	133713		1/x^2		
-0.0200 | 0.1678 | 0.00	174961	203685						LINR	#	0.9928
70)AM n-Octadecane		0.6572188	0.6373802	0.5832132	0.5965148	0.5208579				
	0.4916116	0.4697845					0.5652	AVRG		12.8126
71)A Dinoseb		10933	27047	83767	129879	177294		1/x^2		
-0.0331 | 0.2250 | 0.00	230222	273275						LINR	#	0.9903
72)AM Phenanthrene	1.0654175	1.1230412	1.1165562	1.0579141	1.1169403	1.0066086				
	0.9745095	0.9698140					1.0539	AVRG		6.0482
73)AM Anthracene	1.0680730	1.1862782	1.1736305	1.1223983	1.1568911	1.0580482				
	1.0224056	1.0174833					1.1007	AVRG		6.1630
74)AM Carbazole	0.9706510	1.0625236	1.0339323	1.0325039	1.0585346	0.9696743				
	0.9378627	0.9522300					1.0022	AVRG		4.9785
75)AM Di-n-butylphthalate	1.2832476	1.4094271	1.3579740	1.3014996	1.3342340	1.1834098				
	1.1196586	1.1308154					1.2650	AVRG		8.5426
76)AMC Fluoranthene	1.2768579	1.3658009	1.2949728	1.3066368	1.3316218	1.1881821				
	1.1351012	1.1961932					1.2619	AVRG		6.3399
78)AM Pyrene	1.5678888	1.7801118	1.8978793	1.5949834	1.7610683	1.5926184				
	1.5291093	1.3714291					1.6369	AVRG		10.1863
79)SA p-Terphenyl-d14		1.1616952	1.2075852	1.0859766	1.2035251	1.1026777				
	1.0613506	0.9737160					1.1138	AVRG		7.5486
80)AM Butylbenzylphthalate	0.5193384	0.6641841	0.6810190	0.6548330	0.7164119	0.6599445				
	0.6319434	0.6130774					0.6426	AVRG		9.1158

Response Factor Report MSD5
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Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
81)AM bis(2-Ethylhexyl)phthala	0.5668827	0.7008619	0.6795353	0.7310192	0.7605236	0.7370544				
	0.6877409	0.6949268					0.6948	AVRG		8.4447
82)AM Benzo(a)anthracene	1.3549590	1.3711059	1.3728626	1.3159710	1.3806641	1.2731666				
	1.2420161	1.2412567					1.3190	AVRG		4.5119
83)AM Chrysene	1.0587462	1.2100090	1.1854830	1.1667333	1.2235272	1.1423031				
	1.1317340	1.1372270					1.1570	AVRG		4.5079
84)A Methoxychlor		0.9110110	0.9504416	1.0015427	1.0609146	0.9978463				
	0.9598434	0.9735329					0.9793	AVRG		4.8271
85)A Methylenebis(2-chloroani		0.2580809	0.2473569	0.2724224	0.2824356	0.2673716				
	0.2722391	0.2833633					0.2690	AVRG		4.7969
86)AMC Di-n-octylphthalate	7265	88667	145941	477040	568550	782244		1/x^2		
-0.0119 | 1.2462 | 0.00	980164	1364398						LINR	#	0.9957
88)AM Benzo(b)fluoranthene	1.1938555	1.3573870	1.3855980	1.3221987	1.4058306	1.3153212				
	1.2704614	1.2397396					1.3113	AVRG		5.5666
89)AM Benzo(k)fluoranthene	1.1621091	1.3389302	1.3326744	1.2330335	1.3144053	1.2363137				
	1.1757961	1.1387718					1.2415	AVRG		6.4144
90)AMC Benzo(a)pyrene	1.0441941	1.2072341	1.2252579	1.2338058	1.2830100	1.1945693				
	1.1795435	1.1519495					1.1899	AVRG		5.9379
91)AM Indeno(1,2,3-cd)pyrene	0.8680087	0.8889778	0.8805098	1.0577833	0.8964575	0.8536744				
	0.9631781	0.9777988					0.9233	AVRG		7.5794
92)AM Dibenzo(a,h)anthracene	0.8190835	0.8722851	0.8807879	1.0096843	0.8745398	0.8344190				
	0.9165906	0.9185553					0.8907	AVRG		6.6551
93)AM Benzo(ghi)perylene	0.8332389	0.9115016	0.8943466	1.0526082	0.8680336	0.8425959				
	0.9521679	0.9577372					0.9140	AVRG		7.9227
94)A Dibenzo(a,e)pyrene		0.4913413	0.5190542	0.7620924	0.4923546	0.4972176				
	0.6067345	0.6765065					0.5779	AVRG	#	18.5920
96)BM 1,4-Dioxane		0.5745912	0.5451347	0.5211187	0.4945706	0.4866594				
	0.4786757	0.5050065	0.5165160	0.4776539			0.5111	AVRG		6.3388
97)B Methyl methacrylate		0.2940253	0.2664337	0.2556715	0.2499318	0.2503637				
	0.2401835	0.2615687	0.2587518	0.2370836			0.2571	AVRG		6.5356

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Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
98)B Ethyl methacrylate		1.3344529	1.3120261	1.2350233	1.0920496	1.1455564				
	1.1098930	1.0698891	1.2364829	1.0449490			1.1756	AVRG		9.0987
99)B 2-Picoline		1.6286989	1.6241420	1.5109294	1.4957793	1.4101672				
	1.3688795	1.3343835	1.5389115	1.4731761			1.4872	AVRG		6.9540
100)B N-Nitrosomethylethylamin		0.6802814	0.6552292	0.6368682	0.6383518	0.6116374				
	0.5952032	0.5944313	0.6425743	0.6181724			0.6303	AVRG		4.4846
101)B Methyl methanesulfonate		0.8522886	0.8135910	0.7982175	0.8017081	0.7289118				
	0.7239880	0.7065441	0.8172648	0.7894002			0.7813	AVRG		6.3611
102)B N-Nitrosodiethylamine		0.7045282	0.6637504	0.6647567	0.6578787	0.6350647				
	0.6253539	0.6242550	0.6714446	0.6473636			0.6549	AVRG		3.8865
103)B 2-Butoxyethanol		1.8900929	1.7668735	1.6517504	1.6122701	1.5080011				
	1.4806885	1.4561120	1.6910544	1.5833097			1.6267	AVRG		8.7045
104)B Ethyl methanesulfonate		1.1167226	1.0594635	1.0566581	1.0629546	0.9991404				
	0.9778667	0.9744038	1.0903166	1.0380972			1.0417	AVRG		4.7285
105)BM Benzaldehyde		1.3003506	1.1981258	1.1460535	1.1241891	0.9870754				
	0.9731849	0.8716917	1.1875976	1.0955200			1.0982	AVRG		12.0930
106)B Pentachloroethane		0.6139645	0.5766227	0.5572125	0.5517231	0.5266206				
	0.5186187	0.5130122	0.5605220	0.5389643			0.5508	AVRG		5.7345
107)BM N-Nitrosopyrrolidine		0.7253426	0.6956334	0.7132034	0.7133086	0.6507610				
	0.6404135	0.6202967	0.7280540	0.7065748			0.6882	AVRG		5.8379
108)BM Acetophenone		1.8499350	1.7030237	1.6507255	1.6366944	1.5616197				
	1.5299377	1.5490514	1.7020960	1.6076627			1.6434	AVRG		6.0657
109)B N-Nitrosomorpholine		0.8467479	0.7824021	0.7594805	0.7385532	0.6700280				
	0.6603223	0.6400417	0.7848912	0.7201748			0.7336	AVRG		9.2517
110)B o-Toluidine		2.0946088	1.9394414	1.8098152	1.7599064	1.6236885				
	1.5869087	1.5764746	1.8930281	1.7320495			1.7795	AVRG		9.8120
112)B N-Nitrosopiperidine		0.2097429	0.1985427	0.1949344	0.1925246	0.1912540				
	0.1860855	0.1952495	0.1968601	0.1911221			0.1951	AVRG		3.3793
113)B a,a-Dimethylphenethylami		1.2264878	1.2280201	1.2421478	1.2327848	1.1735107				
	1.1392318		1.2457986	1.2180062			1.2132	AVRG		3.0761

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Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
114)BM 2,6-Dichlorophenol		0.2656527	0.2627853	0.2727165	0.2708890	0.2704749				
	0.2644208	0.2811435	0.2711946	0.2726746			0.2702	AVRG		2.0388
115)B Hexachloropropene		0.2644202	0.2493458	0.2479044	0.2464544	0.2373884				
	0.2194076	0.2114982	0.2549028	0.2414564			0.2414	AVRG		6.9267
116)BM Caprolactam		0.1108823	0.1115896	0.1110214	0.1076599	0.1045293				
	0.1027613	0.1080565	0.1127066	0.1086546			0.1087	AVRG		3.0646
117)B N-Nitrosodi-n-butylamine		0.3504915	0.3352050	0.3256740	0.3147697	0.2658503				
	0.2616829	0.2695076	0.3308330	0.3129886			0.3074	AVRG		10.8188
118)B Safrole		0.3086034	0.2945341	0.2827861	0.2796307	0.2744382				
	0.2660386	0.2756109	0.2867872	0.2766816			0.2828	AVRG		4.4545
120)B 1,2,4,5-Tetrachlorobenze		0.7740290	0.7526527	0.7002819	0.6880951	0.6735250				
	0.6494022	0.6193230	0.7192496	0.6776398			0.6949	AVRG		6.9763
121)BM 1,1-Biphenyl		1.6878419	1.5657814	1.4066229	1.3778297	1.2951823				
	1.2540945	1.1796864	1.4861043	1.3656606			1.4021	AVRG		11.2838
122)B Isosafrole		0.6014633	0.5570545	0.5254402	0.5217436	0.5097853				
	0.4907516	0.4804643	0.5504508	0.5146948			0.5280	AVRG		7.0061
123)B 1,4-Naphthoquinone		0.5514360	0.5296694	0.4692810	0.4323230					
			0.5195880	0.4392548			0.4903	AVRG		10.2207
124)B Pentachlorobenzene		0.6230990	0.6104521	0.5749046	0.5710984	0.5614810				
	0.5521780	0.5413804	0.5984248	0.5724872			0.5784	AVRG		4.6838
125)B 1-Naphthylamine		1.3551969	1.2986254	1.2282042	1.1922830	1.1232576				
	1.0997396	1.0090517	1.3022019	1.2036173			1.2014	AVRG		9.1900
126)B 2-Naphthylamine		1.3580963	1.2841321	1.2161985	1.1801720	1.0977188				
	1.0920841	0.9858442	1.2931934	1.1830478			1.1878	AVRG		9.7969
127)B 5-Nitro-o-toluidine		0.3787062	0.3872669	0.3855848	0.3809502	0.3838134				
	0.3808799	0.3751806	0.3935739	0.3897282			0.3840	AVRG		1.4919
129)B 1,3,5-Trinitrobenzene		0.1327084	0.1546015	0.1744555	0.1671561	0.1706566				
	0.1625870	0.1789108	0.1666749	0.1754032			0.1648	AVRG		8.5465
130)B Phenacetin		0.3482667	0.3425447	0.3377960	0.3288222	0.3291919				
	0.3207393	0.3166702	0.3385075	0.3272018			0.3322	AVRG		3.1106

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Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
131)B Diallate		0.3400507	0.3221535	0.3023846	0.2891148	0.2731789				
	0.2628685	0.2530531	0.3035099	0.2835982			0.2922	AVRG		9.5704
132)B Cis Diallate		0.3643240	0.3550375	0.3411443	0.3401384	0.3261759				
	0.3173213	0.3160584	0.3300487	0.3266007			0.3352	AVRG		4.9126
133)B Trans Diallate		0.4000597	0.3790041	0.3557466	0.3401350	0.3213870				
	0.3092570	0.2977095	0.3570705	0.3336449			0.3438	AVRG		9.5704
134)BM Atrazine		0.2527554	0.2450765	0.2264661	0.2178836	0.1863612				
	0.1962571		0.2298933	0.2156831			0.2213	AVRG		10.1711
135)B 4-Aminobiphenyl		0.8654494	0.8072189	0.7687527	0.7446909	0.6828988				
	0.6623246		0.7920393	0.7356348			0.7574	AVRG		8.7454
136)B Pentachloronitrobenzene		0.1130154	0.1080764	0.1041660	0.1046555	0.1026918				
	0.1005549	0.1012878	0.1062258	0.1034759			0.1049	AVRG		3.6476
137)B Pronamide		0.3719178	0.3462375	0.3289313	0.3201387	0.3037471				
	0.2966023	0.2923316	0.3328958	0.3185390			0.3235	AVRG		7.8054
138)B 4-Nitroquinoline-1-oxide		0.0342510	0.0341779	0.0365365	0.0342459	0.0298002				
	0.0310394		0.0401505	0.0354661			0.0345	AVRG		9.2612
139)B Methapyrilene		0.6498535	0.6112761	0.5645094	0.5436917	0.4905314				
	0.4879662	0.4316955	0.6185538	0.5454202			0.5493	AVRG		12.8850
140)B Isodrin		0.1436681	0.1353388	0.1319791	0.1299915	0.1324826				
	0.1258232	0.1229259	0.1396846	0.1303345			0.1325	AVRG		4.8622
142)B Aramite		0.0788859	0.0825389	0.0766426	0.0772408	0.0723443				
	0.0669506	0.0626836	0.0762481	0.0724569			0.0740	AVRG		8.3057
143)B Kepone		0.1012368	0.1013975	0.0992957	0.0992258	0.0972842				
	0.0942403	0.0914866	0.0996662	0.0968615			0.0979	AVRG		3.3536
144)B p-(Dimethylamino)azobenz		0.3699192	0.3775249	0.3310581	0.3300842	0.3157260				
	0.2983423	0.2852776	0.3240695	0.3141946			0.3274	AVRG		9.2160
145)B Chlorobenzilate		0.3952959	0.3920293	0.3592078	0.3587523	0.3585145				
	0.3300447	0.3290179	0.3457767	0.3455834			0.3571	AVRG		6.6184
146)B 2-Acetylaminofluorene		0.3401443	0.3606292	0.4055639	0.4149559	0.3578913				
	0.4127399	0.4048257	0.4208039	0.4184031			0.3929	AVRG		7.8770

Response Factor Report MSD5
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Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	1 7	2 8	3 9	4 10	5	6	Avg	Curve	Exp	%RSD/r2
148)B 7,12-Dimethylbenz(a)anth		0.5883933	0.5997688	0.5586318	0.5466066	0.5892809				
	0.5276807	0.5170088	0.5407718	0.5367702			0.5561	AVRG		5.3540
149)B 3-Methylcholanthrene		0.1171464	0.1190853	0.1170709	0.1173129	0.1176356				
	0.1138679	0.1169242	0.1224123	0.1222241			0.1182	AVRG		2.2901
151)JM Benzidine		0.5513391	0.6875806	0.6679453	0.6460914	0.6546601				
		0.6527480					0.6434	AVRG		7.3728
153)JM 3,3'-Dimethylbenzidine		1.0926939	1.0598156	1.0277461	1.0562979	1.0307346				
		0.9673956					1.0391	AVRG		4.0688
154)JM 3,3'-Dichlorobenzidine		0.4230730	0.4617840	0.4575349	0.4556744	0.4574343				
		0.4532441					0.4515	AVRG		3.1418
156)D Triethylphosphorothioate		0.2203200	0.2163808	0.2076559	0.1991072	0.2040810				
	0.1988434	0.1919815					0.2055	AVRG		4.9175
158)D Thionazine		0.2233746	0.2359690	0.2267007	0.2272852	0.2227780				
	0.2189653	0.2110191					0.2237	AVRG		3.4457
159)DM Tributylphosphate		1.5888403	1.6607196	1.5486316	1.5305549	1.4624539				
	1.3852981	1.2999021					1.4966	AVRG		8.2534
161)D Sulfotepp		0.1509416	0.1434023	0.1465070	0.1437203	0.1456961				
	0.1434869	0.1451970					0.1456	AVRG		1.8251
162)D Phorate		0.5141796	0.5178775	0.5122595	0.4981033	0.4841139				
	0.4683083	0.4510598					0.4923	AVRG		5.1846
163)D Dimethoate		0.2644535	0.2920654	0.2935928	0.2936160	0.3014451				
	0.2982782	0.2952974					0.2912	AVRG		4.2040
164)D Disulfoton		0.4329156	0.4210526	0.4075654	0.3994521	0.3814502				
	0.3711606	0.3545357					0.3954	AVRG		7.0639
165)D Methyl parathion		0.2114405	0.2333634	0.2435293	0.2490904	0.2531592				
	0.2497647	0.2465438					0.2410	AVRG		6.0118
166)D Parathion		0.0821480	0.0897170	0.0859165	0.0921938	0.0939637				
	0.0915693	0.0929214					0.0898	AVRG		4.7602
168)D Famphur		0.5213542	0.5443491	0.5617231	0.5296033	0.5364720				
	0.5390369	0.5325034					0.5379	AVRG		2.3812

Response Factor Report MSD5
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Last Update : Wed Jul 11 08:32:38 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound	1	2	3	4	5	6	Avg	Curve	Exp	%RSD/r2
b | m1 | m2	7	8	9	10						
170)E p-Phenylenediamine		0.3999386	0.3693780	0.3622514	0.3496429	0.3450028				
	0.3300215						0.3594	AVRG		6.7207
172)E Hexachlorophene		240626	506220	815265	862716	1100649				
-0.8668 | 0.1321 | 0.00	973811							LINR	#	0.9950

(#) = Out of Range ($) = Individual RF Out of Range
AVRG = Average, LINR = Linear Regression, 1/x = the inverse of concentration, 1/x^2 = the inverse square of concentration

Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0923.D
Acq On : 09 Jul 2018 22:51
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-43|ICAL|1|SVM|1|BZ2
Misc : |MIX[J]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 11 07:49:13 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.759	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.274	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.750	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.759	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.274	15.269	1.000	0m	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.750	18.740	1.000	0m	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	521523	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.274	15.274	1.000	287279	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.274	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.750	18.788	1.000	0m	40.00	ng/uL	-0.04
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

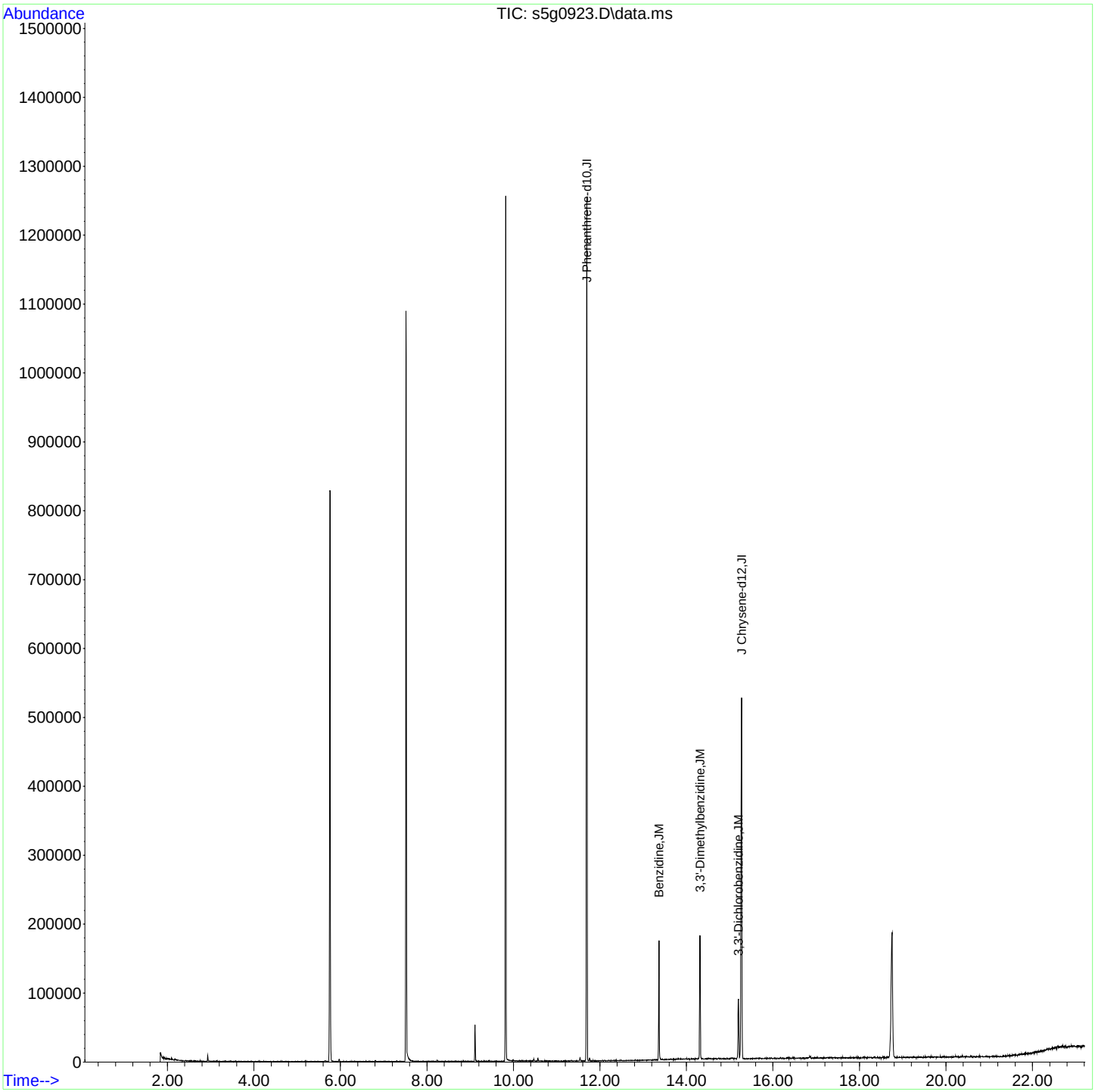
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
151) Benzidine	184	13.364	13.369	1.142	71884	8.25	ng/uL	99
153) 3,3'-Dimethylbenzidine	212	14.312	14.316	0.937	78477	10.63	ng/uL	99
154) 3,3'-Dichlorobenzidine	252	15.202	15.207	0.995	30385	9.25	ng/uL	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0923.D
Acq On : 09 Jul 2018 22:51
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-43|ICAL|1|SVM|1|BZ2
Misc : |MIX[J]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 11 07:49:13 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0924.D
Acq On : 09 Jul 2018 23:21
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-44|ICAL|1|SVM|1|BZ3
Misc : |MIX[J]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 11 07:49:17 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.274	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.755	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.274	15.269	1.000	0m	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.755	18.740	1.000	0m	40.00	ng/uL	0.01
150) J Phenanthrene-d10	188	11.697	11.697	1.000	480732	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.274	15.274	1.000	338340	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.274	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.755	18.788	1.000	0m	40.00	ng/uL	-0.03
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

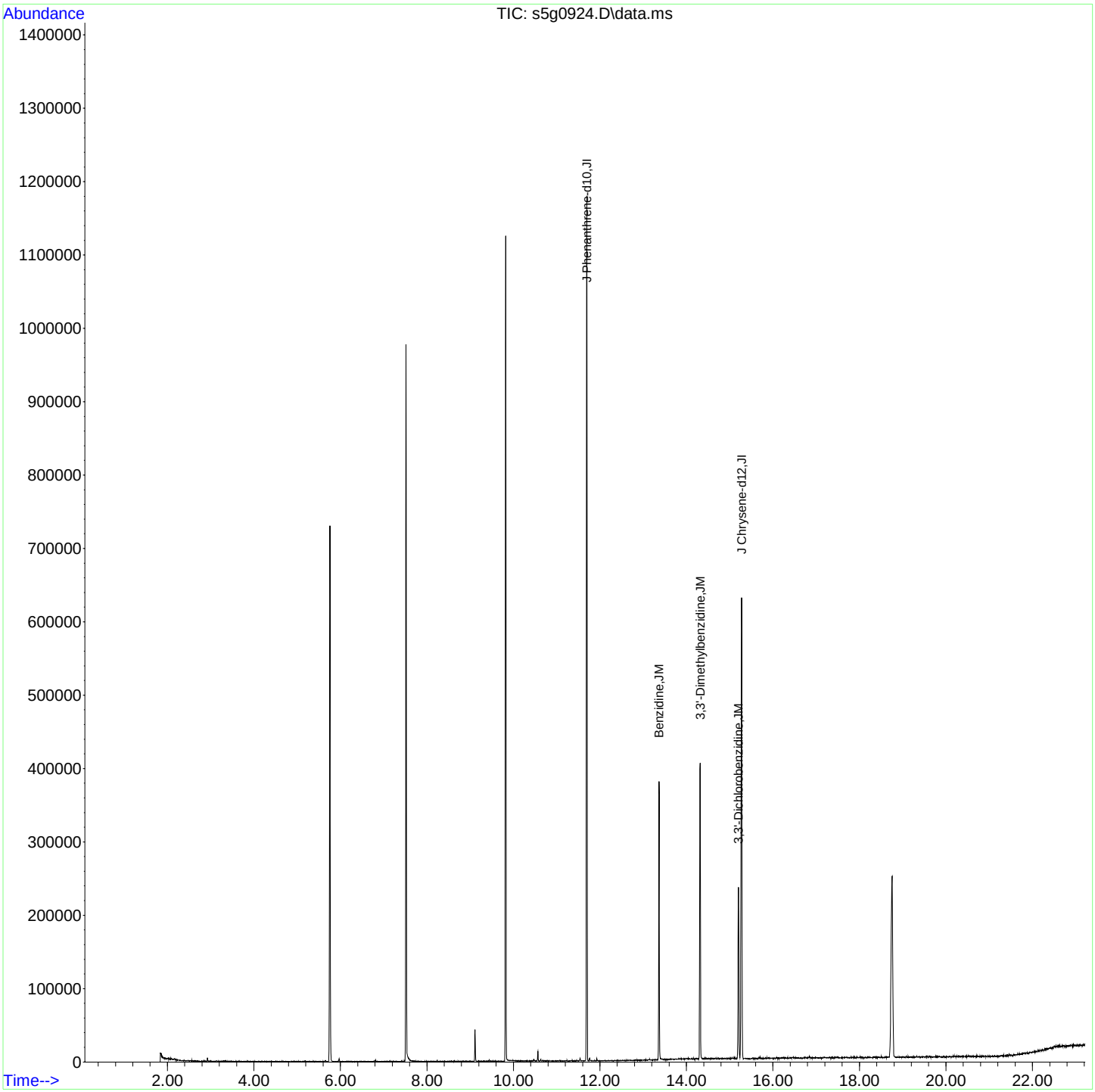
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
151) Benzidine	184	13.364	13.369	1.142	165271	20.59	ng/uL	99
153) 3,3'-Dimethylbenzidine	212	14.316	14.316	0.937	179289	20.62	ng/uL	100
154) 3,3'-Dichlorobenzidine	252	15.202	15.207	0.995	78120	20.19	ng/uL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0924.D
Acq On : 09 Jul 2018 23:21
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-44|ICAL|1|SVM|1|BZ3
Misc : |MIX[J]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 11 07:49:17 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0925.D
Acq On : 09 Jul 2018 23:51
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-45.1|ICAL|1|SVM|1|BZ4
Misc : |MIX[J]
ALS Vial : 15 Sample Multiplier: 1

07/11/2018

Quant Time: Jul 11 07:42:01 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:41:57 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.274	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.755	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.702	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.274	15.288	1.000	0m	40.00	ng/uL	-0.01
147) B Perylene-d12	264	18.755	18.764	1.000	0m	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	524769	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.274	15.274	1.000	349923	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
158) D Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
161) D Phenanthrene-d10	188	11.697	11.702	1.000	0m	40.00	ng/uL	0.00
168) D Chrysene-d12	240	15.274	15.288	1.000	0m	40.00	ng/uL	-0.01
170) E Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
172) E Perylene-d12	264	18.755	18.764	1.000	0m	40.00	ng/uL	0.00
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

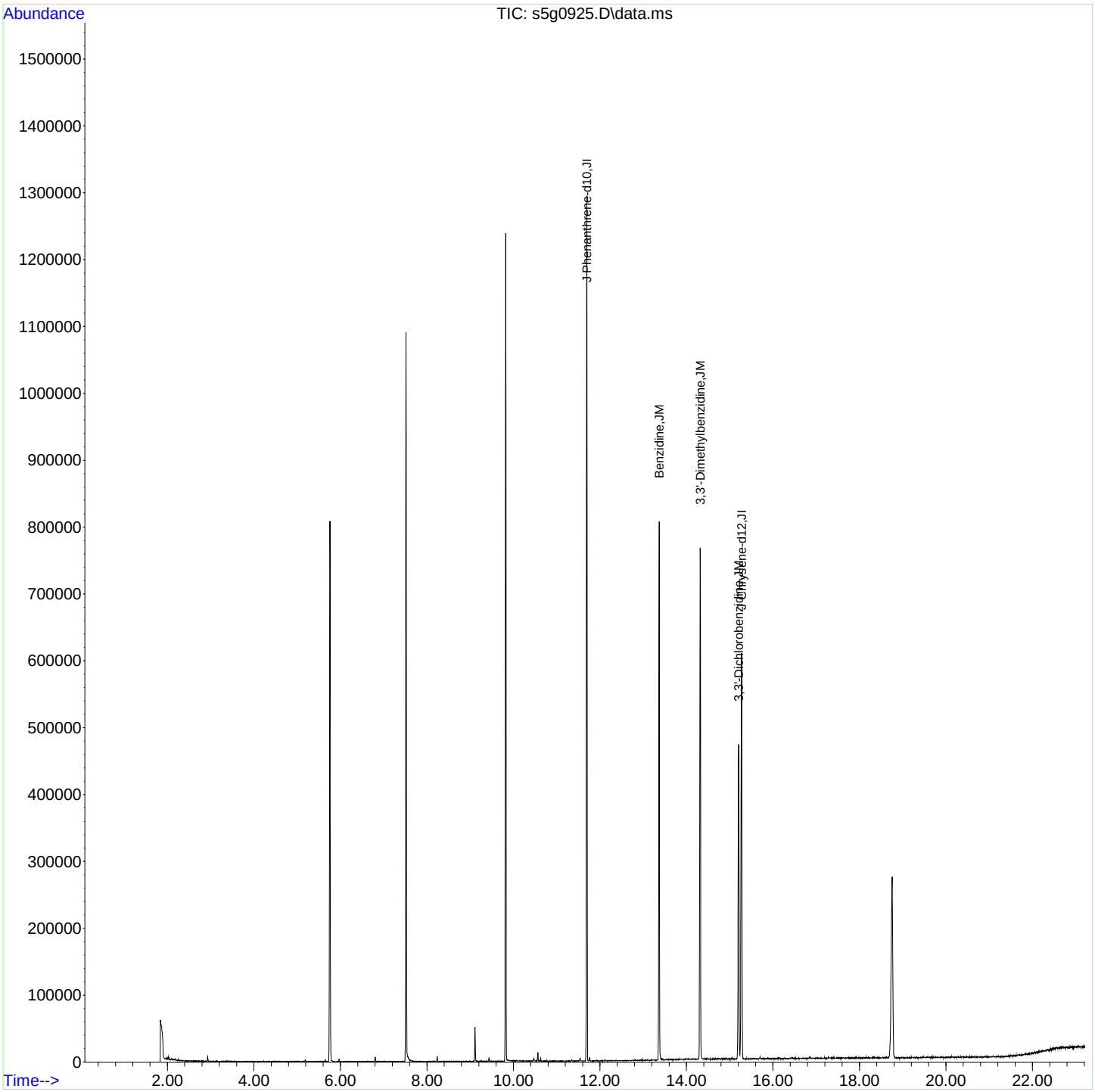
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
151) Benzidine	184	13.369	13.369	1.143	350517	40.00	ng/uL	100
153) 3,3'-Dimethylbenzidine	212	14.316	14.316	0.937	359632	40.00	ng/uL	100
154) 3,3'-Dichlorobenzidine	252	15.207	15.207	0.996	160102	40.00	ng/uL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0925.D
Acq On : 09 Jul 2018 23:51
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-45.1|ICAL|1|SVM|1|BZ4
Misc : |MIX[J]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 11 07:42:01 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:41:57 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0926.D
Acq On : 10 Jul 2018 00:21
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-46|ICAL|1|SVM|1|BZ5
Misc : |MIX[J]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 11 07:49:20 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.273	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.750	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.273	15.269	1.000	0m	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.750	18.740	1.000	0m	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	531292	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.273	15.274	1.000	330687	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.273	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.750	18.788	1.000	0m	40.00	ng/uL	-0.04
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

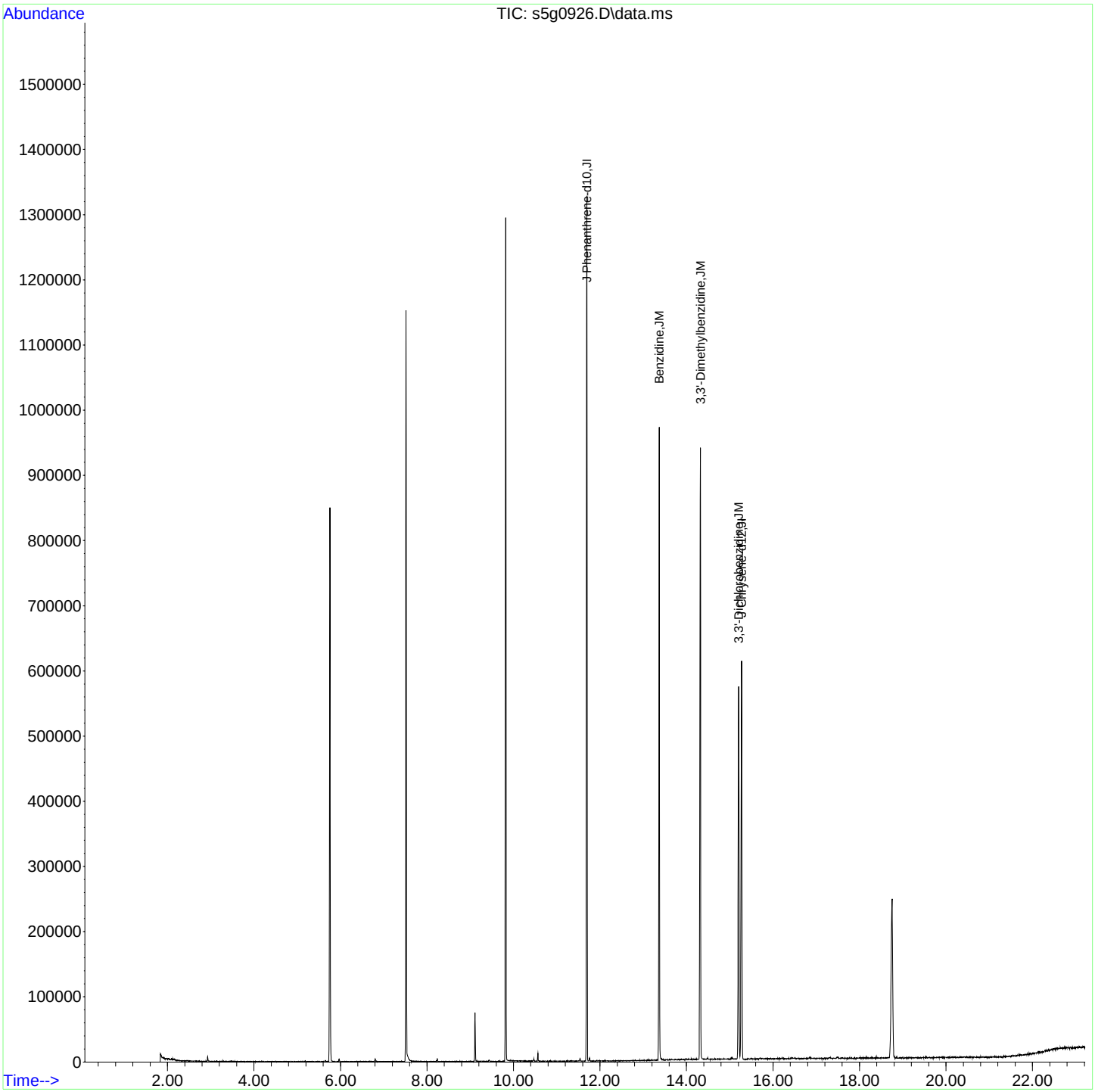
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
151) Benzidine	184	13.369	13.369	1.143	429079	48.36	ng/uL	99 A
153) 3,3'-Dimethylbenzidine	212	14.321	14.316	0.938	436630	51.39	ng/uL	100 A
154) 3,3'-Dichlorobenzidine	252	15.207	15.207	0.996	188357	49.80	ng/uL	98 A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0926.D
Acq On : 10 Jul 2018 00:21
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-46|ICAL|1|SVM|1|BZ5
Misc : |MIX[J]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 11 07:49:20 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0927.D
Acq On : 10 Jul 2018 00:51
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-47|ICAL|1|SVM|1|BZ6
Misc : |MIX[J]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 11 07:49:23 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.278	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.750	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.278	15.269	1.000	0m	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.750	18.740	1.000	0m	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	519730	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.278	15.274	1.000	332427	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.278	15.264	1.000	0m	40.00	ng/uL	0.01
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.750	18.788	1.000	0m	40.00	ng/uL	-0.04
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

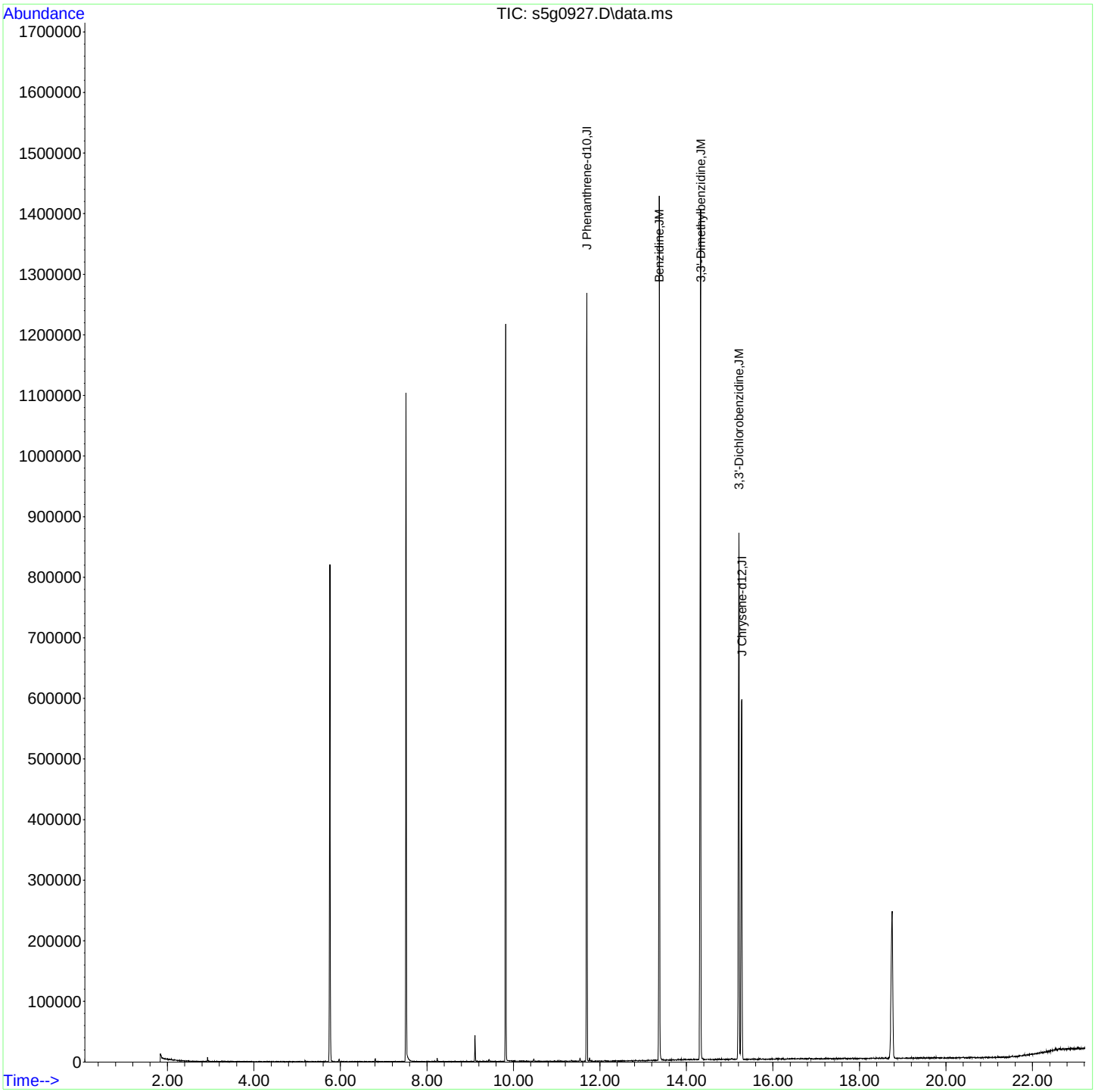
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
151) Benzidine	184	13.373	13.369	1.143	680493	78.41	ng/uL	99 A
153) 3,3'-Dimethylbenzidine	212	14.326	14.316	0.938	685288	80.23	ng/uL	99 A
154) 3,3'-Dichlorobenzidine	252	15.212	15.207	0.996	304127	79.98	ng/uL	98 A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0927.D
Acq On : 10 Jul 2018 00:51
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-47|ICAL|1|SVM|1|BZ6
Misc : |MIX[J]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 11 07:49:23 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0929.D
Acq On : 10 Jul 2018 01:52
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-49|ICAL|1|SVM|1|BZ8
Misc : |MIX[J]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 11 07:49:29 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.278	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.759	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.278	15.269	1.000	0m	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.759	18.740	1.000	0m	40.00	ng/uL	0.02
150) J Phenanthrene-d10	188	11.697	11.697	1.000	519495	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.278	15.274	1.000	360657	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.278	15.264	1.000	0m	40.00	ng/uL	0.01
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.759	18.788	1.000	0m	40.00	ng/uL	-0.03
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

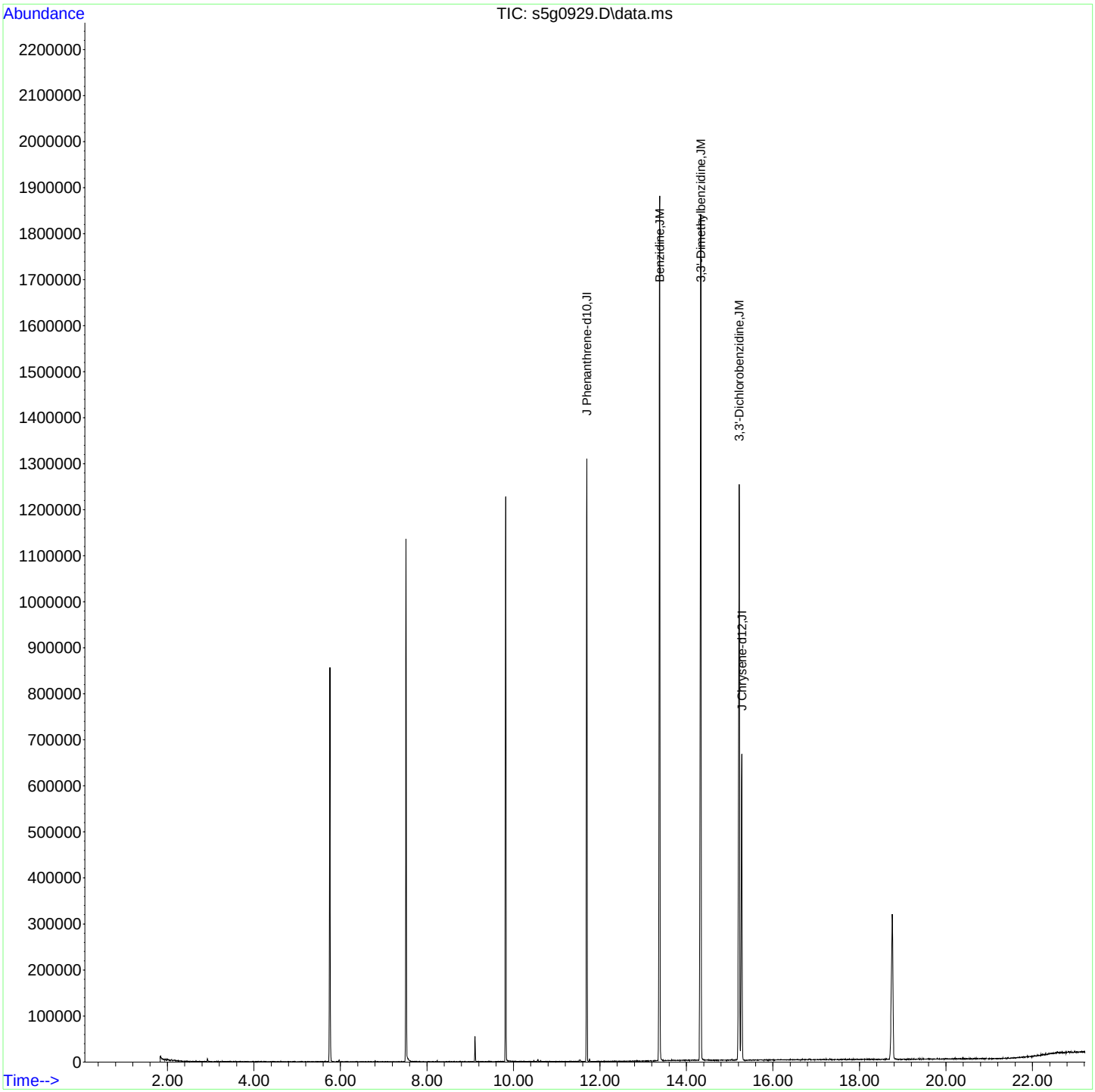
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
151) Benzidine	184	13.383	13.369	1.144	1017298	117.27	ng/uL	98 A
153) 3,3'-Dimethylbenzidine	212	14.331	14.316	0.938	1046694	112.95	ng/uL	99 A
154) 3,3'-Dichlorobenzidine	252	15.221	15.207	0.996	490397	118.87	ng/uL	97 A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0929.D
Acq On : 10 Jul 2018 01:52
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-49|ICAL|1|SVM|1|BZ8
Misc : |MIX[J]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 11 07:49:29 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: MSD5.I

Injection Date: 10-JUL-18 02:22

Data File: s070918.B\s5g0930.D

Init. Cal. Date(s) 09-JUL-18 22:51 - 11-JUL-18 03:17

Lab Sample ID WBN180518-50.4

Method: s070918.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD

Method Update: 11-JUL-18 08:32

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
3,3'-Dichlorobenzidine	0.4515	0.45597		.01		0.99003	30		Averaged

Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0930.D
Acq On : 10 Jul 2018 02:22
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-50.4|ICV|1|SVM|1|BZICV
Misc : |MIX[J]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 11 09:59:54 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	158877	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	524688	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	266589	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	502247	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.278	15.278	1.000	367935	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.755	18.755	1.000	295278	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	158877	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	524688	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	266589	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	502247	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.278	15.269	1.000	367935	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.755	18.740	1.000	295278	40.00	ng/uL	0.01
150) J Phenanthrene-d10	188	11.697	11.697	1.000	502247	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.278	15.274	1.000	367935	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	524688	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	266589	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	502247	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.278	15.264	1.000	367935	40.00	ng/uL	0.01
169) E Naphthalene-d8	136	7.516	7.516	1.000	524688	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.755	18.788	1.000	295278	40.00	ng/uL	-0.03
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

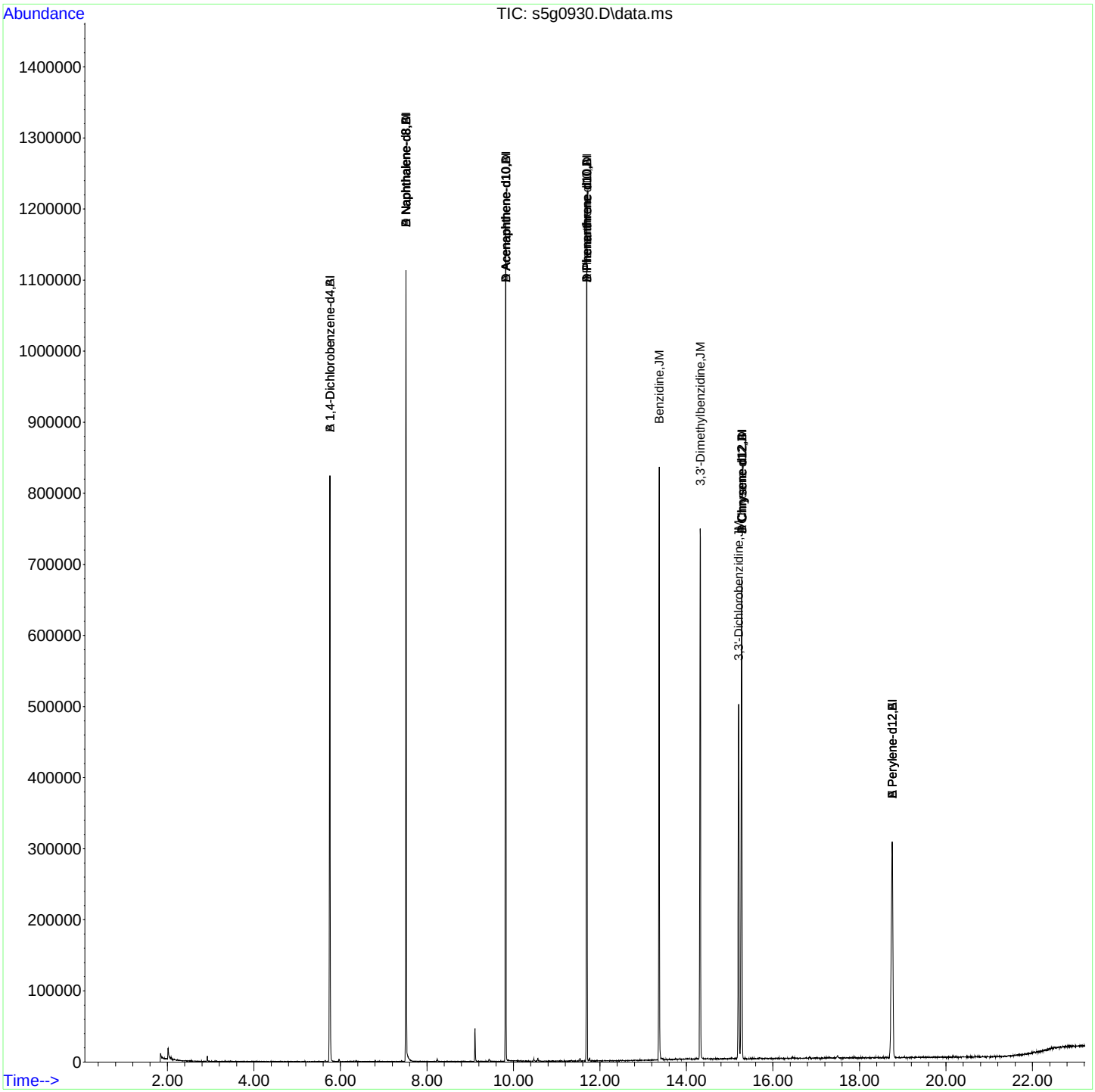
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
151) Benzidine	184	13.369	13.369	1.143	354575	43.89	ng/uL	99
153) 3,3'-Dimethylbenzidine	212	14.317	14.316	0.937	349489	36.56	ng/uL	100
154) 3,3'-Dichlorobenzidine	252	15.207	15.207	0.995	167769	40.40	ng/uL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0930.D
Acq On : 10 Jul 2018 02:22
Operator : JLD1
InstName : MSD5
Sample : |WBN180518-50.4|ICV|1|SVM|1|BZICV
Misc : |MIX[J]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 11 09:59:54 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0933.D
Acq On : 10 Jul 2018 10:36
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-08.1|ICAL|1|SVM|1|M1
Misc : |MIX[A]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 11 08:17:42 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	143722	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	488046	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	253839	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.693	11.697	1.000	482027	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.274	15.278	1.000	372705	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.755	18.755	1.000	291057	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.693	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.274	15.269	1.000	0m	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.755	18.740	1.000	0m	40.00	ng/uL	0.01
150) J Phenanthrene-d10	188	11.693	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.274	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.693	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.274	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.755	18.788	1.000	0m	40.00	ng/uL	-0.03
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.021	4.026	0.699	4193	0.84	ng/uL	0.00
7) Phenol-d5	99	5.188	5.202	0.902	5658	0.87	ng/uL	-0.01
22) Nitrobenzene-d5	82	6.521	6.535	0.868	5256	1.00	ng/uL	-0.01
43) 2-Fluorobiphenyl	172	8.945	8.950	0.911	9816	1.02	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.812	10.816	1.101	811	0.53	ng/uL	0.00
79) p-Terphenyl-d14	244	13.674	13.674	0.895	9757	0.94	ng/uL	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
3) N-Methyl-N-nitrosometh...	74	2.654	2.645	0.461	2618	0.71	ng/uL	96
32) Naphthalene	128	7.545	7.550	1.004	12224	1.00	ng/uL	99
36) 2-Methylnaphthalene	142	8.469	8.473	1.127	9412	0.98	ng/uL	96
37) 1-Methylnaphthalene	142	8.597	8.602	1.144	9131	1.04	ng/uL	97
44) 2-Chloronaphthalene	162	9.102	9.107	0.927	8930	1.06	ng/uL	97
48) Dimethylphthalate	163	9.464	9.483	0.964	9869	1.02	ng/uL	99
52) Acenaphthylene	152	9.635	9.645	0.981	13278	1.07	ng/uL	96
53) Acenaphthene	154	9.859	9.869	1.004	7109	0.96	ng/uL	98
57) Diethylphthalate	149	10.359	10.369	1.055	9657	1.00	ng/uL	99
59) Fluorene	166	10.512	10.521	1.070	10097	1.08	ng/uL	95
72) Phenanthrene	178	11.721	11.726	1.002	12839	1.01	ng/uL	95
73) Anthracene	178	11.783	11.793	1.008	12871	0.97	ng/uL	97
74) Carbazole	167	11.978	11.988	1.024	11697	0.97	ng/uL	97
75) Di-n-butylphthalate	149	12.407	12.407	1.061	15464	1.01	ng/uL	95
76) Fluoranthene	202	13.202	13.207	1.129	15387	1.01	ng/uL	96
78) Pyrene	202	13.488	13.493	0.883	14609	0.96	ng/uL	98
80) Butylbenzylphthalate	149	14.326	14.326	0.938	4839	0.81	ng/uL	91
81) bis(2-Ethylhexyl)phtha...	149	15.297	15.293	1.002	5282	0.82	ng/uL	91
82) Benzo(a)anthracene	228	15.250	15.255	0.998	12625	1.03	ng/uL	97
83) Chrysene	228	15.316	15.326	1.003	9865	0.92	ng/uL	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0933.D
Acq On : 10 Jul 2018 10:36
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-08.1|ICAL|1|SVM|1|M1
Misc : |MIX[A]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 11 08:17:42 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE

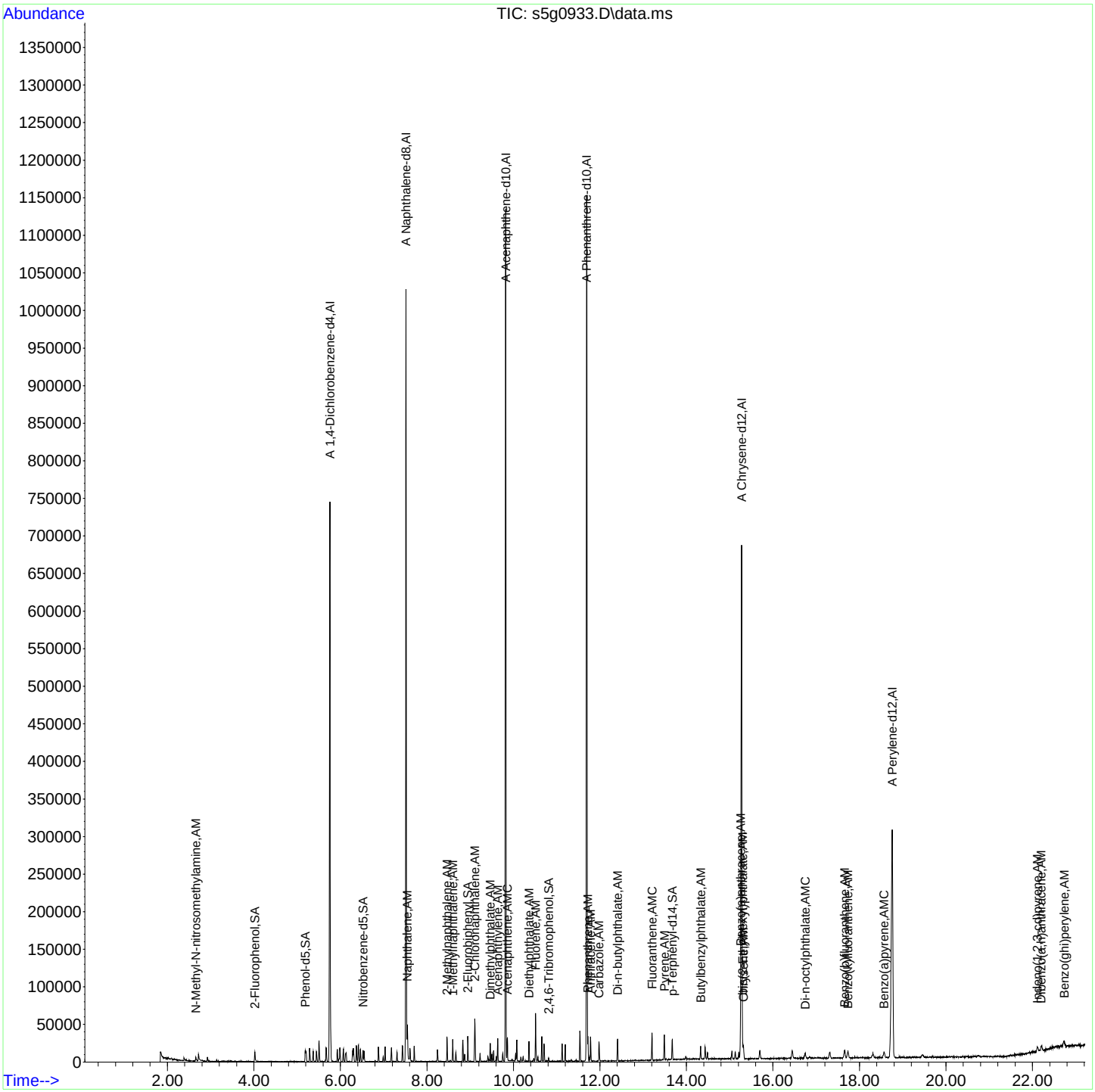
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
86) Di-n-octylphthalate	149	16.745	16.745	1.096	7265	1.01	ng/uL	99
88) Benzo(b)fluoranthene	252	17.655	17.669	0.941	8687	0.91	ng/uL	99
89) Benzo(k)fluoranthene	252	17.731	17.750	0.945	8456	0.94	ng/uL	92
90) Benzo(a)pyrene	252	18.569	18.583	0.990	7598	0.88	ng/uL#	88
91) Indeno(1,2,3-cd)pyrene	276	22.112	22.140	1.179	6316	0.94	ng/uL	96
92) Dibenzo(a,h)anthracene	278	22.202	22.221	1.184	5960	0.92	ng/uL#	70
93) Benzo(ghi)perylene	276	22.736	22.750	1.212	6063	0.91	ng/uL	81

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0933.D
Acq On : 10 Jul 2018 10:36
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-08.1|ICAL|1|SVM|1|M1
Misc : |MIX[A]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 11 08:17:42 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/12/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0934.D
Acq On : 10 Jul 2018 11:06
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-07.1|ICAL|1|SVM|1|M2
Misc : |MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 11 08:17:52 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	120160	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	397251	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	216484	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	417730	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.274	15.278	1.000	314196	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.755	18.755	1.000	244897	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.274	15.269	1.000	0m	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.755	18.740	1.000	0m	40.00	ng/uL	0.01
150) J Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.274	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.274	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.755	18.788	1.000	0m	40.00	ng/uL	-0.03
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.021	4.026	0.699	42722	10.18	ng/uL	0.00
7) Phenol-d5	99	5.192	5.202	0.902	55033	10.13	ng/uL	0.00
22) Nitrobenzene-d5	82	6.526	6.535	0.868	45988	10.75	ng/uL	0.00
43) 2-Fluorobiphenyl	172	8.945	8.950	0.911	91890	11.15	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.812	10.816	1.101	10305	7.96	ng/uL	0.00
79) p-Terphenyl-d14	244	13.674	13.674	0.895	91250	10.43	ng/uL	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) 2-Ethoxyethanol	59	2.364	2.369	0.411	33279	10.07	ng/uL	95
3) N-Methyl-N-nitrosometh...	74	2.640	2.645	0.459	32747	10.59	ng/uL	95
4) Pyridine	79	2.692	2.688	0.468	55727	10.72	ng/uL	97
6) Aniline	93	5.292	5.302	0.920	73139	10.97	ng/uL	100
8) Phenol	94	5.211	5.221	0.906	57048	10.84	ng/uL	99
9) bis(2-Chloroethyl) ether	93	5.369	5.378	0.933	46921	11.13	ng/uL	100
10) 2-Chlorophenol	128	5.450	5.454	0.947	44433	10.71	ng/uL	99
11) n-Decane	43	5.507	5.512	0.957	58989	11.99	ng/uL	100
12) 1,3-Dichlorobenzene	146	5.673	5.678	0.986	49730	10.92	ng/uL	98
13) 1,4-Dichlorobenzene	146	5.778	5.783	1.004	45217	10.54	ng/uL	96
14) 1,2-Dichlorobenzene	146	5.988	5.992	1.041	43880	10.52	ng/uL	99
15) bis(2-Chloro-1-methyle...	45	6.126	6.135	1.065	82001	11.32	ng/uL	99
16) Benzyl alcohol	108	5.931	5.940	1.031	29435	10.42	ng/uL	97
17) o-Cresol	107	6.069	6.078	1.055	33583	10.34	ng/uL	98
18) m,p-Cresols	107	6.288	6.307	1.093	45338	10.35	ng/uL	99
19) N-Nitrosodipropylamine	70	6.311	6.331	1.097	33927	10.64	ng/uL	96
20) Hexachloroethane	117	6.464	6.469	1.123	19135	10.95	ng/uL	100
23) Nitrobenzene	77	6.550	6.564	0.871	46020	11.01	ng/uL	99
24) Isophorone	82	6.883	6.892	0.916	90992	10.77	ng/uL	99
25) 2-Nitrophenol	139	6.988	6.997	0.930	17835	9.02	ng/uL	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0934.D
Acq On : 10 Jul 2018 11:06
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-07.1|ICAL|1|SVM|1|M2
Misc : |MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 11 08:17:52 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
26)	2,4-Dimethylphenol	122	7.035	7.040	0.936	36970	10.74	ng/uL	98
27)	bis(2-Chloroethoxy)met...	93	7.178	7.188	0.955	55146	11.35	ng/uL	96
28)	2,4-Dichlorophenol	162	7.312	7.316	0.973	35061	10.24	ng/uL	99
30)	1,2,4-Trichlorobenzene	180	7.435	7.440	0.989	42445	10.95	ng/uL	99
31)	alpha-Terpineol	59	7.554	7.564	1.005	40008	11.29	ng/uL	98
32)	Naphthalene	128	7.545	7.550	1.004	111954	11.22	ng/uL	98
33)	4-Chloroaniline	127	7.612	7.621	1.013	47359	10.72	ng/uL	100
34)	Hexachlorobutadiene	225	7.707	7.712	1.025	26344	10.45	ng/uL	98
35)	4-Chloro-3-methylphenol	107	8.245	8.250	1.097	34739	10.06	ng/uL	99
36)	2-Methylnaphthalene	142	8.469	8.473	1.127	85870	10.98	ng/uL	100
37)	1-Methylnaphthalene	142	8.597	8.602	1.144	79504	11.18	ng/uL	99
39)	Hexachlorocyclopentadiene	237	8.669	8.673	0.883	23762	9.02	ng/uL	98
40)	2,3-Dichloroaniline	161	8.831	8.840	0.899	42493	11.05	ng/uL	100
41)	2,4,6-Trichlorophenol	196	8.831	8.835	0.899	22845	9.26	ng/uL	99
42)	2,4,5-Trichlorophenol	196	8.869	8.873	0.903	25511	9.74	ng/uL	98
44)	2-Chloronaphthalene	162	9.102	9.107	0.927	79011	11.03	ng/uL	98
45)	o-Nitroaniline	65	9.231	9.235	0.940	22947	9.98	ng/uL	99
46)	1,4-Dinitrobenzene	168	9.412	9.421	0.958	11978	8.75	ng/uL	95
47)	m-Nitroaniline	138	9.754	9.769	0.993	19949	10.08	ng/uL	97
48)	Dimethylphthalate	163	9.469	9.483	0.964	89953	10.94	ng/uL	98
49)	m-Dinitrobenzene	168	9.502	9.516	0.968	14886	10.10	ng/uL	98
50)	2,6-Dinitrotoluene	165	9.545	9.554	0.972	20156	10.41	ng/uL	97
51)	2,4-Dinitrotoluene	165	10.054	10.064	1.024	25551	9.89	ng/uL	86
52)	Acenaphthylene	152	9.635	9.645	0.981	119217	11.30	ng/uL	99
53)	Acenaphthene	154	9.859	9.869	1.004	67846	10.71	ng/uL	100
55)	Dibenzofuran	168	10.078	10.083	1.026	108498	11.29	ng/uL	100
56)	2,3,4,6-Tetrachlorophenol	232	10.226	10.231	1.041	19139	8.57	ng/uL	98
57)	Diethylphthalate	149	10.364	10.369	1.055	90296	10.93	ng/uL	99
58)	4-Nitrophenol	139	9.950	9.959	1.013	10425	7.44	ng/uL	94
59)	Fluorene	166	10.512	10.521	1.070	89139	11.19	ng/uL	100
60)	4-Chlorophenylphenylether	204	10.512	10.516	1.070	47403	10.78	ng/uL	98
61)	p-Nitroaniline	138	10.526	10.545	1.072	18149	9.91	ng/uL	98
64)	2-Methyl-4,6-dinitroph...	198	10.564	10.578	0.903	7129	10.52	ng/uL	96
65)	Diphenylamine	169	10.654	10.664	0.911	75723	10.81	ng/uL	99
66)	1,2-Diphenylhydrazine	77	10.712	10.716	0.916	92019	11.49	ng/uL	98
67)	4-Bromophenylphenylether	248	11.126	11.131	0.951	28664	9.99	ng/uL	99
68)	Hexachlorobenzene	284	11.197	11.202	0.957	30266	10.38	ng/uL	100
69)	Pentachlorophenol	266	11.440	11.445	0.978	10042	10.49	ng/uL	96
70)	n-Octadecane	57	11.540	11.540	0.987	68635	11.63	ng/uL	97
71)	Dinoseb	211	11.669	11.674	0.998	10933	10.54	ng/uL	98
72)	Phenanthrene	178	11.721	11.726	1.002	117282	10.66	ng/uL	99
73)	Anthracene	178	11.788	11.793	1.008	123886	10.78	ng/uL	98
74)	Carbazole	167	11.983	11.988	1.024	110962	10.60	ng/uL	99
75)	Di-n-butylphthalate	149	12.407	12.407	1.061	147190	11.14	ng/uL	98
76)	Fluoranthene	202	13.202	13.207	1.129	142634	10.82	ng/uL	99
78)	Pyrene	202	13.488	13.493	0.883	139826	10.87	ng/uL	99
80)	Butylbenzylphthalate	149	14.326	14.326	0.938	52171	10.34	ng/uL	100
81)	bis(2-Ethylhexyl)phtha...	149	15.293	15.293	1.001	55052	10.09	ng/uL	100
82)	Benzo(a)anthracene	228	15.250	15.255	0.998	107699	10.40	ng/uL	99
83)	Chrysene	228	15.316	15.326	1.003	95045	10.46	ng/uL	98
84)	Methoxychlor	227	15.131	15.135	0.991	71559	9.30	ng/uL	99
85)	Methylenebis(2-chloroa...	231	15.212	15.216	0.996	20272	9.59	ng/uL	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0934.D
Acq On : 10 Jul 2018 11:06
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-07.1|ICAL|1|SVM|1|M2
Misc : |MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 11 08:17:52 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE

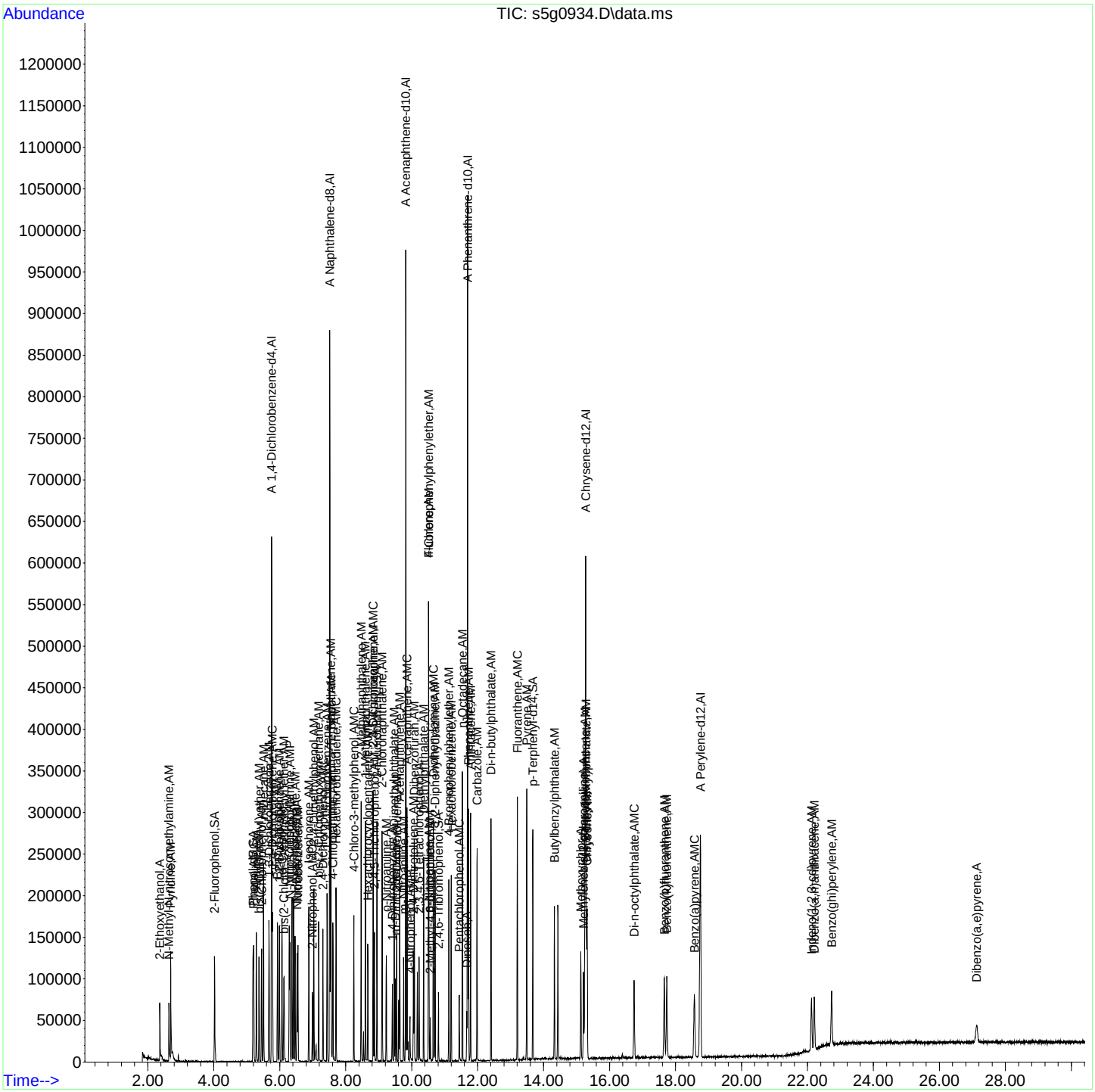
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
86)	Di-n-octylphthalate	149	16.745	16.745	1.096	88667	9.44	ng/uL	99
88)	Benzo(b)fluoranthene	252	17.659	17.669	0.942	83105	10.35	ng/uL	98
89)	Benzo(k)fluoranthene	252	17.735	17.750	0.946	81975	10.78	ng/uL	99
90)	Benzo(a)pyrene	252	18.574	18.583	0.990	73912	10.15	ng/uL	98
91)	Indeno(1,2,3-cd)pyrene	276	22.121	22.140	1.180	54427	9.63	ng/uL	99
92)	Dibenzo(a,h)anthracene	278	22.207	22.221	1.184	53405	9.79	ng/uL	90
93)	Benzo(ghi)perylene	276	22.731	22.750	1.212	55806	9.97	ng/uL	99
94)	Dibenzo(a,e)pyrene	302	27.126	27.159	1.446	30082	8.50	ng/uL	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0934.D
Acq On : 10 Jul 2018 11:06
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-07.1|ICAL|1|SVM|1|M2
Misc : |MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 11 08:17:52 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/12/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0935.D
Acq On : 10 Jul 2018 11:44
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-06.1|ICAL|1|SVM|1|M3
Misc : |MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 11 08:18:30 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	117667	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	400566	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	215034	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.692	11.697	1.000	413706	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.273	15.278	1.000	273637	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.745	18.755	1.000	201347	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.692	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.273	15.269	1.000	0m	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.745	18.740	1.000	0m	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.692	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.273	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.692	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.273	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.745	18.788	1.000	0m	40.00	ng/uL	-0.04
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.026	4.026	0.700	84011	20.44	ng/uL	0.00
7) Phenol-d5	99	5.192	5.202	0.902	110836	20.84	ng/uL	0.00
22) Nitrobenzene-d5	82	6.526	6.535	0.868	89754	20.80	ng/uL	0.00
43) 2-Fluorobiphenyl	172	8.950	8.950	0.911	175598	21.46	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.816	10.816	1.101	22080	17.18	ng/uL	0.00
79) p-Terphenyl-d14	244	13.673	13.674	0.895	165220	21.68	ng/uL	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) 2-Ethoxyethanol	59	2.364	2.369	0.411	67589	20.88	ng/uL	95
3) N-Methyl-N-nitrosometh...	74	2.640	2.645	0.459	65720	21.70	ng/uL	98
4) Pyridine	79	2.688	2.688	0.467	107482	21.11	ng/uL	96
6) Aniline	93	5.292	5.302	0.920	138413	21.20	ng/uL	99
8) Phenol	94	5.211	5.221	0.906	111527	21.64	ng/uL	99
9) bis(2-Chloroethyl) ether	93	5.373	5.378	0.934	88178	21.36	ng/uL	98
10) 2-Chlorophenol	128	5.450	5.454	0.947	85981	21.16	ng/uL	99
11) n-Decane	43	5.507	5.512	0.957	111322	23.11	ng/uL	99
12) 1,3-Dichlorobenzene	146	5.673	5.678	0.986	94783	21.25	ng/uL	99
13) 1,4-Dichlorobenzene	146	5.778	5.783	1.004	87339	20.79	ng/uL	99
14) 1,2-Dichlorobenzene	146	5.988	5.992	1.041	86917	21.27	ng/uL	99
15) bis(2-Chloro-1-methyle...	45	6.130	6.135	1.065	153908	21.70	ng/uL	100
16) Benzyl alcohol	108	5.935	5.940	1.031	55616	20.11	ng/uL	97
17) o-Cresol	107	6.073	6.078	1.055	66657	20.96	ng/uL	99
18) m,p-Cresols	107	6.292	6.307	1.094	89466	20.86	ng/uL	100
19) N-Nitrosodipropylamine	70	6.316	6.331	1.098	66728	21.38	ng/uL	98
20) Hexachloroethane	117	6.464	6.469	1.123	36347	21.25	ng/uL	99
23) Nitrobenzene	77	6.554	6.564	0.872	91121	21.62	ng/uL	98
24) Isophorone	82	6.883	6.892	0.916	176942	20.76	ng/uL	98
25) 2-Nitrophenol	139	6.992	6.997	0.930	39058	19.58	ng/uL	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0935.D
Acq On : 10 Jul 2018 11:44
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-06.1|ICAL|1|SVM|1|M3
Misc : |MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 11 08:18:30 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
26)	2,4-Dimethylphenol	122	7.035	7.040	0.936	73877	21.28	ng/uL	99
27)	bis(2-Chloroethoxy)met...	93	7.183	7.188	0.956	103997	21.23	ng/uL	97
28)	2,4-Dichlorophenol	162	7.311	7.316	0.973	70570	20.43	ng/uL	99
29)	Benzoic acid	105	7.130	7.188	0.949	24256	19.60	ng/uL#	97
30)	1,2,4-Trichlorobenzene	180	7.435	7.440	0.989	82705	21.15	ng/uL	99
31)	alpha-Terpineol	59	7.554	7.564	1.005	77248	21.62	ng/uL	99
32)	Naphthalene	128	7.545	7.550	1.004	216869	21.55	ng/uL	99
33)	4-Chloroaniline	127	7.611	7.621	1.013	91892	20.62	ng/uL	100
34)	Hexachlorobutadiene	225	7.707	7.712	1.025	52121	20.51	ng/uL	98
35)	4-Chloro-3-methylphenol	107	8.245	8.250	1.097	70930	20.37	ng/uL	99
36)	2-Methylnaphthalene	142	8.469	8.473	1.127	166263	21.08	ng/uL	98
37)	1-Methylnaphthalene	142	8.597	8.602	1.144	150707	21.01	ng/uL	98
39)	Hexachlorocyclopentadiene	237	8.669	8.673	0.883	49969	19.09	ng/uL	97
40)	2,3-Dichloroaniline	161	8.835	8.840	0.900	82202	21.51	ng/uL	99
41)	2,4,6-Trichlorophenol	196	8.831	8.835	0.899	49171	20.06	ng/uL	97
42)	2,4,5-Trichlorophenol	196	8.869	8.873	0.903	52427	20.15	ng/uL	99
44)	2-Chloronaphthalene	162	9.102	9.107	0.927	151183	21.25	ng/uL	99
45)	o-Nitroaniline	65	9.231	9.235	0.940	46646	20.43	ng/uL	99
46)	1,4-Dinitrobenzene	168	9.416	9.421	0.959	25304	18.61	ng/uL	99
47)	m-Nitroaniline	138	9.759	9.769	0.994	38221	19.45	ng/uL	96
48)	Dimethylphthalate	163	9.473	9.483	0.965	175339	21.48	ng/uL	98
49)	m-Dinitrobenzene	168	9.507	9.516	0.968	28350	19.36	ng/uL	95
50)	2,6-Dinitrotoluene	165	9.550	9.554	0.972	39515	20.54	ng/uL	97
51)	2,4-Dinitrotoluene	165	10.054	10.064	1.024	51222	19.97	ng/uL	89
52)	Acenaphthylene	152	9.640	9.645	0.982	226586	21.63	ng/uL	99
53)	Acenaphthene	154	9.859	9.869	1.004	134797	21.42	ng/uL	97
54)	2,4-Dinitrophenol	184	9.888	9.893	1.007	10442	20.04	ng/uL#	1
55)	Dibenzofuran	168	10.078	10.083	1.026	206361	21.61	ng/uL	100
56)	2,3,4,6-Tetrachlorophenol	232	10.226	10.231	1.041	39880	17.99	ng/uL	99
57)	Diethylphthalate	149	10.364	10.369	1.055	175180	21.35	ng/uL	99
58)	4-Nitrophenol	139	9.950	9.959	1.013	23485	16.88	ng/uL	97
59)	Fluorene	166	10.516	10.521	1.071	169152	21.39	ng/uL	99
60)	4-Chlorophenylphenylether	204	10.512	10.516	1.070	92128	21.09	ng/uL	98
61)	p-Nitroaniline	138	10.531	10.545	1.072	34185	18.79	ng/uL	98
64)	2-Methyl-4,6-dinitroph...	198	10.564	10.578	0.903	17372	17.69	ng/uL	96
65)	Diphenylamine	169	10.659	10.664	0.912	144324	20.80	ng/uL	99
66)	1,2-Diphenylhydrazine	77	10.711	10.716	0.916	172271	21.71	ng/uL	97
67)	4-Bromophenylphenylether	248	11.126	11.131	0.952	57194	20.13	ng/uL	98
68)	Hexachlorobenzene	284	11.197	11.202	0.958	57983	20.07	ng/uL	98
69)	Pentachlorophenol	266	11.440	11.445	0.978	22307	17.62	ng/uL	97
70)	n-Octadecane	57	11.535	11.540	0.987	131844	22.55	ng/uL	98
71)	Dinoseb	211	11.669	11.674	0.998	27047	17.51	ng/uL	99
72)	Phenanthrene	178	11.721	11.726	1.002	230963	21.19	ng/uL	99
73)	Anthracene	178	11.788	11.793	1.008	242769	21.33	ng/uL	98
74)	Carbazole	167	11.983	11.988	1.025	213872	20.63	ng/uL	98
75)	Di-n-butylphthalate	149	12.407	12.407	1.061	280901	21.47	ng/uL	99
76)	Fluoranthene	202	13.202	13.207	1.129	267869	20.52	ng/uL	98
78)	Pyrene	202	13.488	13.493	0.883	259665	23.19	ng/uL	99
80)	Butylbenzylphthalate	149	14.326	14.326	0.938	93176	21.20	ng/uL	98
81)	bis(2-Ethylhexyl)phtha...	149	15.293	15.293	1.001	92973	19.56	ng/uL	99
82)	Benzo(a)anthracene	228	15.250	15.255	0.998	187833	20.82	ng/uL	99
83)	Chrysene	228	15.316	15.326	1.003	162196	20.49	ng/uL	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0935.D
Acq On : 10 Jul 2018 11:44
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-06.1|ICAL|1|SVM|1|M3
Misc : |MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 11 08:18:30 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE

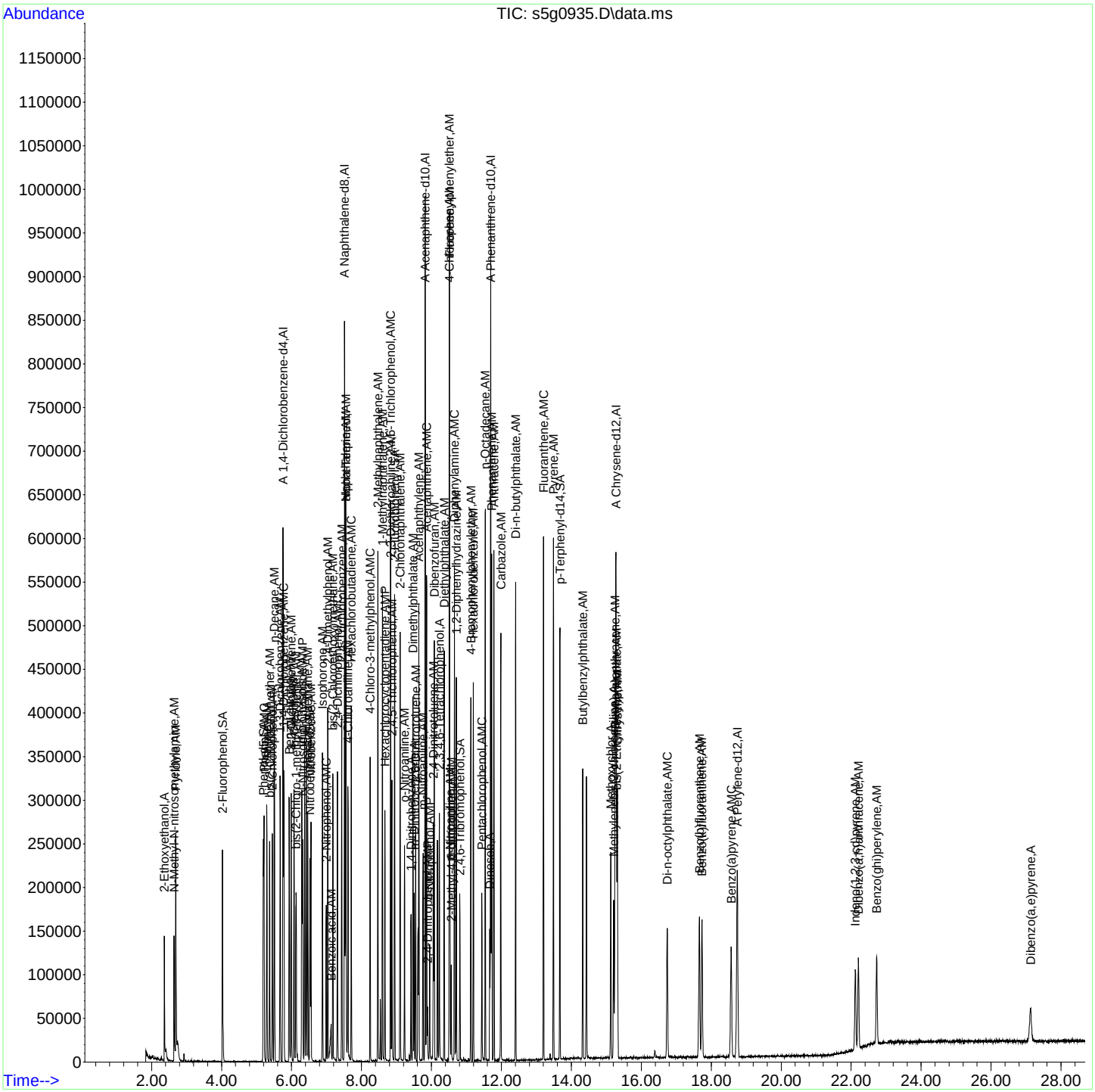
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
84) Methoxychlor	227	15.126	15.135	0.990	130038	19.41	ng/uL	99
85) Methylenebis(2-chloroa...	231	15.212	15.216	0.996	33843	18.39	ng/uL	97
86) Di-n-octylphthalate	149	16.740	16.745	1.096	145941	17.50	ng/uL	98
88) Benzo(b)fluoranthene	252	17.659	17.669	0.942	139493	21.13	ng/uL	99
89) Benzo(k)fluoranthene	252	17.735	17.750	0.946	134165	21.47	ng/uL	99
90) Benzo(a)pyrene	252	18.569	18.583	0.991	123351	20.59	ng/uL	100
91) Indeno(1,2,3-cd)pyrene	276	22.116	22.140	1.180	88644	19.07	ng/uL	98
92) Dibenzo(a,h)anthracene	278	22.207	22.221	1.185	88672	19.78	ng/uL	99
93) Benzo(ghi)perylene	276	22.731	22.750	1.213	90037	19.57	ng/uL	100
94) Dibenzo(a,e)pyrene	302	27.131	27.159	1.447	52255	17.96	ng/uL	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0935.D
Acq On : 10 Jul 2018 11:44
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-06.1|ICAL|1|SVM|1|M3
Misc : |MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 11 08:18:30 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:16:39 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0936.D
Acq On : 10 Jul 2018 12:19
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.1|ICAL|1|SVM|1|M4
Misc : |MIX[A]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 11 07:41:07 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:41:04 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) A 1,4-Dichlorobenzene-d4	152	5.759	5.759	1.000	131246	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.521	7.521	1.000	441931	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.826	9.826	1.000	242064	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	464067	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.278	15.278	1.000	364948	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.755	18.755	1.000	328884	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.759	5.759	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.521	7.521	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.826	9.826	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.702	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.278	15.288	1.000	0m	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.755	18.764	1.000	0m	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.278	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.521	7.521	1.000	0m	40.00	ng/uL	0.00
158) D Acenaphthene-d10	164	9.826	9.826	1.000	0m	40.00	ng/uL	0.00
161) D Phenanthrene-d10	188	11.697	11.702	1.000	0m	40.00	ng/uL	0.00
168) D Chrysene-d12	240	15.278	15.288	1.000	0m	40.00	ng/uL	0.00
170) E Naphthalene-d8	136	7.521	7.521	1.000	0m	40.00	ng/uL	0.00
172) E Perylene-d12	264	18.755	18.764	1.000	0m	40.00	ng/uL	0.00
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.026	4.026	0.699	187486	40.00	ng/uL	0.00
7) Phenol-d5	99	5.202	5.202	0.903	240448	40.00	ng/uL	0.00
22) Nitrobenzene-d5	82	6.535	6.535	0.869	193025	40.00	ng/uL	0.00
43) 2-Fluorobiphenyl	172	8.950	8.950	0.911	370496	40.00	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.816	10.816	1.101	56968	40.00	ng/uL	0.00
79) p-Terphenyl-d14	244	13.674	13.674	0.895	396325	40.00	ng/uL	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) 2-Ethoxyethanol	59	2.369	2.369	0.411	148667	40.00	ng/uL	100
3) N-Methyl-N-nitrosometh...	74	2.645	2.645	0.459	143558	40.00	ng/uL	100
4) Pyridine	79	2.688	2.688	0.467	229666	40.00	ng/uL	100
6) Aniline	93	5.302	5.302	0.921	293849	40.00	ng/uL	100
8) Phenol	94	5.221	5.221	0.907	234504	40.00	ng/uL	100
9) bis(2-Chloroethyl) ether	93	5.378	5.378	0.934	185318	40.00	ng/uL	100
10) 2-Chlorophenol	128	5.454	5.454	0.947	181012	40.00	ng/uL	100
11) n-Decane	43	5.512	5.512	0.957	221517	40.00	ng/uL	100
12) 1,3-Dichlorobenzene	146	5.678	5.678	0.986	199168	40.00	ng/uL	100
13) 1,4-Dichlorobenzene	146	5.783	5.783	1.004	189978	40.00	ng/uL	100
14) 1,2-Dichlorobenzene	146	5.992	5.992	1.041	185153	40.00	ng/uL	100
15) bis(2-Chloro-1-methyle...	45	6.135	6.135	1.065	322100	40.00	ng/uL	100
16) Benzyl alcohol	108	5.940	5.940	1.031	123961	40.00	ng/uL	100
17) o-Cresol	107	6.078	6.078	1.055	143375	40.00	ng/uL	100
18) m,p-Cresols	107	6.307	6.307	1.095	190919	40.00	ng/uL	100
19) N-Nitrosodipropylamine	70	6.331	6.331	1.099	139589	40.00	ng/uL	100
20) Hexachloroethane	117	6.469	6.469	1.123	76370	40.00	ng/uL	100
23) Nitrobenzene	77	6.564	6.564	0.873	186968	40.00	ng/uL	100
24) Isophorone	82	6.892	6.892	0.916	379376	40.00	ng/uL	100
25) 2-Nitrophenol	139	6.997	6.997	0.930	89258	40.00	ng/uL	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0936.D
Acq On : 10 Jul 2018 12:19
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.1|ICAL|1|SVM|1|M4
Misc : |MIX[A]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 11 07:41:07 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:41:04 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
26)	2,4-Dimethylphenol	122	7.040	7.040	0.936	154562	40.00	ng/uL	100
27)	bis(2-Chloroethoxy)met...	93	7.188	7.188	0.956	217240	40.00	ng/uL	100
28)	2,4-Dichlorophenol	162	7.316	7.316	0.973	155692	40.00	ng/uL	100
29)	Benzoic acid	105	7.188	7.188	0.956	80097	40.00	ng/uL#	100
30)	1,2,4-Trichlorobenzene	180	7.440	7.440	0.989	173803	40.00	ng/uL	100
31)	alpha-Terpineol	59	7.564	7.564	1.006	160603	40.00	ng/uL	100
32)	Naphthalene	128	7.550	7.550	1.004	456418	40.00	ng/uL	100
33)	4-Chloroaniline	127	7.621	7.621	1.013	200291	40.00	ng/uL	100
34)	Hexachlorobutadiene	225	7.712	7.712	1.025	114199	40.00	ng/uL	100
35)	4-Chloro-3-methylphenol	107	8.250	8.250	1.097	156478	40.00	ng/uL	100
36)	2-Methylnaphthalene	142	8.473	8.473	1.127	356536	40.00	ng/uL	100
37)	1-Methylnaphthalene	142	8.602	8.602	1.144	320819	40.00	ng/uL	100
39)	Hexachlorocyclopentadiene	237	8.673	8.673	0.883	124133	40.00	ng/uL	100
40)	2,3-Dichloroaniline	161	8.840	8.840	0.900	171995	40.00	ng/uL	100
41)	2,4,6-Trichlorophenol	196	8.835	8.835	0.899	111929	40.00	ng/uL	100
42)	2,4,5-Trichlorophenol	196	8.873	8.873	0.903	117380	40.00	ng/uL	100
44)	2-Chloronaphthalene	162	9.107	9.107	0.927	318723	40.00	ng/uL	100
45)	o-Nitroaniline	65	9.235	9.235	0.940	103366	40.00	ng/uL	100
46)	1,4-Dinitrobenzene	168	9.421	9.421	0.959	60200	40.00	ng/uL	100
47)	m-Nitroaniline	138	9.769	9.769	0.994	88359	40.00	ng/uL	100
48)	Dimethylphthalate	163	9.483	9.483	0.965	362655	40.00	ng/uL	100
49)	m-Dinitrobenzene	168	9.516	9.516	0.968	65004	40.00	ng/uL	100
50)	2,6-Dinitrotoluene	165	9.554	9.554	0.972	85673	40.00	ng/uL	100
51)	2,4-Dinitrotoluene	165	10.064	10.064	1.024	117144	40.00	ng/uL	100
52)	Acenaphthylene	152	9.645	9.645	0.982	473463	40.00	ng/uL	100
53)	Acenaphthene	154	9.869	9.869	1.004	286981	40.00	ng/uL	100
54)	2,4-Dinitrophenol	184	9.893	9.893	1.007	34112	40.00	ng/uL	100
55)	Dibenzofuran	168	10.083	10.083	1.026	435282	40.00	ng/uL	100
56)	2,3,4,6-Tetrachlorophenol	232	10.231	10.231	1.041	101478	40.00	ng/uL	100
57)	Diethylphthalate	149	10.369	10.369	1.055	372366	40.00	ng/uL	100
58)	4-Nitrophenol	139	9.959	9.959	1.014	64544	40.00	ng/uL	100
59)	Fluorene	166	10.521	10.521	1.071	353524	40.00	ng/uL	100
60)	4-Chlorophenylphenylether	204	10.516	10.516	1.070	197228	40.00	ng/uL	100
61)	p-Nitroaniline	138	10.545	10.545	1.073	79799	40.00	ng/uL	100
64)	2-Methyl-4,6-dinitroph...	198	10.578	10.578	0.904	51659	40.00	ng/uL	100
65)	Diphenylamine	169	10.664	10.664	0.912	313196	40.00	ng/uL	100
66)	1,2-Diphenylhydrazine	77	10.716	10.716	0.916	359950	40.00	ng/uL	100
67)	4-Bromophenylphenylether	248	11.131	11.131	0.952	125506	40.00	ng/uL	100
68)	Hexachlorobenzene	284	11.202	11.202	0.958	129361	40.00	ng/uL	100
69)	Pentachlorophenol	266	11.445	11.445	0.978	66774	40.00	ng/uL	100
70)	n-Octadecane	57	11.540	11.540	0.987	270650	40.00	ng/uL	100
71)	Dinoseb	211	11.674	11.674	0.998	83767	40.00	ng/uL	100
72)	Phenanthrene	178	11.726	11.726	1.002	490943	40.00	ng/uL	100
73)	Anthracene	178	11.793	11.793	1.008	520868	40.00	ng/uL	100
74)	Carbazole	167	11.988	11.988	1.025	479151	40.00	ng/uL	100
75)	Di-n-butylphthalate	149	12.407	12.407	1.061	603983	40.00	ng/uL	100
76)	Fluoranthene	202	13.207	13.207	1.129	606367	40.00	ng/uL	100
78)	Pyrene	202	13.493	13.493	0.883	582086	40.00	ng/uL	100
80)	Butylbenzylphthalate	149	14.326	14.326	0.938	238980	40.00	ng/uL	100
81)	bis(2-Ethylhexyl)phtha...	149	15.293	15.293	1.001	266784	40.00	ng/uL	100
82)	Benzo(a)anthracene	228	15.255	15.255	0.998	480261	40.00	ng/uL	100
83)	Chrysene	228	15.326	15.326	1.003	425797	40.00	ng/uL	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0936.D
Acq On : 10 Jul 2018 12:19
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.1|ICAL|1|SVM|1|M4
Misc : |MIX[A]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 11 07:41:07 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:41:04 2018
Response via : Initial Calibration
Integrator: RTE

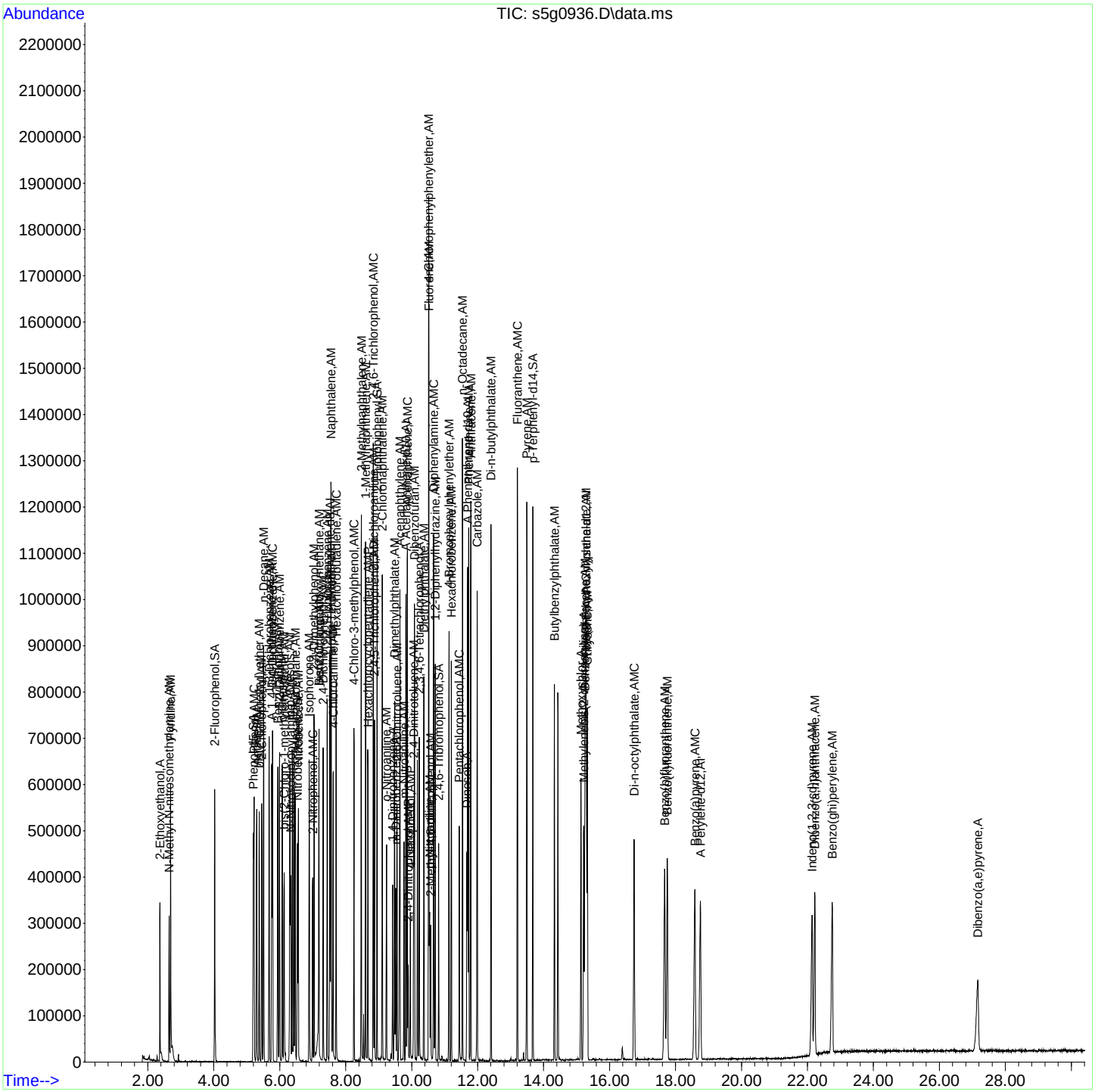
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
84) Methoxychlor	227	15.135	15.135	0.991	365511	40.00	ng/uL	100
85) Methylenebis(2-chloroa...	231	15.216	15.216	0.996	99420	40.00	ng/uL	100
86) Di-n-octylphthalate	149	16.745	16.745	1.096	477040	40.00	ng/uL	100
88) Benzo(b)fluoranthene	252	17.669	17.669	0.942	434850	40.00	ng/uL	100
89) Benzo(k)fluoranthene	252	17.750	17.750	0.946	405525	40.00	ng/uL	100
90) Benzo(a)pyrene	252	18.583	18.583	0.991	405779	40.00	ng/uL	100
91) Indeno(1,2,3-cd)pyrene	276	22.140	22.140	1.181	347888	40.00	ng/uL	100
92) Dibenzo(a,h)anthracene	278	22.221	22.221	1.185	332069	40.00	ng/uL	100
93) Benzo(ghi)perylene	276	22.750	22.750	1.213	346186	40.00	ng/uL	100
94) Dibenzo(a,e)pyrene	302	27.159	27.159	1.448	250640	40.00	ng/uL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0936.D
Acq On : 10 Jul 2018 12:19
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.1|ICAL|1|SVM|1|M4
Misc : |MIX[A]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 11 07:41:07 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:41:04 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0938.D
Acq On : 10 Jul 2018 13:35
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-03|ICAL|1|SVM|1|M6
Misc : |MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 11 08:34:12 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.759	5.759	1.000	122800	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.521	7.521	1.000	412697	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.826	9.826	1.000	225779	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	429669	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.283	15.278	1.000	312249	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.755	18.755	1.000	234870	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.759	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.521	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.826	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.283	15.269	1.000	0m	40.00	ng/uL	0.01
147) B Perylene-d12	264	18.755	18.740	1.000	0m	40.00	ng/uL	0.01
150) J Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.283	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.521	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.826	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.283	15.264	1.000	0m	40.00	ng/uL	0.02
169) E Naphthalene-d8	136	7.521	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.755	18.788	1.000	0m	40.00	ng/uL	-0.03
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.031	4.026	0.700	336946	78.56	ng/uL	0.00
7) Phenol-d5	99	5.216	5.202	0.906	432460	77.90	ng/uL	0.01
22) Nitrobenzene-d5	82	6.545	6.535	0.870	347011	78.05	ng/uL	0.00
43) 2-Fluorobiphenyl	172	8.954	8.950	0.911	652244	75.90	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.826	10.816	1.102	113835	84.33	ng/uL	0.00
79) p-Terphenyl-d14	244	13.678	13.674	0.895	688620	79.20	ng/uL	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) 2-Ethoxyethanol	59	2.369	2.369	0.411	264960	78.42	ng/uL	96
3) N-Methyl-N-nitrosometh...	74	2.650	2.645	0.460	256777	81.25	ng/uL	99
4) Pyridine	79	2.688	2.688	0.467	409709	77.12	ng/uL	96
6) Aniline	93	5.312	5.302	0.922	517669	75.97	ng/uL	99
8) Phenol	94	5.235	5.221	0.909	405160	75.35	ng/uL	98
9) bis(2-Chloroethyl) ether	93	5.388	5.378	0.936	327871	76.11	ng/uL	99
10) 2-Chlorophenol	128	5.464	5.454	0.949	326168	76.90	ng/uL	98
11) n-Decane	43	5.516	5.512	0.958	368886	73.38	ng/uL	98
12) 1,3-Dichlorobenzene	146	5.683	5.678	0.987	353735	75.98	ng/uL	99
13) 1,4-Dichlorobenzene	146	5.788	5.783	1.005	337366	76.96	ng/uL	99
14) 1,2-Dichlorobenzene	146	5.997	5.992	1.041	323912	75.97	ng/uL	99
15) bis(2-Chloro-1-methyle...	45	6.140	6.135	1.066	561050	75.81	ng/uL	98
16) Benzyl alcohol	108	5.950	5.940	1.033	223120	77.32	ng/uL	99
17) o-Cresol	107	6.083	6.078	1.056	255414	76.95	ng/uL	99
18) m,p-Cresols	107	6.321	6.307	1.098	345613	77.23	ng/uL	100
19) N-Nitrosodipropylamine	70	6.359	6.331	1.104	248366	76.23	ng/uL	100
20) Hexachloroethane	117	6.469	6.469	1.123	136287	76.33	ng/uL	96
23) Nitrobenzene	77	6.573	6.564	0.874	332817	76.65	ng/uL	98
24) Isophorone	82	6.907	6.892	0.918	675185	76.90	ng/uL	99
25) 2-Nitrophenol	139	7.002	6.997	0.931	166460	80.99	ng/uL	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0938.D
Acq On : 10 Jul 2018 13:35
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-03|ICAL|1|SVM|1|M6
Misc : |MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 11 08:34:12 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
26)	2,4-Dimethylphenol	122	7.050	7.040	0.937	276526	77.31	ng/uL	99
27)	bis(2-Chloroethoxy)met...	93	7.197	7.188	0.957	387026	76.68	ng/uL	100
28)	2,4-Dichlorophenol	162	7.326	7.316	0.974	279939	78.67	ng/uL	100
29)	Benzoic acid	105	7.250	7.188	0.964	176233	78.53	ng/uL#	96
30)	1,2,4-Trichlorobenzene	180	7.445	7.440	0.990	310060	76.97	ng/uL	100
31)	alpha-Terpineol	59	7.569	7.564	1.006	279317	75.88	ng/uL	97
32)	Naphthalene	128	7.554	7.550	1.004	788671	76.05	ng/uL	99
33)	4-Chloroaniline	127	7.626	7.621	1.014	356175	77.58	ng/uL	100
34)	Hexachlorobutadiene	225	7.712	7.712	1.025	204462	78.10	ng/uL	99
35)	4-Chloro-3-methylphenol	107	8.259	8.250	1.098	278475	77.61	ng/uL	98
36)	2-Methylnaphthalene	142	8.478	8.473	1.127	621645	76.51	ng/uL	98
37)	1-Methylnaphthalene	142	8.607	8.602	1.144	552337	74.74	ng/uL	99
39)	Hexachlorocyclopentadiene	237	8.673	8.673	0.883	222345	80.92	ng/uL	98
40)	2,3-Dichloroaniline	161	8.840	8.840	0.900	302913	75.49	ng/uL	99
41)	2,4,6-Trichlorophenol	196	8.840	8.835	0.900	206472	80.23	ng/uL	99
42)	2,4,5-Trichlorophenol	196	8.878	8.873	0.904	216872	79.37	ng/uL	99
44)	2-Chloronaphthalene	162	9.112	9.107	0.927	562859	75.34	ng/uL	98
45)	o-Nitroaniline	65	9.245	9.235	0.941	187779	78.32	ng/uL	98
46)	1,4-Dinitrobenzene	168	9.431	9.421	0.960	117559	82.33	ng/uL	95
47)	m-Nitroaniline	138	9.783	9.769	0.996	162009	78.50	ng/uL	100
48)	Dimethylphthalate	163	9.497	9.483	0.967	646181	75.38	ng/uL	100
49)	m-Dinitrobenzene	168	9.526	9.516	0.969	122646	79.77	ng/uL	93
50)	2,6-Dinitrotoluene	165	9.564	9.554	0.973	157670	78.04	ng/uL	97
51)	2,4-Dinitrotoluene	165	10.078	10.064	1.026	213416	79.23	ng/uL	99
52)	Acenaphthylene	152	9.650	9.645	0.982	811135	73.73	ng/uL	98
53)	Acenaphthene	154	9.873	9.869	1.005	507356	76.80	ng/uL	100
54)	2,4-Dinitrophenol	184	9.907	9.893	1.008	76119	76.23	ng/uL	89
55)	Dibenzofuran	168	10.093	10.083	1.027	746025	74.40	ng/uL	98
56)	2,3,4,6-Tetrachlorophenol	232	10.235	10.231	1.042	191081	82.07	ng/uL	99
57)	Diethylphthalate	149	10.378	10.369	1.056	655007	76.02	ng/uL	99
58)	4-Nitrophenol	139	9.973	9.959	1.015	124564	85.27	ng/uL	98
59)	Fluorene	166	10.526	10.521	1.071	614505	74.00	ng/uL	99
60)	4-Chlorophenylphenylether	204	10.521	10.516	1.071	349520	76.22	ng/uL	99
61)	p-Nitroaniline	138	10.564	10.545	1.075	152285	79.73	ng/uL	98
64)	2-Methyl-4,6-dinitroph...	198	10.588	10.578	0.905	109190	78.68	ng/uL	92
65)	Diphenylamine	169	10.674	10.664	0.912	557296	77.35	ng/uL	99
66)	1,2-Diphenylhydrazine	77	10.721	10.716	0.917	622010	75.49	ng/uL	98
67)	4-Bromophenylphenylether	248	11.135	11.131	0.952	234870	79.57	ng/uL	98
68)	Hexachlorobenzene	284	11.207	11.202	0.958	234315	78.09	ng/uL	99
69)	Pentachlorophenol	266	11.450	11.445	0.979	133713	78.94	ng/uL	98
70)	n-Octadecane	57	11.545	11.540	0.987	447593	73.72	ng/uL	97
71)	Dinoseb	211	11.678	11.674	0.998	177294	79.23	ng/uL	99
72)	Phenanthrene	178	11.735	11.726	1.003	865017	76.41	ng/uL	98
73)	Anthracene	178	11.802	11.793	1.009	909221	76.90	ng/uL	98
74)	Carbazole	167	11.997	11.988	1.026	833278	77.40	ng/uL	99
75)	Di-n-butylphthalate	149	12.412	12.407	1.061	1016949	74.84	ng/uL	99
76)	Fluoranthene	202	13.212	13.207	1.129	1021050	75.33	ng/uL	98
78)	Pyrene	202	13.497	13.493	0.883	994587	77.84	ng/uL	99
80)	Butylbenzylphthalate	149	14.331	14.326	0.938	412134	82.16	ng/uL	99
81)	bis(2-Ethylhexyl)phtha...	149	15.297	15.293	1.001	460289	84.86	ng/uL	99
82)	Benzo(a)anthracene	228	15.264	15.255	0.999	795090	77.22	ng/uL	99
83)	Chrysene	228	15.335	15.326	1.003	713366	78.99	ng/uL	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0938.D
Acq On : 10 Jul 2018 13:35
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-03|ICAL|1|SVM|1|M6
Misc : |MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 11 08:34:12 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

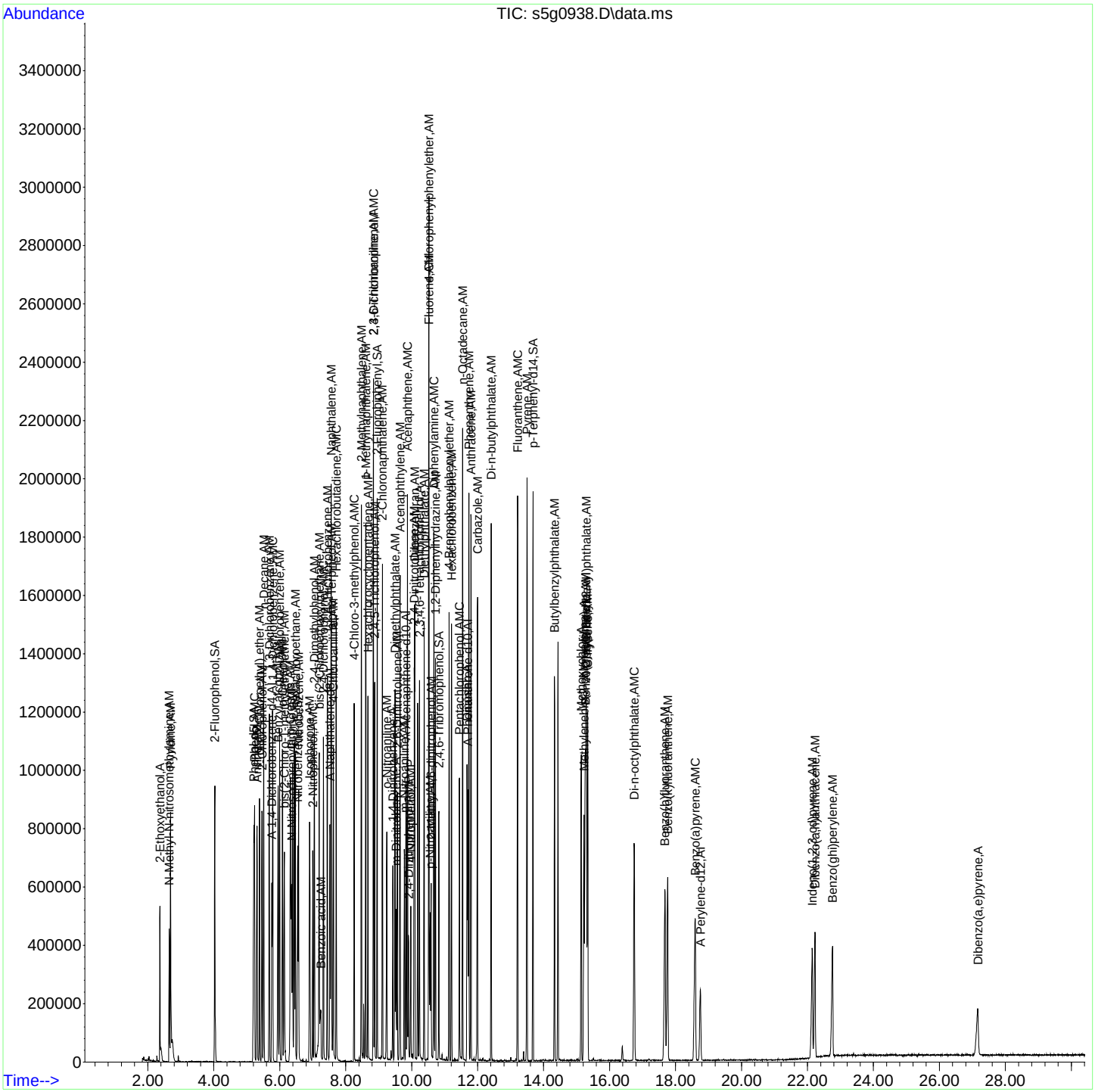
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
84)	Methoxychlor	227	15.140	15.135	0.991	623153	81.51	ng/uL	99
85)	Methylenebis(2-chloroa...	231	15.221	15.216	0.996	166973	79.50	ng/uL	99
86)	Di-n-octylphthalate	149	16.745	16.745	1.096	782244	80.79	ng/uL	99
88)	Benzo(b)fluoranthene	252	17.678	17.669	0.943	617859	80.25	ng/uL	99
89)	Benzo(k)fluoranthene	252	17.759	17.750	0.947	580746	79.67	ng/uL	99
90)	Benzo(a)pyrene	252	18.597	18.583	0.992	561137	80.31	ng/uL	99
91)	Indeno(1,2,3-cd)pyrene	276	22.145	22.140	1.181	401005	73.97	ng/uL	99
92)	Dibenzo(a,h)anthracene	278	22.226	22.221	1.185	391960	74.94	ng/uL	81
93)	Benzo(ghi)perylene	276	22.759	22.750	1.214	395801	73.75	ng/uL	98
94)	Dibenzo(a,e)pyrene	302	27.164	27.159	1.448	233563	68.83	ng/uL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0938.D
Acq On : 10 Jul 2018 13:35
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-03|ICAL|1|SVM|1|M6
Misc : |MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 11 08:34:12 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0939.D
Acq On : 10 Jul 2018 14:13
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-02|ICAL|1|SVM|1|M7
Misc : |MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 11 07:49:47 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.759	5.759	1.000	123126	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.526	7.521	1.000	423548	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.831	9.826	1.000	230755	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.702	11.697	1.000	439176	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.288	15.278	1.000	316222	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.759	18.755	1.000	277525	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.759	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.526	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.831	9.816	1.000	0m	40.00	ng/uL	0.01
128) B Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.288	15.269	1.000	0m	40.00	ng/uL	0.02
147) B Perylene-d12	264	18.759	18.740	1.000	0m	40.00	ng/uL	0.02
150) J Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.288	15.274	1.000	0m	40.00	ng/uL	0.01
155) D Naphthalene-d8	136	7.526	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.831	9.816	1.000	0m	40.00	ng/uL	0.01
160) D Phenanthrene-d10	188	11.702	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.288	15.264	1.000	0m	40.00	ng/uL	0.02
169) E Naphthalene-d8	136	7.526	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	0.000	18.788	1.000	0	0.00	ng/uL	-18.79

System Monitoring Compounds								Dev(Min)	
5) 2-Fluorophenol	112	4.030	4.026	0.700	410905	93.45	ng/uL	0.00	A
7) Phenol-d5	99	5.221	5.202	0.907	529878	93.96	ng/uL	0.02	A
22) Nitrobenzene-d5	82	6.550	6.535	0.870	424141	91.71	ng/uL	0.01	A
43) 2-Fluorobiphenyl	172	8.959	8.950	0.911	803333	90.98	ng/uL	0.00	A
62) 2,4,6-Tribromophenol	330	10.831	10.816	1.102	149677	110.25	ng/uL	0.01	A
79) p-Terphenyl-d14	244	13.678	13.674	0.895	839056	97.73	ng/uL	0.00	A

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue	
2) 2-Ethoxyethanol	59	2.369	2.369	0.411	326119	93.53	ng/uL	94	A
3) N-Methyl-N-nitrosometh...	74	2.654	2.645	0.461	309890	92.04	ng/uL	98	A
4) Pyridine	79	2.688	2.688	0.467	493443	91.61	ng/uL	97	A
6) Aniline	93	5.316	5.302	0.923	632466	91.77	ng/uL	100	A
8) Phenol	94	5.240	5.221	0.910	492782	89.60	ng/uL	98	A
9) bis(2-Chloroethyl) ether	93	5.392	5.378	0.936	395429	90.98	ng/uL	99	A
10) 2-Chlorophenol	128	5.464	5.454	0.949	397658	93.67	ng/uL	99	A
11) n-Decane	43	5.516	5.512	0.958	431637	83.08	ng/uL	96	A
12) 1,3-Dichlorobenzene	146	5.683	5.678	0.987	435777	93.29	ng/uL	99	A
13) 1,4-Dichlorobenzene	146	5.788	5.783	1.005	412707	92.63	ng/uL	99	A
14) 1,2-Dichlorobenzene	146	5.997	5.992	1.041	401722	92.51	ng/uL	99	A
15) bis(2-Chloro-1-methyle...	45	6.140	6.135	1.066	666807	88.27	ng/uL	97	A
16) Benzyl alcohol	108	5.954	5.940	1.034	277618	95.49	ng/uL	99	A
17) o-Cresol	107	6.088	6.078	1.057	315137	93.72	ng/uL	99	A
18) m,p-Cresols	107	6.331	6.307	1.099	426492	95.25	ng/uL	100	A
19) N-Nitrosodipropylamine	70	6.369	6.331	1.106	304289	92.95	ng/uL	98	A
20) Hexachloroethane	117	6.469	6.469	1.123	165341	92.31	ng/uL	96	A
23) Nitrobenzene	77	6.578	6.564	0.874	408079	91.09	ng/uL	98	A
24) Isophorone	82	6.911	6.892	0.918	846461	93.12	ng/uL	99	A
25) 2-Nitrophenol	139	7.007	6.997	0.931	207379	96.97	ng/uL	98	A

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0939.D
Acq On : 10 Jul 2018 14:13
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-02|ICAL|1|SVM|1|M7
Misc : |MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 11 07:49:47 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
26)	2,4-Dimethylphenol	122	7.054	7.040	0.937	341527	92.22	ng/uL	99	A
27)	bis(2-Chloroethoxy)met...	93	7.197	7.188	0.956	471984	90.68	ng/uL	99	A
28)	2,4-Dichlorophenol	162	7.331	7.316	0.974	346389	92.86	ng/uL	100	A
29)	Benzoic acid	105	7.269	7.188	0.966	224304	116.88	ng/uL#	96	A
30)	1,2,4-Trichlorobenzene	180	7.445	7.440	0.989	382391	91.83	ng/uL	98	A
31)	alpha-Terpineol	59	7.573	7.564	1.006	342369	88.97	ng/uL	97	A
32)	Naphthalene	128	7.559	7.550	1.004	953368	87.18	ng/uL	98	A
33)	4-Chloroaniline	127	7.631	7.621	1.014	438411	91.35	ng/uL	100	A
34)	Hexachlorobutadiene	225	7.716	7.712	1.025	257423	94.08	ng/uL	99	A
35)	4-Chloro-3-methylphenol	107	8.259	8.250	1.097	352452	94.01	ng/uL	99	A
36)	2-Methylnaphthalene	142	8.478	8.473	1.127	766733	89.75	ng/uL	99	A
37)	1-Methylnaphthalene	142	8.611	8.602	1.144	685330	89.16	ng/uL	99	A
39)	Hexachlorocyclopentadiene	237	8.673	8.673	0.882	272662	92.17	ng/uL	99	A
40)	2,3-Dichloroaniline	161	8.845	8.840	0.900	377041	91.98	ng/uL	99	A
41)	2,4,6-Trichlorophenol	196	8.840	8.835	0.899	258314	96.84	ng/uL	99	A
42)	2,4,5-Trichlorophenol	196	8.883	8.873	0.904	275051	98.32	ng/uL	99	A
44)	2-Chloronaphthalene	162	9.116	9.107	0.927	691505	91.04	ng/uL	96	A
45)	o-Nitroaniline	65	9.250	9.235	0.941	236034	95.82	ng/uL	98	A
46)	1,4-Dinitrobenzene	168	9.435	9.421	0.960	150376	104.81	ng/uL	95	A
47)	m-Nitroaniline	138	9.788	9.769	0.996	205723	97.69	ng/uL	99	A
48)	Dimethylphthalate	163	9.502	9.483	0.967	815049	94.30	ng/uL	99	A
49)	m-Dinitrobenzene	168	9.535	9.516	0.970	153292	98.95	ng/uL	96	A
50)	2,6-Dinitrotoluene	165	9.573	9.554	0.974	197619	96.79	ng/uL	95	A
51)	2,4-Dinitrotoluene	165	10.083	10.064	1.026	265353	95.05	ng/uL	99	A
52)	Acenaphthylene	152	9.654	9.645	0.982	1004198	89.00	ng/uL	98	A
53)	Acenaphthene	154	9.878	9.869	1.005	639849	93.55	ng/uL	99	A
54)	2,4-Dinitrophenol	184	9.912	9.893	1.008	100219	123.28	ng/uL	91	A
55)	Dibenzofuran	168	10.097	10.083	1.027	937831	90.41	ng/uL	97	A
56)	2,3,4,6-Tetrachlorophenol	232	10.240	10.231	1.042	244641	101.16	ng/uL	98	A
57)	Diethylphthalate	149	10.383	10.369	1.056	813840	91.71	ng/uL	97	A
58)	4-Nitrophenol	139	9.983	9.959	1.016	159141	103.46	ng/uL	98	A
59)	Fluorene	166	10.531	10.521	1.071	762438	90.50	ng/uL	98	A
60)	4-Chlorophenylphenylether	204	10.521	10.516	1.070	437598	93.10	ng/uL	99	A
61)	p-Nitroaniline	138	10.578	10.545	1.076	194745	102.40	ng/uL	99	A
64)	2-Methyl-4,6-dinitroph...	198	10.597	10.578	0.906	143815	117.67	ng/uL	93	A
65)	Diphenylamine	169	10.678	10.664	0.913	693521	93.59	ng/uL	99	A
66)	1,2-Diphenylhydrazine	77	10.726	10.716	0.917	766291	89.98	ng/uL	97	A
67)	4-Bromophenylphenylether	248	11.140	11.131	0.952	296078	99.71	ng/uL	98	A
68)	Hexachlorobenzene	284	11.212	11.202	0.958	299272	97.78	ng/uL	98	A
69)	Pentachlorophenol	266	11.450	11.445	0.978	174961	110.75	ng/uL	98	A
70)	n-Octadecane	57	11.545	11.540	0.987	539760	84.29	ng/uL	96	A
71)	Dinoseb	211	11.683	11.674	0.998	230222	116.17	ng/uL	98	A
72)	Phenanthrene	178	11.740	11.726	1.003	1069953	92.12	ng/uL	97	A
73)	Anthracene	178	11.802	11.793	1.009	1122540	91.09	ng/uL	97	A
74)	Carbazole	167	11.997	11.988	1.025	1029717	90.83	ng/uL	99	A
75)	Di-n-butylphthalate	149	12.416	12.407	1.061	1229318	86.03	ng/uL	98	A
76)	Fluoranthene	202	13.216	13.207	1.129	1246273	86.87	ng/uL	98	A
78)	Pyrene	202	13.502	13.493	0.883	1208845	95.87	ng/uL	99	A
80)	Butylbenzylphthalate	149	14.335	14.326	0.938	499586	96.50	ng/uL	99	A
81)	bis(2-Ethylhexyl)phtha...	149	15.297	15.293	1.001	543697	94.08	ng/uL	98	A
82)	Benzo(a)anthracene	228	15.269	15.255	0.999	981882	94.38	ng/uL	99	A
83)	Chrysene	228	15.340	15.326	1.003	894698	97.00	ng/uL	99	A

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0939.D
Acq On : 10 Jul 2018 14:13
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-02|ICAL|1|SVM|1|M7
Misc : |MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 11 07:49:47 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

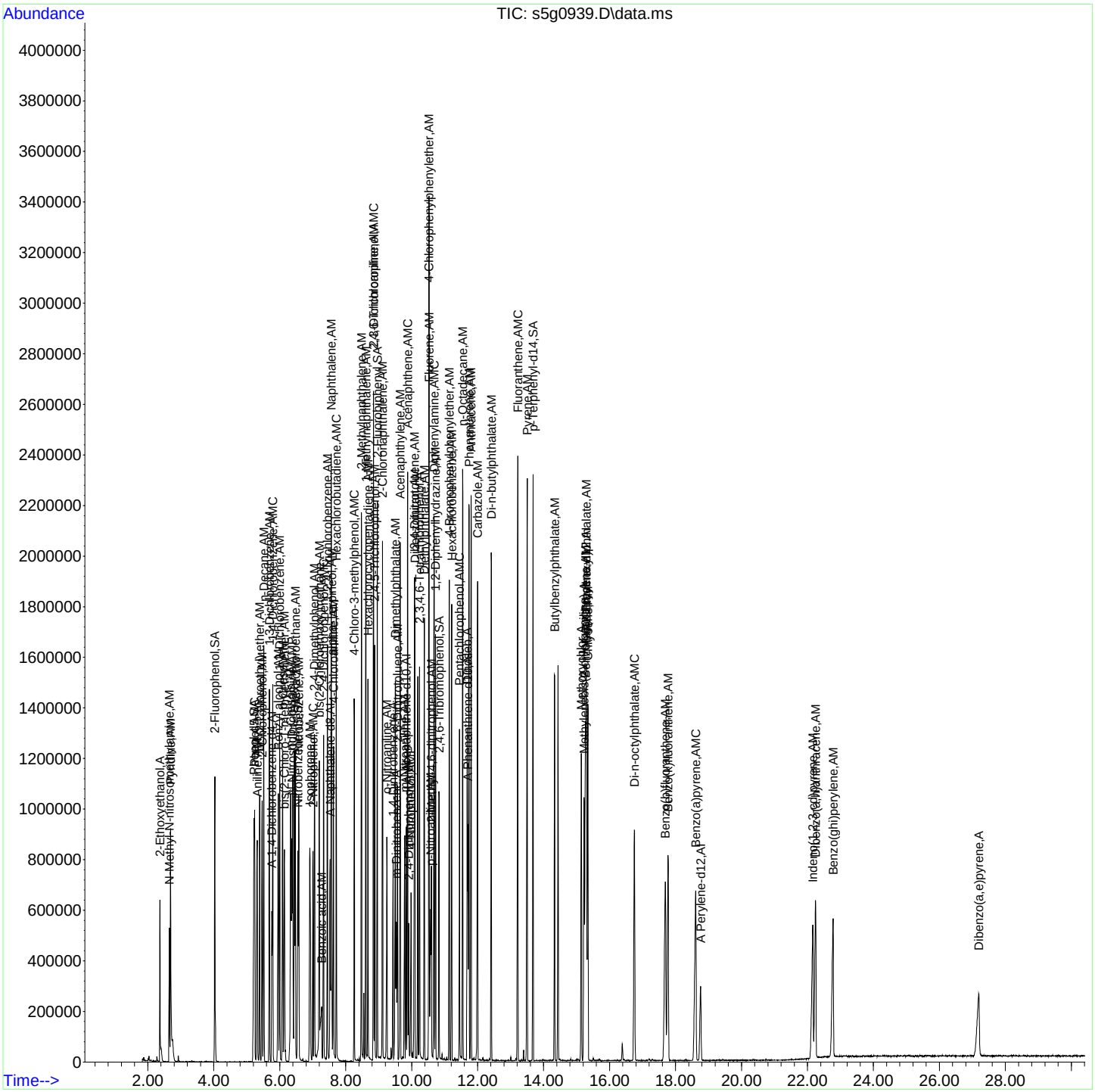
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
84)	Methoxychlor	227	15.145	15.135	0.991	758809	95.84	ng/uL	98	A
85)	Methylenebis(2-chloroa...	231	15.226	15.216	0.996	215220	99.93	ng/uL	99	A
86)	Di-n-octylphthalate	149	16.754	16.745	1.096	980164	94.85	ng/uL	99	A
88)	Benzo(b)fluoranthene	252	17.693	17.669	0.943	881462	96.09	ng/uL	99	A
89)	Benzo(k)fluoranthene	252	17.774	17.750	0.947	815782	95.36	ng/uL	99	A
90)	Benzo(a)pyrene	252	18.612	18.583	0.992	818382	95.60	ng/uL	100	A
91)	Indeno(1,2,3-cd)pyrene	276	22.159	22.140	1.181	668265	91.06	ng/uL	99	A
92)	Dibenzo(a,h)anthracene	278	22.245	22.221	1.186	635942	90.78	ng/uL#	70	A
93)	Benzo(ghi)perylene	276	22.774	22.750	1.214	660626	90.46	ng/uL	98	A
94)	Dibenzo(a,e)pyrene	302	27.193	27.159	1.450	420960	79.61	ng/uL	99	A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0939.D
Acq On : 10 Jul 2018 14:13
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-02|ICAL|1|SVM|1|M7
Misc : |MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 11 07:49:47 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0940.D
Acq On : 10 Jul 2018 14:50
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-01|ICAL|1|SVM|1|M8
Misc : |MIX[A]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 11 08:32:58 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)	
Internal Standards									
1) A 1,4-Dichlorobenzene-d4	152	5.759	5.759	1.000	109331	40.00	ng/uL	0.00	
21) A Naphthalene-d8	136	7.526	7.521	1.000	379381	40.00	ng/uL	0.00	
38) A Acenaphthene-d10	164	9.831	9.826	1.000	208186	40.00	ng/uL	0.00	
63) A Phenanthrene-d10	188	11.702	11.697	1.000	406922	40.00	ng/uL	0.00	
77) A Chrysene-d12	240	15.297	15.278	1.000	351544	40.00	ng/uL	0.02	
87) A Perylene-d12	264	18.769	18.755	1.000	336048	40.00	ng/uL	0.01	
95) B 1,4-Dichlorobenzene-d4	152	5.759	5.754	1.000	0m	40.00	ng/uL	0.00	
111) B Naphthalene-d8	136	7.526	7.516	1.000	0m	40.00	ng/uL	0.00	
119) B Acenaphthene-d10	164	9.831	9.816	1.000	0m	40.00	ng/uL	0.01	
128) B Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00	
141) B Chrysene-d12	240	15.297	15.269	1.000	0m	40.00	ng/uL	0.03	
147) B Perylene-d12	264	18.769	18.740	1.000	0m	40.00	ng/uL	0.03	
150) J Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00	
152) J Chrysene-d12	240	15.297	15.274	1.000	0m	40.00	ng/uL	0.02	
155) D Naphthalene-d8	136	7.526	7.516	1.000	0m	40.00	ng/uL	0.00	
157) D Acenaphthene-d10	164	9.831	9.816	1.000	0m	40.00	ng/uL	0.01	
160) D Phenanthrene-d10	188	11.702	11.693	1.000	0m	40.00	ng/uL	0.00	
167) D Chrysene-d12	240	15.297	15.264	1.000	0m	40.00	ng/uL	0.03	
169) E Naphthalene-d8	136	7.526	7.516	1.000	0m	40.00	ng/uL	0.00	
171) E Perylene-d12	264	18.769	18.788	1.000	0m	40.00	ng/uL	-0.02	
System Monitoring Compounds								Dev(Min)	
5) 2-Fluorophenol	112	4.030	4.026	0.700	426270	111.63	ng/uL	0.00	
7) Phenol-d5	99	5.221	5.202	0.907	561501	113.60	ng/uL	0.02	
22) Nitrobenzene-d5	82	6.550	6.535	0.870	455958	111.56	ng/uL	0.01	
43) 2-Fluorobiphenyl	172	8.959	8.950	0.911	864902	109.15	ng/uL	0.00	
62) 2,4,6-Tribromophenol	330	10.831	10.816	1.102	165548	133.01	ng/uL	0.01	A
79) p-Terphenyl-d14	244	13.683	13.674	0.894	1026912	104.91	ng/uL	0.00	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) 2-Ethoxyethanol	59	2.364	2.369	0.410	329157	109.42	ng/uL	97
3) N-Methyl-N-nitrosometh...	74	2.654	2.645	0.461	328877	116.88	ng/uL	96
4) Pyridine	79	2.683	2.688	0.466	519149	109.76	ng/uL	97
6) Aniline	93	5.316	5.302	0.923	667324	109.99	ng/uL	100
8) Phenol	94	5.245	5.221	0.911	525013	109.66	ng/uL	99
9) bis(2-Chloroethyl) ether	93	5.392	5.378	0.936	416440	108.57	ng/uL	98
10) 2-Chlorophenol	128	5.464	5.454	0.949	419731	111.15	ng/uL	98
11) n-Decane	43	5.516	5.512	0.958	442536	98.88	ng/uL	95
12) 1,3-Dichlorobenzene	146	5.683	5.678	0.987	456711	110.18	ng/uL	99
13) 1,4-Dichlorobenzene	146	5.788	5.783	1.005	437130	112.00	ng/uL	99
14) 1,2-Dichlorobenzene	146	5.997	5.992	1.041	422086	111.19	ng/uL	100
15) bis(2-Chloro-1-methyle...	45	6.145	6.135	1.067	697212	105.82	ng/uL	95
16) Benzyl alcohol	108	5.959	5.940	1.035	297676	115.87	ng/uL	99
17) o-Cresol	107	6.088	6.078	1.057	335218	113.43	ng/uL	99
18) m,p-Cresols	107	6.330	6.307	1.099	455704	114.38	ng/uL	100
19) N-Nitrosodipropylamine	70	6.373	6.331	1.107	323880	111.66	ng/uL	100
20) Hexachloroethane	117	6.469	6.469	1.123	174635	109.86	ng/uL	95
23) Nitrobenzene	77	6.583	6.564	0.875	436080	109.25	ng/uL	98
24) Isophorone	82	6.916	6.892	0.919	908529	112.57	ng/uL	99
25) 2-Nitrophenol	139	7.007	6.997	0.931	226153	119.70	ng/uL	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0940.D
Acq On : 10 Jul 2018 14:50
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-01|ICAL|1|SVM|1|M8
Misc : |MIX[A]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 11 08:32:58 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
26)	2,4-Dimethylphenol	122	7.059	7.040	0.938	363161	110.44	ng/uL	99	
27)	bis(2-Chloroethoxy)met...	93	7.202	7.188	0.957	504348	108.70	ng/uL	99	
28)	2,4-Dichlorophenol	162	7.330	7.316	0.974	370089	113.14	ng/uL	99	
29)	Benzoic acid	105	7.288	7.188	0.968	268976	123.87	ng/uL#	96	A
30)	1,2,4-Trichlorobenzene	180	7.445	7.440	0.989	406802	109.85	ng/uL	98	
31)	alpha-Terpineol	59	7.578	7.564	1.007	359249	106.16	ng/uL	95	
32)	Naphthalene	128	7.559	7.550	1.004	1024963	107.51	ng/uL	98	
33)	4-Chloroaniline	127	7.635	7.621	1.015	472630	111.99	ng/uL	100	
34)	Hexachlorobutadiene	225	7.716	7.712	1.025	273277	113.55	ng/uL	98	
35)	4-Chloro-3-methylphenol	107	8.264	8.250	1.098	382411	115.94	ng/uL	98	
36)	2-Methylnaphthalene	142	8.478	8.473	1.127	816794	109.36	ng/uL	99	
37)	1-Methylnaphthalene	142	8.611	8.602	1.144	732251	107.79	ng/uL	99	
39)	Hexachlorocyclopentadiene	237	8.673	8.673	0.882	314462	124.12	ng/uL	99	A
40)	2,3-Dichloroaniline	161	8.845	8.840	0.900	408906	110.52	ng/uL	99	
41)	2,4,6-Trichlorophenol	196	8.845	8.835	0.900	278081	117.19	ng/uL	100	
42)	2,4,5-Trichlorophenol	196	8.883	8.873	0.904	297924	118.24	ng/uL	99	
44)	2-Chloronaphthalene	162	9.116	9.107	0.927	741808	107.69	ng/uL	97	
45)	o-Nitroaniline	65	9.250	9.235	0.941	254544	115.14	ng/uL	97	
46)	1,4-Dinitrobenzene	168	9.440	9.421	0.960	166552	126.50	ng/uL	93	A
47)	m-Nitroaniline	138	9.792	9.769	0.996	227988	119.81	ng/uL	100	
48)	Dimethylphthalate	163	9.507	9.483	0.967	867936	109.80	ng/uL	99	
49)	m-Dinitrobenzene	168	9.535	9.516	0.970	169351	119.46	ng/uL	90	
50)	2,6-Dinitrotoluene	165	9.573	9.554	0.974	212771	114.22	ng/uL	96	
51)	2,4-Dinitrotoluene	165	10.088	10.064	1.026	288619	116.20	ng/uL	97	
52)	Acenaphthylene	152	9.659	9.645	0.983	1071297	105.61	ng/uL	98	
53)	Acenaphthene	154	9.878	9.869	1.005	684332	112.35	ng/uL	99	
54)	2,4-Dinitrophenol	184	9.911	9.893	1.008	124106	126.67	ng/uL	87	A
55)	Dibenzofuran	168	10.097	10.083	1.027	1000385	108.20	ng/uL	97	
56)	2,3,4,6-Tetrachlorophenol	232	10.240	10.231	1.042	269553	125.56	ng/uL	99	A
57)	Diethylphthalate	149	10.388	10.369	1.057	867793	109.23	ng/uL	97	
58)	4-Nitrophenol	139	9.988	9.959	1.016	182355	135.38	ng/uL	97	A
59)	Fluorene	166	10.531	10.521	1.071	820409	107.14	ng/uL	98	
60)	4-Chlorophenylphenylether	204	10.526	10.516	1.071	474156	112.13	ng/uL	99	
61)	p-Nitroaniline	138	10.583	10.545	1.077	222403	126.28	ng/uL	99	A
64)	2-Methyl-4,6-dinitroph...	198	10.602	10.578	0.906	170385	125.99	ng/uL	94	A
65)	Diphenylamine	169	10.683	10.664	0.913	749871	109.89	ng/uL	100	
66)	1,2-Diphenylhydrazine	77	10.731	10.716	0.917	809372	103.72	ng/uL	96	
67)	4-Bromophenylphenylether	248	11.140	11.131	0.952	322731	115.45	ng/uL	98	
68)	Hexachlorobenzene	284	11.211	11.202	0.958	331807	116.77	ng/uL	99	
69)	Pentachlorophenol	266	11.454	11.445	0.979	203685	124.07	ng/uL	98	A
70)	n-Octadecane	57	11.550	11.540	0.987	573497	99.74	ng/uL	96	
71)	Dinoseb	211	11.683	11.674	0.998	273275	125.26	ng/uL	100	A
72)	Phenanthrene	178	11.740	11.726	1.003	1183916	110.43	ng/uL	97	
73)	Anthracene	178	11.807	11.793	1.009	1242109	110.93	ng/uL	96	
74)	Carbazole	167	12.002	11.988	1.026	1162450	114.01	ng/uL	98	
75)	Di-n-butylphthalate	149	12.416	12.407	1.061	1380461	107.27	ng/uL	98	
76)	Fluoranthene	202	13.221	13.207	1.130	1460272	113.75	ng/uL	97	
78)	Pyrene	202	13.507	13.493	0.883	1446353	100.54	ng/uL	99	
80)	Butylbenzylphthalate	149	14.335	14.326	0.937	646571	114.49	ng/uL	98	
81)	bis(2-Ethylhexyl)phtha...	149	15.307	15.293	1.001	732892	120.02	ng/uL	96	A
82)	Benzo(a)anthracene	228	15.273	15.255	0.998	1309069	112.93	ng/uL	92	
83)	Chrysene	228	15.354	15.326	1.004	1199356	117.95	ng/uL	98	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0940.D
Acq On : 10 Jul 2018 14:50
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-01|ICAL|1|SVM|1|M8
Misc : |MIX[A]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 11 08:32:58 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

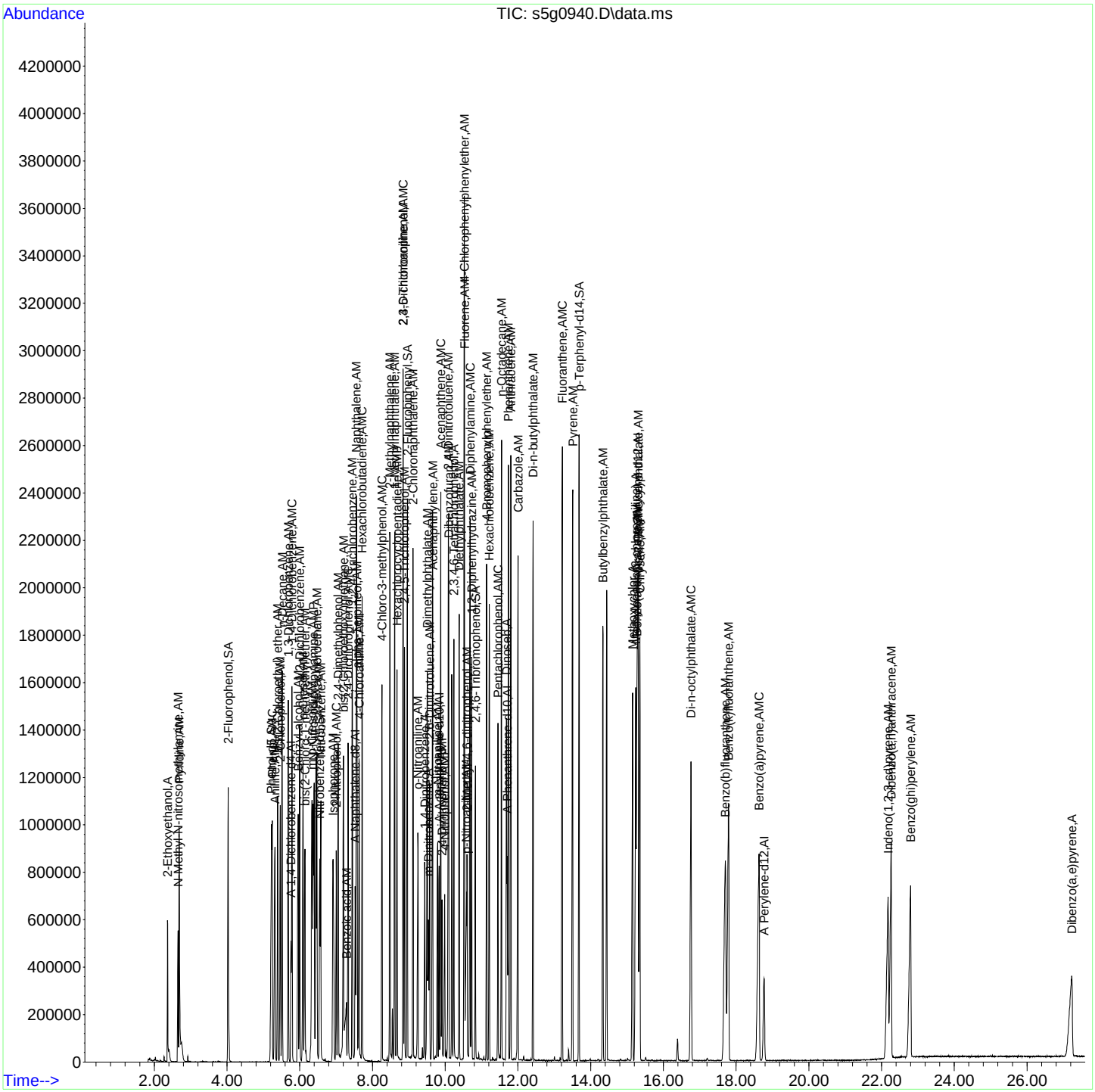
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
84)	Methoxychlor	227	15.154	15.135	0.991	1026719	119.29	ng/uL	97	
85)	Methylenebis(2-chloroa...	231	15.240	15.216	0.996	298844	126.39	ng/uL	98	A
86)	Di-n-octylphthalate	149	16.759	16.745	1.096	1364398	124.95	ng/uL	99	A
88)	Benzo(b)fluoranthene	252	17.702	17.669	0.943	1249836	113.45	ng/uL	99	
89)	Benzo(k)fluoranthene	252	17.793	17.750	0.948	1148046	110.07	ng/uL	98	
90)	Benzo(a)pyrene	252	18.631	18.583	0.993	1161331	116.17	ng/uL	99	
91)	Indeno(1,2,3-cd)pyrene	276	22.178	22.140	1.182	985762	127.08	ng/uL	98	A
92)	Dibenzo(a,h)anthracene	278	22.264	22.221	1.186	926036	123.75	ng/uL	70	A
93)	Benzo(ghi)perylene	276	22.797	22.750	1.215	965537	125.74	ng/uL	98	A
94)	Dibenzo(a,e)pyrene	302	27.236	27.159	1.451	682016	140.48	ng/uL	99	A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0940.D
Acq On : 10 Jul 2018 14:50
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-01|ICAL|1|SVM|1|M8
Misc : |MIX[A]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 11 08:32:58 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0942.D
Acq On : 10 Jul 2018 16:34
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-04|ICAL|1|SVM|1|M5
Misc : |MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 11 08:34:22 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.759	5.759	1.000	130434	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.521	7.521	1.000	448670	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.826	9.826	1.000	246213	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	471940	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.283	15.278	1.000	345523	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.755	18.755	1.000	276781	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.759	5.754	1.000	0m	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.521	7.516	1.000	0m	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.826	9.816	1.000	0m	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.283	15.269	1.000	0m	40.00	ng/uL	0.01
147) B Perylene-d12	264	18.755	18.740	1.000	0m	40.00	ng/uL	0.01
150) J Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.283	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.521	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.826	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.283	15.264	1.000	0m	40.00	ng/uL	0.02
169) E Naphthalene-d8	136	7.521	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.755	18.788	1.000	0m	40.00	ng/uL	-0.03
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.026	4.026	0.699	243700	53.49	ng/uL	0.00
7) Phenol-d5	99	5.207	5.202	0.904	312438	52.98	ng/uL	0.00
22) Nitrobenzene-d5	82	6.540	6.535	0.870	250578	51.84	ng/uL	0.00
43) 2-Fluorobiphenyl	172	8.955	8.950	0.911	484260	51.68	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.821	10.816	1.101	81947	55.67	ng/uL	0.00
79) p-Terphenyl-d14	244	13.678	13.674	0.895	519807	54.03	ng/uL	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) 2-Ethoxyethanol	59	2.364	2.369	0.410	191210	53.28	ng/uL	98
3) N-Methyl-N-nitrosometh...	74	2.645	2.645	0.459	187639	55.90	ng/uL	96
4) Pyridine	79	2.688	2.688	0.467	297971	52.80	ng/uL	97
6) Aniline	93	5.302	5.302	0.921	377397	52.14	ng/uL	99
8) Phenol	94	5.226	5.221	0.907	298113	52.19	ng/uL	99
9) bis(2-Chloroethyl) ether	93	5.378	5.378	0.934	238226	52.06	ng/uL	100
10) 2-Chlorophenol	128	5.454	5.454	0.947	236631	52.53	ng/uL	98
11) n-Decane	43	5.512	5.512	0.957	271443	50.84	ng/uL	99
12) 1,3-Dichlorobenzene	146	5.678	5.678	0.986	258099	52.19	ng/uL	99
13) 1,4-Dichlorobenzene	146	5.783	5.783	1.004	246373	52.91	ng/uL	99
14) 1,2-Dichlorobenzene	146	5.993	5.992	1.041	238398	52.64	ng/uL	99
15) bis(2-Chloro-1-methyle...	45	6.135	6.135	1.065	407295	51.81	ng/uL	99
16) Benzyl alcohol	108	5.945	5.940	1.032	161717	52.76	ng/uL	99
17) o-Cresol	107	6.078	6.078	1.055	185808	52.70	ng/uL	99
18) m,p-Cresols	107	6.312	6.307	1.096	250564	52.72	ng/uL	100
19) N-Nitrosodipropylamine	70	6.335	6.331	1.100	181654	52.49	ng/uL	100
20) Hexachloroethane	117	6.464	6.469	1.122	99429	52.43	ng/uL	98
23) Nitrobenzene	77	6.569	6.564	0.873	242691	51.41	ng/uL	99
24) Isophorone	82	6.897	6.892	0.917	495209	51.88	ng/uL	100
25) 2-Nitrophenol	139	6.997	6.997	0.930	124286	55.62	ng/uL	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0942.D
Acq On : 10 Jul 2018 16:34
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-04|ICAL|1|SVM|1|M5
Misc : |MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 11 08:34:22 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
26) 2,4-Dimethylphenol	122	7.045	7.040	0.937	201529	51.82	ng/uL	99
27) bis(2-Chloroethoxy)met...	93	7.193	7.188	0.956	280698	51.16	ng/uL	99
28) 2,4-Dichlorophenol	162	7.321	7.316	0.973	204694	52.91	ng/uL	99
29) Benzoic acid	105	7.216	7.188	0.959	123052	53.97	ng/uL#	96
30) 1,2,4-Trichlorobenzene	180	7.440	7.440	0.989	227345	51.91	ng/uL	99
31) alpha-Terpineol	59	7.564	7.564	1.006	206510	51.60	ng/uL	99
32) Naphthalene	128	7.550	7.550	1.004	583290	51.74	ng/uL	99
33) 4-Chloroaniline	127	7.621	7.621	1.013	260801	52.25	ng/uL	99
34) Hexachlorobutadiene	225	7.712	7.712	1.025	146611	51.51	ng/uL	99
35) 4-Chloro-3-methylphenol	107	8.255	8.250	1.098	207515	53.20	ng/uL	99
36) 2-Methylnaphthalene	142	8.474	8.473	1.127	466647	52.83	ng/uL	99
37) 1-Methylnaphthalene	142	8.602	8.602	1.144	416625	51.86	ng/uL	100
39) Hexachlorocyclopentadiene	237	8.674	8.673	0.883	160782	53.66	ng/uL	99
40) 2,3-Dichloroaniline	161	8.840	8.840	0.900	226703	51.81	ng/uL	99
41) 2,4,6-Trichlorophenol	196	8.835	8.835	0.899	153688	54.76	ng/uL	99
42) 2,4,5-Trichlorophenol	196	8.878	8.873	0.904	157185	52.75	ng/uL	99
44) 2-Chloronaphthalene	162	9.112	9.107	0.927	420289	51.59	ng/uL	98
45) o-Nitroaniline	65	9.240	9.235	0.940	140352	53.68	ng/uL	99
46) 1,4-Dinitrobenzene	168	9.426	9.421	0.959	85467	54.89	ng/uL	99
47) m-Nitroaniline	138	9.774	9.769	0.995	119980	53.31	ng/uL	99
48) Dimethylphthalate	163	9.488	9.483	0.966	483306	51.70	ng/uL	99
49) m-Dinitrobenzene	168	9.521	9.516	0.969	89546	53.41	ng/uL	99
50) 2,6-Dinitrotoluene	165	9.559	9.554	0.973	116711	52.97	ng/uL	97
51) 2,4-Dinitrotoluene	165	10.069	10.064	1.025	158008	53.79	ng/uL	99
52) Acenaphthylene	152	9.650	9.645	0.982	609818	50.83	ng/uL	99
53) Acenaphthene	154	9.869	9.869	1.004	375892	52.18	ng/uL	100
54) 2,4-Dinitrophenol	184	9.902	9.893	1.008	55368	54.37	ng/uL	88
55) Dibenzofuran	168	10.088	10.083	1.027	564165	51.60	ng/uL	99
56) 2,3,4,6-Tetrachlorophenol	232	10.231	10.231	1.041	143002	56.33	ng/uL	99
57) Diethylphthalate	149	10.374	10.369	1.056	493369	52.51	ng/uL	99
58) 4-Nitrophenol	139	9.969	9.959	1.015	89339	56.08	ng/uL	98
59) Fluorene	166	10.521	10.521	1.071	462329	51.05	ng/uL	99
60) 4-Chlorophenylphenylether	204	10.516	10.516	1.070	260927	52.18	ng/uL	100
61) p-Nitroaniline	138	10.555	10.545	1.074	109199	52.43	ng/uL	99
64) 2-Methyl-4,6-dinitroph...	198	10.583	10.578	0.905	80372	54.58	ng/uL	97
65) Diphenylamine	169	10.669	10.664	0.912	414793	52.41	ng/uL	99
66) 1,2-Diphenylhydrazine	77	10.721	10.716	0.917	469167	51.84	ng/uL	99
67) 4-Bromophenylphenylether	248	11.136	11.131	0.952	173826	53.62	ng/uL	99
68) Hexachlorobenzene	284	11.207	11.202	0.958	170708	51.80	ng/uL	98
69) Pentachlorophenol	266	11.445	11.445	0.978	97033	53.77	ng/uL	97
70) n-Octadecane	57	11.545	11.540	0.987	351899	52.77	ng/uL	98
71) Dinoseb	211	11.674	11.674	0.998	129879	54.81	ng/uL	100
72) Phenanthrene	178	11.731	11.726	1.003	658911	52.99	ng/uL	99
73) Anthracene	178	11.797	11.793	1.009	682479	52.55	ng/uL	99
74) Carbazole	167	11.993	11.988	1.025	624456	52.81	ng/uL	99
75) Di-n-butylphthalate	149	12.412	12.407	1.061	787098	52.74	ng/uL	99
76) Fluoranthene	202	13.212	13.207	1.129	785557	52.76	ng/uL	99
78) Pyrene	202	13.497	13.493	0.883	760612	53.79	ng/uL	100
80) Butylbenzylphthalate	149	14.331	14.326	0.938	309421	55.74	ng/uL	99
81) bis(2-Ethylhexyl)phtha...	149	15.297	15.293	1.001	328473	54.73	ng/uL	100
82) Benzo(a)anthracene	228	15.259	15.255	0.998	596314	52.34	ng/uL	99
83) Chrysene	228	15.336	15.326	1.003	528446	52.88	ng/uL	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0942.D
Acq On : 10 Jul 2018 16:34
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-04|ICAL|1|SVM|1|M5
Misc : |MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 11 08:34:22 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

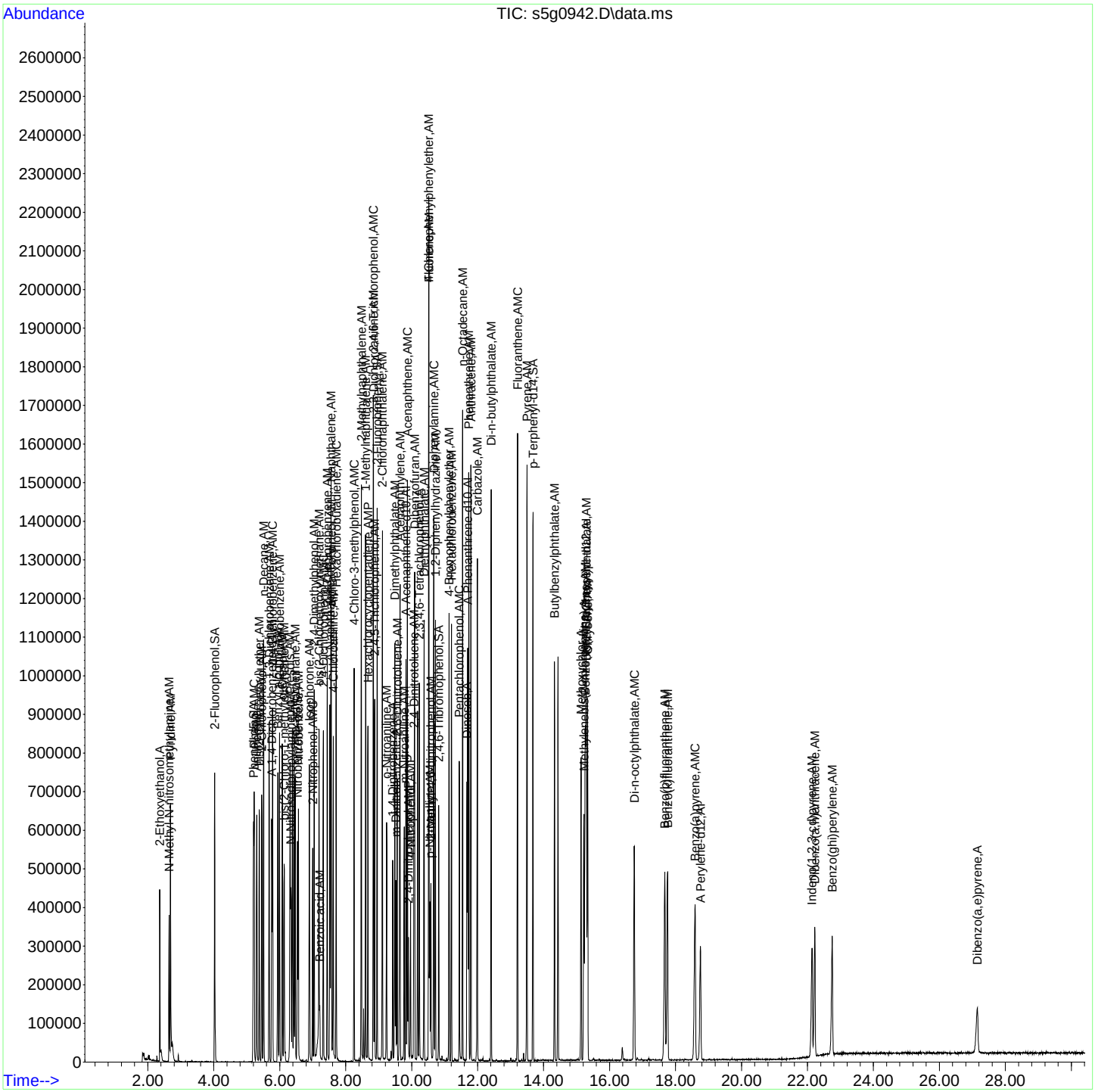
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
84)	Methoxychlor	227	15.136	15.135	0.990	458213	54.17	ng/uL	99
85)	Methylenebis(2-chloroa...	231	15.221	15.216	0.996	121985	52.49	ng/uL	99
86)	Di-n-octylphthalate	149	16.750	16.745	1.096	568550	53.20	ng/uL	99
88)	Benzo(b)fluoranthene	252	17.674	17.669	0.942	486384	53.60	ng/uL	99
89)	Benzo(k)fluoranthene	252	17.759	17.750	0.947	454753	52.94	ng/uL	100
90)	Benzo(a)pyrene	252	18.593	18.583	0.991	443891	53.91	ng/uL	99
91)	Indeno(1,2,3-cd)pyrene	276	22.136	22.140	1.180	310153	48.55	ng/uL	99
92)	Dibenzo(a,h)anthracene	278	22.221	22.221	1.185	302570	49.09	ng/uL	99
93)	Benzo(ghi)perylene	276	22.750	22.750	1.213	300319	47.48	ng/uL	99
94)	Dibenzo(a,e)pyrene	302	27.150	27.159	1.448	170343	42.60	ng/uL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0942.D
Acq On : 10 Jul 2018 16:34
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-04|ICAL|1|SVM|1|M5
Misc : |MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 11 08:34:22 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: MSD5.I **Injection Date:** 10-JUL-18 17:49

Data File: s070918.B\s5g0944.D **Init. Cal. Date(s)** 09-JUL-18 22:51 - 11-JUL-18 03:17

Lab Sample ID WBN180517-09.1 **Method:** s070918.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD **Method Update:** 11-JUL-18 08:32

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	2-Fluorophenol	1.3971	1.48506		.01		6.2959	30		Averaged
S	Phenol-d5	1.8083	1.92407		.01		6.40215	30		Averaged
S	Nitrobenzene-d5	0.4309	0.44561		.01		3.41379	30		Averaged
S	2-Fluorobiphenyl	1.5224	1.54308		.01		1.35838	30		Averaged
S	2,4,6-Tribromophenol	0.2391	0.26349		.01		10.20075	30		Averaged
S	p-Terphenyl-d14	1.1138	1.06935		.01		-3.99084	30		Averaged
	Phenol	1.7516	1.71429		.8		-2.13005	30		Averaged
	bis(2-Chloroethyl) ether	1.4033	1.38418		.7		-1.3625	30		Averaged
	2-Chlorophenol	1.3815	1.31165		.8		-5.0561	30		Averaged
	o-Cresol	1.0812	1.08327		.7		0.19145	30		Averaged
	bis(2-Chloro-1-methylethyl)eth	2.4106	2.30479		.01		-4.38936	30		Averaged
	m,p-Cresols	1.4576	1.45987		.6		0.15574	30		Averaged
	N-Nitrosodipropylamine	1.0612	1.06345		.5		0.21202	30		Averaged
	Hexachloroethane	0.5816	0.56066		.3		-3.60041	30		Averaged
	Nitrobenzene	0.4208	0.41333		.2		-1.77519	30		Averaged
	Isophorone	0.851	0.79758		.4		-6.27732	30		Averaged
	2-Nitrophenol	0.1992	0.21075		.1		5.79819	30		Averaged
	2,4-Dimethylphenol	0.3467	0.33824		.2		-2.44015	30		Averaged
	bis(2-Chloroethoxy)methane	0.4892	0.46907		.3		-4.11488	30		Averaged
	2,4-Dichlorophenol	0.3449	0.34618		.2		0.37112	30		Averaged
	Naphthalene	1.0052	0.99678		.7		-0.83764	30		Averaged
	4-Chloroaniline	0.445	0.43101		.01		-3.14382	30		Averaged
	Hexachlorobutadiene	0.2538	0.267		.01		5.20095	30		Averaged
	4-Chloro-3-methylphenol	0.3478	0.35062		.2		0.81081	30		Averaged
	2-Methylnaphthalene	0.7875	0.78189		.4		-0.71238	30		Averaged
	Hexachlorocyclopentadiene	0.4868	0.4624		.05		-5.01233	30		Averaged
	2,4,6-Trichlorophenol	0.4559	0.47379		.2		3.92411	30		Averaged
	2,4,5-Trichlorophenol	0.4841	0.49503		.2		2.2578	30		Averaged
	2-Chloronaphthalene	1.3236	1.26408		.8		-4.49683	30		Averaged
	o-Nitroaniline	0.4248	0.41865		.01		-1.44774	30		Averaged
	Dimethylphthalate	1.5188	1.47976		.01		-2.57045	30		Averaged
	2,6-Dinitrotoluene	0.3579	0.34852		.2		-2.62084	30		Averaged
	Acenaphthylene	1.949	1.90814		.9		-2.09646	30		Averaged
	m-Nitroaniline	0.3656	0.36644		.01		0.22976	30		Averaged
	Acenaphthene	1.1704	1.18868		.9		1.56186	30		Averaged
	2,4-Dinitrophenol	40	44.93	40			12.325	30		Linear
	4-Nitrophenol	0.2588	0.28076		.05		8.48532	30		Averaged

Continuing Calibration Summary

Instrument ID: MSD5.I **Injection Date:** 10-JUL-18 17:49

Data File: s070918.B\s5g0944.D **Init. Cal. Date(s)** 09-JUL-18 22:51 11-JUL-18 03:17

Lab Sample ID WBN180517-09.1 **Method:** s070918.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
2,4-Dinitrotoluene	0.4772	0.48097		.2		0.79003	30		Averaged
Dibenzofuran	1.7764	1.77799		.8		0.08951	30		Averaged
2,3,4,6-Tetrachlorophenol	0.4125	0.43139		.01		4.57939	30		Averaged
Diethylphthalate	1.5264	1.50307		.01		-1.52843	30		Averaged
4-Chlorophenylphenylether	0.8124	0.81471		.4		0.28434	30		Averaged
Fluorene	1.4713	1.44793		.9		-1.58839	30		Averaged
p-Nitroaniline	0.3384	0.34461		.01		1.83511	30		Averaged
2-Methyl-4,6-dinitrophenol	40	45.51	40			13.775	30		Linear
Diphenylamine	0.6708	0.66624		.01		-0.67979	30		Averaged
4-Bromophenylphenylether	0.2748	0.27809		.1		1.19723	30		Averaged
Hexachlorobenzene	0.2793	0.27447		.1		-1.72932	30		Averaged
Pentachlorophenol	40	46.64	40			16.6	30		Linear
Phenanthrene	1.0539	1.04491		.7		-0.85302	30		Averaged
Anthracene	1.1007	1.09158		.7		-0.82856	30		Averaged
Carbazole	1.0022	1.01085		.01		0.8631	30		Averaged
Di-n-butylphthalate	1.265	1.25722		.01		-0.61502	30		Averaged
Fluoranthene	1.2619	1.2975		.6		2.82114	30		Averaged
Pyrene	1.6369	1.52613		.6		-6.76706	30		Averaged
Butylbenzylphthalate	0.6426	0.62133		.01		-3.30999	30		Averaged
Benzo(a)anthracene	1.319	1.27896		.8		-3.03563	30		Averaged
bis(2-Ethylhexyl)phthalate	0.6948	0.7089		.01		2.02936	30		Averaged
Chrysene	1.157	1.1305		.7		-2.29041	30		Averaged
Di-n-octylphthalate	40	39.69	40			-0.775	30		Linear
Benzo(b)fluoranthene	1.3113	1.25461		.7		-4.32319	30		Averaged
Benzo(k)fluoranthene	1.2415	1.18653		.7		-4.42771	30		Averaged
Benzo(a)pyrene	1.1899	1.16411		.7		-2.16741	30		Averaged
Indeno(1,2,3-cd)pyrene	0.9233	1.01839		.5		10.29893	30		Averaged
Dibenzo(a,h)anthracene	0.8907	0.98832		.4		10.95992	30		Averaged
Benzo(ghi)perylene	0.914	1.00987		.5		10.48906	30		Averaged

Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0944.D
Acq On : 10 Jul 2018 17:49
Operator : JLD1
InstName : MSD5
Sample : |WBN180517-09.1|ICV|1|SVM|1|MICV
Misc : |MIX[A]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 11 10:01:45 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) A 1,4-Dichlorobenzene-d4	152	5.759	5.759	1.000	158638	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.521	7.521	1.000	534902	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.826	9.826	1.000	299805	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	573873	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.283	15.278	1.000	481297	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.764	18.755	1.000	455174	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.759	5.754	1.000	158638	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.521	7.516	1.000	534902	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.826	9.816	1.000	299805	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	573873	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.283	15.269	1.000	481297	40.00	ng/uL	0.01
147) B Perylene-d12	264	18.764	18.740	1.000	455174	40.00	ng/uL	0.02
150) J Phenanthrene-d10	188	11.697	11.697	1.000	573873	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.283	15.274	1.000	481297	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.521	7.516	1.000	534902	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.826	9.816	1.000	299805	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	573873	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.283	15.264	1.000	481297	40.00	ng/uL	0.02
169) E Naphthalene-d8	136	7.521	7.516	1.000	534902	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.764	18.788	1.000	455174	40.00	ng/uL	-0.02
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.030	4.026	0.700	235587	42.52	ng/uL	0.00
7) Phenol-d5	99	5.207	5.202	0.904	305230	42.56	ng/uL	0.00
22) Nitrobenzene-d5	82	6.535	6.535	0.869	238359	41.36	ng/uL	0.00
43) 2-Fluorobiphenyl	172	8.950	8.950	0.911	462624	40.54	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.821	10.816	1.101	78997	44.07	ng/uL	0.00
79) p-Terphenyl-d14	244	13.673	13.674	0.895	514677	38.40	ng/uL	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) 2-Ethoxyethanol	59	2.369	2.369	0.411	164523	37.69	ng/uL	95
3) N-Methyl-N-nitrosometh...	74	2.645	2.645	0.459	156090	38.23	ng/uL	96
4) Pyridine	79	2.688	2.688	0.467	269636	39.29	ng/uL	98
6) Aniline	93	5.302	5.302	0.921	335499	38.11	ng/uL	98
8) Phenol	94	5.226	5.221	0.907	271952	39.15	ng/uL	98
9) bis(2-Chloroethyl) ether	93	5.383	5.378	0.935	219583	39.45	ng/uL	99
10) 2-Chlorophenol	128	5.459	5.454	0.948	208078	37.98	ng/uL	98
11) n-Decane	43	5.511	5.512	0.957	243440	37.49	ng/uL	97
12) 1,3-Dichlorobenzene	146	5.678	5.678	0.986	235490	39.15	ng/uL	99
13) 1,4-Dichlorobenzene	146	5.783	5.783	1.004	222052	39.21	ng/uL	99
14) 1,2-Dichlorobenzene	146	5.992	5.992	1.041	211720	38.44	ng/uL	100
15) bis(2-Chloro-1-methyle...	45	6.135	6.135	1.065	365627	38.24	ng/uL	97
16) Benzyl alcohol	108	5.940	5.940	1.031	149159	40.01	ng/uL	98
17) o-Cresol	107	6.078	6.078	1.055	171848	40.07	ng/uL	99
18) m,p-Cresols	107	6.311	6.307	1.096	231591	40.06	ng/uL	100
19) N-Nitrosodipropylamine	70	6.335	6.331	1.100	168704	40.08	ng/uL	97
20) Hexachloroethane	117	6.464	6.469	1.122	88942	38.56	ng/uL	93
23) Nitrobenzene	77	6.564	6.564	0.873	221091	39.29	ng/uL	98
24) Isophorone	82	6.897	6.892	0.917	426626	37.49	ng/uL	99
25) 2-Nitrophenol	139	6.997	6.997	0.930	112733	42.32	ng/uL	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0944.D
Acq On : 10 Jul 2018 17:49
Operator : JLD1
InstName : MSD5
Sample : |WBN180517-09.1|ICV|1|SVM|1|MICV
Misc : |MIX[A]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 11 10:01:45 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
26)	2,4-Dimethylphenol	122	7.045	7.040	0.937	180926	39.03	ng/uL	98
27)	bis(2-Chloroethoxy)met...	93	7.188	7.188	0.956	250906	38.35	ng/uL	97
28)	2,4-Dichlorophenol	162	7.321	7.316	0.973	185170	40.15	ng/uL	99
29)	Benzoic acid	105	7.216	7.188	0.959	130749	49.17	ng/uL#	96
30)	1,2,4-Trichlorobenzene	180	7.440	7.440	0.989	209875	40.20	ng/uL	99
31)	alpha-Terpineol	59	7.564	7.564	1.006	173268	36.32	ng/uL	99
32)	Naphthalene	128	7.550	7.550	1.004	533179	39.67	ng/uL	99
33)	4-Chloroaniline	127	7.621	7.621	1.013	230549	38.75	ng/uL	99
34)	Hexachlorobutadiene	225	7.711	7.712	1.025	142820	42.09	ng/uL	100
35)	4-Chloro-3-methylphenol	107	8.254	8.250	1.098	187549	40.33	ng/uL	99
36)	2-Methylnaphthalene	142	8.473	8.473	1.127	418232	39.72	ng/uL	99
37)	1-Methylnaphthalene	142	8.602	8.602	1.144	375384	39.19	ng/uL	100
39)	Hexachlorocyclopentadiene	237	8.669	8.673	0.882	138629	38.00	ng/uL	100
40)	2,3-Dichloroaniline	161	8.840	8.840	0.900	205900	38.65	ng/uL	99
41)	2,4,6-Trichlorophenol	196	8.835	8.835	0.899	142045	41.57	ng/uL	100
42)	2,4,5-Trichlorophenol	196	8.873	8.873	0.903	148413	40.90	ng/uL	98
44)	2-Chloronaphthalene	162	9.107	9.107	0.927	378979	38.20	ng/uL	99
45)	o-Nitroaniline	65	9.240	9.235	0.940	125513	39.42	ng/uL	98
46)	1,4-Dinitrobenzene	168	9.426	9.421	0.959	78320	41.31	ng/uL	96
47)	m-Nitroaniline	138	9.773	9.769	0.995	109860	40.09	ng/uL	99
48)	Dimethylphthalate	163	9.483	9.483	0.965	443640	38.97	ng/uL	100
49)	m-Dinitrobenzene	168	9.521	9.516	0.969	83850	41.07	ng/uL	97
50)	2,6-Dinitrotoluene	165	9.559	9.554	0.973	104488	38.95	ng/uL	97
51)	2,4-Dinitrotoluene	165	10.064	10.064	1.024	144197	40.31	ng/uL	91
52)	Acenaphthylene	152	9.645	9.645	0.982	572069	39.16	ng/uL	100
53)	Acenaphthene	154	9.869	9.869	1.004	356372	40.63	ng/uL	100
54)	2,4-Dinitrophenol	184	9.897	9.893	1.007	52880	44.93	ng/uL	96
55)	Dibenzofuran	168	10.088	10.083	1.027	533051	40.04	ng/uL	100
56)	2,3,4,6-Tetrachlorophenol	232	10.231	10.231	1.041	129334	41.84	ng/uL	100
57)	Diethylphthalate	149	10.373	10.369	1.056	450627	39.39	ng/uL	100
58)	4-Nitrophenol	139	9.964	9.959	1.014	84172	43.39	ng/uL	96
59)	Fluorene	166	10.521	10.521	1.071	434096	39.37	ng/uL	98
60)	4-Chlorophenylphenylether	204	10.516	10.516	1.070	244254	40.11	ng/uL	99
61)	p-Nitroaniline	138	10.550	10.545	1.074	103316	40.74	ng/uL	96
64)	2-Methyl-4,6-dinitroph...	198	10.578	10.578	0.904	79633	45.51	ng/uL	95
65)	Diphenylamine	169	10.669	10.664	0.912	382339	39.73	ng/uL	100
66)	1,2-Diphenylhydrazine	77	10.716	10.716	0.916	433095	39.35	ng/uL	99
67)	4-Bromophenylphenylether	248	11.131	11.131	0.952	159590	40.48	ng/uL	98
68)	Hexachlorobenzene	284	11.202	11.202	0.958	157510	39.30	ng/uL	98
69)	Pentachlorophenol	266	11.445	11.445	0.978	100827	46.64	ng/uL	98
70)	n-Octadecane	57	11.540	11.540	0.987	321328	39.63	ng/uL	98
71)	Dinoseb	211	11.673	11.674	0.998	125264	44.69	ng/uL	100
72)	Phenanthrene	178	11.731	11.726	1.003	599645	39.66	ng/uL	99
73)	Anthracene	178	11.792	11.793	1.008	626428	39.67	ng/uL	99
74)	Carbazole	167	11.988	11.988	1.025	580101	40.34	ng/uL	99
75)	Di-n-butylphthalate	149	12.407	12.407	1.061	721487	39.75	ng/uL	100
76)	Fluoranthene	202	13.207	13.207	1.129	744602	41.13	ng/uL	99
78)	Pyrene	202	13.493	13.493	0.883	734520	37.29	ng/uL	100
80)	Butylbenzylphthalate	149	14.326	14.326	0.937	299044	38.68	ng/uL	99
81)	bis(2-Ethylhexyl)phtha...	149	15.293	15.293	1.001	341190	40.81	ng/uL	100
82)	Benzo(a)anthracene	228	15.254	15.255	0.998	615559	38.79	ng/uL	100
83)	Chrysene	228	15.331	15.326	1.003	544104	39.08	ng/uL	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0944.D
Acq On : 10 Jul 2018 17:49
Operator : JLD1
InstName : MSD5
Sample : |WBN180517-09.1|ICV|1|SVM|1|MICV
Misc : |MIX[A]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 11 10:01:45 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

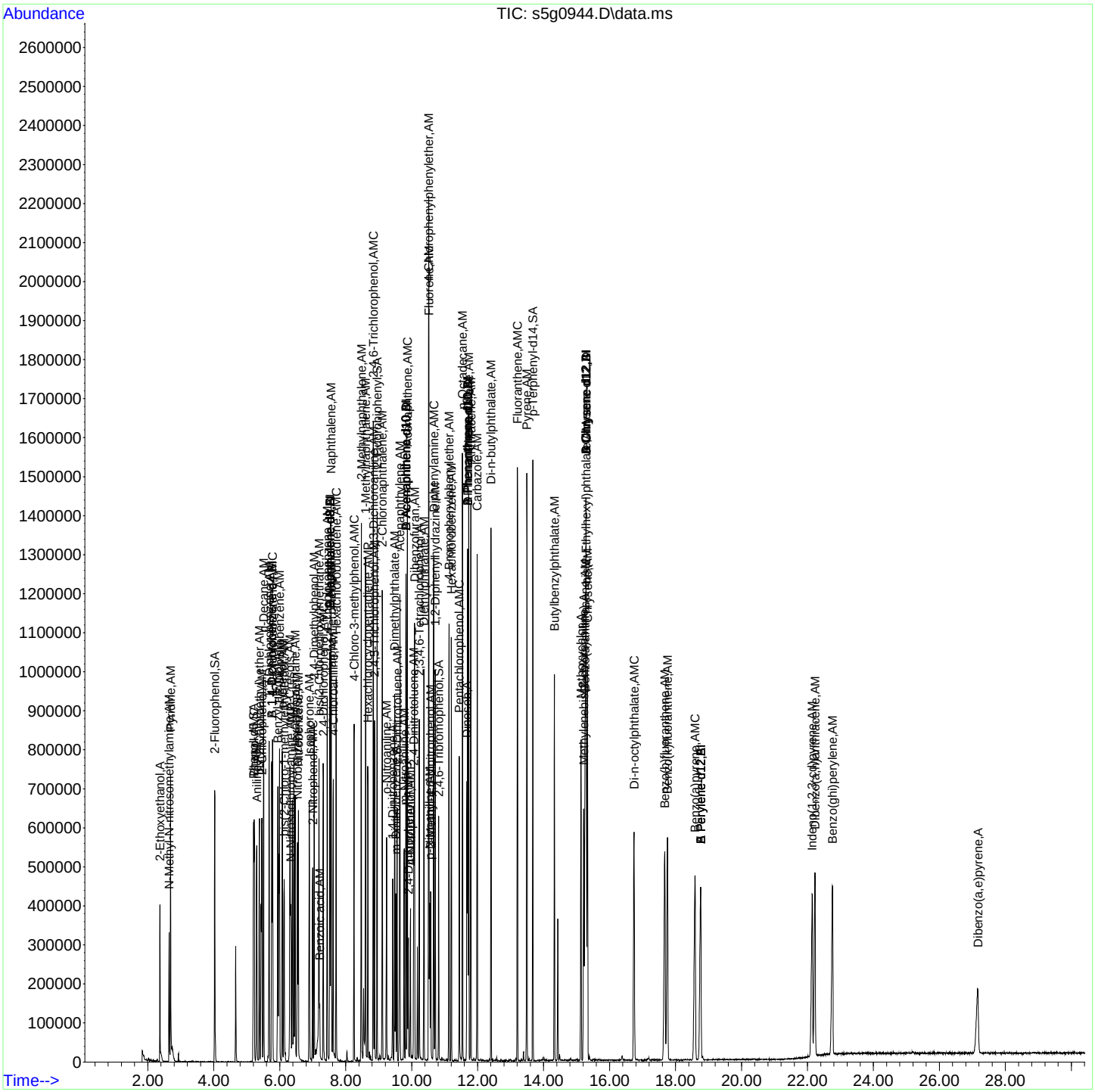
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
84) Methoxychlor	227	15.135	15.135	0.990	484178	41.09	ng/uL	99
85) Methylenebis(2-chloroa...	231	15.216	15.216	0.996	125037	38.63	ng/uL	98
86) Di-n-octylphthalate	149	16.740	16.745	1.095	589356	39.69	ng/uL	99
88) Benzo(b)fluoranthene	252	17.674	17.669	0.942	571068	38.27	ng/uL	99
89) Benzo(k)fluoranthene	252	17.754	17.750	0.946	540076	38.23	ng/uL	100
90) Benzo(a)pyrene	252	18.593	18.583	0.991	529871	39.13	ng/uL	100
91) Indeno(1,2,3-cd)pyrene	276	22.140	22.140	1.180	463546	44.12	ng/uL	99
92) Dibenzo(a,h)anthracene	278	22.226	22.221	1.184	449858	44.38	ng/uL	98
93) Benzo(ghi)perylene	276	22.759	22.750	1.213	459668	44.19	ng/uL	98
94) Dibenzo(a,e)pyrene	302	27.164	27.159	1.448	261634	39.79	ng/uL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0944.D
Acq On : 10 Jul 2018 17:49
Operator : JLD1
InstName : MSD5
Sample : |WBN180517-09.1|ICV|1|SVM|1|MICV
Misc : |MIX[A]
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 11 10:01:45 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0955.D
Acq On : 10 Jul 2018 23:16
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-17|ICAL|1|SVM|1|A2
Misc : |MIX[B]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 11 07:50:17 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards									Dev(Min)
1)	A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21)	A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38)	A Acenaphthene-d10	164	9.816	9.826	1.000	0m	40.00	ng/uL	0.00
63)	A Phenanthrene-d10	188	11.693	11.697	1.000	0m	40.00	ng/uL	0.00
77)	A Chrysene-d12	240	15.264	15.278	1.000	0m	40.00	ng/uL	-0.01
87)	A Perylene-d12	264	18.735	18.755	1.000	0m	40.00	ng/uL	-0.02
95)	B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	163156	40.00	ng/uL	0.00
111)	B Naphthalene-d8	136	7.516	7.516	1.000	542016	40.00	ng/uL	0.00
119)	B Acenaphthene-d10	164	9.816	9.816	1.000	292480	40.00	ng/uL	0.00
128)	B Phenanthrene-d10	188	11.693	11.697	1.000	533591	40.00	ng/uL	0.00
141)	B Chrysene-d12	240	15.264	15.269	1.000	355602	40.00	ng/uL	0.00
147)	B Perylene-d12	264	18.735	18.740	1.000	238983	40.00	ng/uL	0.00
150)	J Phenanthrene-d10	188	11.693	11.697	1.000	0m	40.00	ng/uL	0.00
152)	J Chrysene-d12	240	15.264	15.274	1.000	0m	40.00	ng/uL	0.00
155)	D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157)	D Acenaphthene-d10	164	9.816	9.816	1.000	0m	40.00	ng/uL	0.00
160)	D Phenanthrene-d10	188	11.693	11.693	1.000	0m	40.00	ng/uL	0.00
167)	D Chrysene-d12	240	15.264	15.264	1.000	0m	40.00	ng/uL	0.00
169)	E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171)	E Perylene-d12	264	0.000	18.788	1.000	0	0.00	ng/uL	-18.79
System Monitoring Compounds									Dev(Min)
5)	2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7)	Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22)	Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43)	2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62)	2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79)	p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

	Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
96)	1,4-Dioxane	88	2.369	2.364	0.412	23437	11.03	ng/uL	95
97)	Methyl methacrylate	100	2.364	2.364	0.411	11993	11.50	ng/uL	95
98)	Ethyl methacrylate	69	3.064	3.059	0.532	54431	10.81	ng/uL	97
99)	2-Picoline	93	3.421	3.416	0.595	66433	10.78	ng/uL	99
100)	N-Nitrosomethylethylamine	88	3.521	3.521	0.612	27748	10.68	ng/uL	98
101)	Methyl methanesulfonate	80	3.850	3.864	0.669	34764	10.68	ng/uL	99
102)	N-Nitrosodiethylamine	102	4.330	4.335	0.753	28737	10.60	ng/uL	98
103)	2-Butoxyethanol	57	4.407	4.411	0.766	77095	11.44	ng/uL	98
104)	Ethyl methanesulfonate	79	4.692	4.707	0.815	45550	10.57	ng/uL	97
105)	Benzaldehyde	77	5.154	5.159	0.896	53040	11.35	ng/uL	98
106)	Pentachloroethane	167	5.364	5.364	0.932	25043	11.02	ng/uL	98
107)	N-Nitrosopyrrolidine	100	6.278	6.297	1.091	29586	10.17	ng/uL	98
108)	Acetophenone	105	6.311	6.321	1.097	75457	11.21	ng/uL	100
109)	N-Nitrosomorpholine	56	6.335	6.350	1.101	34538	11.15	ng/uL	98
110)	o-Toluidine	106	6.359	6.369	1.105	85437	11.57	ng/uL	97
112)	N-Nitrosopiperidine	114	6.759	6.769	0.899	28421	10.76	ng/uL	99
113)	a,a-Dimethylphenethyla...	58	7.273	7.345	0.968	166194	9.87	ng/uL	99
114)	2,6-Dichlorophenol	162	7.616	7.626	1.013	35997	9.74	ng/uL	97
115)	Hexachloropropene	213	7.659	7.659	1.019	35830	10.67	ng/uL	100
116)	Caprolactam	113	8.050	8.092	1.071	15025	9.99	ng/uL	91

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0955.D
Acq On : 10 Jul 2018 23:16
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-17|ICAL|1|SVM|1|A2
Misc : |MIX[B]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 11 07:50:17 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

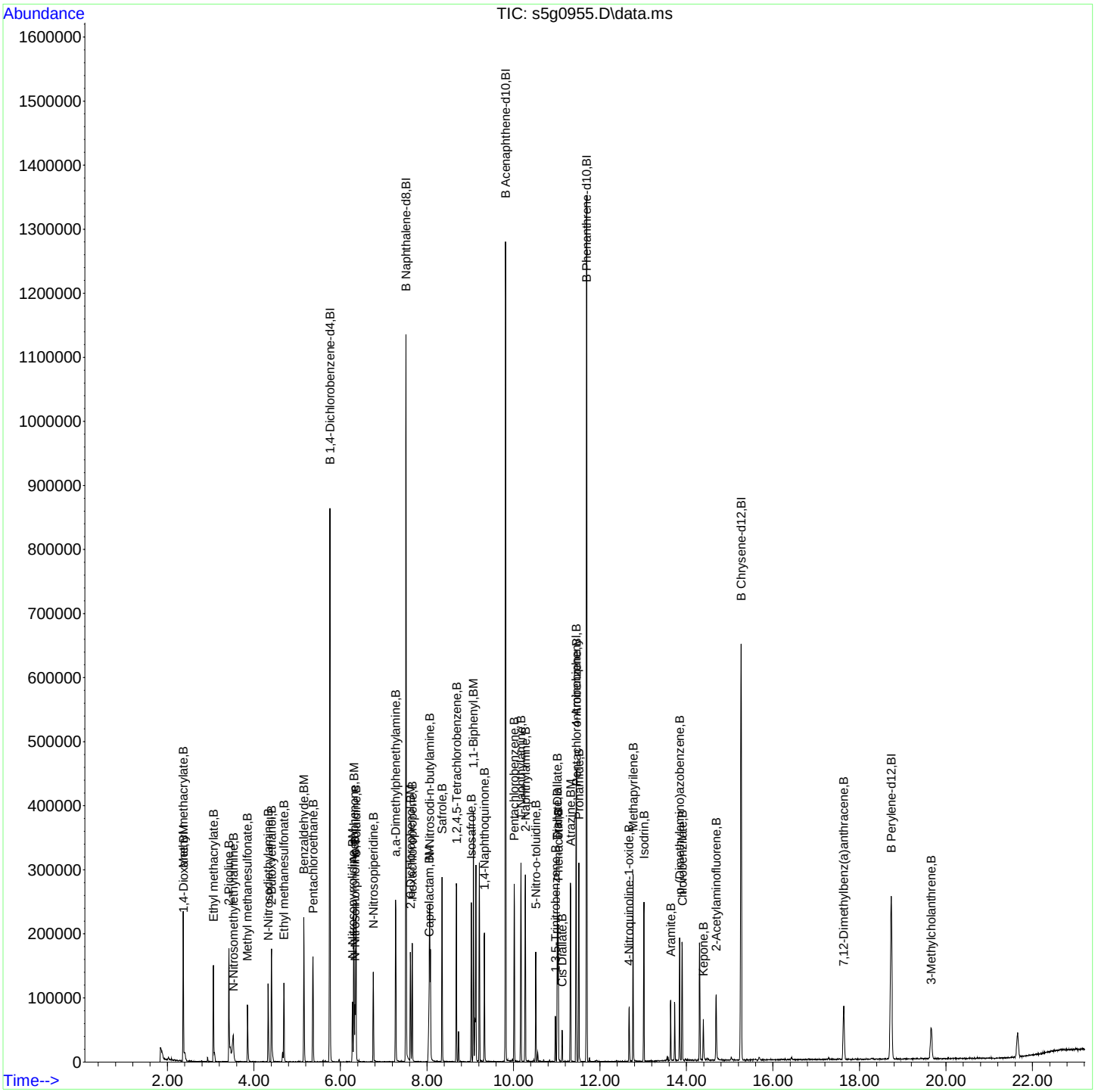
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
117)	N-Nitrosodi-n-butylamine	84	8.064	8.073	1.073	47493	10.76	ng/uL	95
118)	Safrole	162	8.350	8.354	1.111	41817	10.91	ng/uL	98
120)	1,2,4,5-Tetrachloroben...	216	8.683	8.683	0.885	56597	11.05	ng/uL	98
121)	1,1-Biphenyl	154	9.073	9.083	0.924	123415	12.00	ng/uL	99
122)	Isosafrole	162	9.026	9.031	0.919	43979	11.45	ng/uL	96
123)	1,4-Naphthoquinone	158	9.331	9.335	0.951	40321	11.75	ng/uL	98
124)	Pentachlorobenzene	250	10.016	10.021	1.020	45561	10.84	ng/uL	98
125)	1-Naphthylamine	143	10.173	10.178	1.036	99092	11.03	ng/uL	100
126)	2-Naphthylamine	143	10.273	10.278	1.047	99304	11.17	ng/uL	99
127)	5-Nitro-o-toluidine	152	10.516	10.526	1.071	27691	9.82	ng/uL	99
129)	1,3,5-Trinitrobenzene	75	10.969	10.978	0.938	17703	7.61	ng/uL	96
130)	Phenacetin	108	11.035	11.054	0.944	46458	10.31	ng/uL	96
131)	Diallate	86	11.012	11.016	0.942	45362	11.25	ng/uL	98
132)	Cis Diallate	86	11.126	11.131	0.952	7290	1.60	ng/uL	98
133)	Trans Diallate	86	11.012	11.016	0.942	45362	9.56	ng/uL	98
134)	Atrazine	200	11.321	11.331	0.968	33717	11.16	ng/uL	99
135)	4-Aminobiphenyl	169	11.450	11.454	0.979	115449	11.26	ng/uL	97
136)	Pentachloronitrobenzene	237	11.454	11.459	0.980	15076	10.85	ng/uL	98
137)	Pronamide	173	11.512	11.521	0.985	49613	11.31	ng/uL	98
138)	4-Nitroquinoline-1-oxide	116	12.673	12.683	1.084	4569	9.37	ng/uL#	64
139)	Methapyrilene	58	12.764	12.769	1.092	86689	11.51	ng/uL	96
140)	Isodrin	193	13.016	13.016	1.113	19165	10.89	ng/uL	97
142)	Aramite	185	13.635	13.635	0.893	7013	10.29	ng/uL	91
143)	Kepone	272	14.393	14.397	0.943	9000	10.20	ng/uL	95
144)	p-(Dimethylamino)azobe...	120	13.840	13.845	0.907	32886	11.17	ng/uL	99
145)	Chlorobenzilate	251	13.902	13.907	0.911	35142	11.00	ng/uL	99
146)	2-Acetylaminofluorene	181	14.688	14.697	0.962	30239	8.39	ng/uL	97
148)	7,12-Dimethylbenz(a)an...	256	17.631	17.650	0.941	35154	10.53	ng/uL	99
149)	3-Methylcholanthrene	269	19.655	19.674	1.049	6999	10.01	ng/uL#	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0955.D
Acq On : 10 Jul 2018 23:16
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-17|ICAL|1|SVM|1|A2
Misc : |MIX[B]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 11 07:50:17 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0956.D
Acq On : 10 Jul 2018 23:46
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-16|ICAL|1|SVM|1|A3
Misc : |MIX[B]
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 11 07:50:20 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.816	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.693	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.264	15.278	1.000	0m	40.00	ng/uL	-0.01
87) A Perylene-d12	264	18.736	18.755	1.000	0m	40.00	ng/uL	-0.02
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	167111	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	550320	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.816	9.816	1.000	297242	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.693	11.697	1.000	540525	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.264	15.269	1.000	345413	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.736	18.740	1.000	220615	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.693	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.264	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.816	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.693	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.264	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	0.000	18.788	1.000	0	0.00	ng/uL	-18.79
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
96) 1,4-Dioxane	88	2.364	2.364	0.411	45549	20.92	ng/uL	99
97) Methyl methacrylate	100	2.364	2.364	0.411	22262	20.84	ng/uL	97
98) Ethyl methacrylate	69	3.059	3.059	0.532	109627	21.25	ng/uL	100
99) 2-Picoline	93	3.416	3.416	0.594	135706	21.50	ng/uL	100
100) N-Nitrosomethylethylamine	88	3.516	3.521	0.611	54748	20.58	ng/uL	98
101) Methyl methanesulfonate	80	3.854	3.864	0.670	67980	20.39	ng/uL	99
102) N-Nitrosodiethylamine	102	4.331	4.335	0.753	55460	19.97	ng/uL	99
103) 2-Butoxyethanol	57	4.407	4.411	0.766	147632	21.39	ng/uL	99
104) Ethyl methanesulfonate	79	4.697	4.707	0.816	88524	20.05	ng/uL	99
105) Benzaldehyde	77	5.154	5.159	0.896	100110	20.91	ng/uL	99
106) Pentachloroethane	167	5.364	5.364	0.932	48180	20.70	ng/uL	98
107) N-Nitrosopyrrolidine	100	6.288	6.297	1.093	58124	19.51	ng/uL	99
108) Acetophenone	105	6.312	6.321	1.097	142297	20.63	ng/uL	99
109) N-Nitrosomorpholine	56	6.340	6.350	1.102	65374	20.60	ng/uL	100
110) o-Toluidine	106	6.364	6.369	1.106	162051	21.43	ng/uL	98
112) N-Nitrosopiperidine	114	6.764	6.769	0.900	54631	20.37	ng/uL	98
113) a,a-Dimethylphenethyla...	58	7.273	7.345	0.968	337902	19.77	ng/uL	100
114) 2,6-Dichlorophenol	162	7.621	7.626	1.014	72308	19.27	ng/uL	98
115) Hexachloropropene	213	7.659	7.659	1.019	68610	20.12	ng/uL	98
116) Caprolactam	113	8.069	8.092	1.073	30705	20.10	ng/uL	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0956.D
Acq On : 10 Jul 2018 23:46
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-16|ICAL|1|SVM|1|A3
Misc : |MIX[B]
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 11 07:50:20 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

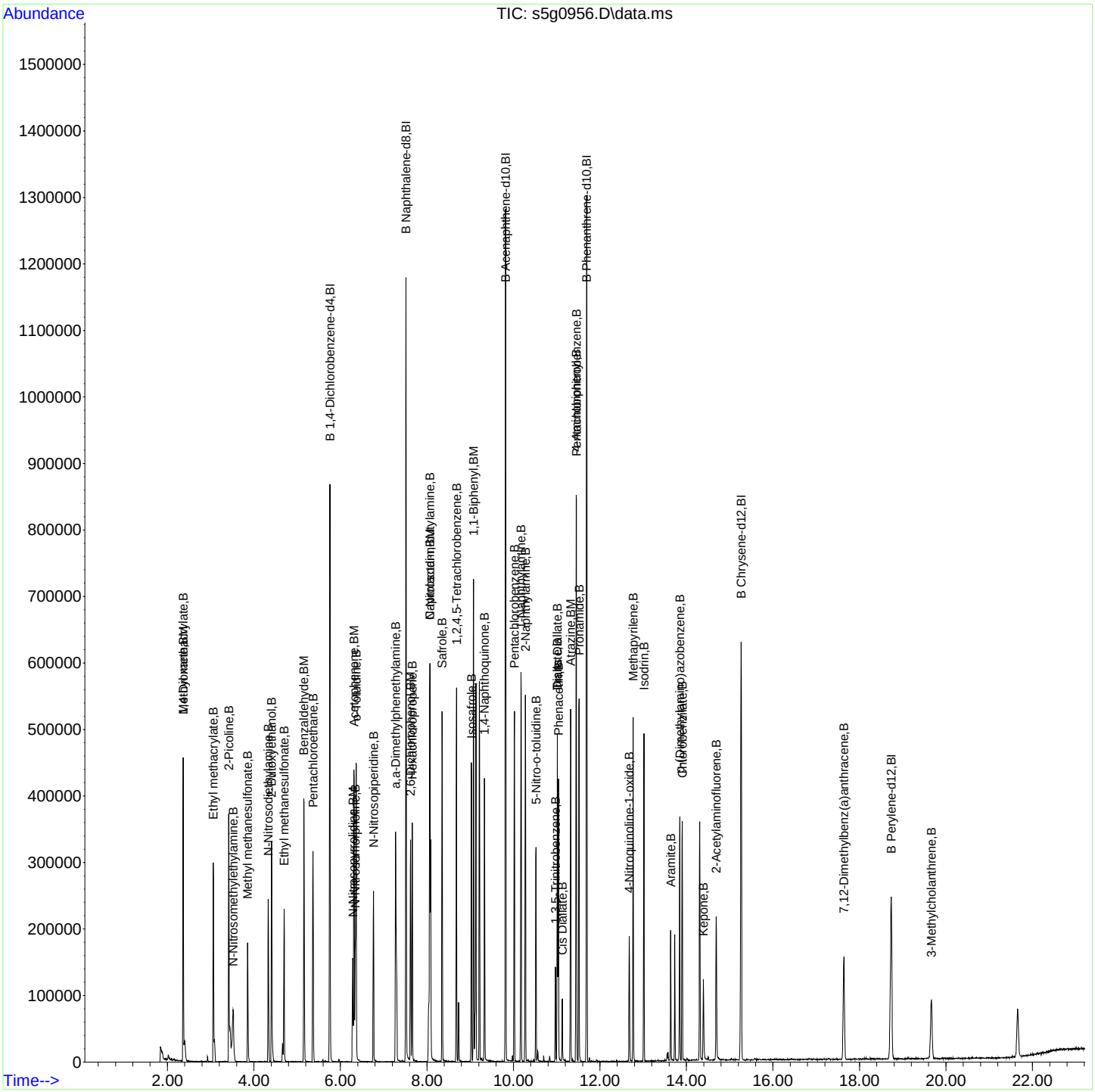
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
117)	N-Nitrosodi-n-butylamine	84	8.069	8.073	1.073	92235	20.59	ng/uL	98
118)	Safrole	162	8.350	8.354	1.111	81044	20.83	ng/uL	99
120)	1,2,4,5-Tetrachloroben...	216	8.683	8.683	0.885	111860	21.50	ng/uL	99
121)	1,1-Biphenyl	154	9.078	9.083	0.925	232708	22.26	ng/uL	99
122)	Isosafrole	162	9.031	9.031	0.920	82790	21.20	ng/uL	99
123)	1,4-Naphthoquinone	158	9.331	9.335	0.951	78720	22.57	ng/uL	100
124)	Pentachlorobenzene	250	10.021	10.021	1.021	90726	21.24	ng/uL	99
125)	1-Naphthylamine	143	10.174	10.178	1.036	193003	21.15	ng/uL	99
126)	2-Naphthylamine	143	10.274	10.278	1.047	190849	21.12	ng/uL	98
127)	5-Nitro-o-toluidine	152	10.521	10.526	1.072	57556	20.09	ng/uL	98
129)	1,3,5-Trinitrobenzene	75	10.969	10.978	0.938	41783	17.72	ng/uL	98
130)	Phenacetin	108	11.040	11.054	0.944	92577	20.28	ng/uL	100
131)	Diallate	86	11.016	11.016	0.942	87066	21.31	ng/uL	98
132)	Cis Diallate	86	11.131	11.131	0.952	14393	3.12	ng/uL	100
133)	Trans Diallate	86	11.016	11.016	0.942	87066	18.11	ng/uL	98
134)	Atrazine	200	11.321	11.331	0.968	66235	21.64	ng/uL	99
135)	4-Aminobiphenyl	169	11.450	11.454	0.979	218161	21.00	ng/uL	99
136)	Pentachloronitrobenzene	237	11.454	11.459	0.980	29209	20.75	ng/uL	96
137)	Pronamide	173	11.516	11.521	0.985	93575	21.05	ng/uL	99
138)	4-Nitroquinoline-1-oxide	116	12.678	12.683	1.084	9237	18.71	ng/uL#	79
139)	Methapyrilene	58	12.764	12.769	1.092	165205	21.66	ng/uL	98
140)	Isodrin	193	13.016	13.016	1.113	36577	20.51	ng/uL	98
142)	Aramite	185	13.635	13.635	0.893	14255	21.54	ng/uL	96
143)	Kepone	272	14.393	14.397	0.943	17512	20.42	ng/uL	99
144)	p-(Dimethylamino)azobe...	120	13.845	13.845	0.907	65201	22.81	ng/uL	97
145)	Chlorobenzilate	251	13.902	13.907	0.911	67706	21.83	ng/uL	98
146)	2-Acetylaminofluorene	181	14.688	14.697	0.962	62283	17.78	ng/uL	100
148)	7,12-Dimethylbenz(a)an...	256	17.640	17.650	0.942	66159	21.47	ng/uL	99
149)	3-Methylcholanthrene	269	19.664	19.674	1.050	13136	20.34	ng/uL#	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0956.D
Acq On : 10 Jul 2018 23:46
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-16|ICAL|1|SVM|1|A3
Misc : |MIX[B]
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 11 07:50:20 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0957.D
Acq On : 11 Jul 2018 00:16
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-18|ICAL|1|SVM|1|A9
Misc : |MIX[B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 11 07:50:23 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.816	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.269	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.750	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	157948	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	533929	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.816	9.816	1.000	292909	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	549333	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.269	15.269	1.000	481621	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.750	18.740	1.000	415786	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.269	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.816	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.269	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.750	18.788	1.000	0m	40.00	ng/uL	-0.04
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
96) 1,4-Dioxane	88	2.364	2.364	0.411	61187	29.74	ng/uL	95
97) Methyl methacrylate	100	2.359	2.364	0.410	30652	30.36	ng/uL	95
98) Ethyl methacrylate	69	3.059	3.059	0.532	146475	30.04	ng/uL	99
99) 2-Picoline	93	3.416	3.416	0.594	182301	30.56	ng/uL	100
100) N-Nitrosomethylethylamine	88	3.521	3.521	0.612	76120	30.27	ng/uL	98
101) Methyl methanesulfonate	80	3.859	3.864	0.671	96814	30.72	ng/uL	98
102) N-Nitrosodiethylamine	102	4.335	4.335	0.753	79540	30.30	ng/uL	98
103) 2-Butoxyethanol	57	4.407	4.411	0.766	200324	30.71	ng/uL	99
104) Ethyl methanesulfonate	79	4.702	4.707	0.817	129160	30.96	ng/uL	96
105) Benzaldehyde	77	5.159	5.159	0.897	140684	31.09	ng/uL	100
106) Pentachloroethane	167	5.364	5.364	0.932	66400	30.18	ng/uL	100
107) N-Nitrosopyrrolidine	100	6.292	6.297	1.094	86246	30.62	ng/uL	98
108) Acetophenone	105	6.316	6.321	1.098	201632	30.93	ng/uL	100
109) N-Nitrosomorpholine	56	6.345	6.350	1.103	92979	31.00	ng/uL	99
110) o-Toluidine	106	6.364	6.369	1.106	224250	31.38	ng/uL	98
112) N-Nitrosopiperidine	114	6.769	6.769	0.901	78832	30.30	ng/uL	98
113) a,a-Dimethylphenethyla...	58	7.321	7.345	0.974	498876	30.09	ng/uL	99
114) 2,6-Dichlorophenol	162	7.621	7.626	1.014	108599	29.83	ng/uL	98
115) Hexachloropropene	213	7.659	7.659	1.019	102075	30.85	ng/uL	98
116) Caprolactam	113	8.078	8.092	1.075	45133	30.46	ng/uL	95

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0957.D
Acq On : 11 Jul 2018 00:16
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-18|ICAL|1|SVM|1|A9
Misc : |MIX[B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 11 07:50:23 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

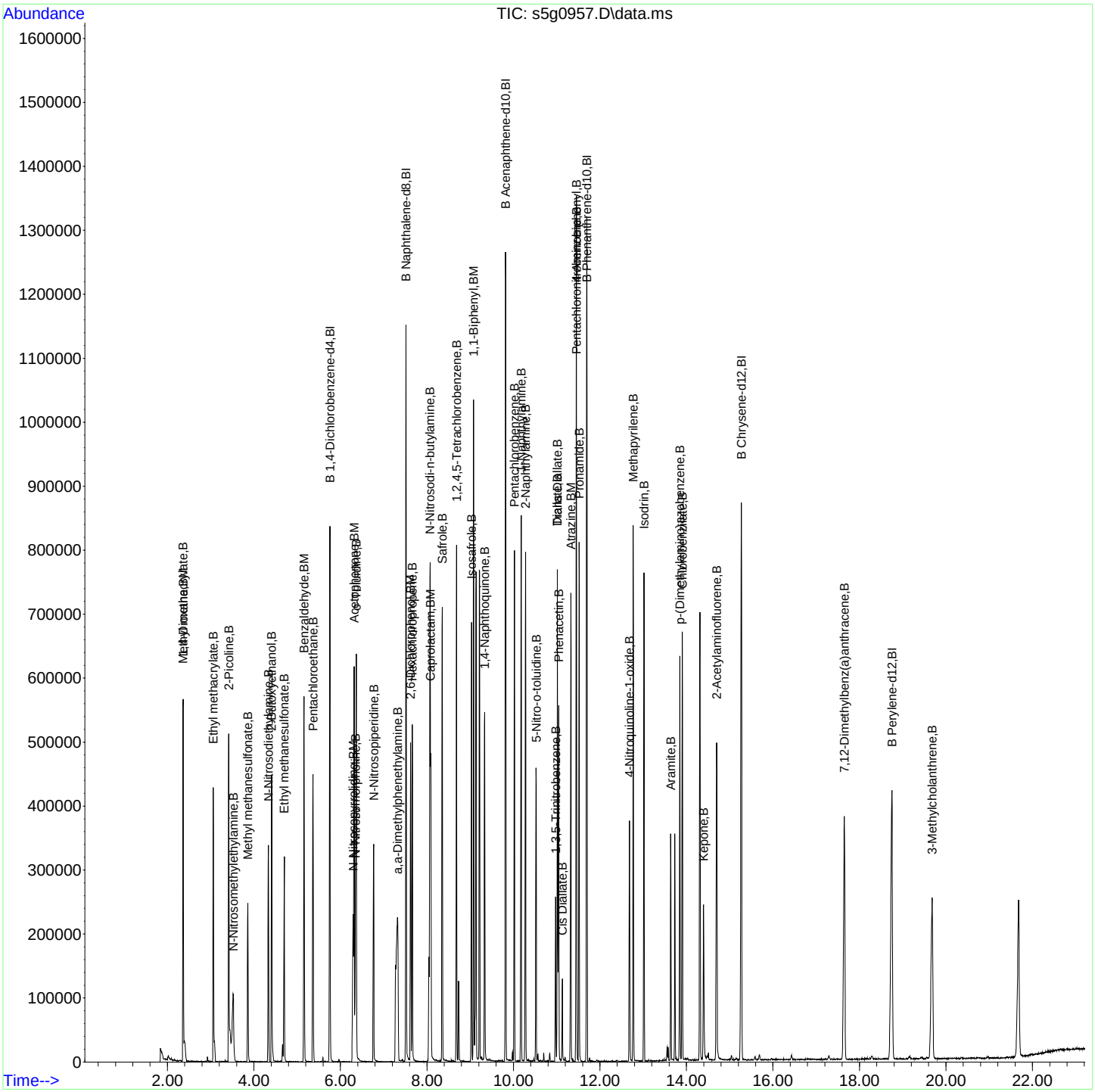
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
117)	N-Nitrosodi-n-butylamine	84	8.069	8.073	1.073	132481	30.48	ng/uL	98
118)	Safrole	162	8.354	8.354	1.112	114843	30.42	ng/uL	100
120)	1,2,4,5-Tetrachloroben...	216	8.683	8.683	0.885	158006	30.81	ng/uL	100
121)	1,1-Biphenyl	154	9.078	9.083	0.925	326470	31.70	ng/uL	98
122)	Isosafrole	162	9.031	9.031	0.920	120924	31.43	ng/uL	99
123)	1,4-Naphthoquinone	158	9.335	9.335	0.951	114144	33.22	ng/uL	99
124)	Pentachlorobenzene	250	10.021	10.021	1.021	131463	31.23	ng/uL	100
125)	1-Naphthylamine	143	10.178	10.178	1.037	286070	31.81	ng/uL	100
126)	2-Naphthylamine	143	10.278	10.278	1.047	284091	31.90	ng/uL	100
127)	5-Nitro-o-toluidine	152	10.526	10.526	1.072	86461	30.62	ng/uL	100
129)	1,3,5-Trinitrobenzene	75	10.973	10.978	0.938	68670	28.66	ng/uL	99
130)	Phenacetin	108	11.045	11.054	0.944	139465	30.06	ng/uL	99
131)	Diallate	86	11.016	11.016	0.942	125046	30.11	ng/uL	99
132)	Cis Diallate	86	11.131	11.131	0.952	20397	4.35	ng/uL	97
133)	Trans Diallate	86	11.016	11.016	0.942	125046	25.59	ng/uL	99
134)	Atrazine	200	11.326	11.331	0.968	94716	30.45	ng/uL	99
135)	4-Aminobiphenyl	169	11.454	11.454	0.979	326320	30.91	ng/uL	99
136)	Pentachloronitrobenzene	237	11.459	11.459	0.980	43765	30.59	ng/uL	98
137)	Pronamide	173	11.516	11.521	0.985	137153	30.36	ng/uL	100
138)	4-Nitroquinoline-1-oxide	116	12.683	12.683	1.084	16542	32.97	ng/uL	88
139)	Methapyrilene	58	12.769	12.769	1.092	254844	32.87	ng/uL	99
140)	Isodrin	193	13.016	13.016	1.113	57550	31.75	ng/uL	96
142)	Aramite	185	13.635	13.635	0.893	27542	29.85	ng/uL	96
143)	Kepone	272	14.397	14.397	0.943	36001	30.11	ng/uL	99
144)	p-(Dimethylamino)azobe...	120	13.850	13.845	0.907	117059	29.37	ng/uL	98
145)	Chlorobenzilate	251	13.902	13.907	0.910	124900	28.88	ng/uL	100
146)	2-Acetylaminofluorene	181	14.697	14.697	0.963	152001	31.13	ng/uL	100
148)	7,12-Dimethylbenz(a)an...	256	17.650	17.650	0.941	168634	29.04	ng/uL	98
149)	3-Methylcholanthrene	269	19.678	19.674	1.050	38173	31.37	ng/uL#	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0957.D
Acq On : 11 Jul 2018 00:16
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-18|ICAL|1|SVM|1|A9
Misc : |MIX[B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 11 07:50:23 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0958.D
Acq On : 11 Jul 2018 00:46
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-15.2|ICAL|1|SVM|1|A4
Misc : |MIX[B]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 11 07:46:59 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:46:55 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.816	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.269	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.740	18.755	1.000	0m	40.00	ng/uL	-0.01
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	166843	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	558316	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.816	9.816	1.000	311436	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	566173	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.269	15.269	1.000	433362	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.740	18.740	1.000	332337	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.269	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.816	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.269	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.740	18.764	1.000	0m	40.00	ng/uL	-0.02
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
96) 1,4-Dioxane	88	2.364	2.364	0.411	86945	40.00	ng/uL	100
97) Methyl methacrylate	100	2.364	2.364	0.411	42657	40.00	ng/uL	100
98) Ethyl methacrylate	69	3.059	3.059	0.532	206055	40.00	ng/uL	100
99) 2-Picoline	93	3.416	3.416	0.594	252088	40.00	ng/uL	100
100) N-Nitrosomethylethylamine	88	3.521	3.521	0.612	106257	40.00	ng/uL	100
101) Methyl methanesulfonate	80	3.864	3.864	0.671	133177	40.00	ng/uL	100
102) N-Nitrosodiethylamine	102	4.335	4.335	0.753	110910	40.00	ng/uL	100
103) 2-Butoxyethanol	57	4.411	4.411	0.767	275583	40.00	ng/uL	100
104) Ethyl methanesulfonate	79	4.707	4.707	0.818	176296	40.00	ng/uL	100
105) Benzaldehyde	77	5.159	5.159	0.897	191211	40.00	ng/uL	100
106) Pentachloroethane	167	5.364	5.364	0.932	92967	40.00	ng/uL	100
107) N-Nitrosopyrrolidine	100	6.297	6.297	1.094	118993	40.00	ng/uL	100
108) Acetophenone	105	6.321	6.321	1.098	275412	40.00	ng/uL	100
109) N-Nitrosomorpholine	56	6.350	6.350	1.103	126714	40.00	ng/uL	100
110) o-Toluidine	106	6.369	6.369	1.107	301955	40.00	ng/uL	100
112) N-Nitrosopiperidine	114	6.769	6.769	0.901	108835	40.00	ng/uL	100
113) a,a-Dimethylphenethyla...	58	7.345	7.345	0.977	693511	40.00	ng/uL	100
114) 2,6-Dichlorophenol	162	7.626	7.626	1.015	152262	40.00	ng/uL	100
115) Hexachloropropene	213	7.659	7.659	1.019	138409	40.00	ng/uL	100
116) Caprolactam	113	8.092	8.092	1.077	61985	40.00	ng/uL	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0958.D
Acq On : 11 Jul 2018 00:46
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-15.2|ICAL|1|SVM|1|A4
Misc : |MIX[B]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 11 07:46:59 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:46:55 2018
Response via : Initial Calibration
Integrator: RTE

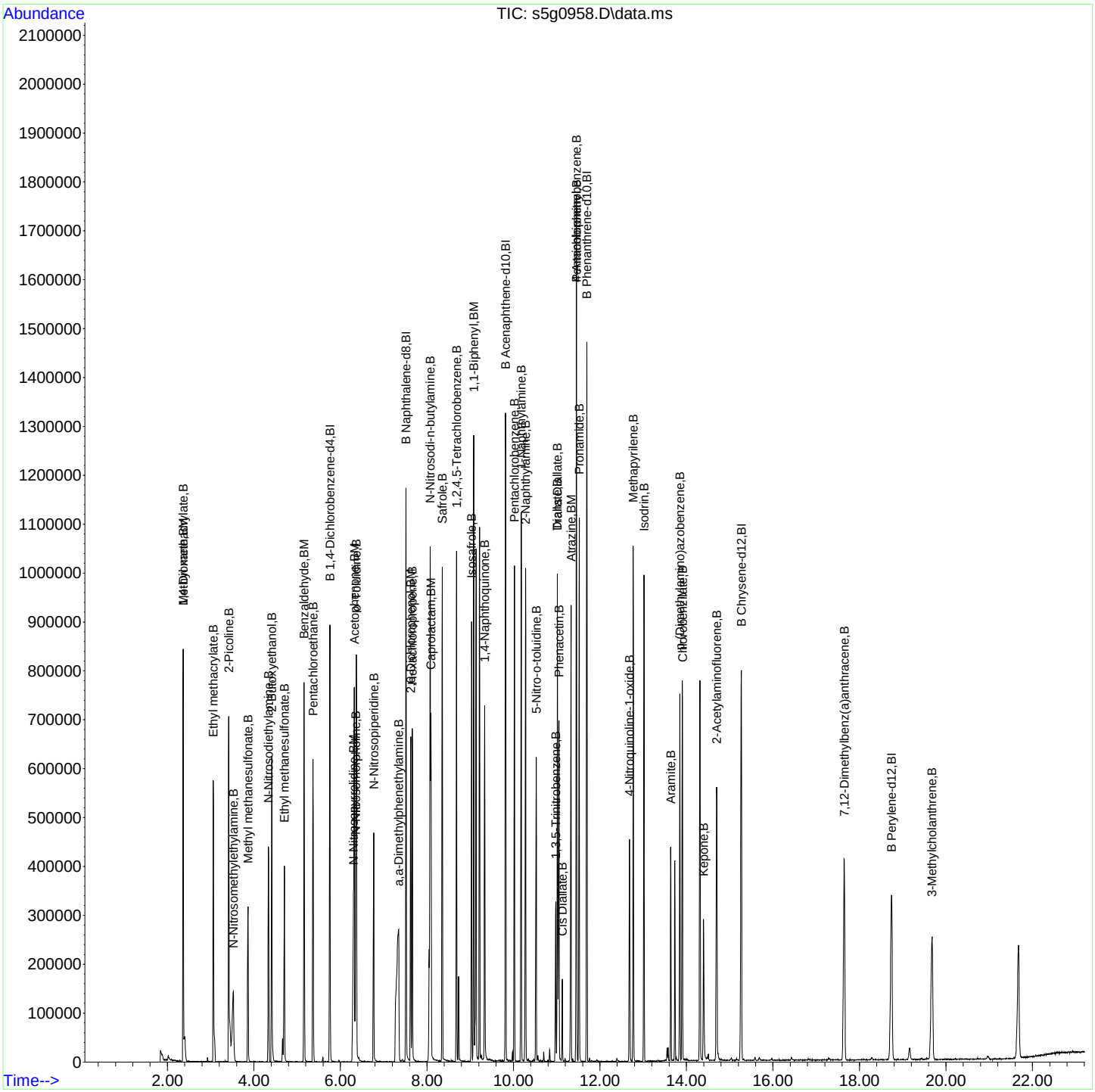
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
117) N-Nitrosodi-n-butylamine	84	8.073	8.073	1.074	181829	40.00	ng/uL	100
118) Safrole	162	8.354	8.354	1.112	157884	40.00	ng/uL	100
120) 1,2,4,5-Tetrachloroben...	216	8.683	8.683	0.885	218093	40.00	ng/uL	100
121) 1,1-Biphenyl	154	9.083	9.083	0.925	438073	40.00	ng/uL	100
122) Isosafrole	162	9.031	9.031	0.920	163641	40.00	ng/uL	100
123) 1,4-Naphthoquinone	158	9.335	9.335	0.951	146151	40.00	ng/uL	100
124) Pentachlorobenzene	250	10.021	10.021	1.021	179046	40.00	ng/uL	100
125) 1-Naphthylamine	143	10.178	10.178	1.037	382507	40.00	ng/uL	100
126) 2-Naphthylamine	143	10.278	10.278	1.047	378768	40.00	ng/uL	100
127) 5-Nitro-o-toluidine	152	10.526	10.526	1.072	120085	40.00	ng/uL	100
129) 1,3,5-Trinitrobenzene	75	10.978	10.978	0.939	98772	40.00	ng/uL	100
130) Phenacetin	108	11.054	11.054	0.945	191251	40.00	ng/uL	100
131) Diallate	86	11.016	11.016	0.942	171202	40.00	ng/uL	100
132) Cis Diallate	86	11.131	11.131	0.952	28972	6.00	ng/uL	100
133) Trans Diallate	86	11.016	11.016	0.942	171202	34.00	ng/uL	100
134) Atrazine	200	11.331	11.331	0.969	128219	40.00	ng/uL	100
135) 4-Aminobiphenyl	169	11.454	11.454	0.979	435247	40.00	ng/uL	100
136) Pentachloronitrobenzene	237	11.459	11.459	0.980	58976	40.00	ng/uL	100
137) Pronamide	173	11.521	11.521	0.985	186232	40.00	ng/uL	100
138) 4-Nitroquinoline-1-oxide	116	12.683	12.683	1.084	20686	40.00	ng/uL	100
139) Methapyrilene	58	12.769	12.769	1.092	319610	40.00	ng/uL	100
140) Isodrin	193	13.016	13.016	1.113	74723	40.00	ng/uL	100
142) Aramite	185	13.635	13.635	0.893	33214	40.00	ng/uL	100
143) Kepone	272	14.397	14.397	0.943	43031	40.00	ng/uL	100
144) p-(Dimethylamino)azobe...	120	13.845	13.845	0.907	143468	40.00	ng/uL	100
145) Chlorobenzilate	251	13.907	13.907	0.911	155667	40.00	ng/uL	100
146) 2-Acetylaminofluorene	181	14.697	14.697	0.963	175756	40.00	ng/uL	100
148) 7,12-Dimethylbenz(a)an...	256	17.650	17.650	0.942	185654	40.00	ng/uL	100
149) 3-Methylcholanthrene	269	19.674	19.674	1.050	38907	40.00	ng/uL#	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0958.D
Acq On : 11 Jul 2018 00:46
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-15.2|ICAL|1|SVM|1|A4
Misc : |MIX[B]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 11 07:46:59 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:46:55 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0959.D
Acq On : 11 Jul 2018 01:16
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-14|ICAL|1|SVM|1|A5
Misc : |MIX[B]
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 11 07:50:26 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.816	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.269	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.740	18.755	1.000	0m	40.00	ng/uL	-0.01
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	165802	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	556783	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.816	9.816	1.000	308412	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	561889	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.269	15.269	1.000	438007	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.740	18.740	1.000	335472	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.269	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.816	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.269	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.740	18.788	1.000	0m	40.00	ng/uL	-0.05
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue	
96) 1,4-Dioxane	88	2.359	2.364	0.410	102501	47.45	ng/uL	98	A
97) Methyl methacrylate	100	2.359	2.364	0.410	51799	48.88	ng/uL	94	A
98) Ethyl methacrylate	69	3.059	3.059	0.532	226330	44.21	ng/uL	99	A
99) 2-Picoline	93	3.412	3.416	0.593	310004	49.50	ng/uL	100	A
100) N-Nitrosomethylethylamine	88	3.521	3.521	0.612	132300	50.12	ng/uL	99	A
101) Methyl methanesulfonate	80	3.864	3.864	0.671	166156	50.22	ng/uL	99	A
102) N-Nitrosodiethylamine	102	4.340	4.335	0.754	136347	49.48	ng/uL	100	A
103) 2-Butoxyethanol	57	4.412	4.411	0.767	334147	48.80	ng/uL	99	A
104) Ethyl methanesulfonate	79	4.707	4.707	0.818	220300	50.30	ng/uL	98	A
105) Benzaldehyde	77	5.159	5.159	0.897	232991	49.05	ng/uL	100	A
106) Pentachloroethane	167	5.364	5.364	0.932	114346	49.51	ng/uL	99	A
107) N-Nitrosopyrrolidine	100	6.302	6.297	1.095	147835	50.01	ng/uL	99	A
108) Acetophenone	105	6.321	6.321	1.098	339209	49.58	ng/uL	99	A
109) N-Nitrosomorpholine	56	6.354	6.350	1.104	153067	48.62	ng/uL	99	A
110) o-Toluidine	106	6.374	6.369	1.108	364745	48.62	ng/uL	99	A
112) N-Nitrosopiperidine	114	6.774	6.769	0.901	133993	49.38	ng/uL	99	A
113) a,a-Dimethylphenethyla...	58	7.331	7.345	0.975	857992	49.62	ng/uL	100	A
114) 2,6-Dichlorophenol	162	7.626	7.626	1.015	188533	49.66	ng/uL	99	A
115) Hexachloropropene	213	7.664	7.659	1.020	171527	49.71	ng/uL	100	A
116) Caprolactam	113	8.102	8.092	1.078	74929	48.49	ng/uL	98	A

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0959.D
Acq On : 11 Jul 2018 01:16
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-14|ICAL|1|SVM|1|A5
Misc : |MIX[B]
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 11 07:50:26 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
117)	N-Nitrosodi-n-butylamine	84	8.078	8.073	1.075	219073	48.33	ng/uL	99	A
118)	Safrole	162	8.355	8.354	1.112	194617	49.44	ng/uL	99	A
120)	1,2,4,5-Tetrachloroben...	216	8.688	8.683	0.885	265271	49.13	ng/uL	99	A
121)	1,1-Biphenyl	154	9.083	9.083	0.925	531174	48.98	ng/uL	99	A
122)	Isosafrole	162	9.035	9.031	0.920	201140	49.65	ng/uL	99	A
123)	1,4-Naphthoquinone	158	9.335	9.335	0.951	166667	46.06	ng/uL	99	A
124)	Pentachlorobenzene	250	10.021	10.021	1.021	220167	49.67	ng/uL	99	A
125)	1-Naphthylamine	143	10.183	10.178	1.037	459643	48.54	ng/uL	99	A
126)	2-Naphthylamine	143	10.283	10.278	1.048	454974	48.52	ng/uL	100	A
127)	5-Nitro-o-toluidine	152	10.531	10.526	1.073	146862	49.40	ng/uL	99	A
129)	1,3,5-Trinitrobenzene	75	10.978	10.978	0.939	117404	47.91	ng/uL	98	A
130)	Phenacetin	108	11.059	11.054	0.945	230952	48.67	ng/uL	99	A
131)	Diallate	86	11.016	11.016	0.942	203063	47.81	ng/uL	99	A
132)	Cis Diallate	86	11.131	11.131	0.952	35835	7.48	ng/uL	100	A
133)	Trans Diallate	86	11.016	11.016	0.942	203063	40.63	ng/uL	99	A
134)	Atrazine	200	11.336	11.331	0.969	153033	48.11	ng/uL	100	A
135)	4-Aminobiphenyl	169	11.459	11.454	0.980	523042	48.44	ng/uL	100	A
136)	Pentachloronitrobenzene	237	11.459	11.459	0.980	73506	50.23	ng/uL	100	A
137)	Pronamide	173	11.521	11.521	0.985	224853	48.66	ng/uL	99	A
138)	4-Nitroquinoline-1-oxide	116	12.688	12.683	1.085	24053	46.87	ng/uL	97	A
139)	Methapyrilene	58	12.769	12.769	1.092	381868	48.16	ng/uL	100	A
140)	Isodrin	193	13.016	13.016	1.113	91301	49.25	ng/uL	99	A
142)	Aramite	185	13.640	13.635	0.893	42290	50.39	ng/uL	99	A
143)	Kepone	272	14.397	14.397	0.943	54327	49.96	ng/uL	98	A
144)	p-(Dimethylamino)azobe...	120	13.850	13.845	0.907	180724	49.85	ng/uL	98	A
145)	Chlorobenzilate	251	13.907	13.907	0.911	196420	49.94	ng/uL	99	A
146)	2-Acetylaminofluorene	181	14.702	14.697	0.963	227192	51.16	ng/uL	99	A
148)	7,12-Dimethylbenz(a)an...	256	17.655	17.650	0.942	229214	48.92	ng/uL	99	A
149)	3-Methylcholanthrene	269	19.688	19.674	1.051	49194	50.10	ng/uL#	1	A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0959.D
Acq On    : 11 Jul 2018  01:16
Operator  : JLD1
InstName  : MSD5
Sample    : |WBN180709-14|ICAL|1|SVM|1|A5
Misc      : |MIX[B]
ALS Vial  : 24   Sample Multiplier: 1

Quant Time: Jul 11 07:50:26 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title  : BNA01                                          SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE
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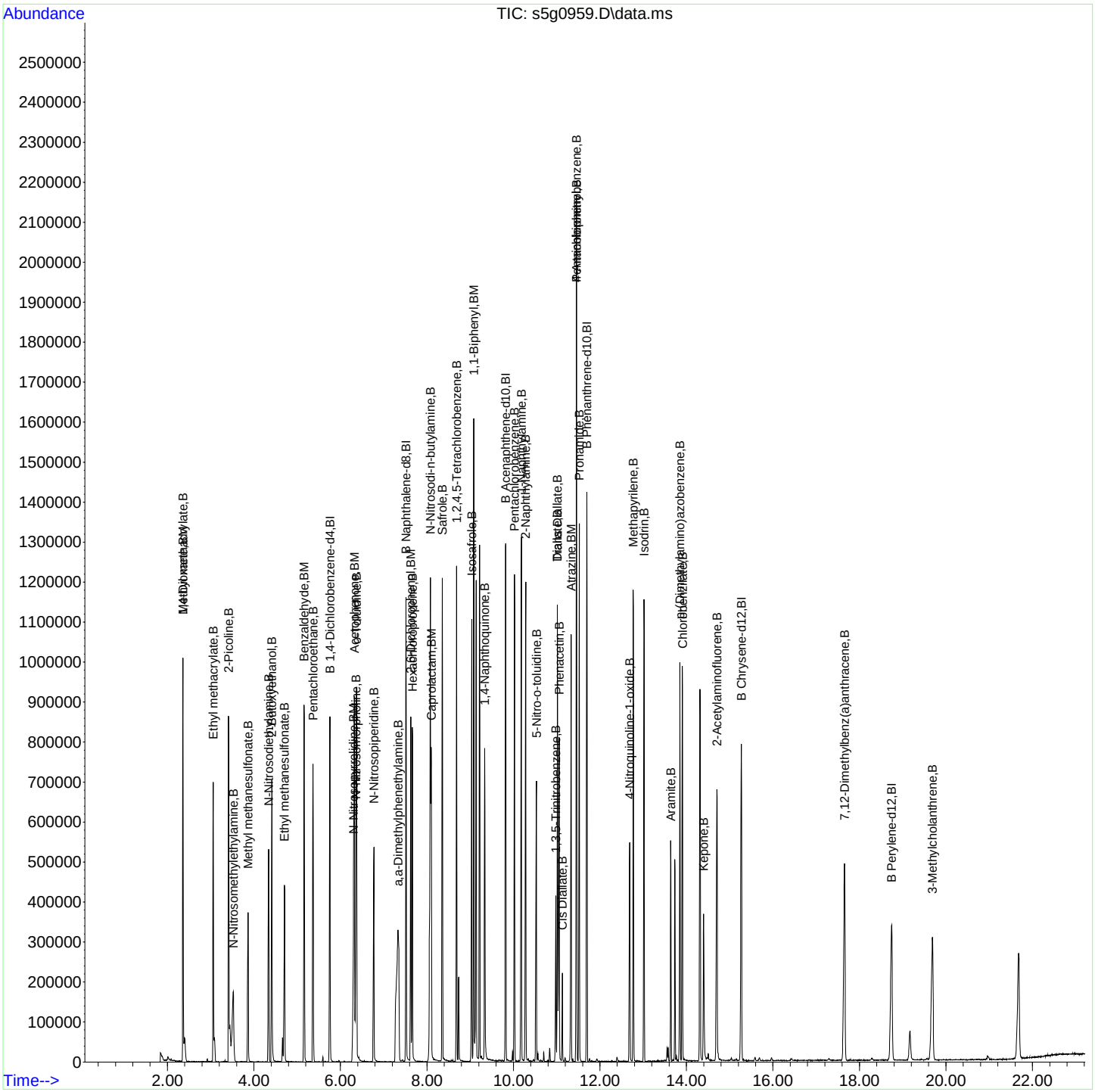


Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0960.D
Acq On : 11 Jul 2018 01:47
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-19|ICAL|1|SVM|1|A10
Misc : |MIX[B]
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 11 07:50:29 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.816	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.269	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.740	18.755	1.000	0m	40.00	ng/uL	-0.01
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	147990	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	495460	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.816	9.816	1.000	273577	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	506456	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.269	15.269	1.000	426203	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.740	18.740	1.000	348960	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.269	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.816	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.269	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.740	18.788	1.000	0m	40.00	ng/uL	-0.05
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue	
96) 1,4-Dioxane	88	2.359	2.364	0.410	106032	55.00	ng/uL	97	A
97) Methyl methacrylate	100	2.359	2.364	0.410	52629	55.64	ng/uL	96	A
98) Ethyl methacrylate	69	3.059	3.059	0.532	231963	50.77	ng/uL	100	A
99) 2-Picoline	93	3.412	3.416	0.593	327023	58.50	ng/uL	100	A
100) N-Nitrosomethylethylamine	88	3.521	3.521	0.612	137225	58.24	ng/uL	99	A
101) Methyl methanesulfonate	80	3.864	3.864	0.671	175235	59.34	ng/uL	99	A
102) N-Nitrosodiethylamine	102	4.340	4.335	0.754	143705	58.43	ng/uL	100	A
103) 2-Butoxyethanol	57	4.416	4.411	0.767	351471	57.51	ng/uL	100	A
104) Ethyl methanesulfonate	79	4.712	4.707	0.819	230442	58.95	ng/uL	98	A
105) Benzaldehyde	77	5.164	5.159	0.897	243189	57.35	ng/uL	99	A
106) Pentachloroethane	167	5.364	5.364	0.932	119642	58.04	ng/uL	98	A
107) N-Nitrosopyrrolidine	100	6.307	6.297	1.096	156849	59.44	ng/uL	98	A
108) Acetophenone	105	6.321	6.321	1.098	356877	58.43	ng/uL	99	A
109) N-Nitrosomorpholine	56	6.359	6.350	1.105	159868	56.89	ng/uL	100	A
110) o-Toluidine	106	6.373	6.369	1.108	384489	57.42	ng/uL	99	A
112) N-Nitrosopiperidine	114	6.773	6.769	0.901	142040	58.83	ng/uL	100	A
113) a,a-Dimethylphenethyla...	58	7.350	7.345	0.978	905210	58.83	ng/uL	100	A
114) 2,6-Dichlorophenol	162	7.626	7.626	1.015	202649	59.99	ng/uL	99	A
115) Hexachloropropene	213	7.664	7.659	1.020	179448	58.44	ng/uL	99	A
116) Caprolactam	113	8.102	8.092	1.078	80751	58.72	ng/uL	97	A

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0960.D
Acq On : 11 Jul 2018 01:47
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-19|ICAL|1|SVM|1|A10
Misc : |MIX[B]
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 11 07:50:29 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE

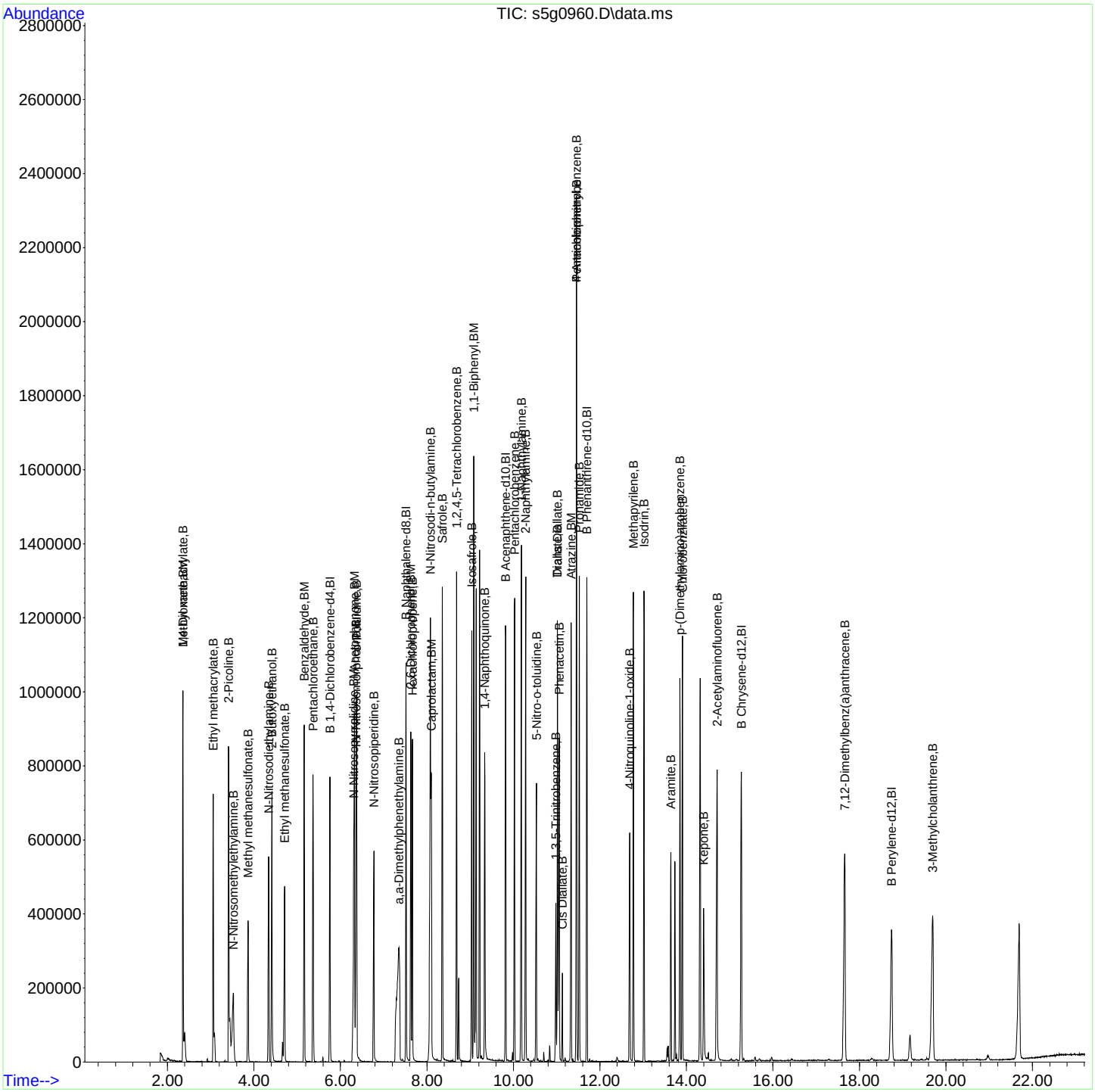
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
117)	N-Nitrosodi-n-butylamine	84	8.078	8.073	1.075	232610	57.66	ng/uL	100	A
118)	Safrole	162	8.354	8.354	1.112	205627	58.70	ng/uL	99	A
120)	1,2,4,5-Tetrachloroben...	216	8.688	8.683	0.885	278080	58.06	ng/uL	99	A
121)	1,1-Biphenyl	154	9.083	9.083	0.925	560420	58.25	ng/uL	99	A
122)	Isosafrole	162	9.035	9.031	0.920	211213	58.77	ng/uL	98	A
123)	1,4-Naphthoquinone	158	9.335	9.335	0.951	180255	56.16	ng/uL	99	A
124)	Pentachlorobenzene	250	10.026	10.021	1.021	234929	59.75	ng/uL	100	A
125)	1-Naphthylamine	143	10.183	10.178	1.037	493923	58.80	ng/uL	99	A
126)	2-Naphthylamine	143	10.283	10.278	1.048	485482	58.36	ng/uL	99	A
127)	5-Nitro-o-toluidine	152	10.531	10.526	1.073	159931	60.64	ng/uL	99	A
129)	1,3,5-Trinitrobenzene	75	10.978	10.978	0.939	133251	60.33	ng/uL	99	A
130)	Phenacetin	108	11.059	11.054	0.945	248570	58.12	ng/uL	100	A
131)	Diallate	86	11.016	11.016	0.942	215445	56.27	ng/uL	99	A
132)	Cis Diallate	86	11.131	11.131	0.952	37217	8.62	ng/uL	97	A
133)	Trans Diallate	86	11.016	11.016	0.942	215445	47.83	ng/uL	99	A
134)	Atrazine	200	11.335	11.331	0.969	163851	57.14	ng/uL	100	A
135)	4-Aminobiphenyl	169	11.459	11.454	0.980	558850	57.42	ng/uL	100	A
136)	Pentachloronitrobenzene	237	11.459	11.459	0.980	78609	59.60	ng/uL	100	A
137)	Pronamide	173	11.521	11.521	0.985	241989	58.10	ng/uL	100	A
138)	4-Nitroquinoline-1-oxide	116	12.688	12.683	1.085	26943	58.24	ng/uL	94	A
139)	Methapyrilene	58	12.774	12.769	1.092	414347	57.97	ng/uL	99	A
140)	Isodrin	193	13.016	13.016	1.113	99013	59.25	ng/uL	100	A
142)	Aramite	185	13.640	13.635	0.893	46322	56.72	ng/uL	98	A
143)	Kepone	272	14.397	14.397	0.943	61924	58.53	ng/uL	99	A
144)	p-(Dimethylamino)azobe...	120	13.850	13.845	0.907	200866	56.94	ng/uL	98	A
145)	Chlorobenzilate	251	13.907	13.907	0.911	220933	57.72	ng/uL	99	A
146)	2-Acetylaminofluorene	181	14.707	14.697	0.963	267487	61.90	ng/uL	99	A
148)	7,12-Dimethylbenz(a)an...	256	17.659	17.650	0.942	280967	57.65	ng/uL	99	A
149)	3-Methylcholanthrene	269	19.693	19.674	1.051	63977	62.64	ng/uL#	1	A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0960.D
Acq On : 11 Jul 2018 01:47
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-19|ICAL|1|SVM|1|A10
Misc : |MIX[B]
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 11 07:50:29 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 07:48:18 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0961.D
Acq On : 11 Jul 2018 02:17
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-13|ICAL|1|SVM|1|A6
Misc : |MIX[B]
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jul 11 08:25:36 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:23:21 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.269	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.745	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	181476	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	586644	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	319611	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.702	11.697	1.000	587311	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.269	15.269	1.000	492644	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.745	18.740	1.000	330457	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.269	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.702	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.269	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.745	18.788	1.000	0m	40.00	ng/uL	-0.04
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
96) 1,4-Dioxane	88	2.364	2.364	0.411	176634	76.17	ng/uL	98
97) Methyl methacrylate	100	2.359	2.359	0.410	90870	77.90	ng/uL	98
98) Ethyl methacrylate	69	3.059	3.059	0.532	415782	77.96	ng/uL	99
99) 2-Picoline	93	3.416	3.416	0.594	511823	75.85	ng/uL	99
100) N-Nitrosomethylethylamine	88	3.526	3.521	0.613	221995	77.63	ng/uL	98
101) Methyl methanesulfonate	80	3.873	3.864	0.673	264560	74.63	ng/uL	98
102) N-Nitrosodiethylamine	102	4.350	4.335	0.756	230498	77.57	ng/uL	98
103) 2-Butoxyethanol	57	4.421	4.411	0.768	547332	74.16	ng/uL	100
104) Ethyl methanesulfonate	79	4.721	4.707	0.820	362640	76.73	ng/uL	97
105) Benzaldehyde	77	5.169	5.159	0.898	358261	71.91	ng/uL	99
106) Pentachloroethane	167	5.369	5.364	0.933	191138	76.49	ng/uL	99
107) N-Nitrosopyrrolidine	100	6.321	6.297	1.098	236195	75.65	ng/uL	95
108) Acetophenone	105	6.331	6.321	1.100	566793	76.02	ng/uL	98
109) N-Nitrosomorpholine	56	6.373	6.350	1.108	243188	73.06	ng/uL	99
110) o-Toluidine	106	6.383	6.369	1.109	589321	72.99	ng/uL	99
112) N-Nitrosopiperidine	114	6.783	6.769	0.902	224396	78.40	ng/uL	97
113) a,a-Dimethylphenethyla...	58	7.350	7.345	0.978	1376866	80.66	ng/uL	99
114) 2,6-Dichlorophenol	162	7.635	7.626	1.016	317345	80.08	ng/uL	96
115) Hexachloropropene	213	7.664	7.659	1.020	278525	78.66	ng/uL	99
116) Caprolactam	113	8.121	8.092	1.080	122643	76.97	ng/uL	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0961.D
Acq On : 11 Jul 2018 02:17
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-13|ICAL|1|SVM|1|A6
Misc : |MIX[B]
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jul 11 08:25:36 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:23:21 2018
Response via : Initial Calibration
Integrator: RTE

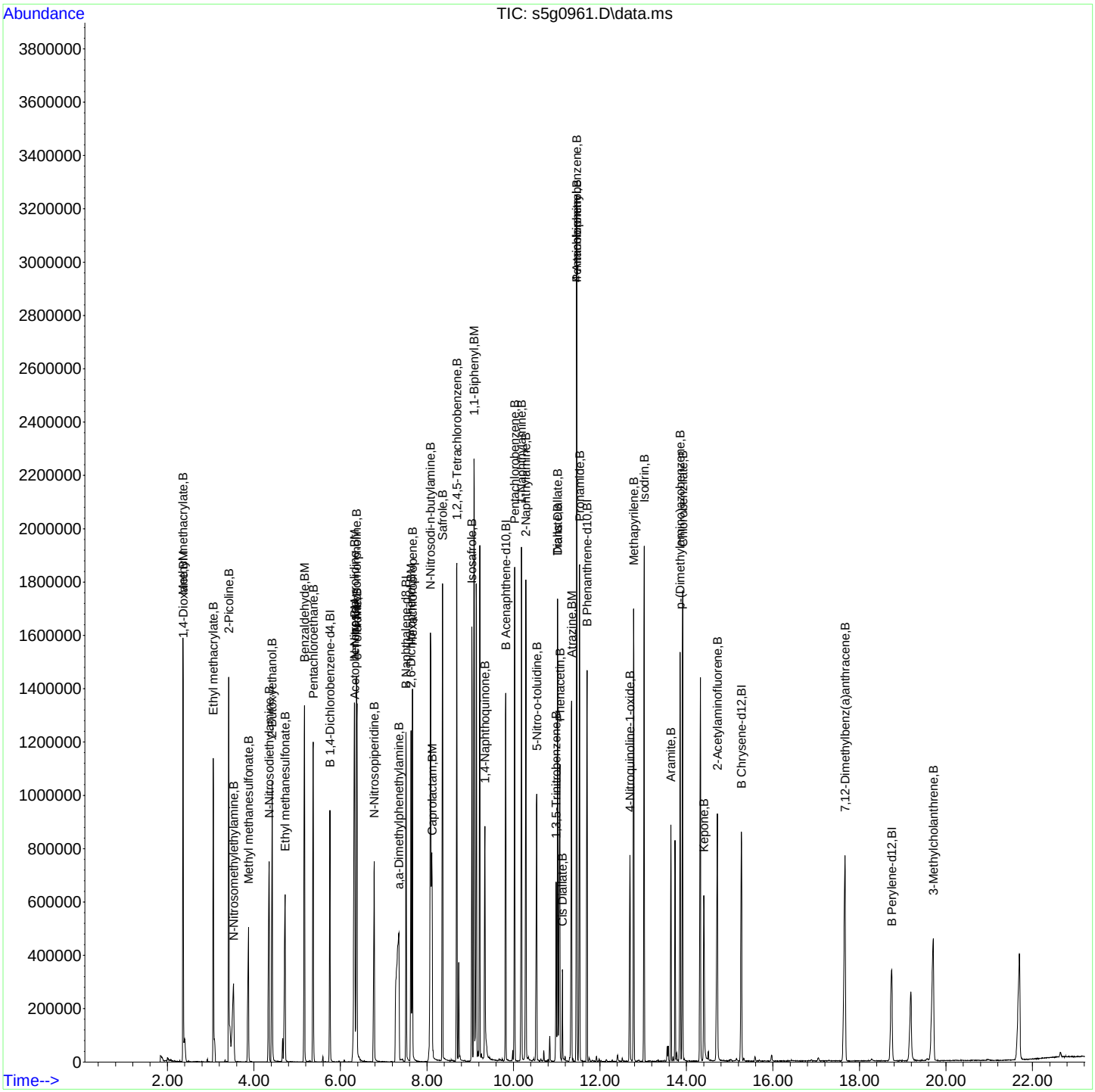
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
117)	N-Nitrosodi-n-butylamine	84	8.083	8.073	1.075	311919	69.18	ng/uL	90	
118)	Safrole	162	8.359	8.354	1.112	321995	77.64	ng/uL	100	
120)	1,2,4,5-Tetrachloroben...	216	8.692	8.683	0.885	430532	77.54	ng/uL	100	
121)	1,1-Biphenyl	154	9.088	9.083	0.925	827909	73.90	ng/uL	99	
122)	Isosafrole	162	9.040	9.031	0.920	325866	77.24	ng/uL	100	
123)	1,4-Naphthoquinone	158	9.340	9.335	0.951	222463	56.79	ng/uL	99	
124)	Pentachlorobenzene	250	10.026	10.021	1.021	358911	77.66	ng/uL	99	
125)	1-Naphthylamine	143	10.188	10.178	1.037	718011	74.80	ng/uL	98	
126)	2-Naphthylamine	143	10.288	10.278	1.048	701686	73.93	ng/uL	98	
127)	5-Nitro-o-toluidine	152	10.540	10.526	1.073	245342	79.97	ng/uL	99	
129)	1,3,5-Trinitrobenzene	75	10.988	10.978	0.939	200457	82.85	ng/uL	98	
130)	Phenacetin	108	11.073	11.054	0.946	386676	79.28	ng/uL	98	
131)	Diallate	86	11.021	11.016	0.942	320882	74.79	ng/uL	97	
132)	Cis Diallate	86	11.131	11.131	0.951	57470	11.68	ng/uL	98	
133)	Trans Diallate	86	11.021	11.016	0.942	320882	63.57	ng/uL	97	
134)	Atrazine	200	11.345	11.331	0.969	218904	67.37	ng/uL	99	
135)	4-Aminobiphenyl	169	11.464	11.454	0.980	802148	72.13	ng/uL	99	
136)	Pentachloronitrobenzene	237	11.464	11.459	0.980	120624	78.31	ng/uL	97	
137)	Pronamide	173	11.531	11.521	0.985	356788	75.12	ng/uL	99	
138)	4-Nitroquinoline-1-oxide	116	12.693	12.683	1.085	35004	71.92	ng/uL	88	
139)	Methapyrilene	58	12.778	12.769	1.092	576189	71.44	ng/uL	98	
140)	Isodrin	193	13.021	13.016	1.113	155617	80.01	ng/uL	99	
142)	Aramite	185	13.640	13.635	0.893	71280	78.21	ng/uL	99	
143)	Kepone	272	14.402	14.397	0.943	95853	79.53	ng/uL	98	
144)	p-(Dimethylamino)azobe...	120	13.854	13.845	0.907	311081	77.16	ng/uL	100	
145)	Chlorobenzilate	251	13.912	13.907	0.911	353240	80.31	ng/uL	98	
146)	2-Acetylaminofluorene	181	14.716	14.697	0.964	352626	72.87	ng/uL	100	
148)	7,12-Dimethylbenz(a)an...	256	17.664	17.650	0.942	389464	84.77	ng/uL	99	
149)	3-Methylcholanthrene	269	19.707	19.707	1.051	77747	78.94	ng/uL	98	A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0961.D
Acq On : 11 Jul 2018 02:17
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-13|ICAL|1|SVM|1|A6
Misc : |MIX[B]
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jul 11 08:25:36 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:23:21 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0962.D
Acq On : 11 Jul 2018 02:47
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-12|ICAL|1|SVM|1|A7
Misc : |MIX[B]
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jul 11 08:26:18 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:25:49 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.816	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.269	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.750	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	153018	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	504626	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.816	9.816	1.000	276923	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.702	11.697	1.000	514843	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.269	15.269	1.000	444901	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.750	18.740	1.000	369105	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.269	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.816	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.702	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.269	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.750	18.788	1.000	0m	40.00	ng/uL	-0.04
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
96) 1,4-Dioxane	88	2.364	2.364	0.411	183115	93.66	ng/uL	99
97) Methyl methacrylate	100	2.364	2.359	0.411	91881	93.42	ng/uL	99
98) Ethyl methacrylate	69	3.059	3.059	0.532	424584	94.41	ng/uL	98
99) 2-Picoline	93	3.416	3.416	0.594	523658	92.04	ng/uL	100
100) N-Nitrosomethylethylamine	88	3.526	3.521	0.613	227692	94.43	ng/uL	100
101) Methyl methanesulfonate	80	3.873	3.864	0.673	276958	92.66	ng/uL	99
102) N-Nitrosodiethylamine	102	4.349	4.335	0.756	239226	95.48	ng/uL	97
103) 2-Butoxyethanol	57	4.421	4.411	0.768	566430	91.02	ng/uL	99
104) Ethyl methanesulfonate	79	4.721	4.707	0.820	374078	93.87	ng/uL	99
105) Benzaldehyde	77	5.168	5.159	0.898	372287	88.62	ng/uL	99
106) Pentachloroethane	167	5.369	5.364	0.933	198395	94.16	ng/uL	99
107) N-Nitrosopyrrolidine	100	6.321	6.297	1.098	244987	93.06	ng/uL	96
108) Acetophenone	105	6.330	6.321	1.100	585270	93.09	ng/uL	98
109) N-Nitrosomorpholine	56	6.373	6.350	1.108	252603	90.01	ng/uL	98
110) o-Toluidine	106	6.383	6.369	1.109	607064	89.17	ng/uL	98
112) N-Nitrosopiperidine	114	6.783	6.769	0.902	234759	95.36	ng/uL	98
113) a,a-Dimethylphenethyla...	58	7.330	7.345	0.975	1437215	97.88	ng/uL	99
114) 2,6-Dichlorophenol	162	7.635	7.626	1.016	333584	97.86	ng/uL	96
115) Hexachloropropene	213	7.664	7.659	1.020	276797	90.88	ng/uL	99
116) Caprolactam	113	8.126	8.092	1.081	129640	94.58	ng/uL	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0962.D
Acq On : 11 Jul 2018 02:47
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-12|ICAL|1|SVM|1|A7
Misc : |MIX[B]
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jul 11 08:26:18 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:25:49 2018
Response via : Initial Calibration
Integrator: RTE

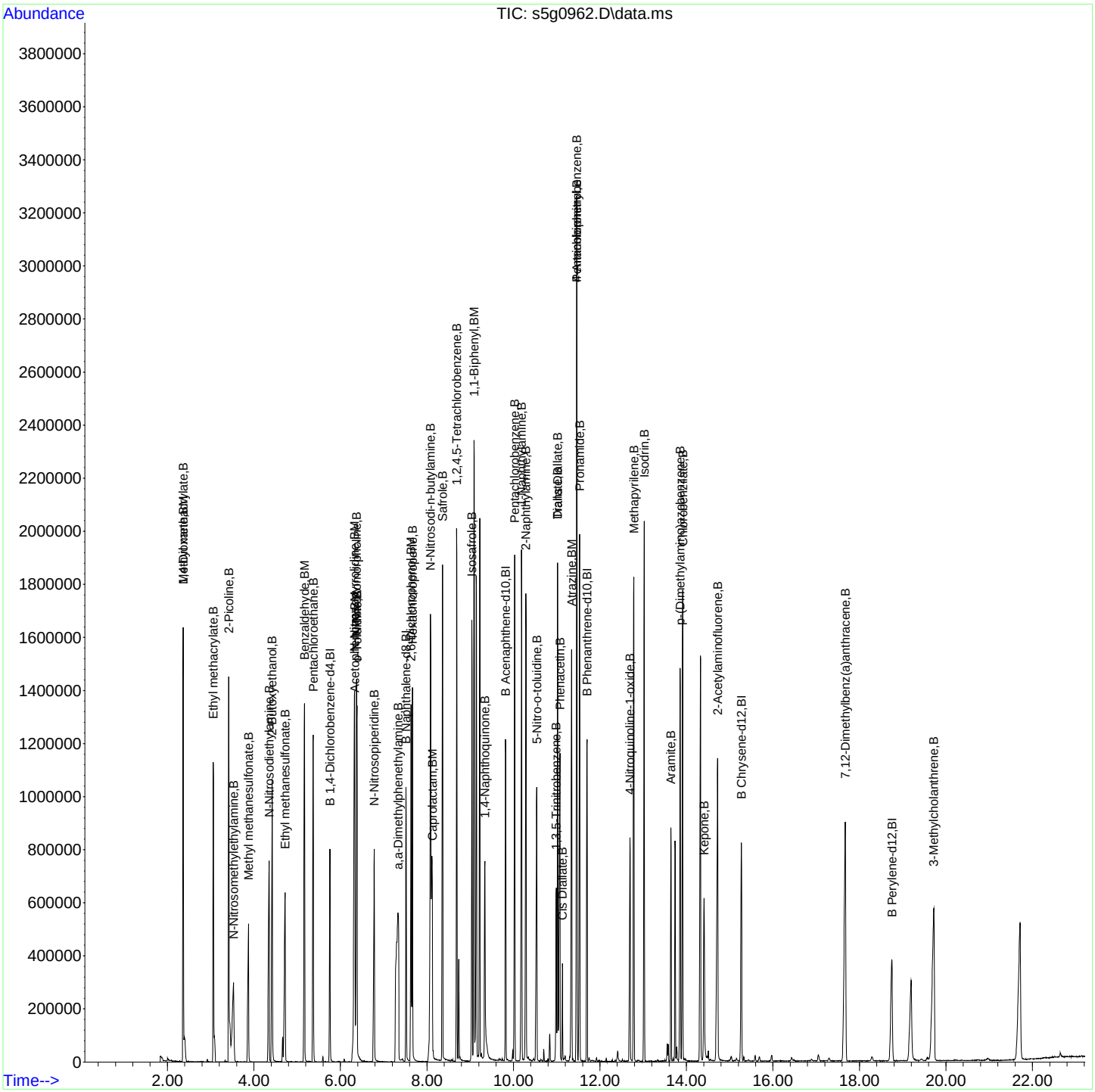
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
117)	N-Nitrosodi-n-butylamine	84	8.083	8.073	1.075	330130	85.12	ng/uL	90	
118)	Safrole	162	8.359	8.354	1.112	335625	94.08	ng/uL	99	
120)	1,2,4,5-Tetrachloroben...	216	8.688	8.683	0.885	449586	93.45	ng/uL	100	
121)	1,1-Biphenyl	154	9.088	9.083	0.926	868219	89.44	ng/uL	99	
122)	Isosafrole	162	9.040	9.031	0.921	339751	92.95	ng/uL	99	
123)	1,4-Naphthoquinone	158	9.340	9.335	0.951	217177	66.75	ng/uL	99	
124)	Pentachlorobenzene	250	10.030	10.021	1.022	382277	95.47	ng/uL	99	
125)	1-Naphthylamine	143	10.188	10.178	1.038	761358	91.54	ng/uL	98	
126)	2-Naphthylamine	143	10.288	10.278	1.048	756058	91.94	ng/uL	98	
127)	5-Nitro-o-toluidine	152	10.540	10.526	1.074	263686	99.20	ng/uL	99	
129)	1,3,5-Trinitrobenzene	75	10.988	10.978	0.939	209267	98.66	ng/uL	98	
130)	Phenacetin	108	11.073	11.054	0.946	412826	96.55	ng/uL	98	
131)	Diallate	86	11.021	11.016	0.942	338340	89.96	ng/uL	96	
132)	Cis Diallate	86	11.130	11.131	0.951	61264	14.20	ng/uL	99	
133)	Trans Diallate	86	11.021	11.016	0.942	338340	76.46	ng/uL	96	
134)	Atrazine	200	11.345	11.331	0.969	252604	88.68	ng/uL	99	
135)	4-Aminobiphenyl	169	11.464	11.454	0.980	852483	87.45	ng/uL	99	
136)	Pentachloronitrobenzene	237	11.464	11.459	0.980	129425	95.85	ng/uL	98	
137)	Pronamide	173	11.531	11.521	0.985	381759	91.69	ng/uL	98	
138)	4-Nitroquinoline-1-oxide	116	12.692	12.683	1.085	39951	93.64	ng/uL#	84	
139)	Methapyrilene	58	12.783	12.769	1.092	628065	88.84	ng/uL	97	
140)	Isodrin	193	13.021	13.016	1.113	161948	94.98	ng/uL	100	
142)	Aramite	185	13.640	13.635	0.893	74466	90.47	ng/uL	99	
143)	Kepone	272	14.407	14.397	0.944	104819	96.31	ng/uL	99	
144)	p-(Dimethylamino)azobe...	120	13.854	13.845	0.907	331832	91.14	ng/uL	99	
145)	Chlorobenzilate	251	13.911	13.907	0.911	367093	92.41	ng/uL	97	
146)	2-Acetylaminofluorene	181	14.721	14.697	0.964	459071	105.05	ng/uL	98	
148)	7,12-Dimethylbenz(a)an...	256	17.673	17.650	0.943	486924	94.89	ng/uL	99	
149)	3-Methylcholanthrene	269	19.716	19.716	1.052	105073	95.70	ng/uL	97	A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0962.D
Acq On : 11 Jul 2018 02:47
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-12|ICAL|1|SVM|1|A7
Misc : |MIX[B]
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jul 11 08:26:18 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:25:49 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0963.D
Acq On : 11 Jul 2018 03:17
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-11|ICAL|1|SVM|1|A8
Misc : |MIX[B]
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jul 11 08:26:37 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:26:30 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	0m	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.521	7.521	1.000	0m	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	0m	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.269	15.278	1.000	0m	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.750	18.755	1.000	0m	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	172044	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.521	7.516	1.000	544780	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	326274	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.702	11.697	1.000	601007	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.269	15.269	1.000	502077	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.750	18.740	1.000	423428	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.702	11.697	1.000	0m	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.269	15.274	1.000	0m	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.521	7.516	1.000	0m	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	0m	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.702	11.693	1.000	0m	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.269	15.264	1.000	0m	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.521	7.516	1.000	0m	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.750	18.788	1.000	0m	40.00	ng/uL	-0.04
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue	
96) 1,4-Dioxane	88	2.373	2.364	0.412	260650	118.57	ng/uL	99	
97) Methyl methacrylate	100	2.369	2.359	0.412	135004	122.08	ng/uL#	86	A
98) Ethyl methacrylate	69	3.069	3.059	0.533	552204	109.21	ng/uL	98	
99) 2-Picoline	93	3.421	3.416	0.595	688718	107.67	ng/uL	99	
100) N-Nitrosomethylethylamine	88	3.531	3.521	0.614	306805	113.17	ng/uL	99	
101) Methyl methanesulfonate	80	3.883	3.864	0.675	364670	108.51	ng/uL	98	
102) N-Nitrosodiethylamine	102	4.354	4.335	0.757	322198	114.38	ng/uL	98	
103) 2-Butoxyethanol	57	4.431	4.411	0.770	751546	107.42	ng/uL	99	
104) Ethyl methanesulfonate	79	4.731	4.707	0.822	502921	112.24	ng/uL	100	
105) Benzaldehyde	77	5.173	5.159	0.899	449908	95.25	ng/uL	99	
106) Pentachloroethane	167	5.369	5.364	0.933	264782	111.77	ng/uL	100	
107) N-Nitrosopyrrolidine	100	6.335	6.297	1.101	320155	108.16	ng/uL	93	
108) Acetophenone	105	6.331	6.321	1.100	799515	113.11	ng/uL	99	
109) N-Nitrosomorpholine	56	6.383	6.350	1.109	330346	104.69	ng/uL	96	
110) o-Toluidine	106	6.392	6.369	1.111	813669	106.31	ng/uL	98	
112) N-Nitrosopiperidine	114	6.792	6.769	0.903	319104	120.06	ng/uL	98	A
113) a,a-Dimethylphenethyla...	58	7.469	7.345	0.993	1257766	79.34	ng/uL	82	
114) 2,6-Dichlorophenol	162	7.640	7.626	1.016	459484	124.85	ng/uL	96	A
115) Hexachloropropene	213	7.664	7.659	1.019	345660	105.13	ng/uL	99	
116) Caprolactam	113	8.135	8.092	1.082	176601	119.34	ng/uL	96	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0963.D
Acq On : 11 Jul 2018 03:17
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-11|ICAL|1|SVM|1|A8
Misc : |MIX[B]
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jul 11 08:26:37 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:26:30 2018
Response via : Initial Calibration
Integrator: RTE

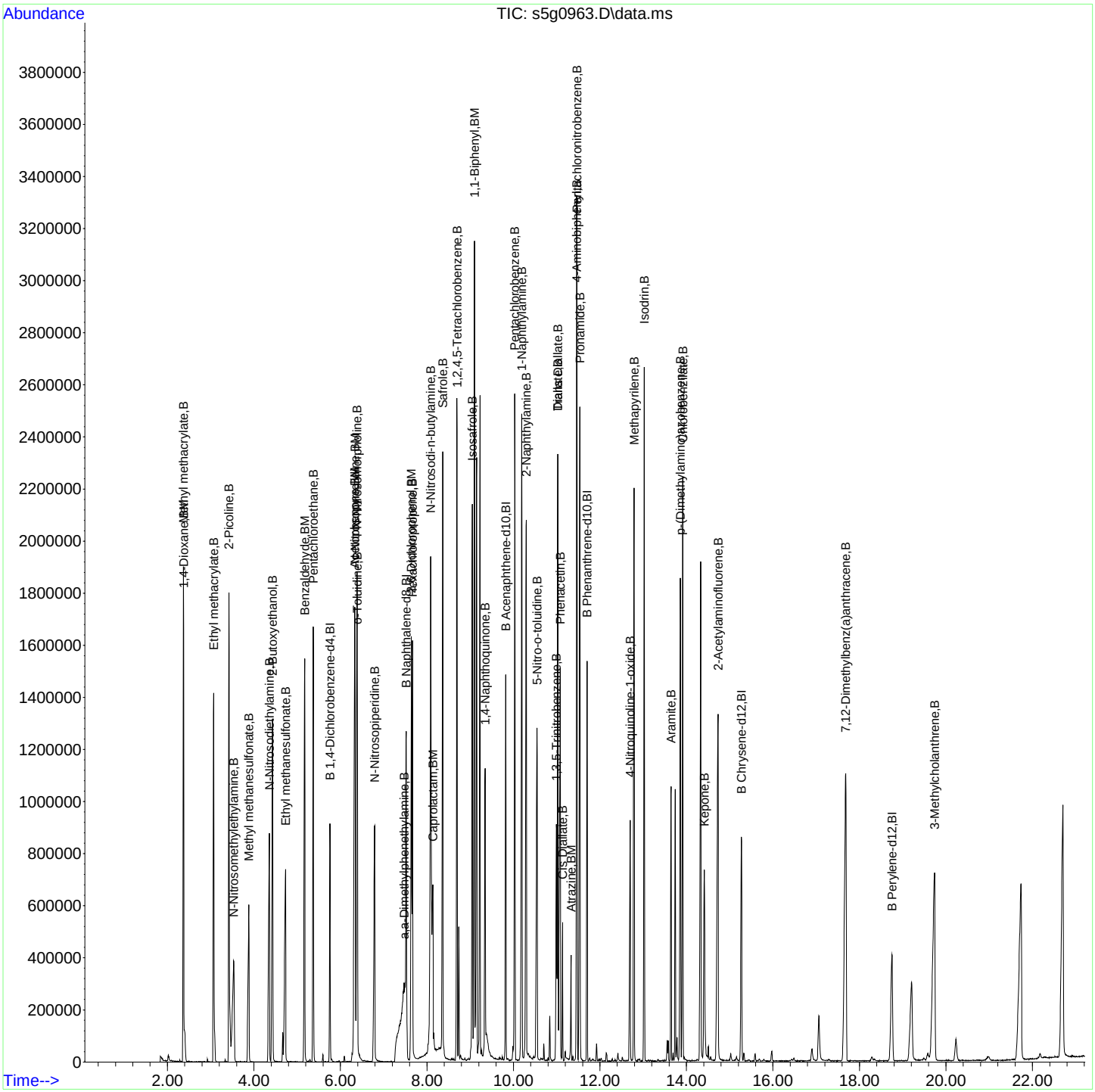
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
117)	N-Nitrosodi-n-butylamine	84	8.088	8.073	1.075	440467	105.19	ng/uL	89	
118)	Safrole	162	8.364	8.354	1.112	450442	116.95	ng/uL	99	
120)	1,2,4,5-Tetrachloroben...	216	8.697	8.683	0.886	606207	106.95	ng/uL	99	
121)	1,1-Biphenyl	154	9.097	9.083	0.926	1154703	100.97	ng/uL	98	
122)	Isosafrole	162	9.050	9.031	0.921	470289	109.20	ng/uL	99	
123)	1,4-Naphthoquinone	158	9.345	9.335	0.952	264404	71.97	ng/uL	99	
124)	Pentachlorobenzene	250	10.031	10.021	1.021	529915	112.32	ng/uL	99	
125)	1-Naphthylamine	143	10.193	10.178	1.038	987682	100.79	ng/uL	97	
126)	2-Naphthylamine	143	10.297	10.278	1.048	964966	99.59	ng/uL	98	
127)	5-Nitro-o-toluidine	152	10.545	10.526	1.074	367235	117.25	ng/uL	99	
129)	1,3,5-Trinitrobenzene	75	10.993	10.978	0.939	322580	130.28	ng/uL	98	A
130)	Phenacetin	108	11.083	11.054	0.947	570963	114.39	ng/uL	97	
131)	Diallate	86	11.026	11.016	0.942	456260	103.92	ng/uL	95	
132)	Cis Diallate	86	11.135	11.131	0.952	85479	16.97	ng/uL	97	
133)	Trans Diallate	86	11.026	11.016	0.942	456260	88.33	ng/uL	95	
134)	Atrazine	200	11.331	11.331	0.968	47677	14.34	ng/uL	98	
135)	4-Aminobiphenyl	169	11.464	11.454	0.980	711382	62.51	ng/uL	99	
136)	Pentachloronitrobenzene	237	11.469	11.459	0.980	182624	115.86	ng/uL	96	
137)	Pronamide	173	11.535	11.521	0.986	527080	108.44	ng/uL	97	
138)	4-Nitroquinoline-1-oxide	116	12.697	12.683	1.085	40874	82.07	ng/uL	85	
139)	Methapyrilene	58	12.788	12.769	1.093	778356	94.31	ng/uL	96	
140)	Isodrin	193	13.021	13.016	1.113	221638	111.35	ng/uL	100	
142)	Aramite	185	13.645	13.635	0.894	94416	101.65	ng/uL	99	
143)	Kepone	272	14.412	14.397	0.944	137800	112.19	ng/uL	99	
144)	p-(Dimethylamino)azobe...	120	13.859	13.845	0.908	429694	104.58	ng/uL	99	
145)	Chlorobenzilate	251	13.916	13.907	0.911	495577	110.55	ng/uL	96	
146)	2-Acetylaminofluorene	181	14.731	14.697	0.965	609761	123.65	ng/uL	98	A
148)	7,12-Dimethylbenz(a)an...	256	17.678	17.650	0.943	656748	111.56	ng/uL	99	
149)	3-Methylcholanthrene	269	19.735	19.716	1.053	148527	118.56	ng/uL#	1	A

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0963.D
Acq On : 11 Jul 2018 03:17
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-11|ICAL|1|SVM|1|A8
Misc : |MIX[B]
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jul 11 08:26:37 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:26:30 2018
Response via : Initial Calibration
Integrator: RTE


Abundance
TIC: s5g0963.D\data.ms
Time-->
1,4-Dioxane,BM
Ethyl methacrylate,B
2-Picoline,B
N-Nitrosomethylethylamine,B
Methyl methanesulfonate,B
2-Butoxyethanol,B
Ethyl methanesulfonate,B
Benzaldehyde,BM
Pentachloroethane,B
B 1,4-Dichlorobenzene-d4,BI
N-Nitrosopiperidine,B
a,a-Dimethylphenethylamine,B
B Naphthalene-d8,BI
Caprolactam,BM
N-Nitrosodi-n-butylamine,B
Safrole,B
1,2,4,5-Tetrachlorobenzene,B
1,1-Biphenyl,BM
Isosafrole,B
1,4-Naphthoquinone,B
B Acenaphthene-d10,BI
2-Naphthylamine,B
1-Naphthylamine,B
Pentachlorobenzene,B
5-Nitro-o-toluidine,B
Phenacetin,B
Dialkyl Dialkyl Dialkyl

Continuing Calibration Summary

Client SDG: 454715

Instrument ID: MSD5.I

Injection Date: 11-JUL-18 03:48

Data File: s070918.B\s5g0964.D

Init. Cal. Date(s) 09-JUL-18 22:51 - 11-JUL-18 03:17

Lab Sample ID WBN180517-19

Method: s070918.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD

Method Update: 11-JUL-18 08:32

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
Benzaldehyde	1.0982	0.83977		.01		-23.53214	30		Averaged
Acetophenone	1.6434	1.6714		.01		1.70378	30		Averaged
Caprolactam	0.1087	0.11043		.01		1.59154	30		Averaged
1,2,4,5-Tetrachlorobenzene	0.6949	0.73422		.01		5.65837	30		Averaged
1,1'-Biphenyl	1.4021	1.45215		.01		3.56965	30		Averaged
Atrazine	0.2213	0.21669		.01		-2.08315	30		Averaged

Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0964.D
Acq On : 11 Jul 2018 03:48
Operator : JLD1
InstName : MSD5
Sample : |WBN180517-19|ICV|1|SVM|1|AICV
Misc : |MIX[B]
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jul 11 10:08:25 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) A 1,4-Dichlorobenzene-d4	152	5.754	5.759	1.000	182072	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.516	7.521	1.000	606575	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.821	9.826	1.000	336016	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.697	11.697	1.000	621863	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.269	15.278	1.000	478140	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.745	18.755	1.000	395471	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.754	5.754	1.000	182072	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.516	7.516	1.000	606575	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.821	9.816	1.000	336016	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.697	11.697	1.000	621863	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.269	15.269	1.000	478140	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.745	18.740	1.000	395471	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.697	11.697	1.000	621863	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.269	15.274	1.000	478140	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.516	7.516	1.000	606575	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.821	9.816	1.000	336016	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.697	11.693	1.000	621863	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.269	15.264	1.000	478140	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.516	7.516	1.000	606575	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.745	18.740	1.000	395471	40.00	ng/uL	0.00
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.026	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.202	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.535	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.950	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.816	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
96) 1,4-Dioxane	88	2.364	2.364	0.411	93818	40.33	ng/uL	94
97) Methyl methacrylate	100	2.364	2.364	0.411	48455	41.40	ng/uL#	90
98) Ethyl methacrylate	69	3.064	3.059	0.532	225768	42.19	ng/uL	99
99) 2-Picoline	93	3.416	3.416	0.594	283903	41.94	ng/uL	100
100) N-Nitrosomethylethylamine	88	3.526	3.521	0.613	127554	44.46	ng/uL	99
101) Methyl methanesulfonate	80	3.864	3.864	0.671	137433	38.64	ng/uL	100
102) N-Nitrosodiethylamine	102	4.340	4.335	0.754	131466	44.10	ng/uL	98
103) 2-Butoxyethanol	57	4.411	4.411	0.767	320507	43.29	ng/uL	100
104) Ethyl methanesulfonate	79	4.707	4.707	0.818	193957	40.90	ng/uL	100
105) Benzaldehyde	77	5.159	5.159	0.897	152899	30.59	ng/uL	100
106) Pentachloroethane	167	5.364	5.364	0.932	107472	42.87	ng/uL	99
107) N-Nitrosopyrrolidine	100	6.302	6.297	1.095	144898	46.26	ng/uL	98
108) Acetophenone	105	6.321	6.321	1.098	304315	40.68	ng/uL	99
109) N-Nitrosomorpholine	56	6.354	6.350	1.104	150705	45.13	ng/uL	99
110) o-Toluidine	106	6.373	6.369	1.108	346590	42.79	ng/uL	100
112) N-Nitrosopiperidine	114	6.773	6.769	0.901	134750	45.53	ng/uL	97
113) a,a-Dimethylphenethyla...	58	7.340	7.345	0.977	765758	41.62	ng/uL	100
114) 2,6-Dichlorophenol	162	7.626	7.626	1.015	169855	41.45	ng/uL	100
115) Hexachloropropene	213	7.659	7.659	1.019	125791	34.36	ng/uL	99
116) Caprolactam	113	8.097	8.092	1.077	66983	40.65	ng/uL	93

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0964.D
Acq On : 11 Jul 2018 03:48
Operator : JLD1
InstName : MSD5
Sample : |WBN180517-19|ICV|1|SVM|1|AICV
Misc : |MIX[B]
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jul 11 10:08:25 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

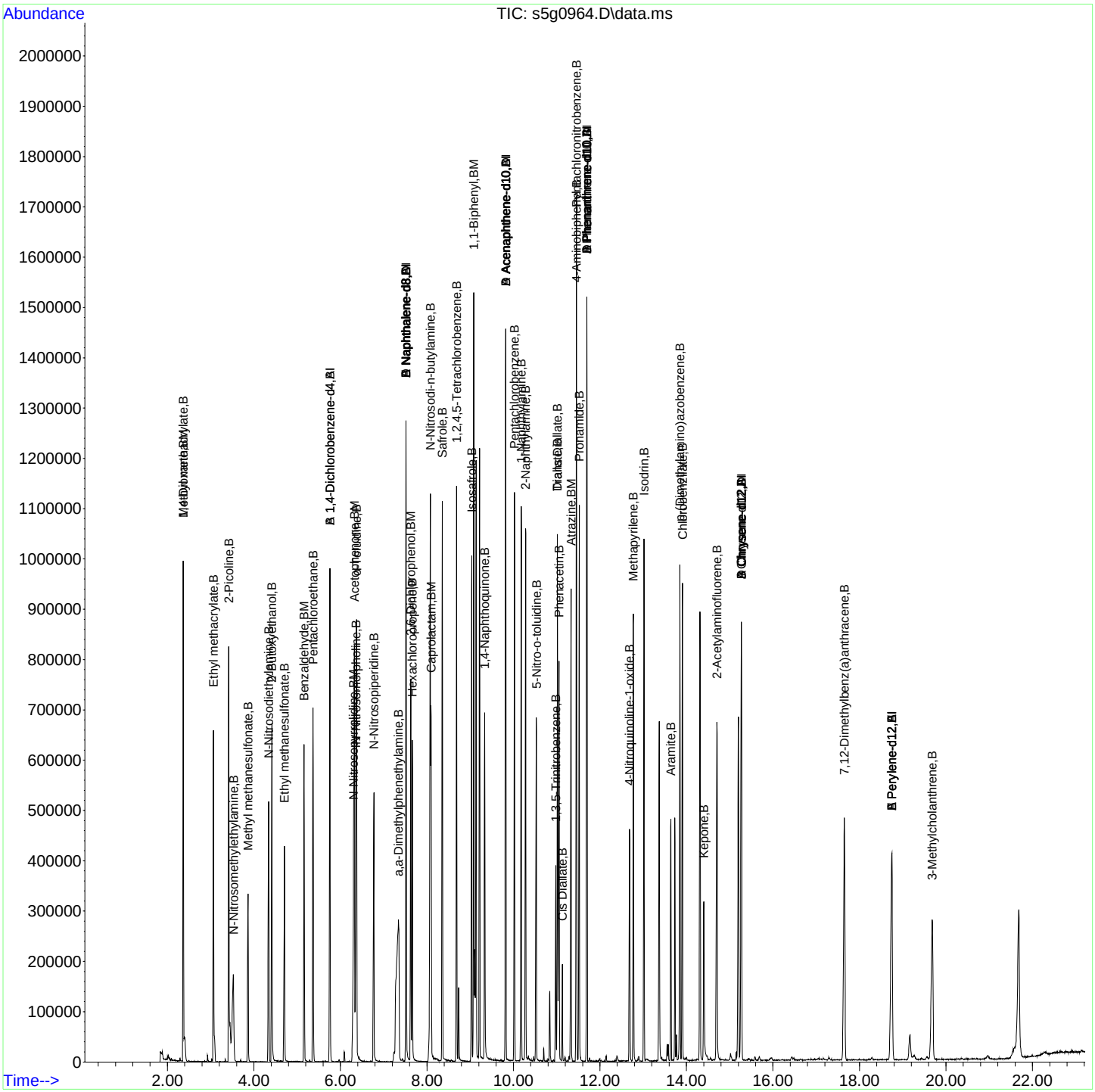
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
117) N-Nitrosodi-n-butylamine	84	8.078	8.073	1.075	215753	46.28	ng/uL	98
118) Safrole	162	8.354	8.354	1.112	177999	41.51	ng/uL	99
120) 1,2,4,5-Tetrachloroben...	216	8.688	8.683	0.885	246709	42.26	ng/uL	100
121) 1,1-Biphenyl	154	9.083	9.083	0.925	487944	41.43	ng/uL	99
122) Isosafrole	162	9.035	9.031	0.920	195653	44.11	ng/uL	99
123) 1,4-Naphthoquinone	158	9.335	9.335	0.951	147558	35.83	ng/uL	99
124) Pentachlorobenzene	250	10.021	10.021	1.020	201756	41.52	ng/uL	100
125) 1-Naphthylamine	143	10.178	10.178	1.036	385782	38.23	ng/uL	99
126) 2-Naphthylamine	143	10.283	10.278	1.047	416048	41.70	ng/uL	100
127) 5-Nitro-o-toluidine	152	10.531	10.526	1.072	143402	44.46	ng/uL	99
129) 1,3,5-Trinitrobenzene	75	10.978	10.978	0.939	108092	42.19	ng/uL	99
130) Phenacetin	108	11.054	11.054	0.945	218410	42.29	ng/uL	99
131) Diallate	86	11.016	11.016	0.942	185127	40.75	ng/uL	98
132) Cis Diallate	86	11.131	11.131	0.952	31094	5.97	ng/uL	97
133) Trans Diallate	86	11.016	11.016	0.942	185127	34.64	ng/uL	98
134) Atrazine	200	11.331	11.331	0.969	134754	39.17	ng/uL	99
135) 4-Aminobiphenyl	169	11.454	11.454	0.979	395880	33.62	ng/uL	99
136) Pentachloronitrobenzene	237	11.459	11.459	0.980	67763	41.55	ng/uL	99
137) Pronamide	173	11.521	11.521	0.985	193185	38.41	ng/uL	100
138) 4-Nitroquinoline-1-oxide	116	12.683	12.683	1.084	20625	38.50	ng/uL	96
139) Methapyrilene	58	12.769	12.769	1.092	298977	35.01	ng/uL	100
140) Isodrin	193	13.016	13.016	1.113	78066	37.91	ng/uL	100
142) Aramite	185	13.640	13.635	0.893	39362	44.50	ng/uL	98
143) Kepone	272	14.402	14.397	0.943	47789	40.86	ng/uL	97
144) p-(Dimethylamino)azobe...	120	13.850	13.845	0.907	185854	47.50	ng/uL	98
145) Chlorobenzilate	251	13.907	13.907	0.911	187791	43.99	ng/uL	99
146) 2-Acetylaminofluorene	181	14.702	14.697	0.963	225246	47.96	ng/uL	100
148) 7,12-Dimethylbenz(a)an...	256	17.650	17.650	0.942	214259	38.97	ng/uL	100
149) 3-Methylcholanthrene	269	19.678	19.716	1.050	40609	34.75	ng/uL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0964.D
Acq On : 11 Jul 2018 03:48
Operator : JLD1
InstName : MSD5
Sample : |WBN180517-19|ICV|1|SVM|1|AICV
Misc : |MIX[B]
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jul 11 10:08:25 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: MSD5.I **Injection Date:** 18-JUL-18 14:29

Data File: s071818a.B\s5g1810.D **Init. Cal. Date(s)** 09-JUL-18 22:51 - 11-JUL-18 03:17

Lab Sample ID WBN180620-05.2 **Method:** s071818a.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD **Method Update:** 11-JUL-18 08:32

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	2-Fluorophenol	1.3971	1.45104		.01		3.86085	20		Averaged
S	Phenol-d5	1.8083	1.91982		.01		6.16712	20		Averaged
S	Nitrobenzene-d5	0.4309	0.46011		.01		6.77883	20		Averaged
S	2-Fluorobiphenyl	1.5224	1.54569		.01		1.52982	20		Averaged
S	2,4,6-Tribromophenol	0.2391	0.25259		.01		5.64199	20		Averaged
S	p-Terphenyl-d14	1.1138	0.97338		.01		-12.60729	20		Averaged
	Phenol	1.7516	1.81176		.8		3.43457	20		Averaged
	bis(2-Chloroethyl) ether	1.4033	1.44399		.7		2.89959	20		Averaged
	2-Chlorophenol	1.3815	1.40168		.8		1.46073	20		Averaged
	o-Cresol	1.0812	1.10257		.7		1.97651	20		Averaged
	bis(2-Chloro-1-methylethyl)eth	2.4106	2.63337		.01		9.24127	20		Averaged
	m,p-Cresols	1.4576	1.45999		.6		0.16397	20		Averaged
	N-Nitrosodipropylamine	1.0612	1.08795		.5		2.52073	20		Averaged
	Hexachloroethane	0.5816	0.5937		.3		2.08047	20		Averaged
	Nitrobenzene	0.4208	0.45004		.2		6.94867	20		Averaged
	Isophorone	0.851	0.89047		.4		4.63807	20		Averaged
	2-Nitrophenol	0.1992	0.21842		.1		9.64859	20		Averaged
	2,4-Dimethylphenol	0.3467	0.35654		.2		2.83819	20		Averaged
	bis(2-Chloroethoxy)methane	0.4892	0.49956		.3		2.11774	20		Averaged
	2,4-Dichlorophenol	0.3449	0.35596		.2		3.20673	20		Averaged
	Naphthalene	1.0052	1.02843		.7		2.31098	20		Averaged
	4-Chloroaniline	0.445	0.44953		.01		1.01798	20		Averaged
	Hexachlorobutadiene	0.2538	0.25336		.01		-0.17336	20		Averaged
	4-Chloro-3-methylphenol	0.3478	0.36342		.2		4.49109	20		Averaged
	2-Methylnaphthalene	0.7875	0.8011		.4		1.72698	20		Averaged
	Hexachlorocyclopentadiene	0.4868	0.56682		.05		16.43796	20		Averaged
	2,4,6-Trichlorophenol	0.4559	0.50109		.2		9.91226	20		Averaged
	2,4,5-Trichlorophenol	0.4841	0.49587		.2		2.43132	20		Averaged
	2-Chloronaphthalene	1.3236	1.32394		.8		0.02569	20		Averaged
	o-Nitroaniline	0.4248	0.46175		.01		8.69821	20		Averaged
	Dimethylphthalate	1.5188	1.51655		.01		-0.14814	20		Averaged
	2,6-Dinitrotoluene	0.3579	0.36164		.2		1.04498	20		Averaged
	Acenaphthylene	1.949	1.94664		.9		-0.12109	20		Averaged
	m-Nitroaniline	0.3656	0.38013		.01		3.97429	20		Averaged
	Acenaphthene	1.1704	1.18994		.9		1.66951	20		Averaged
	2,4-Dinitrophenol	40	39.49	40			-1.275	20		Linear
	4-Nitrophenol	0.2588	0.28901		.05		11.67311	20		Averaged

Continuing Calibration Summary

Instrument ID: MSD5.I **Injection Date:** 18-JUL-18 14:29

Data File: s071818a.B\s5g1810.D **Init. Cal. Date(s)** 09-JUL-18 22:51 11-JUL-18 03:17

Lab Sample ID WBN180620-05.2 **Method:** s071818a.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
2,4-Dinitrotoluene	0.4772	0.49611		.2		3.9627	20		Averaged
Dibenzofuran	1.7764	1.77377		.8		-0.14805	20		Averaged
2,3,4,6-Tetrachlorophenol	0.4125	0.43857		.01		6.32	20		Averaged
Diethylphthalate	1.5264	1.56343		.01		2.42597	20		Averaged
4-Chlorophenylphenylether	0.8124	0.79971		.4		-1.56204	20		Averaged
Fluorene	1.4713	1.4389		.9		-2.20213	20		Averaged
p-Nitroaniline	0.3384	0.34801		.01		2.83983	20		Averaged
2-Methyl-4,6-dinitrophenol	40	42.13	40			5.325	20		Linear
Diphenylamine	0.6708	0.67976		.01		1.33572	20		Averaged
4-Bromophenylphenylether	0.2748	0.27332		.1		-0.53857	20		Averaged
Hexachlorobenzene	0.2793	0.27605		.1		-1.16362	20		Averaged
Pentachlorophenol	40	43.2	40			8	20		Linear
Phenanthrene	1.0539	1.07007		.7		1.5343	20		Averaged
Anthracene	1.1007	1.13426		.7		3.04897	20		Averaged
Carbazole	1.0022	1.0429		.01		4.06107	20		Averaged
Di-n-butylphthalate	1.265	1.39298		.01		10.117	20		Averaged
Fluoranthene	1.2619	1.38565		.6		9.80664	20		Averaged
Pyrene	1.6369	1.39982		.6		-14.48347	20		Averaged
Butylbenzylphthalate	0.6426	0.69046		.01		7.44787	20		Averaged
Benzo(a)anthracene	1.319	1.32309		.8		0.31008	20		Averaged
bis(2-Ethylhexyl)phthalate	0.6948	0.84392		.01		21.46229	20	*	Averaged
Chrysene	1.157	1.19212		.7		3.03544	20		Averaged
Di-n-octylphthalate	40	52.06	40			30.15	20	*	Linear
Benzo(b)fluoranthene	1.3113	1.35429		.7		3.27843	20		Averaged
Benzo(k)fluoranthene	1.2415	1.25713		.7		1.25896	20		Averaged
Benzo(a)pyrene	1.1899	1.2275		.7		3.15993	20		Averaged
Indeno(1,2,3-cd)pyrene	0.9233	0.87393		.5		-5.34712	20		Averaged
Dibenzo(a,h)anthracene	0.8907	0.85634		.4		-3.85764	20		Averaged
Benzo(ghi)perylene	0.914	0.83965		.5		-8.13457	20		Averaged

Quantitation Report
GEL Laboratories, LLC

07/18/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1810.D
Acq On : 18 Jul 2018 14:29
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.2|CCV|1|SVM|1|MCCV
Misc : |MIX[A]
ALS Vial : 2 Sample Multiplier: 1

07/18/2018

Quant Time: Jul 18 15:23:50 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	158063	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.540	7.540	1.000	518845	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.845	9.845	1.000	276907	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.716	11.716	1.000	526135	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.312	15.316	1.000	513305	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.812	18.816	1.000	473228	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	158063	40.00	ng/uL #	0.00
111) B Naphthalene-d8	136	7.540	7.540	1.000	518845	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.845	9.845	1.000	276907	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.716	11.716	1.000	526135	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.312	15.316	1.000	513305	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.812	18.816	1.000	473228	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.716	11.716	1.000	526135	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.312	15.316	1.000	513305	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.540	7.540	1.000	518845	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.845	9.845	1.000	276907	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.716	11.716	1.000	526135	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.312	15.316	1.000	513305	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.540	7.540	1.000	518845	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.812	18.816	1.000	473228	40.00	ng/uL	0.00
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.045	4.063	0.700	229356	41.54	ng/uL	-0.02
7) Phenol-d5	99	5.221	5.227	0.904	303452	42.47	ng/uL	0.00
22) Nitrobenzene-d5	82	6.554	6.562	0.869	238728	42.71	ng/uL	0.00
43) 2-Fluorobiphenyl	172	8.969	8.979	0.911	428013	40.61	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.835	10.834	1.101	69945	42.25	ng/uL	0.00
79) p-Terphenyl-d14	244	13.693	13.674	0.894	499643	34.96	ng/uL	0.02

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) 2-Ethoxyethanol	59	2.388	2.388	0.413	188766	43.40	ng/uL	92
3) N-Methyl-N-nitrosometh...	74	2.669	2.669	0.462	180768	44.44	ng/uL	98
4) Pyridine	79	2.711	2.711	0.469	281772	41.21	ng/uL	87
6) Aniline	93	5.321	5.326	0.921	359613	41.00	ng/uL	99
8) Phenol	94	5.245	5.246	0.908	286372	41.37	ng/uL	97
9) bis(2-Chloroethyl) ether	93	5.397	5.401	0.934	228241	41.16	ng/uL	98
10) 2-Chlorophenol	128	5.478	5.481	0.948	221554	40.58	ng/uL	98
11) n-Decane	43	5.531	5.533	0.957	286583	44.29	ng/uL	99
12) 1,3-Dichlorobenzene	146	5.697	5.703	0.986	237378	39.61	ng/uL	99
13) 1,4-Dichlorobenzene	146	5.802	5.802	1.004	224673	39.82	ng/uL	99
14) 1,2-Dichlorobenzene	146	6.012	6.014	1.040	220883	40.25	ng/uL	99
15) bis(2-Chloro-1-methyle...	45	6.154	6.150	1.065	416238	43.70	ng/uL	98
16) Benzyl alcohol	108	5.959	5.957	1.031	147908	39.82	ng/uL	96
17) o-Cresol	107	6.097	6.089	1.055	174275	40.79	ng/uL	98
18) m,p-Cresols	107	6.326	6.315	1.095	230771	40.06	ng/uL	99
19) N-Nitrosodipropylamine	70	6.350	6.334	1.099	171965	41.01	ng/uL	96
20) Hexachloroethane	117	6.483	6.480	1.122	93842	40.83	ng/uL	98
23) Nitrobenzene	77	6.583	6.590	0.873	233500	42.77	ng/uL	98
24) Isophorone	82	6.912	6.916	0.917	462014	41.86	ng/uL	99
25) 2-Nitrophenol	139	7.016	7.020	0.931	113324	43.86	ng/uL	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1810.D
Acq On : 18 Jul 2018 14:29
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.2|CCV|1|SVM|1|MCCV
Misc : |MIX[A]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 18 15:23:50 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
26) 2,4-Dimethylphenol	122	7.064	7.063	0.937	184987	41.14	ng/uL	99
27) bis(2-Chloroethoxy)met...	93	7.207	7.209	0.956	259196	40.85	ng/uL	99
28) 2,4-Dichlorophenol	162	7.335	7.337	0.973	184689	41.29	ng/uL	99
29) Benzoic acid	105	7.216	7.171	0.957	107595	43.21	ng/uL	97
30) 1,2,4-Trichlorobenzene	180	7.459	7.460	0.989	203441	40.17	ng/uL	99
31) alpha-Terpineol	59	7.578	7.578	1.005	196717	42.51	ng/uL	99
32) Naphthalene	128	7.569	7.573	1.004	533598	40.93	ng/uL	100
33) 4-Chloroaniline	127	7.635	7.635	1.013	233237	40.41	ng/uL	96
34) Hexachlorobutadiene	225	7.726	7.729	1.025	131455	39.94	ng/uL	99
35) 4-Chloro-3-methylphenol	107	8.269	8.263	1.097	188561	41.80	ng/uL	99
36) 2-Methylnaphthalene	142	8.492	8.485	1.126	415645	40.69	ng/uL	100
37) 1-Methylnaphthalene	142	8.621	8.618	1.143	371525	39.99	ng/uL	98
39) Hexachlorocyclopentadiene	237	8.688	8.699	0.882	156957	46.58	ng/uL	99
40) 2,3-Dichloroaniline	161	8.854	8.865	0.899	198153	40.27	ng/uL	99
41) 2,4,6-Trichlorophenol	196	8.854	8.860	0.899	138755	43.96	ng/uL	98
42) 2,4,5-Trichlorophenol	196	8.893	8.903	0.903	137311	40.97	ng/uL	99
44) 2-Chloronaphthalene	162	9.126	9.135	0.927	366609	40.01	ng/uL	98
45) o-Nitroaniline	65	9.254	9.263	0.940	127863	43.48	ng/uL	97
46) 1,4-Dinitrobenzene	168	9.440	9.442	0.959	74255	42.40	ng/uL	95
47) m-Nitroaniline	138	9.788	9.788	0.994	105260	41.59	ng/uL	97
48) Dimethylphthalate	163	9.502	9.499	0.965	419943	39.94	ng/uL	100
49) m-Dinitrobenzene	168	9.535	9.537	0.969	76312	40.47	ng/uL	92
50) 2,6-Dinitrotoluene	165	9.573	9.575	0.972	100141	40.41	ng/uL	96
51) 2,4-Dinitrotoluene	165	10.083	10.082	1.024	137375	41.58	ng/uL	96
52) Acenaphthylene	152	9.664	9.670	0.982	539037	39.95	ng/uL	99
53) Acenaphthene	154	9.888	9.888	1.004	329504	40.67	ng/uL	99
54) 2,4-Dinitrophenol	184	9.912	9.911	1.007	41112	39.49	ng/uL	99
55) Dibenzofuran	168	10.102	10.105	1.026	491168	39.94	ng/uL	98
56) 2,3,4,6-Tetrachlorophenol	232	10.250	10.252	1.041	121444	42.53	ng/uL	96
57) Diethylphthalate	149	10.388	10.389	1.055	432926	40.97	ng/uL	100
58) 4-Nitrophenol	139	9.978	9.977	1.014	80028	44.67	ng/uL	98
59) Fluorene	166	10.540	10.541	1.071	398441	39.12	ng/uL	99
60) 4-Chlorophenylphenylether	204	10.531	10.531	1.070	221445	39.37	ng/uL	98
61) p-Nitroaniline	138	10.564	10.560	1.073	96366	41.14	ng/uL	99
64) 2-Methyl-4,6-dinitroph...	198	10.597	10.598	0.904	66825	42.13	ng/uL	96
65) Diphenylamine	169	10.683	10.688	0.912	357643	40.54	ng/uL	100
66) 1,2-Diphenylhydrazine	77	10.735	10.741	0.916	431773	42.79	ng/uL	99
67) 4-Bromophenylphenylether	248	11.150	11.153	0.952	143802	39.79	ng/uL	98
68) Hexachlorobenzene	284	11.221	11.228	0.958	145241	39.53	ng/uL	98
69) Pentachlorophenol	266	11.464	11.465	0.978	84845	43.20	ng/uL	97
70) n-Octadecane	57	11.559	11.555	0.987	342435	46.06	ng/uL	99
71) Dinoseb	211	11.693	11.688	0.998	116033	45.09	ng/uL	97
72) Phenanthrene	178	11.750	11.749	1.003	563001	40.62	ng/uL	99
73) Anthracene	178	11.812	11.811	1.008	596776	41.22	ng/uL	99
74) Carbazole	167	12.007	12.005	1.025	548705	41.62	ng/uL	99
75) Di-n-butylphthalate	149	12.426	12.422	1.061	732894	44.05	ng/uL	99
76) Fluoranthene	202	13.226	13.223	1.129	729037	43.92	ng/uL	98
78) Pyrene	202	13.512	13.494	0.882	718533	34.21	ng/uL	99
80) Butylbenzylphthalate	149	14.350	14.337	0.937	354416	42.98	ng/uL	98
81) bis(2-Ethylhexyl)phtha...	149	15.321	15.321	1.001	433187	48.58	ng/uL	100
82) Benzo(a)anthracene	228	15.288	15.293	0.998	679151	40.12	ng/uL	99
83) Chrysene	228	15.364	15.364	1.003	611922	41.22	ng/uL	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1810.D
Acq On : 18 Jul 2018 14:29
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.2|CCV|1|SVM|1|MCCV
Misc : |MIX[A]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 18 15:23:50 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

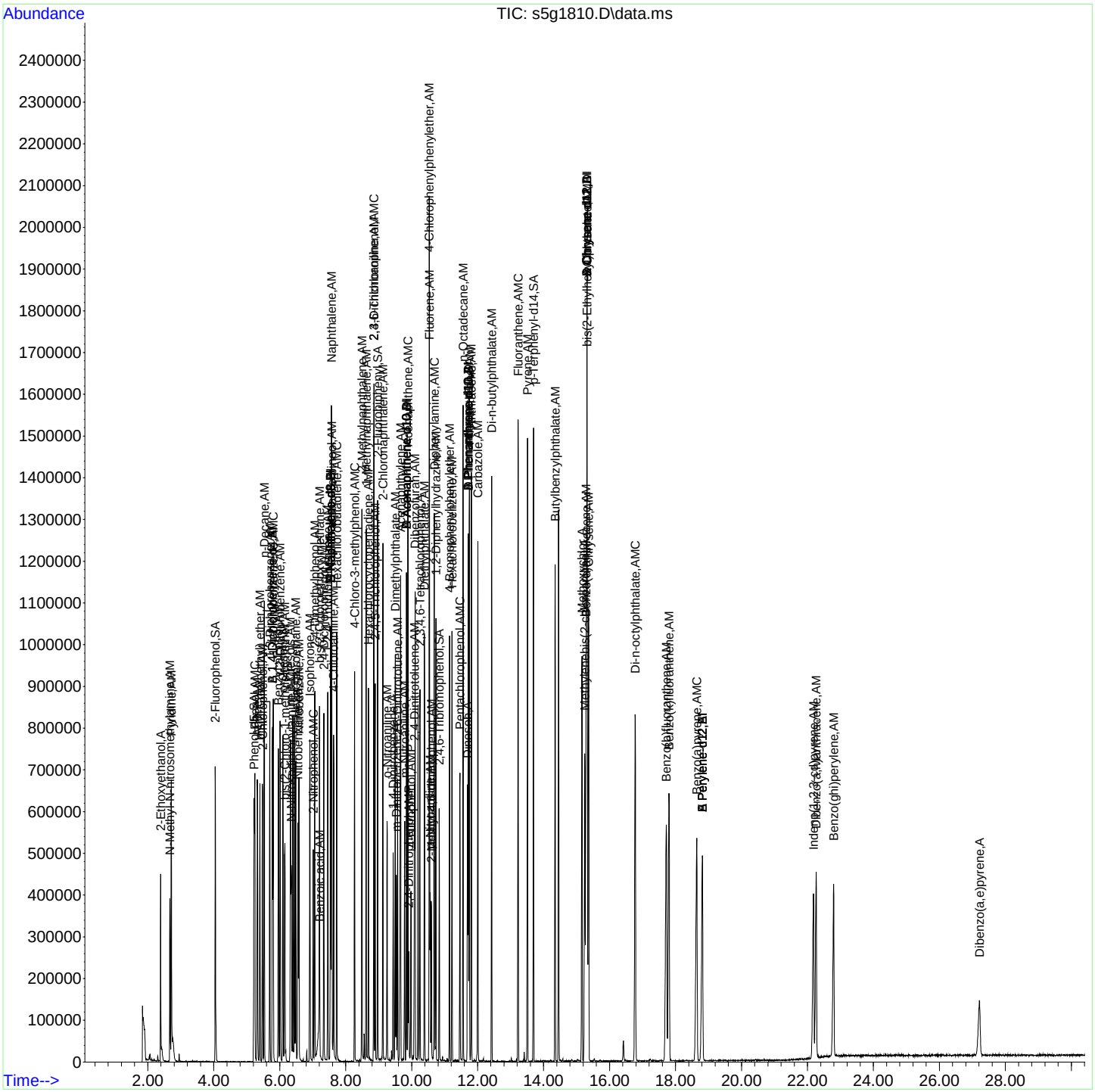
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
84) Methoxychlor	227	15.164	15.160	0.990	547140	43.54	ng/uL	98
85) Methylenebis(2-chloroa...	231	15.245	15.245	0.996	142996	41.42	ng/uL	98
86) Di-n-octylphthalate	149	16.778	16.783	1.096	826474	52.06	ng/uL	97
88) Benzo(b)fluoranthene	252	17.721	17.716	0.942	640888	41.31	ng/uL	99
89) Benzo(k)fluoranthene	252	17.802	17.797	0.946	594908	40.50	ng/uL	99
90) Benzo(a)pyrene	252	18.640	18.642	0.991	580888	41.26	ng/uL	99
91) Indeno(1,2,3-cd)pyrene	276	22.183	22.140	1.179	413567	37.86	ng/uL	99
92) Dibenzo(a,h)anthracene	278	22.264	22.211	1.184	405245	38.46	ng/uL	90
93) Benzo(ghi)perylene	276	22.793	22.749	1.212	397345	36.74	ng/uL	97
94) Dibenzo(a,e)pyrene	302	27.212	27.239	1.447	184047	26.92	ng/uL	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1810.D
Acq On : 18 Jul 2018 14:29
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.2|CCV|1|SVM|1|MCCV
Misc : |MIX[A]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 18 15:23:50 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: MSD5.I

Injection Date: 18-JUL-18 15:37

Data File: s071818a.B\s5g1812.D

Init. Cal. Date(s) 09-JUL-18 22:51 - 11-JUL-18 03:17

Lab Sample ID WBN180712-45.3

Method: s071818a.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD

Method Update: 11-JUL-18 08:32

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
3,3'-Dichlorobenzidine	0.4515	0.45583		.01		0.95903	20		Averaged

Quantitation Report
GEL Laboratories, LLC

07/19/2018

07/19/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1812.D
Acq On : 18 Jul 2018 15:37
Operator : JLD1
InstName : MSD5
Sample : |WBN180712-45.3|CCV|1|SVM|1|BCCV
Misc : |MIX[J]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 18 16:27:56 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) A 1,4-Dichlorobenzene-d4	152	5.773	5.778	1.000	176848	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.535	7.540	1.000	605324	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.835	9.845	1.000	322674	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.712	11.716	1.000	623499	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.302	15.316	1.000	566580	40.00	ng/uL	-0.01
87) A Perylene-d12	264	18.797	18.816	1.000	466085	40.00	ng/uL	-0.02
95) B 1,4-Dichlorobenzene-d4	152	5.773	5.778	1.000	176848	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.535	7.540	1.000	605324	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.835	9.845	1.000	322674	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.712	11.716	1.000	623499	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.302	15.316	1.000	566580	40.00	ng/uL	-0.01
147) B Perylene-d12	264	18.797	18.816	1.000	466085	40.00	ng/uL	-0.02
150) J Phenanthrene-d10	188	11.712	11.716	1.000	623499	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.302	15.316	1.000	566580	40.00	ng/uL	-0.01
155) D Naphthalene-d8	136	7.535	7.540	1.000	605324	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.835	9.845	1.000	322674	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.712	11.716	1.000	623499	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.302	15.316	1.000	566580	40.00	ng/uL	-0.01
169) E Naphthalene-d8	136	7.535	7.540	1.000	605324	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.797	18.816	1.000	466085	40.00	ng/uL	-0.02
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.063	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.227	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.562	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.979	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.834	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

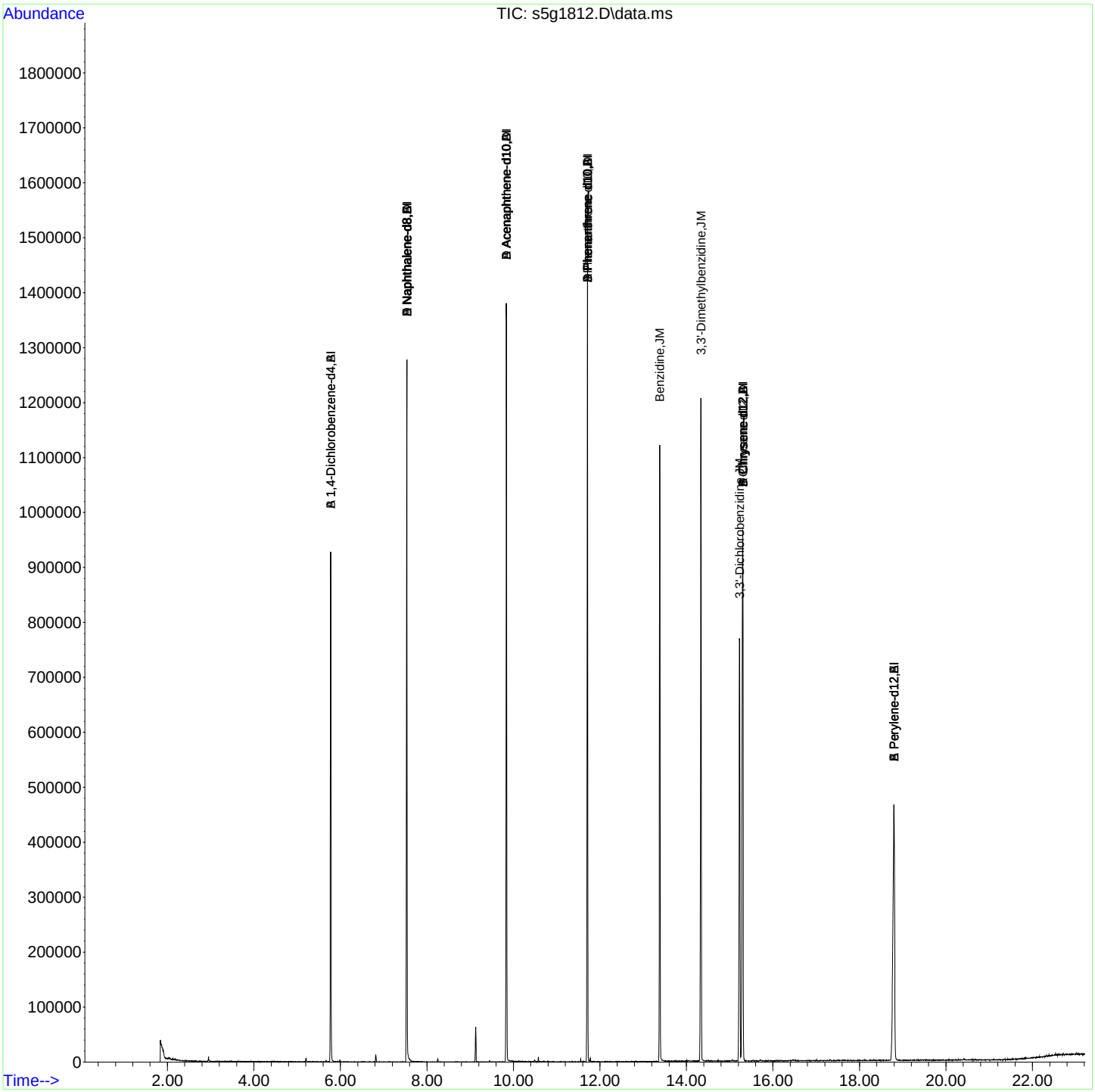
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
151) Benzidine	184	13.383	13.374	1.143	483955	48.26	ng/uL	98
153) 3,3'-Dimethylbenzidine	212	14.336	14.322	0.937	553764	37.62	ng/uL	100
154) 3,3'-Dichlorobenzidine	252	15.231	15.226	0.995	258266	40.39	ng/uL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1812.D
Acq On : 18 Jul 2018 15:37
Operator : JLD1
InstName : MSD5
Sample : |WBN180712-45.3|CCV|1|SVM|1|BCCV
Misc : |MIX[J]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 18 16:27:56 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: MSD5.I

Injection Date: 18-JUL-18 16:07

Data File: s071818a.B\s5g1813.D

Init. Cal. Date(s) 09-JUL-18 22:51 - 11-JUL-18 03:17

Lab Sample ID WBN180709-15.3

Method: s071818a.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD

Method Update: 11-JUL-18 08:32

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
Benzaldehyde	1.0982	1.11824		.01		1.8248	20		Averaged
Acetophenone	1.6434	1.57733		.01		-4.02032	20		Averaged
Caprolactam	0.1087	0.10734		.01		-1.25115	20		Averaged
1,2,4,5-Tetrachlorobenzene	0.6949	0.67751		.01		-2.50252	20		Averaged
1,1'-Biphenyl	1.4021	1.38853		.01		-0.96783	20		Averaged
Atrazine	0.2213	0.21404		.01		-3.28061	20		Averaged

Quantitation Report
GEL Laboratories, LLC

07/19/2018

07/19/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1813.D
Acq On : 18 Jul 2018 16:07
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-15.3|CCV|1|SVM|1|ACCV
Misc : |MIX[B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 18 16:48:27 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.773	5.778	1.000	176541	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.535	7.540	1.000	583207	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.835	9.845	1.000	319114	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.716	11.716	1.000	597684	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.302	15.316	1.000	619282	40.00	ng/uL	-0.01
87) A Perylene-d12	264	18.807	18.816	1.000	554190	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.773	5.778	1.000	176541	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.535	7.540	1.000	583207	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.835	9.845	1.000	319114	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.716	11.716	1.000	597684	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.302	15.316	1.000	619282	40.00	ng/uL	-0.01
147) B Perylene-d12	264	18.807	18.816	1.000	554190	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.716	11.716	1.000	597684	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.302	15.316	1.000	619282	40.00	ng/uL	-0.01
155) D Naphthalene-d8	136	7.535	7.540	1.000	583207	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.835	9.845	1.000	319114	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.716	11.716	1.000	597684	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.302	15.316	1.000	619282	40.00	ng/uL	-0.01
169) E Naphthalene-d8	136	7.535	7.540	1.000	583207	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.807	18.816	1.000	554190	40.00	ng/uL	0.00
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.063	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.227	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.562	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	8.979	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.834	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.674	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
96) 1,4-Dioxane	88	2.388	2.388	0.414	85409	37.86	ng/uL	94
97) Methyl methacrylate	100	2.383	2.383	0.413	44899	39.57	ng/uL	94
98) Ethyl methacrylate	69	3.083	3.083	0.534	217728	41.96	ng/uL	98
99) 2-Picoline	93	3.435	3.435	0.595	262743	40.03	ng/uL	98
100) N-Nitrosomethylethylamine	88	3.545	3.545	0.614	109224	39.26	ng/uL	90
101) Methyl methanesulfonate	80	3.883	3.898	0.673	138595	40.19	ng/uL	98
102) N-Nitrosodiethylamine	102	4.359	4.374	0.755	113741	39.35	ng/uL	98
103) 2-Butoxyethanol	57	4.430	4.445	0.767	295755	41.19	ng/uL	99
104) Ethyl methanesulfonate	79	4.726	4.732	0.819	183186	39.84	ng/uL	96
105) Benzaldehyde	77	5.183	5.189	0.898	197416	40.73	ng/uL	98
106) Pentachloroethane	167	5.383	5.392	0.932	93757	38.57	ng/uL	98
107) N-Nitrosopyrrolidine	100	6.316	6.306	1.094	121857	40.12	ng/uL	95
108) Acetophenone	105	6.340	6.334	1.098	278463	38.39	ng/uL	98
109) N-Nitrosomorpholine	56	6.369	6.362	1.103	133485	41.23	ng/uL	97
110) o-Toluidine	106	6.388	6.381	1.106	303101	38.59	ng/uL	100
112) N-Nitrosopiperidine	114	6.788	6.798	0.901	110868	38.97	ng/uL	94
113) a,a-Dimethylphenethyla...	58	7.316	7.332	0.971	731977	41.38	ng/uL	100
114) 2,6-Dichlorophenol	162	7.645	7.644	1.015	154383	39.19	ng/uL	99
115) Hexachloropropene	213	7.678	7.687	1.019	140281	39.85	ng/uL	99
116) Caprolactam	113	8.111	8.103	1.076	62599	39.52	ng/uL#	65

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1813.D
Acq On : 18 Jul 2018 16:07
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-15.3|CCV|1|SVM|1|ACCV
Misc : |MIX[B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 18 16:48:27 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

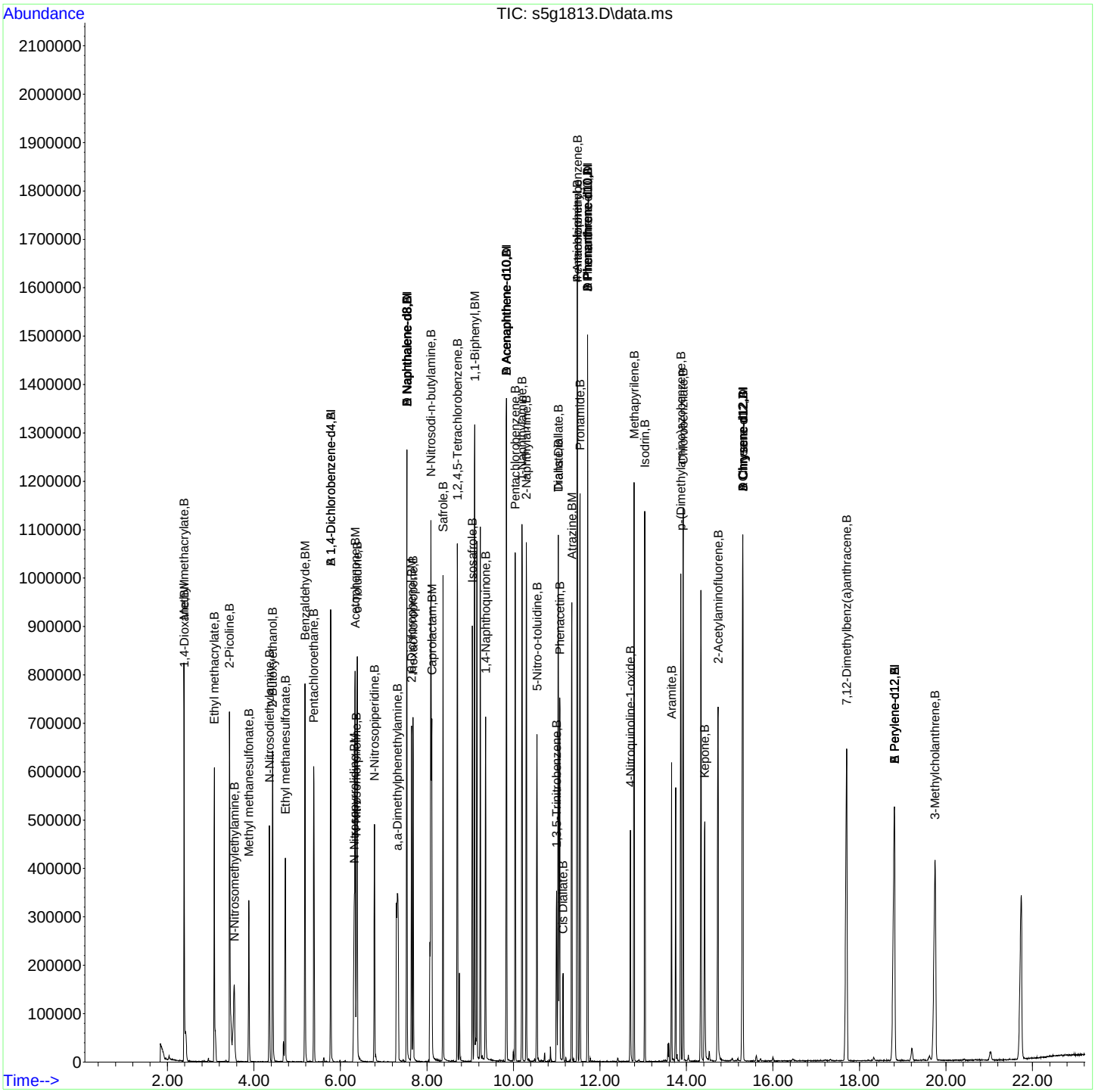
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
117) N-Nitrosodi-n-butylamine	84	8.092	8.088	1.074	188382	42.03	ng/uL	96
118) Safrole	162	8.373	8.367	1.111	160245	38.86	ng/uL	99
120) 1,2,4,5-Tetrachloroben...	216	8.702	8.713	0.885	216203	39.00	ng/uL	99
121) 1,1-Biphenyl	154	9.102	9.106	0.925	443099	39.61	ng/uL	99
122) Isosafrole	162	9.050	9.059	0.920	165095	39.19	ng/uL	98
123) 1,4-Naphthoquinone	158	9.354	9.362	0.951	144387	36.92	ng/uL	99
124) Pentachlorobenzene	250	10.040	10.049	1.021	178199	38.62	ng/uL	100
125) 1-Naphthylamine	143	10.197	10.200	1.037	382386	39.90	ng/uL	98
126) 2-Naphthylamine	143	10.297	10.299	1.047	383486	40.47	ng/uL	98
127) 5-Nitro-o-toluidine	152	10.545	10.546	1.072	123700	40.38	ng/uL	98
129) 1,3,5-Trinitrobenzene	75	10.997	10.996	0.939	111642	45.34	ng/uL	97
130) Phenacetin	108	11.069	11.067	0.945	199990	40.29	ng/uL	99
131) Diallate	86	11.035	11.039	0.942	181354	41.54	ng/uL	97
132) Cis Diallate	86	11.145	11.153	0.951	32322	6.45	ng/uL	95
133) Trans Diallate	86	11.035	11.039	0.942	181354	35.30	ng/uL	97
134) Atrazine	200	11.350	11.347	0.969	127931	38.69	ng/uL	98
135) 4-Aminobiphenyl	169	11.473	11.475	0.979	447923	39.58	ng/uL	100
136) Pentachloronitrobenzene	237	11.478	11.484	0.980	61733	39.38	ng/uL	100
137) Pronamide	173	11.540	11.536	0.985	192093	39.74	ng/uL	99
138) 4-Nitroquinoline-1-oxide	116	12.702	12.702	1.084	22577	43.85	ng/uL	97
139) Methapyrilene	58	12.788	12.787	1.091	370271	45.11	ng/uL	98
140) Isodrin	193	13.035	13.038	1.113	86569	43.74	ng/uL	100
142) Aramite	185	13.654	13.636	0.892	44764	39.07	ng/uL	95
143) Kepone	272	14.421	14.413	0.942	67073	44.27	ng/uL	98
144) p-(Dimethylamino)azobe...	120	13.869	13.854	0.906	187079	36.91	ng/uL	96
145) Chlorobenzilate	251	13.926	13.911	0.910	211192	38.20	ng/uL	99
146) 2-Acetylaminofluorene	181	14.731	14.720	0.963	240662	39.57	ng/uL	100
148) 7,12-Dimethylbenz(a)an...	256	17.702	17.698	0.941	305682	39.68	ng/uL	99
149) 3-Methylcholanthrene	269	19.745	19.754	1.050	65037	39.72	ng/uL	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1813.D
Acq On : 18 Jul 2018 16:07
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-15.3|CCV|1|SVM|1|ACCV
Misc : |MIX[B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 18 16:48:27 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: MSD5.I **Injection Date:** 20-JUL-18 10:37

Data File: s072018.B\s5g2006.D **Init. Cal. Date(s)** 09-JUL-18 22:51 - 11-JUL-18 03:17

Lab Sample ID WBN180620-05.2 **Method:** s072018.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD **Method Update:** 11-JUL-18 08:32

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	2-Fluorophenol	1.3971	1.45033		.01		3.81004	20		Averaged
S	Phenol-d5	1.8083	1.83368		.01		1.40353	20		Averaged
S	Nitrobenzene-d5	0.4309	0.44423		.01		3.09353	20		Averaged
S	2-Fluorobiphenyl	1.5224	1.54697		.01		1.6139	20		Averaged
S	2,4,6-Tribromophenol	0.2391	0.26549		.01		11.03722	20		Averaged
S	p-Terphenyl-d14	1.1138	1.08569		.01		-2.52379	20		Averaged
	Phenol	1.7516	1.80719		.8		3.17367	20		Averaged
	bis(2-Chloroethyl) ether	1.4033	1.46158		.7		4.15307	20		Averaged
	2-Chlorophenol	1.3815	1.43358		.8		3.76982	20		Averaged
	o-Cresol	1.0812	1.12687		.7		4.22401	20		Averaged
	bis(2-Chloro-1-methylethyl)eth	2.4106	2.58409		.01		7.19696	20		Averaged
	m,p-Cresols	1.4576	1.50872		.6		3.50714	20		Averaged
	N-Nitrosodipropylamine	1.0612	1.09174		.5		2.87787	20		Averaged
	Hexachloroethane	0.5816	0.61433		.3		5.62758	20		Averaged
	Nitrobenzene	0.4208	0.43412		.2		3.1654	20		Averaged
	Isophorone	0.851	0.86151		.4		1.23502	20		Averaged
	2-Nitrophenol	0.1992	0.21801		.1		9.44277	20		Averaged
	2,4-Dimethylphenol	0.3467	0.34953		.2		0.81627	20		Averaged
	bis(2-Chloroethoxy)methane	0.4892	0.49691		.3		1.57604	20		Averaged
	2,4-Dichlorophenol	0.3449	0.3595		.2		4.23311	20		Averaged
	Naphthalene	1.0052	1.02579		.7		2.04835	20		Averaged
	4-Chloroaniline	0.445	0.45398		.01		2.01798	20		Averaged
	Hexachlorobutadiene	0.2538	0.25928		.01		2.15918	20		Averaged
	4-Chloro-3-methylphenol	0.3478	0.36532		.2		5.03738	20		Averaged
	2-Methylnaphthalene	0.7875	0.80627		.4		2.38349	20		Averaged
	Hexachlorocyclopentadiene	0.4868	0.4875		.05		0.1438	20		Averaged
	2,4,6-Trichlorophenol	0.4559	0.4936		.2		8.26936	20		Averaged
	2,4,5-Trichlorophenol	0.4841	0.50435		.2		4.18302	20		Averaged
	2-Chloronaphthalene	1.3236	1.33392		.8		0.77969	20		Averaged
	o-Nitroaniline	0.4248	0.45055		.01		6.06168	20		Averaged
	Dimethylphthalate	1.5188	1.5359		.01		1.12589	20		Averaged
	2,6-Dinitrotoluene	0.3579	0.36479		.2		1.92512	20		Averaged
	Acenaphthylene	1.949	1.98118		.9		1.6511	20		Averaged
	m-Nitroaniline	0.3656	0.37755		.01		3.2686	20		Averaged
	Acenaphthene	1.1704	1.26628		.9		8.19207	20		Averaged
	2,4-Dinitrophenol	40	41.21	40			3.025	20		Linear
	4-Nitrophenol	0.2588	0.28705		.05		10.91577	20		Averaged

Continuing Calibration Summary

Instrument ID: MSD5.I **Injection Date:** 20-JUL-18 10:37

Data File: s072018.B\s5g2006.D **Init. Cal. Date(s)** 09-JUL-18 22:51 11-JUL-18 03:17

Lab Sample ID WBN180620-05.2 **Method:** s072018.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
2,4-Dinitrotoluene	0.4772	0.51067		.2		7.01383	20		Averaged
Dibenzofuran	1.7764	1.83115		.8		3.08208	20		Averaged
2,3,4,6-Tetrachlorophenol	0.4125	0.46018		.01		11.55879	20		Averaged
Diethylphthalate	1.5264	1.59557		.01		4.53158	20		Averaged
4-Chlorophenylphenylether	0.8124	0.84704		.4		4.26391	20		Averaged
Fluorene	1.4713	1.47872		.9		0.50432	20		Averaged
p-Nitroaniline	0.3384	0.35465		.01		4.80201	20		Averaged
2-Methyl-4,6-dinitrophenol	40	43.09	40			7.725	20		Linear
Diphenylamine	0.6708	0.66128		.01		-1.4192	20		Averaged
4-Bromophenylphenylether	0.2748	0.27298		.1		-0.6623	20		Averaged
Hexachlorobenzene	0.2793	0.27525		.1		-1.45005	20		Averaged
Pentachlorophenol	40	43.45	40			8.625	20		Linear
Phenanthrene	1.0539	1.07157		.7		1.67663	20		Averaged
Anthracene	1.1007	1.14522		.7		4.0447	20		Averaged
Carbazole	1.0022	1.05788		.01		5.55578	20		Averaged
Di-n-butylphthalate	1.265	1.39414		.01		10.2087	20		Averaged
Fluoranthene	1.2619	1.40537		.6		11.36936	20		Averaged
Pyrene	1.6369	1.54744		.6		-5.46521	20		Averaged
Butylbenzylphthalate	0.6426	0.70734		.01		10.0747	20		Averaged
Benzo(a)anthracene	1.319	1.33273		.8		1.04094	20		Averaged
bis(2-Ethylhexyl)phthalate	0.6948	0.77905		.01		12.12579	20		Averaged
Chrysene	1.157	1.2034		.7		4.01037	20		Averaged
Di-n-octylphthalate	40	42.73	40			6.825	20		Linear
Benzo(b)fluoranthene	1.3113	1.39345		.7		6.26478	20		Averaged
Benzo(k)fluoranthene	1.2415	1.30416		.7		5.04712	20		Averaged
Benzo(a)pyrene	1.1899	1.20615		.7		1.36566	20		Averaged
Indeno(1,2,3-cd)pyrene	0.9233	0.8752		.5		-5.20957	20		Averaged
Dibenzo(a,h)anthracene	0.8907	0.85825		.4		-3.6432	20		Averaged
Benzo(ghi)perylene	0.914	0.87207		.5		-4.58753	20		Averaged

Quantitation Report
GEL Laboratories, LLC

07/20/2018

07/23/2018

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2006.D
Acq On : 20 Jul 2018 10:37
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.2|CCV|1|SVM|1|MCCV
Misc : |MIX[A]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 20 11:41:21 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.874	5.873	1.000	124956	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.631	7.630	1.000	430253	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.931	9.935	1.000	235670	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.807	11.811	1.000	468700	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.445	15.454	1.000	425142	40.00	ng/uL	0.00
87) A Perylene-d12	264	19.031	19.045	1.000	318242	40.00	ng/uL	-0.01
95) B 1,4-Dichlorobenzene-d4	152	5.874	5.873	1.000	124956	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.631	7.630	1.000	430253	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.931	9.935	1.000	235670	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.807	11.811	1.000	468700	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.445	15.454	1.000	425142	40.00	ng/uL	0.00
147) B Perylene-d12	264	19.031	19.045	1.000	318242	40.00	ng/uL	-0.01
150) J Phenanthrene-d10	188	11.807	11.811	1.000	468700	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.445	15.454	1.000	425142	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.631	7.630	1.000	430253	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.931	9.935	1.000	235670	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.807	11.811	1.000	468700	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.445	15.454	1.000	425142	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.631	7.630	1.000	430253	40.00	ng/uL	0.00
171) E Perylene-d12	264	19.031	19.045	1.000	318242	40.00	ng/uL	-0.01
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.140	4.140	0.705	181227	41.52	ng/uL	0.00
7) Phenol-d5	99	5.312	5.311	0.904	229129	40.56	ng/uL	0.00
22) Nitrobenzene-d5	82	6.645	6.645	0.871	191132	41.24	ng/uL	0.00
43) 2-Fluorobiphenyl	172	9.055	9.059	0.912	364574	40.65	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.926	10.931	1.100	62569	44.41	ng/uL	0.00
79) p-Terphenyl-d14	244	13.783	13.788	0.892	461574	38.99	ng/uL	0.00

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) 2-Ethoxyethanol	59	2.478	2.478	0.422	139790	40.66	ng/uL	88
3) N-Methyl-N-nitrosometh...	74	2.759	2.759	0.470	133844	41.62	ng/uL	98
4) Pyridine	79	2.807	2.807	0.478	214357	39.65	ng/uL	83
6) Aniline	93	5.416	5.416	0.922	286803	41.36	ng/uL	100
8) Phenol	94	5.335	5.335	0.908	225819	41.27	ng/uL	98
9) bis(2-Chloroethyl) ether	93	5.493	5.492	0.935	182633	41.66	ng/uL	100
10) 2-Chlorophenol	128	5.574	5.573	0.949	179134	41.51	ng/uL	99
11) n-Decane	43	5.626	5.626	0.958	225755	44.13	ng/uL	99
12) 1,3-Dichlorobenzene	146	5.793	5.797	0.986	196360	41.45	ng/uL	99
13) 1,4-Dichlorobenzene	146	5.897	5.897	1.004	184637	41.39	ng/uL	99
14) 1,2-Dichlorobenzene	146	6.107	6.107	1.040	183107	42.20	ng/uL	99
15) bis(2-Chloro-1-methyle...	45	6.245	6.245	1.063	322898	42.88	ng/uL	99
16) Benzyl alcohol	108	6.050	6.054	1.030	119336	40.64	ng/uL	96
17) o-Cresol	107	6.188	6.188	1.054	140809	41.69	ng/uL	99
18) m,p-Cresols	107	6.412	6.416	1.092	188524	41.40	ng/uL	99
19) N-Nitrosodipropylamine	70	6.435	6.440	1.096	136420	41.15	ng/uL	96
20) Hexachloroethane	117	6.578	6.583	1.120	76764	42.25	ng/uL	99
23) Nitrobenzene	77	6.674	6.673	0.875	186782	41.26	ng/uL	100
24) Isophorone	82	7.002	7.002	0.918	370666	40.50	ng/uL	99
25) 2-Nitrophenol	139	7.107	7.107	0.931	93798	43.78	ng/uL	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2006.D
Acq On : 20 Jul 2018 10:37
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.2|CCV|1|SVM|1|MCCV
Misc : |MIX[A]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 20 11:41:21 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
26)	2,4-Dimethylphenol	122	7.150	7.149	0.937	150385	40.33	ng/uL	98
27)	bis(2-Chloroethoxy)met...	93	7.293	7.292	0.956	213798	40.63	ng/uL	99
28)	2,4-Dichlorophenol	162	7.426	7.426	0.973	154678	41.70	ng/uL	99
29)	Benzoic acid	105	7.269	7.283	0.953	70487	36.21	ng/uL	99
30)	1,2,4-Trichlorobenzene	180	7.545	7.550	0.989	171243	40.77	ng/uL	98
31)	alpha-Terpineol	59	7.664	7.669	1.004	158700	41.35	ng/uL	99
32)	Naphthalene	128	7.659	7.659	1.004	441350	40.82	ng/uL	100
33)	4-Chloroaniline	127	7.726	7.726	1.012	195325	40.81	ng/uL	99
34)	Hexachlorobutadiene	225	7.816	7.821	1.024	111556	40.87	ng/uL	99
35)	4-Chloro-3-methylphenol	107	8.355	8.354	1.095	157180	42.02	ng/uL	98
36)	2-Methylnaphthalene	142	8.578	8.583	1.124	346900	40.95	ng/uL	100
37)	1-Methylnaphthalene	142	8.712	8.711	1.142	316155	41.04	ng/uL	99
39)	Hexachlorocyclopentadiene	237	8.778	8.783	0.884	114890	40.06	ng/uL	99
40)	2,3-Dichloroaniline	161	8.945	8.945	0.901	165796	39.59	ng/uL	99
41)	2,4,6-Trichlorophenol	196	8.940	8.940	0.900	116326	43.31	ng/uL	98
42)	2,4,5-Trichlorophenol	196	8.978	8.983	0.904	118860	41.67	ng/uL	98
44)	2-Chloronaphthalene	162	9.216	9.216	0.928	314364	40.31	ng/uL	99
45)	o-Nitroaniline	65	9.340	9.345	0.941	106180	42.43	ng/uL	99
46)	1,4-Dinitrobenzene	168	9.526	9.526	0.959	64291	43.14	ng/uL	98
47)	m-Nitroaniline	138	9.874	9.878	0.994	88977	41.30	ng/uL	98
48)	Dimethylphthalate	163	9.583	9.588	0.965	361965	40.45	ng/uL	99
49)	m-Dinitrobenzene	168	9.621	9.621	0.969	66298	41.31	ng/uL	97
50)	2,6-Dinitrotoluene	165	9.659	9.659	0.973	85970	40.77	ng/uL	99
51)	2,4-Dinitrotoluene	165	10.169	10.173	1.024	120350	42.80	ng/uL	87
52)	Acenaphthylene	152	9.755	9.754	0.982	466904	40.66	ng/uL	100
53)	Acenaphthene	154	9.974	9.978	1.004	298424	43.28	ng/uL	95
54)	2,4-Dinitrophenol	184	9.997	10.002	1.007	37066	41.21	ng/uL#	1
55)	Dibenzofuran	168	10.193	10.197	1.026	431548	41.23	ng/uL	99
56)	2,3,4,6-Tetrachlorophenol	232	10.336	10.340	1.041	108450	44.63	ng/uL	99
57)	Diethylphthalate	149	10.474	10.478	1.055	376027	41.81	ng/uL	100
58)	4-Nitrophenol	139	10.064	10.064	1.013	67650	44.37	ng/uL	98
59)	Fluorene	166	10.626	10.631	1.070	348490	40.20	ng/uL	99
60)	4-Chlorophenylphenylether	204	10.621	10.626	1.070	199622	41.70	ng/uL	99
61)	p-Nitroaniline	138	10.650	10.654	1.072	83581	41.92	ng/uL	99
64)	2-Methyl-4,6-dinitroph...	198	10.683	10.683	0.905	61096	43.09	ng/uL	94
65)	Diphenylamine	169	10.769	10.773	0.912	309944	39.44	ng/uL	100
66)	1,2-Diphenylhydrazine	77	10.821	10.826	0.917	365119	40.62	ng/uL	99
67)	4-Bromophenylphenylether	248	11.236	11.240	0.952	127944	39.74	ng/uL	100
68)	Hexachlorobenzene	284	11.317	11.316	0.958	129010	39.42	ng/uL	99
69)	Pentachlorophenol	266	11.555	11.559	0.979	76081	43.45	ng/uL	98
70)	n-Octadecane	57	11.640	11.645	0.986	285587	43.12	ng/uL	99
71)	Dinoseb	211	11.778	11.783	0.998	100228	43.90	ng/uL	97
72)	Phenanthrene	178	11.840	11.845	1.003	502247	40.67	ng/uL	100
73)	Anthracene	178	11.902	11.907	1.008	536763	41.62	ng/uL	100
74)	Carbazole	167	12.097	12.102	1.025	495830	42.22	ng/uL	100
75)	Di-n-butylphthalate	149	12.512	12.516	1.060	653435	44.08	ng/uL	100
76)	Fluoranthene	202	13.321	13.326	1.128	658696	44.55	ng/uL	99
78)	Pyrene	202	13.607	13.611	0.881	657881	37.81	ng/uL	100
80)	Butylbenzylphthalate	149	14.455	14.464	0.936	300722	44.03	ng/uL	99
81)	bis(2-Ethylhexyl)phtha...	149	15.445	15.459	1.000	331205	44.85	ng/uL	99
82)	Benzo(a)anthracene	228	15.421	15.431	0.998	566599	40.42	ng/uL	99
83)	Chrysene	228	15.498	15.507	1.003	511618	41.61	ng/uL	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2006.D
Acq On : 20 Jul 2018 10:37
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.2|CCV|1|SVM|1|MCCV
Misc : |MIX[A]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 20 11:41:21 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

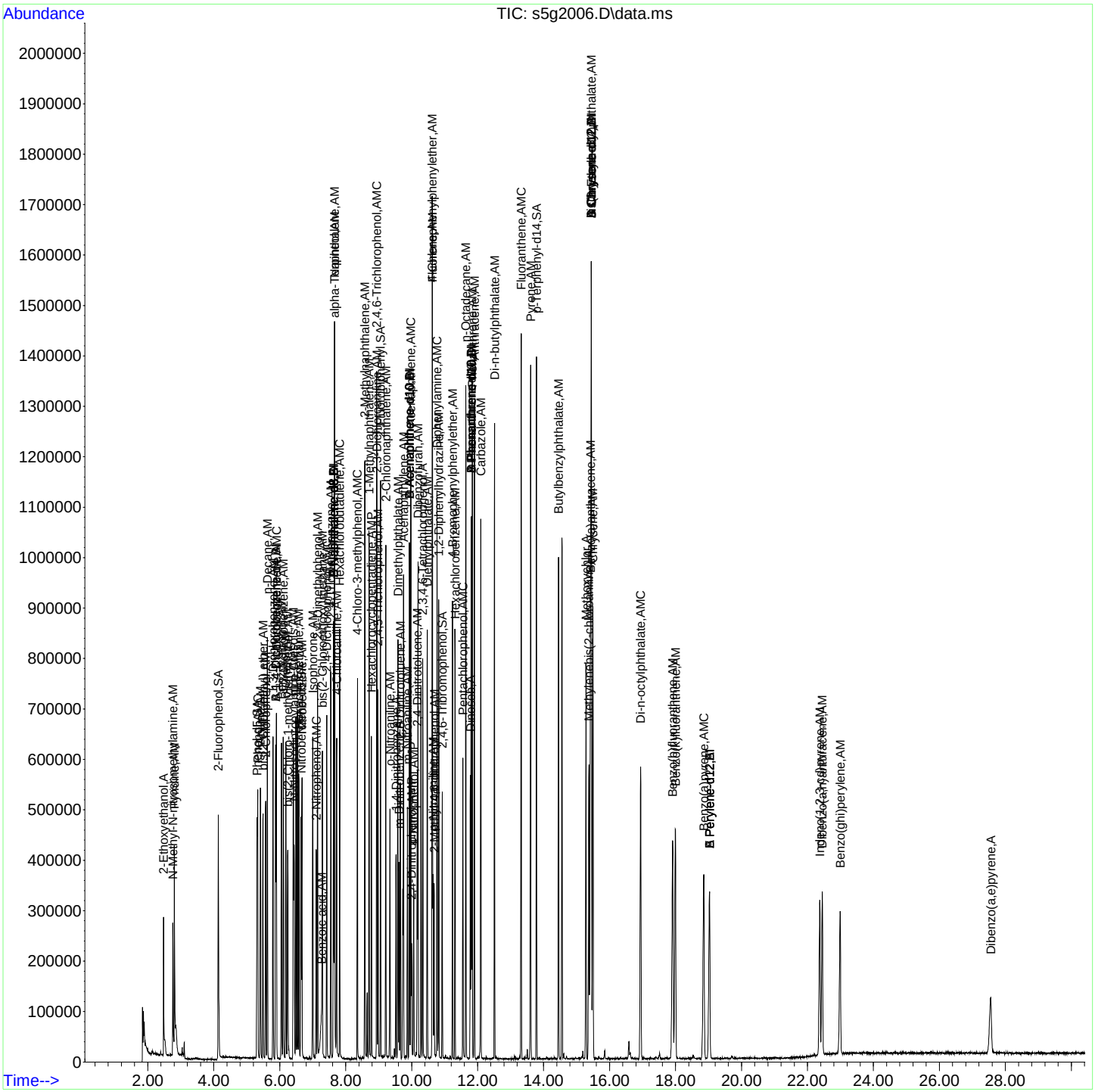
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
84) Methoxychlor	227	15.283	15.297	0.990	442111	42.48	ng/uL	98
85) Methylenebis(2-chloroa...	231	15.374	15.383	0.995	116375	40.70	ng/uL	99
86) Di-n-octylphthalate	149	16.940	16.959	1.097	560887	42.73	ng/uL	99
88) Benzo(b)fluoranthene	252	17.912	17.931	0.941	443454	42.51	ng/uL	99
89) Benzo(k)fluoranthene	252	17.998	18.012	0.946	415040	42.02	ng/uL	99
90) Benzo(a)pyrene	252	18.855	18.873	0.991	383847	40.54	ng/uL	100
91) Indeno(1,2,3-cd)pyrene	276	22.374	22.393	1.176	278524	37.92	ng/uL	100
92) Dibenzo(a,h)anthracene	278	22.450	22.464	1.180	273132	38.54	ng/uL	89
93) Benzo(ghi)perylene	276	22.993	23.012	1.208	277530	38.16	ng/uL	97
94) Dibenzo(a,e)pyrene	302	27.555	27.593	1.448	164789	35.84	ng/uL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2006.D
Acq On : 20 Jul 2018 10:37
Operator : JLD1
InstName : MSD5
Sample : |WBN180620-05.2|CCV|1|SVM|1|MCCV
Misc : |MIX[A]
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 20 11:41:21 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: MSD5.I

Injection Date: 20-JUL-18 11:44

Data File: s072018.B\s5g2007.D

Init. Cal. Date(s) 09-JUL-18 22:51 - 11-JUL-18 03:17

Lab Sample ID WBN180709-15.3

Method: s072018.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD

Method Update: 11-JUL-18 08:32

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
Benzaldehyde	1.0982	1.11313		.01		1.3595	20		Averaged
Acetophenone	1.6434	1.63172		.01		-0.71072	20		Averaged
Caprolactam	0.1087	0.10946		.01		0.69917	20		Averaged
1,2,4,5-Tetrachlorobenzene	0.6949	0.70819		.01		1.91251	20		Averaged
1,1'-Biphenyl	1.4021	1.44862		.01		3.31788	20		Averaged
Atrazine	0.2213	0.22308		.01		0.80434	20		Averaged

Quantitation Report
GEL Laboratories, LLC

07/20/2018

07/23/2018

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2007.D
Acq On : 20 Jul 2018 11:44
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-15.3|CCV|1|SVM|1|ACCV
Misc : |MIX[B]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 20 12:12:19 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.873	5.873	1.000	131051	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.626	7.630	1.000	439215	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.926	9.935	1.000	236765	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.807	11.811	1.000	453484	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.435	15.454	1.000	467403	40.00	ng/uL	-0.02
87) A Perylene-d12	264	19.035	19.045	1.000	398153	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.873	5.873	1.000	131051	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.626	7.630	1.000	439215	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.926	9.935	1.000	236765	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.807	11.811	1.000	453484	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.435	15.454	1.000	467403	40.00	ng/uL	-0.02
147) B Perylene-d12	264	19.035	19.045	1.000	398153	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.807	11.811	1.000	453484	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.435	15.454	1.000	467403	40.00	ng/uL	-0.02
155) D Naphthalene-d8	136	7.626	7.630	1.000	439215	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.926	9.935	1.000	236765	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.807	11.811	1.000	453484	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.435	15.454	1.000	467403	40.00	ng/uL	-0.02
169) E Naphthalene-d8	136	7.626	7.630	1.000	439215	40.00	ng/uL	0.00
171) E Perylene-d12	264	19.035	19.045	1.000	398153	40.00	ng/uL	0.00
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.140	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.311	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.645	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	9.059	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.931	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.788	0.000	0	0.00	ng/uL	

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
96) 1,4-Dioxane	88	2.478	2.478	0.422	69700	41.62	ng/uL	86
97) Methyl methacrylate	100	2.473	2.473	0.421	29804	35.38	ng/uL	98
98) Ethyl methacrylate	69	3.173	3.173	0.540	156387	40.60	ng/uL	98
99) 2-Picoline	93	3.530	3.530	0.601	194113	39.84	ng/uL	98
100) N-Nitrosomethylethylamine	88	3.635	3.635	0.619	81899	39.66	ng/uL	94
101) Methyl methanesulfonate	80	3.968	3.968	0.676	102751	40.14	ng/uL	100
102) N-Nitrosodiethylamine	102	4.449	4.446	0.758	86009	40.08	ng/uL	100
103) 2-Butoxyethanol	57	4.521	4.518	0.770	217752	40.86	ng/uL	99
104) Ethyl methanesulfonate	79	4.811	4.810	0.819	135628	39.74	ng/uL	99
105) Benzaldehyde	77	5.273	5.275	0.898	145877	40.54	ng/uL	99
106) Pentachloroethane	167	5.483	5.481	0.934	72691	40.28	ng/uL	99
107) N-Nitrosopyrrolidine	100	6.402	6.410	1.090	91212	40.45	ng/uL	97
108) Acetophenone	105	6.430	6.439	1.095	213839	39.72	ng/uL	100
109) N-Nitrosomorpholine	56	6.459	6.467	1.100	101172	42.09	ng/uL	96
110) o-Toluidine	106	6.478	6.486	1.103	232538	39.88	ng/uL	100
112) N-Nitrosopiperidine	114	6.878	6.880	0.902	85201	39.76	ng/uL	97
113) a,a-Dimethylphenethyla...	58	7.440	7.431	0.976	548255	41.15	ng/uL	92
114) 2,6-Dichlorophenol	162	7.730	7.736	1.014	120407	40.58	ng/uL	98
115) Hexachloropropene	213	7.773	7.779	1.019	101311	38.22	ng/uL	99
116) Caprolactam	113	8.178	8.200	1.072	48076	40.30	ng/uL#	70

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2007.D
Acq On : 20 Jul 2018 11:44
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-15.3|CCV|1|SVM|1|ACCV
Misc : |MIX[B]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 20 12:12:19 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

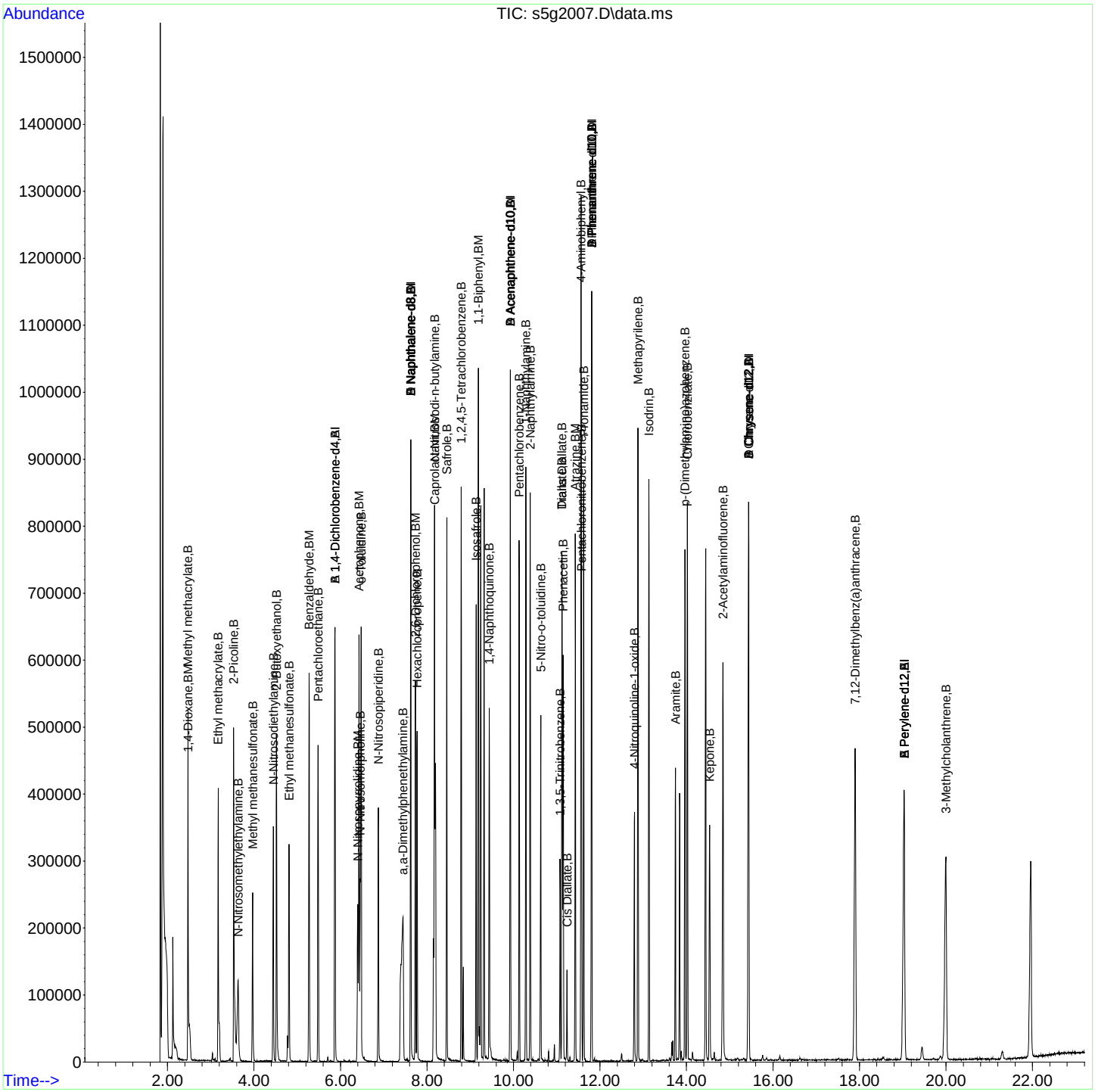
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
117) N-Nitrosodi-n-butylamine	84	8.173	8.185	1.072	142086	42.09	ng/uL	97
118) Safrole	162	8.459	8.468	1.109	123625	39.81	ng/uL	100
120) 1,2,4,5-Tetrachloroben...	216	8.792	8.793	0.886	167675	40.76	ng/uL	99
121) 1,1-Biphenyl	154	9.188	9.190	0.926	342983	41.33	ng/uL	99
122) Isosafrole	162	9.135	9.142	0.920	126298	40.41	ng/uL	99
123) 1,4-Naphthoquinone	158	9.440	9.448	0.951	105950	36.51	ng/uL	99
124) Pentachlorobenzene	250	10.130	10.141	1.021	137221	40.08	ng/uL	99
125) 1-Naphthylamine	143	10.288	10.294	1.036	291002	40.92	ng/uL	99
126) 2-Naphthylamine	143	10.388	10.394	1.047	293230	41.71	ng/uL	100
127) 5-Nitro-o-toluidine	152	10.630	10.643	1.071	94914	41.76	ng/uL	99
129) 1,3,5-Trinitrobenzene	75	11.078	11.086	0.938	86557	46.33	ng/uL	97
130) Phenacetin	108	11.150	11.157	0.944	154092	40.92	ng/uL	98
131) Diallate	86	11.121	11.129	0.942	136752	41.28	ng/uL	98
132) Cis Diallate	86	11.235	11.243	0.952	22676	5.97	ng/uL	99
133) Trans Diallate	86	11.121	11.129	0.942	136752	35.09	ng/uL	98
134) Atrazine	200	11.430	11.439	0.968	101163	40.32	ng/uL	99
135) 4-Aminobiphenyl	169	11.564	11.568	0.979	357070	41.59	ng/uL	99
136) Pentachloronitrobenzene	237	11.573	11.578	0.980	46829	39.37	ng/uL	99
137) Pronamide	173	11.626	11.630	0.985	147604	40.25	ng/uL	99
138) 4-Nitroquinoline-1-oxide	116	12.797	12.805	1.084	17682	45.26	ng/uL	99
139) Methapyrilene	58	12.878	12.891	1.091	292591	46.99	ng/uL	99
140) Isodrin	193	13.131	13.144	1.112	65752	43.78	ng/uL	100
142) Aramite	185	13.745	13.768	0.890	32473	37.55	ng/uL	97
143) Kepone	272	14.535	14.551	0.942	46353	40.54	ng/uL	98
144) p-(Dimethylamino)azobe...	120	13.964	13.988	0.905	142554	37.27	ng/uL	97
145) Chlorobenzilate	251	14.021	14.045	0.908	161169	38.62	ng/uL	99
146) 2-Acetylaminofluorene	181	14.845	14.862	0.962	193770	42.21	ng/uL	100
148) 7,12-Dimethylbenz(a)an...	256	17.902	17.930	0.940	220453	39.83	ng/uL	99
149) 3-Methylcholanthrene	269	19.997	20.021	1.051	46988	39.94	ng/uL	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2007.D
Acq On : 20 Jul 2018 11:44
Operator : JLD1
InstName : MSD5
Sample : |WBN180709-15.3|CCV|1|SVM|1|ACCV
Misc : |MIX[B]
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 20 12:12:19 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454715

Instrument ID: MSD5.I

Injection Date: 20-JUL-18 13:00

Data File: s072018.B\s5g2009.D

Init. Cal. Date(s) 09-JUL-18 22:51 - 11-JUL-18 03:17

Lab Sample ID WBN180712-45.1

Method: s072018.B\MSD5_8270C_8270D_070918.m

Quant Type ISTD

Method Update: 11-JUL-18 08:32

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
3,3'-Dichlorobenzidine	0.4515	0.43349		.01		-3.98893	20		Averaged

Quantitation Report
GEL Laboratories, LLC

07/20/2018

07/23/2018

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2009.D
Acq On : 20 Jul 2018 13:00
Operator : JLD1
InstName : MSD5
Sample : |WBN180712-45.1|CCV|1|SVM|1|BCCV
Misc : |MIX[J]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 20 14:33:55 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.874	5.873	1.000	134530	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.626	7.630	1.000	451614	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.926	9.935	1.000	239522	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.802	11.811	1.000	478866	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.436	15.454	1.000	400946	40.00	ng/uL	-0.02
87) A Perylene-d12	264	19.017	19.045	1.000	228241	40.00	ng/uL	-0.03
95) B 1,4-Dichlorobenzene-d4	152	5.874	5.873	1.000	134530	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.626	7.630	1.000	451614	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.926	9.935	1.000	239522	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.802	11.811	1.000	478866	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.436	15.454	1.000	400946	40.00	ng/uL	-0.02
147) B Perylene-d12	264	19.017	19.045	1.000	228241	40.00	ng/uL	-0.03
150) J Phenanthrene-d10	188	11.802	11.811	1.000	478866	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.436	15.454	1.000	400946	40.00	ng/uL	-0.02
155) D Naphthalene-d8	136	7.626	7.630	1.000	451614	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.926	9.935	1.000	239522	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.802	11.811	1.000	478866	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.436	15.454	1.000	400946	40.00	ng/uL	-0.02
169) E Naphthalene-d8	136	7.626	7.630	1.000	451614	40.00	ng/uL	0.00
171) E Perylene-d12	264	19.017	19.045	1.000	228241	40.00	ng/uL	-0.03
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	0.000	4.140	0.000	0	0.00	ng/uL	
7) Phenol-d5	99	0.000	5.311	0.000	0	0.00	ng/uL	
22) Nitrobenzene-d5	82	0.000	6.645	0.000	0	0.00	ng/uL	
43) 2-Fluorobiphenyl	172	0.000	9.059	0.000	0	0.00	ng/uL	
62) 2,4,6-Tribromophenol	330	0.000	10.931	0.000	0	0.00	ng/uL	
79) p-Terphenyl-d14	244	0.000	13.788	0.000	0	0.00	ng/uL	

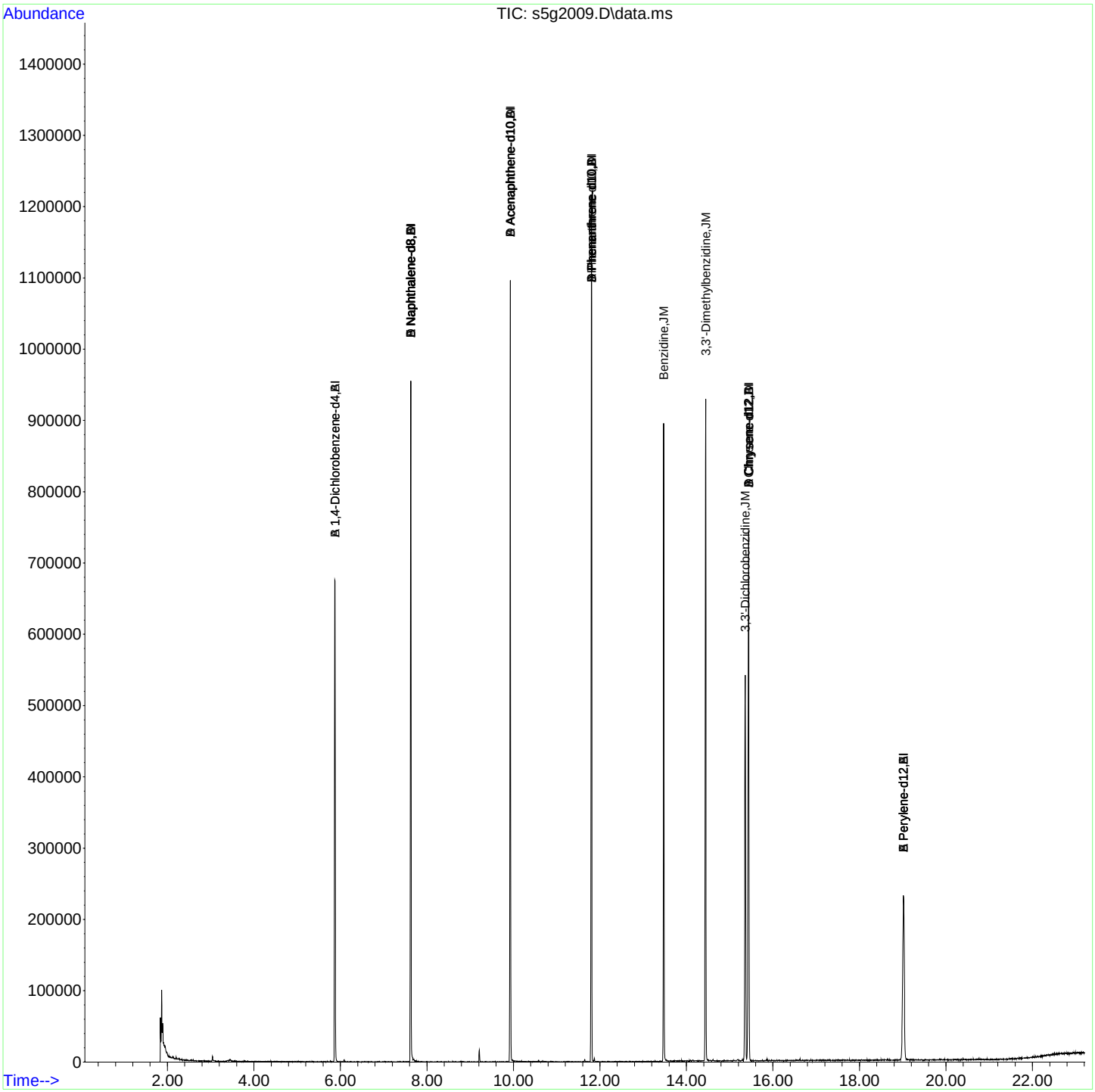
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
151) Benzidine	184	13.474	13.483	1.142	372389	48.35	ng/uL	99
153) 3,3'-Dimethylbenzidine	212	14.445	14.461	0.936	409136	39.28	ng/uL	100
154) 3,3'-Dichlorobenzidine	252	15.359	15.373	0.995	173806	38.41	ng/uL	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2009.D
Acq On : 20 Jul 2018 13:00
Operator : JLD1
InstName : MSD5
Sample : |WBN180712-45.1|CCV|1|SVM|1|BCCV
Misc : |MIX[J]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 20 14:33:55 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Quality Control Data

DFTPP Tune Report
GEL Laboratories, LLC

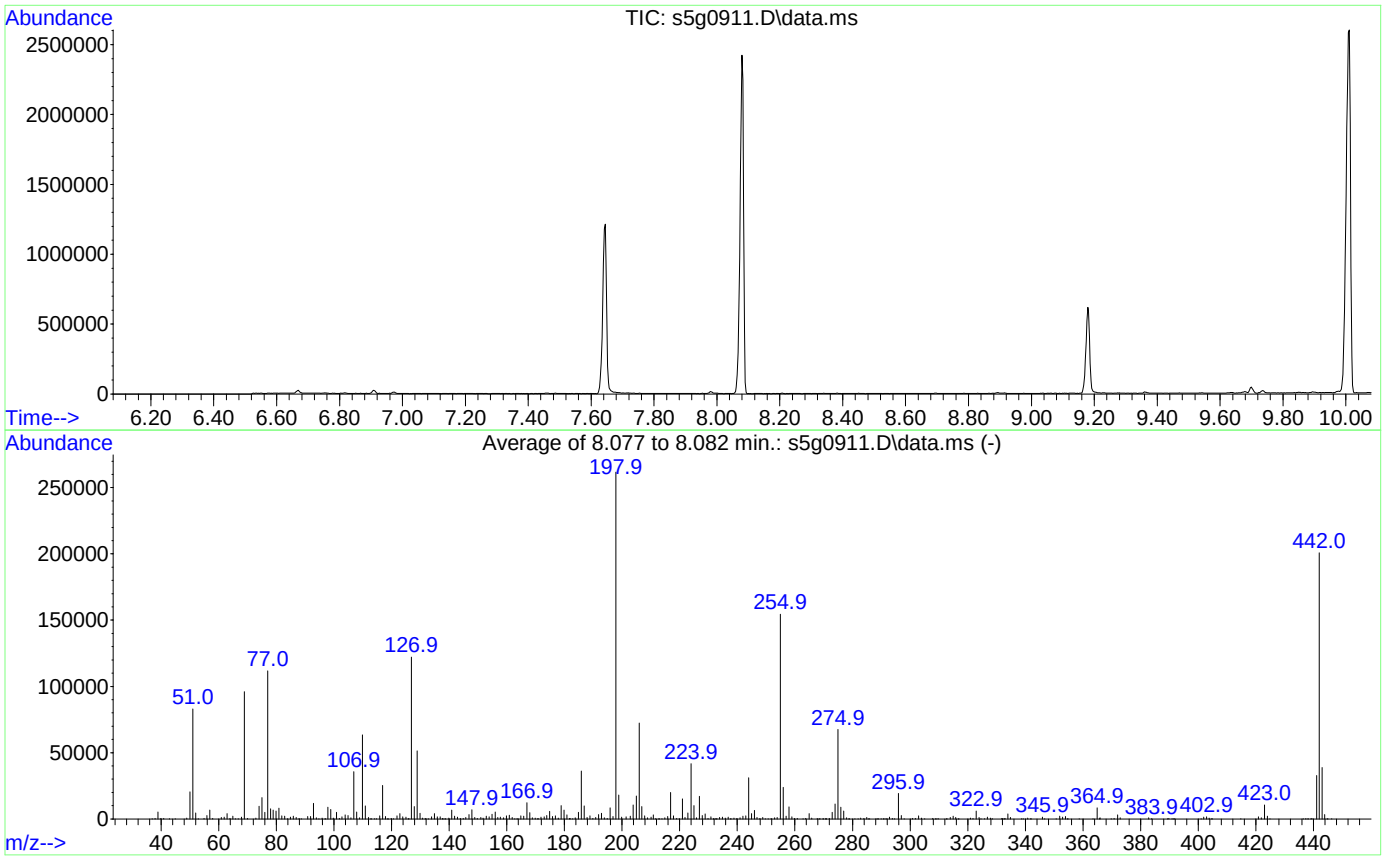
07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0911.D
Acq On : 09 Jul 2018 16:03
Operator : JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: benz.P

Method : C:\msdchem\1\DATA\s070918.B\BNABrk_Down8270D.m
Title : dftpp / endrin / ddt SubList :
Last Update : Tue Mar 15 15:35:42 2016



AutoFind: Scans 3104, 3105, 3106; Background Corrected with Scan 3090

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.7	82907	PASS
68	69	0.00	2	1.4	1311	PASS
69	198	0.00	100	36.7	96056	PASS
70	69	0.00	2	0.5	476	PASS
127	198	10	80	46.7	122208	PASS
197	198	0.00	2	0.7	1819	PASS
198	198	50	100	100.0	261781	PASS
199	198	5	9	6.9	18085	PASS
275	198	10	60	25.8	67624	PASS
365	198	1	100	3.2	8250	PASS
441	442	0.01	24	16.3	32792	PASS
442	198	50	100	76.7	200853	PASS
443	442	15	24	19.3	38813	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0911.D
Acq On : 09 Jul 2018 16:03
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 09:45:07 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

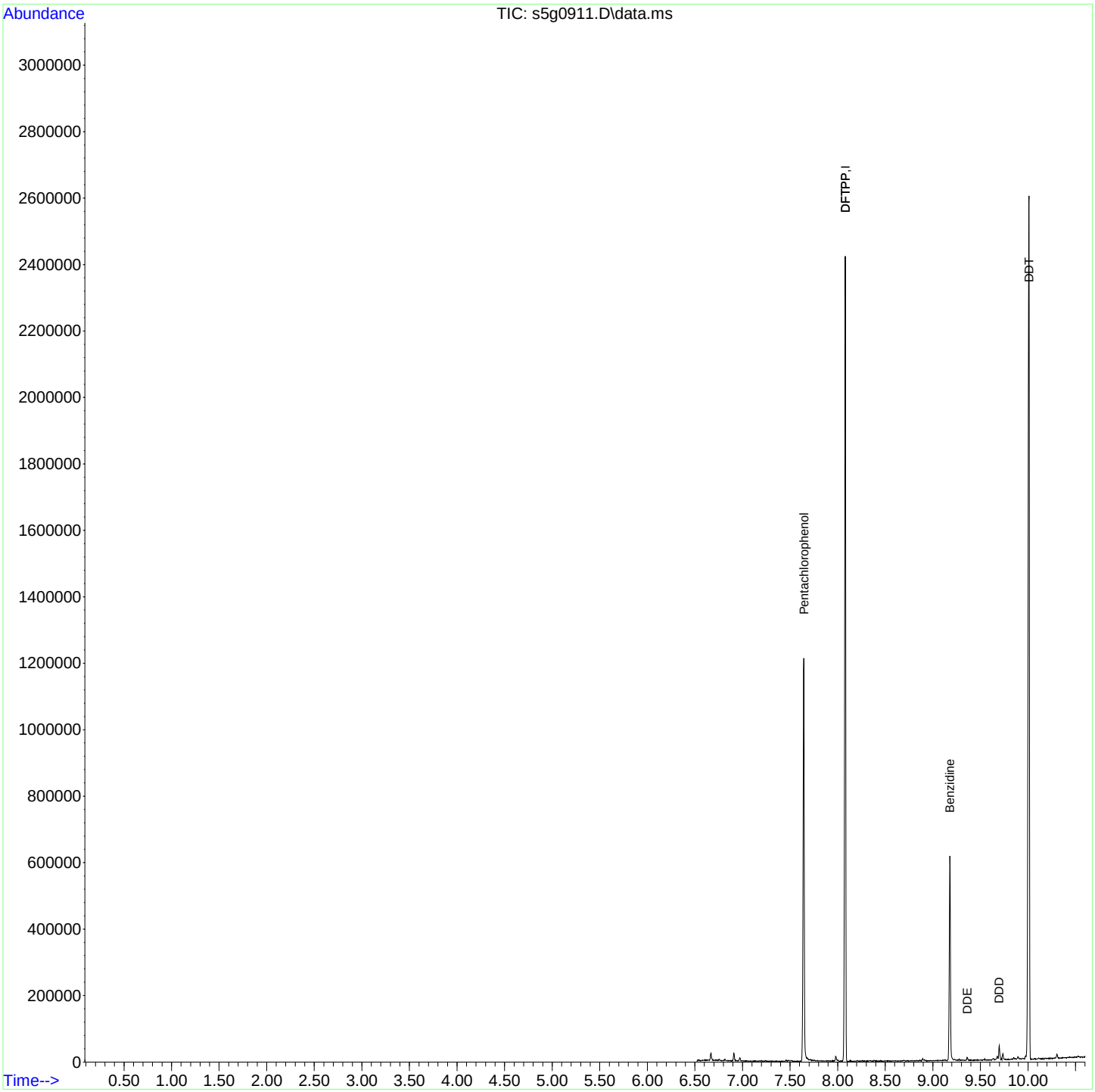
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) DFTPP	TIC	8.080	8.080	1.000	1892581	5.00	ug/l	# 0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) DFTPP	TIC	8.080	8.080	1.000	1892581	5.51	ug/ml#	1
3) Pentachlorophenol	266	7.645	7.645	0.946	122431	3.21	ug/l	98
4) Benzidine	184	9.179	9.179	1.136	212676	2.14	ug/l	99
5) DDE	246	9.359	9.359	1.158	1144	0.01	ug/l	65
6) DDD	235	9.697	9.697	1.200	6337	0.07	ug/l	94
7) DDT	235	10.011	10.011	1.239	491545	5.11	ug/l	99

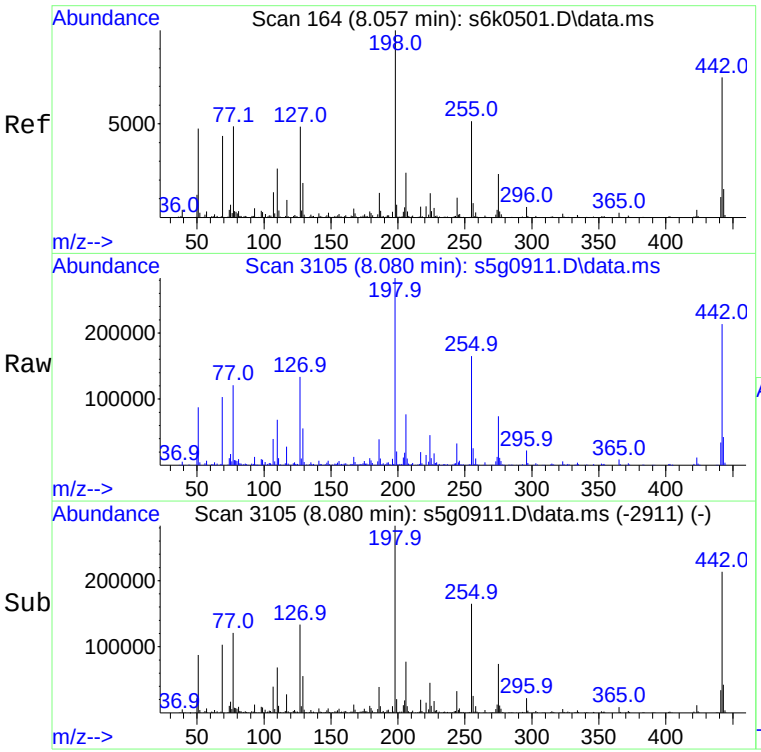
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0911.D
Acq On : 09 Jul 2018 16:03
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 09:45:07 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

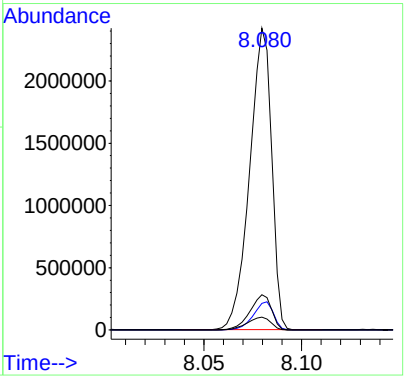


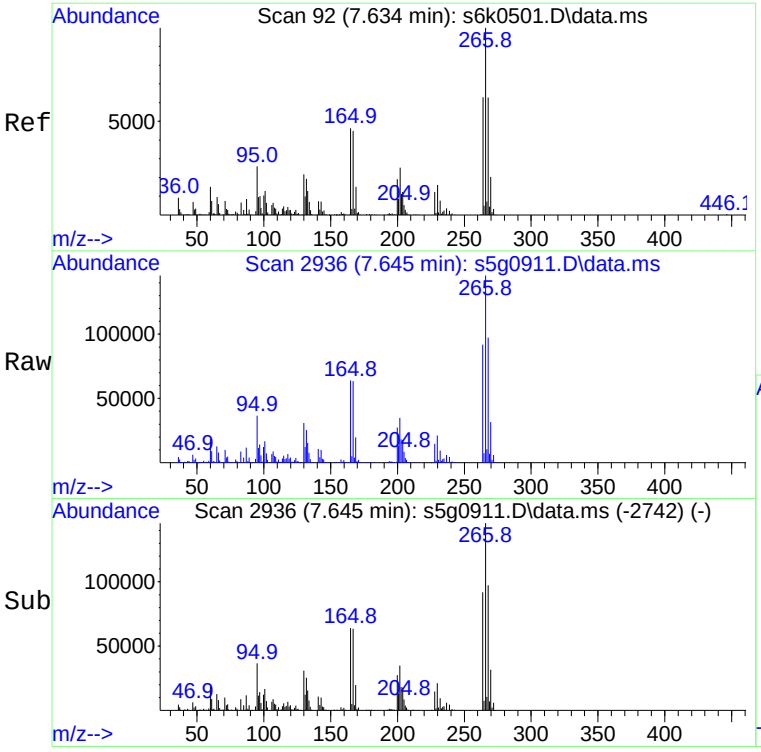


#2
DFTPP
Concen: 5.51 ug/ml
RT: 8.080 min Scan# 3105
Delta R.T. 0.000 min
Lab File: s5g0911.D
Acq: 09 Jul 2018 16:03

Tgt Ion:TIC Resp: 1892581

Ion	Ratio	Lower	Upper
TIC	100		
442	8.6	744.1	784.1#
69	4.6	472.9	512.9#
198	11.5	1025.8	1065.8#

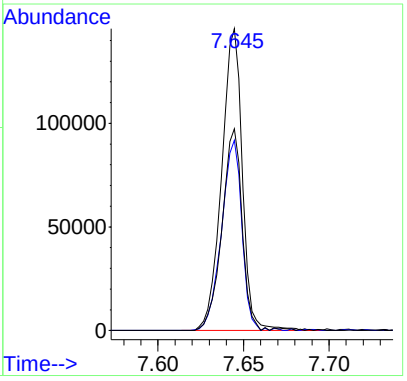


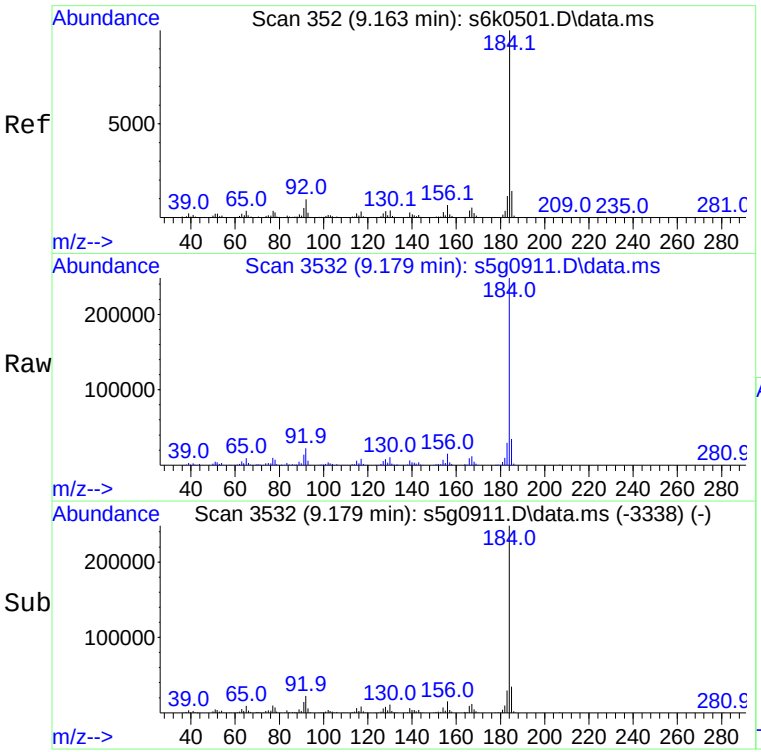


#3
Pentachlorophenol
Concen: 3.21 ug/l
RT: 7.645 min Scan# 2936
Delta R.T. 0.000 min
Lab File: s5g0911.D
Acq: 09 Jul 2018 16:03

Tgt Ion:266 Resp: 122431

Ion	Ratio	Lower	Upper
266	100		
264	61.8	0.0	163.0
268	64.6	0.0	166.8

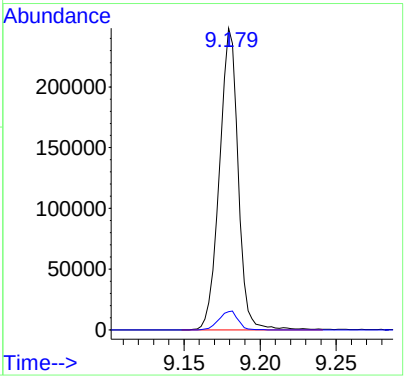


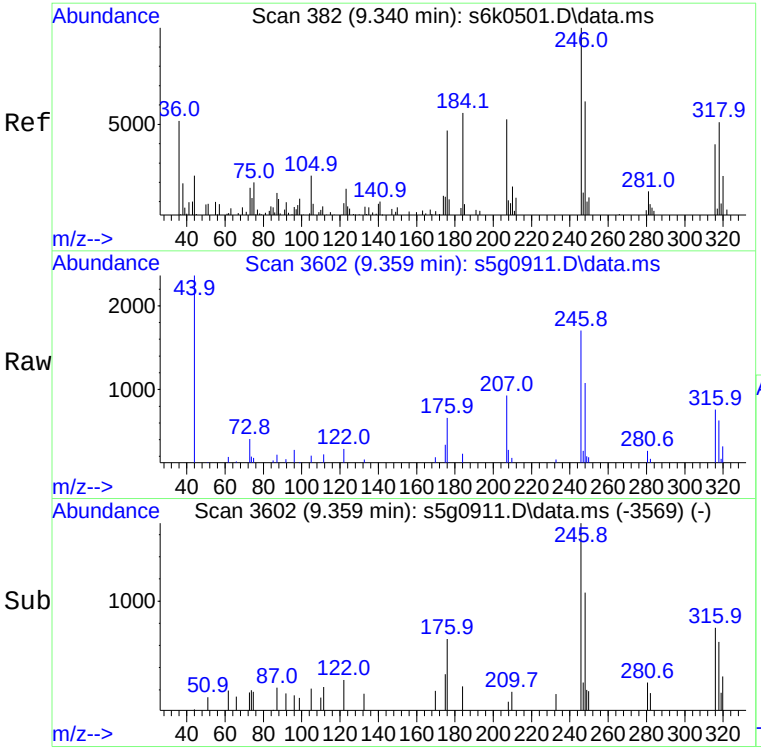


#4
Benzidine
Concen: 2.14 ug/l
RT: 9.179 min Scan# 3532
Delta R.T. 0.000 min
Lab File: s5g0911.D
Acq: 09 Jul 2018 16:03

Tgt Ion:184 Resp: 212676

Ion	Ratio	Lower	Upper
184	100		
156	6.4	0.0	106.1

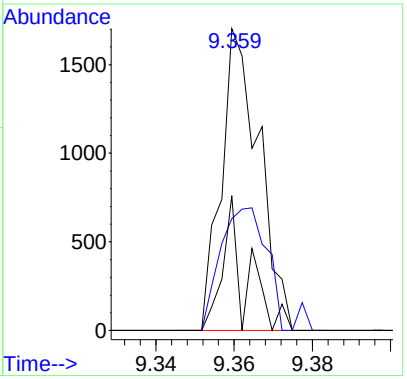


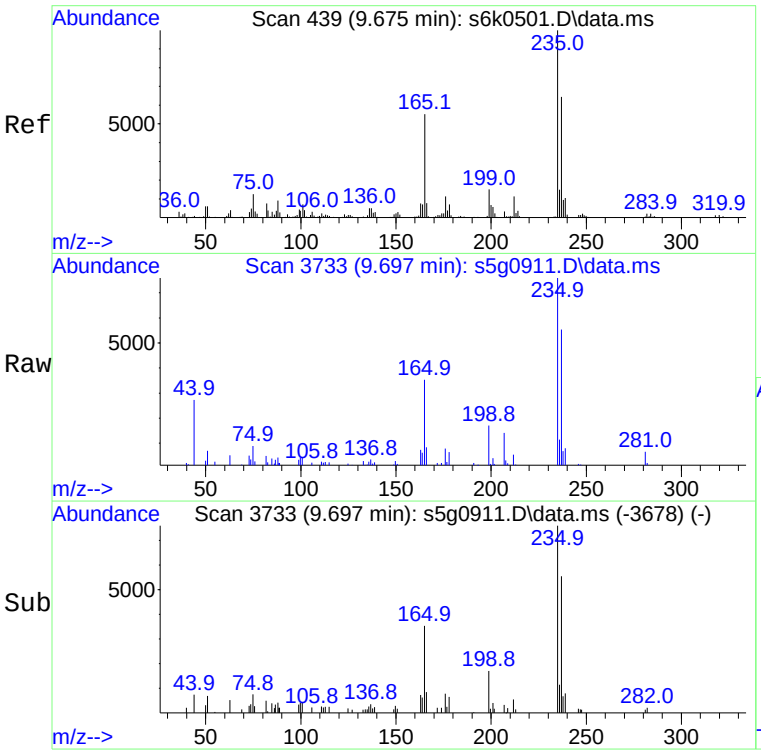


#5
DDE
Concen: 0.01 ug/l
RT: 9.359 min Scan# 3602
Delta R.T. 0.000 min
Lab File: s5g0911.D
Acq: 09 Jul 2018 16:03

Tgt Ion:246 Resp: 1144

Ion	Ratio	Lower	Upper
246	100		
318	51.7	0.0	137.0
316	15.9	0.0	144.6

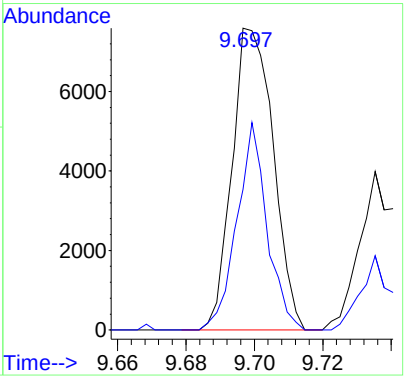


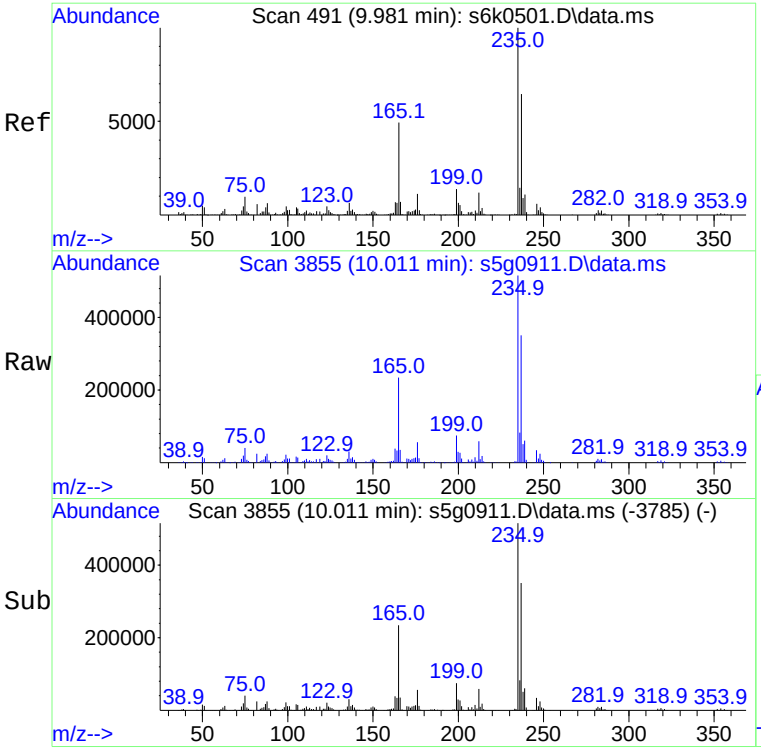


#6
DDD
Concen: 0.07 ug/l
RT: 9.697 min Scan# 3733
Delta R.T. 0.000 min
Lab File: s5g0911.D
Acq: 09 Jul 2018 16:03

Tgt Ion:235 Resp: 6337

Ion	Ratio	Lower	Upper
235	100		
165	50.4	0.0	146.5

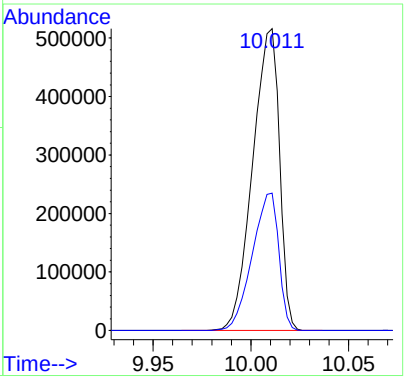




#7
DDT
Concen: 5.11 ug/l
RT: 10.011 min Scan# 3855
Delta R.T. 0.000 min
Lab File: s5g0911.D
Acq: 09 Jul 2018 16:03

Tgt Ion:235 Resp: 491545

Ion	Ratio	Lower	Upper
235	100		
165	45.0	0.0	145.4



8270 Breakdown Report

Data File : C:\msdchem\1\DATA\s070918.B\s5g0911.D Vial: 1
Acq On : 09 Jul 2018 16:03 Operator: JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP Inst : MSD5
Misc : Multiplr: 1.00
IntFile : benz.P

JCB
07/11/2018

Compounds	Area/%Breakdown	8270C	8270D
DDE	1144		
DDD	6337		
DDT	491545		
Breakdown	1.50%	Pass(<20)	Pass(<20)

Compounds	Tailing Factor	8270C	8270D
Benzidine	0.94	Pass(<3)	Pass(<2)
Pentachlorophenol	0.66	Pass(<5)	Pass(<2)

DFTPP Tune Report
GEL Laboratories, LLC

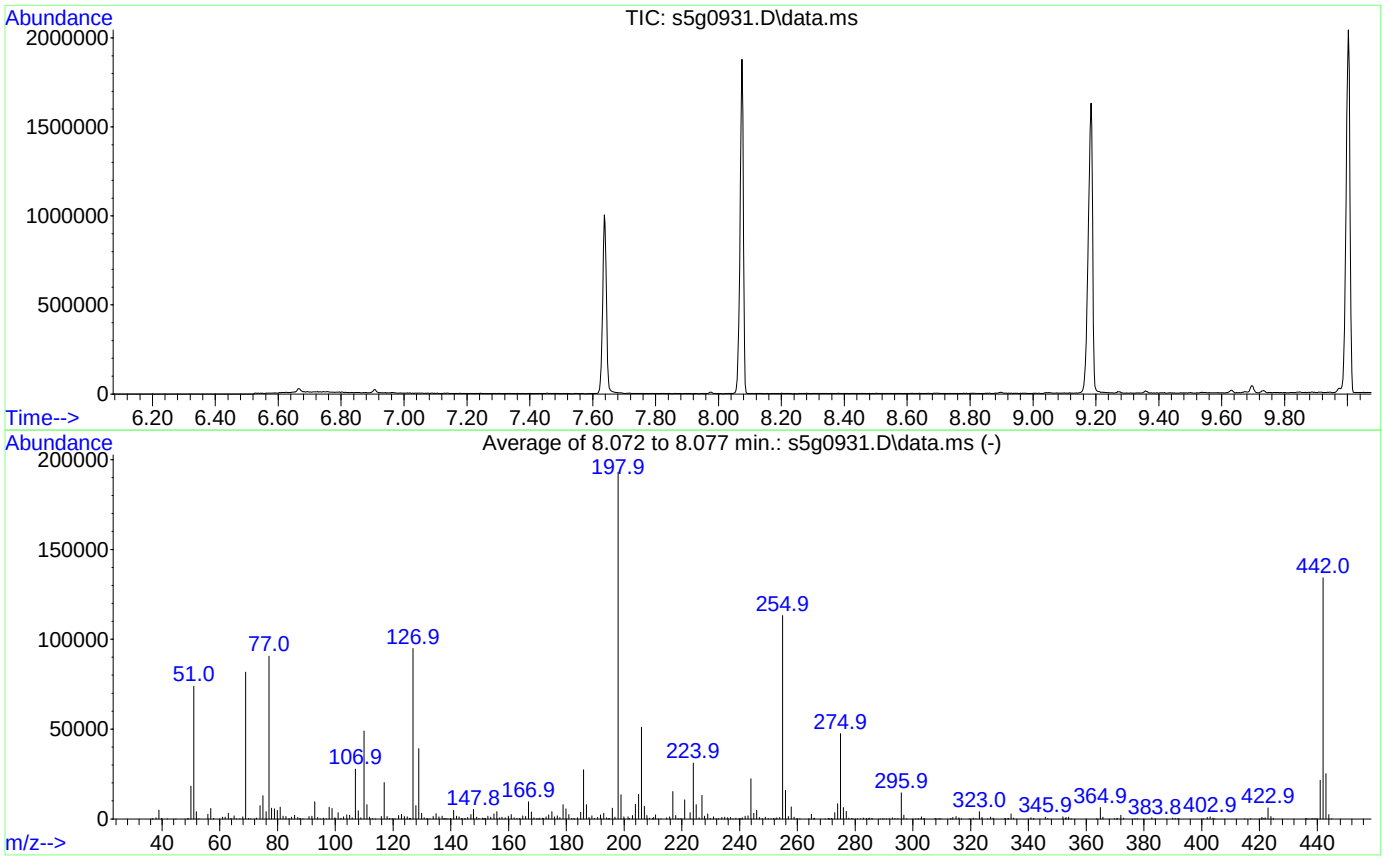
07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0931.D
Acq On : 10 Jul 2018 09:48
Operator : JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: benz.P

Method : C:\msdchem\1\DATA\s070918.B\BNABrk_Down8270D.m
Title : dftpp / endrin / ddt SubList :
Last Update : Tue Mar 15 15:35:42 2016



AutoFind: Scans 3102, 3103, 3104; Background Corrected with Scan 3090

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.2	73856	PASS
68	69	0.00	2	1.4	1169	PASS
69	198	0.00	100	42.3	81643	PASS
70	69	0.00	2	0.4	361	PASS
127	198	10	80	49.1	94893	PASS
197	198	0.00	2	0.5	926	PASS
198	198	50	100	100.0	193088	PASS
199	198	5	9	7.0	13495	PASS
275	198	10	60	24.6	47427	PASS
365	198	1	100	3.3	6302	PASS
441	442	0.01	24	16.0	21427	PASS
442	198	50	100	69.5	134240	PASS
443	442	15	24	18.7	25141	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0931.D
Acq On : 10 Jul 2018 09:48
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 09:45:35 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

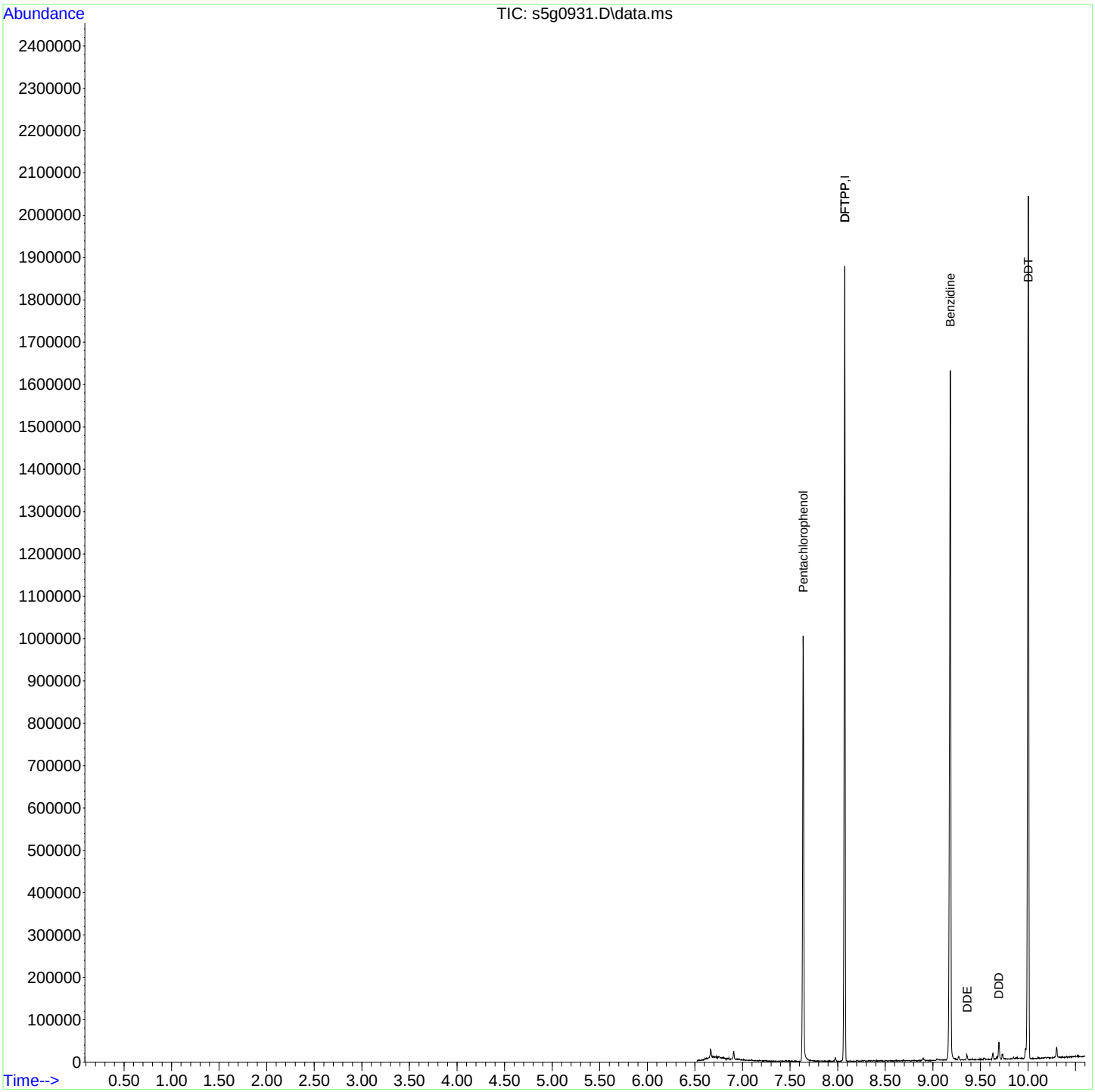
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) DFTPP	TIC	8.075	8.080	1.000	1375236	5.00	ug/l	# 0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) DFTPP	TIC	8.075	8.080	1.000	1375236	5.51	ug/ml#	1
3) Pentachlorophenol	266	7.637	7.645	0.946	91724	3.31	ug/l	100
4) Benzidine	184	9.184	9.179	1.137	632689	8.75	ug/l	98
5) DDE	246	9.359	9.359	1.159	1321	0.02	ug/l	68
6) DDD	235	9.694	9.697	1.201	6721	0.10	ug/l	95
7) DDT	235	10.003	10.011	1.239	339223	4.86	ug/l	97

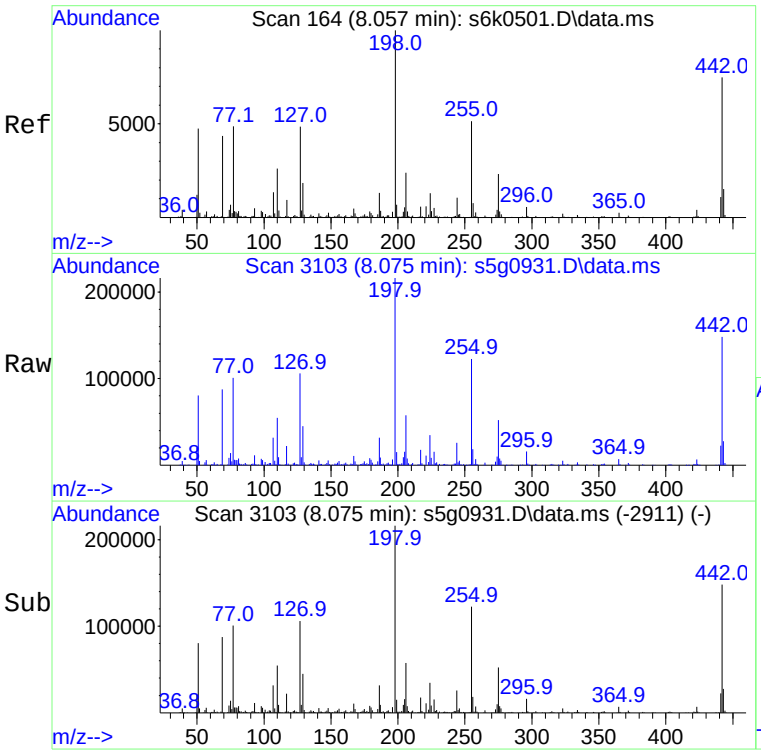
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0931.D
Acq On : 10 Jul 2018 09:48
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 09:45:35 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

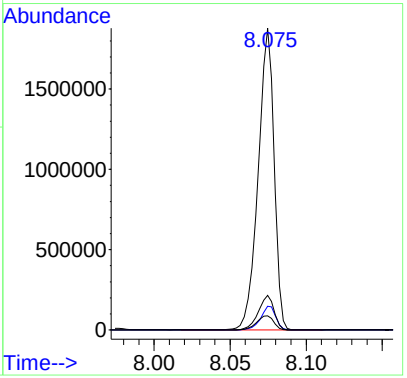


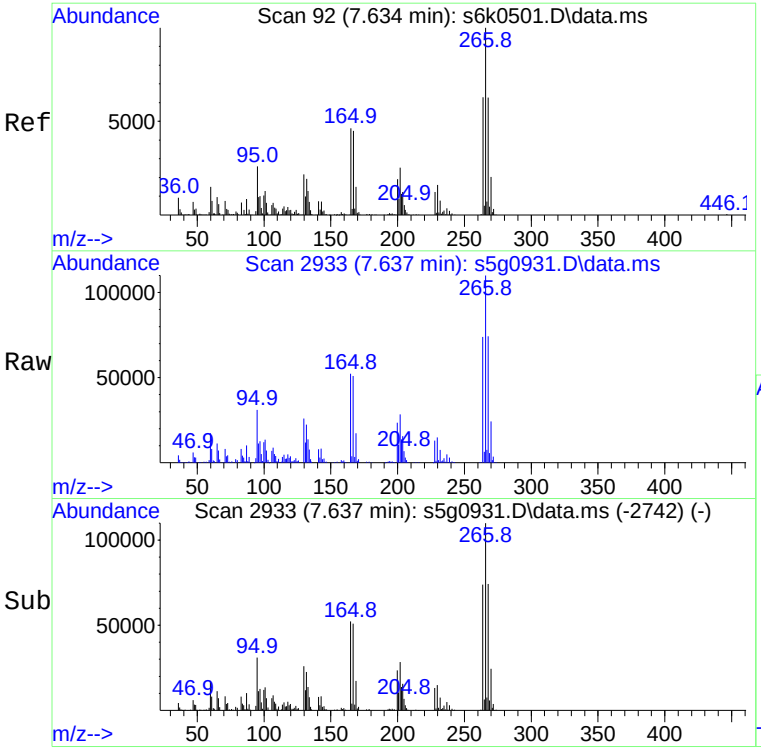


#2
DFTPP
Concen: 5.51 ug/ml
RT: 8.075 min Scan# 3103
Delta R.T. -0.005 min
Lab File: s5g0931.D
Acq: 10 Jul 2018 09:48

Tgt Ion:TIC Resp: 1375236

Ion	Ratio	Lower	Upper
TIC	100		
442	7.5	744.1	784.1#
69	5.1	472.9	512.9#
198	11.3	1025.8	1065.8#

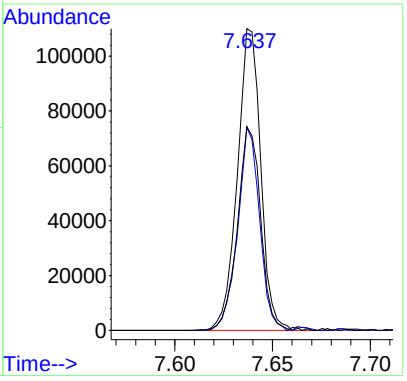


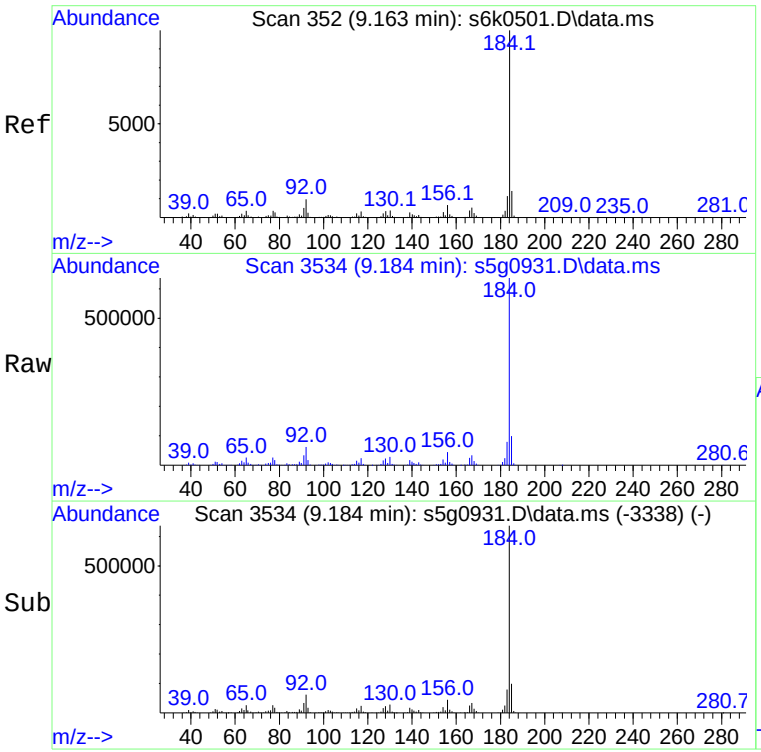


#3
Pentachlorophenol
Concen: 3.31 ug/l
RT: 7.637 min Scan# 2933
Delta R.T. -0.008 min
Lab File: s5g0931.D
Acq: 10 Jul 2018 09:48

Tgt Ion:266 Resp: 91724

Ion	Ratio	Lower	Upper
266	100		
264	63.6	0.0	163.0
268	66.8	0.0	166.8

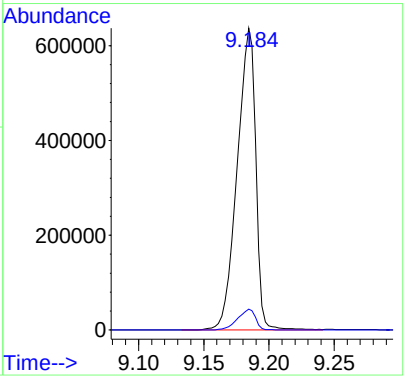


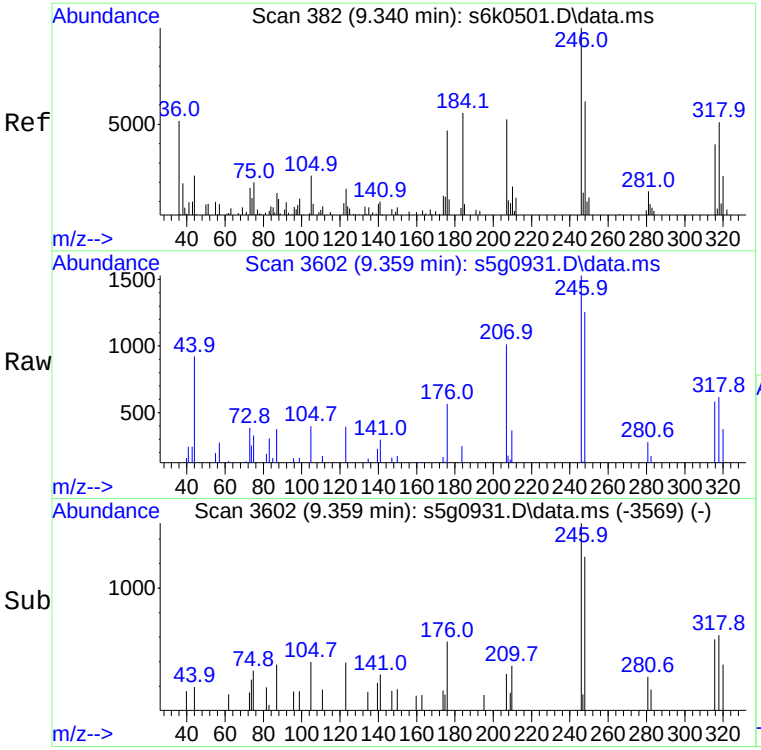


#4
Benzidine
Concen: 8.75 ug/l
RT: 9.184 min Scan# 3534
Delta R.T. 0.005 min
Lab File: s5g0931.D
Acq: 10 Jul 2018 09:48

Tgt Ion:184 Resp: 632689

Ion	Ratio	Lower	Upper
184	100		
156	6.7	0.0	106.1

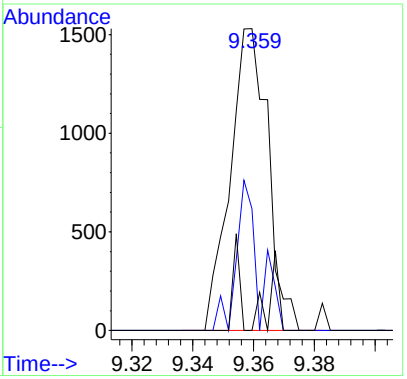


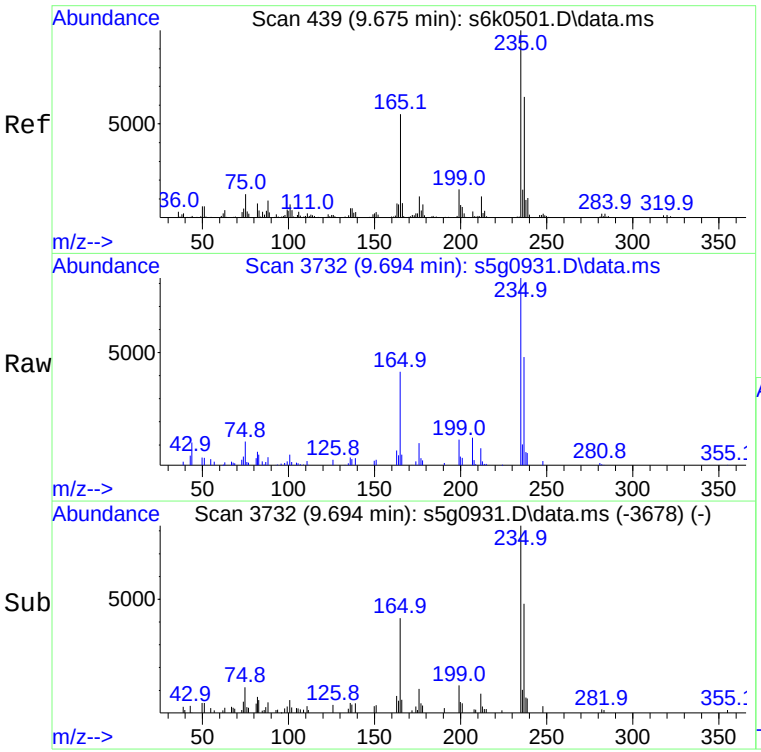


#5
DDE
Concen: 0.02 ug/l
RT: 9.359 min Scan# 3602
Delta R.T. 0.000 min
Lab File: s5g0931.D
Acq: 10 Jul 2018 09:48

Tgt Ion:246 Resp: 1321

Ion	Ratio	Lower	Upper
246	100		
318	29.8	0.0	137.0
316	12.7	0.0	144.6

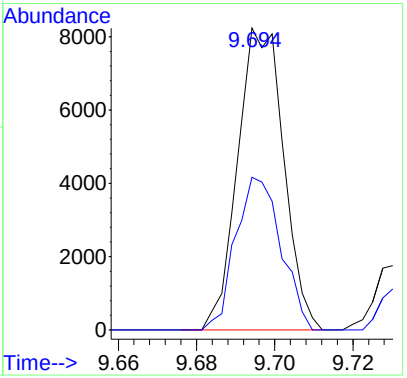


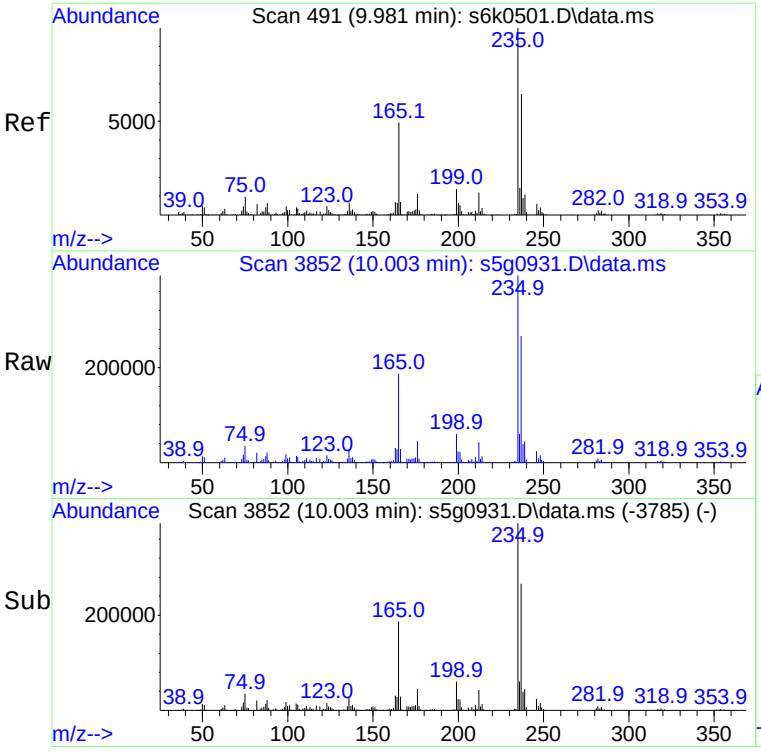


#6
DDD
Concen: 0.10 ug/l
RT: 9.694 min Scan# 3732
Delta R.T. -0.003 min
Lab File: s5g0931.D
Acq: 10 Jul 2018 09:48

Tgt Ion:235 Resp: 6721

Ion	Ratio	Lower	Upper
235	100		
165	50.0	0.0	146.5

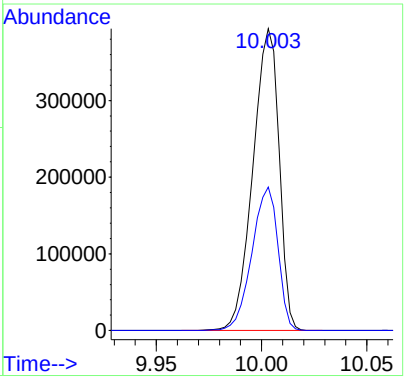




#7
DDT
Concen: 4.86 ug/l
RT: 10.003 min Scan# 3852
Delta R.T. -0.008 min
Lab File: s5g0931.D
Acq: 10 Jul 2018 09:48

Tgt Ion:235 Resp: 339223

Ion	Ratio	Lower	Upper
235	100		
165	47.3	0.0	145.4



8270 Breakdown Report

Data File : C:\msdchem\1\DATA\s070918.B\s5g0931.D Vial: 1
Acq On : 10 Jul 2018 09:48 Operator: JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP Inst : MSD5
Misc : Multiplr: 1.00
IntFile : rteint.p

JCB
07/11/2018

Compounds	Area/%Breakdown	8270C	8270D
DDE	1321		
DDD	6718		
DDT	339175		
Breakdown	2.32%	Pass(<20)	Pass(<20)

Compounds	Tailing Factor	8270C	8270D
Benzidine	0.56	Pass(<3)	Pass(<2)
Pentachlorophenol	1.10	Pass(<5)	Pass(<2)

DFTPP Tune Report
GEL Laboratories, LLC

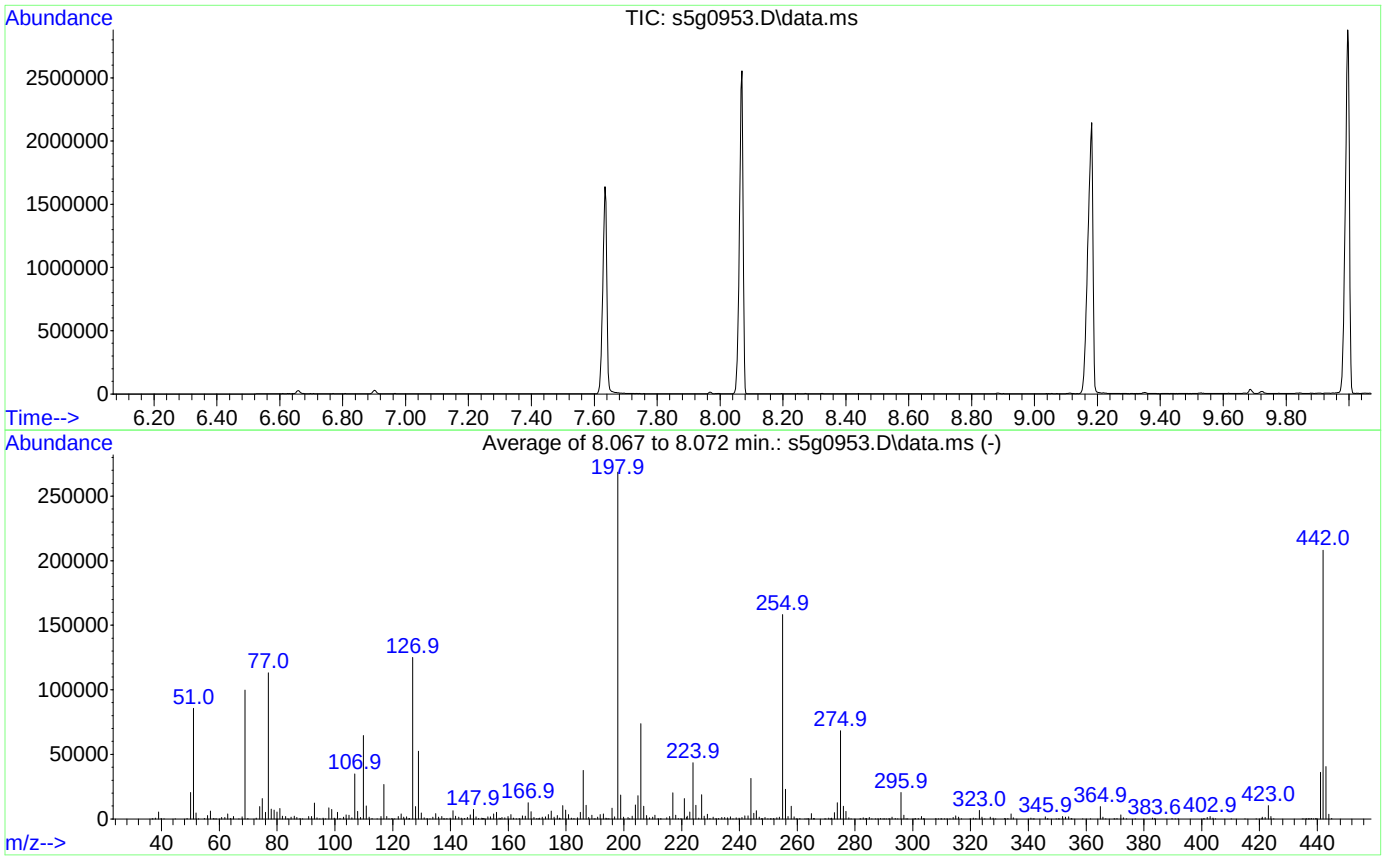
07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0953.D
Acq On : 10 Jul 2018 22:28
Operator : JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: benz.P

Method : C:\msdchem\1\DATA\s070918.B\BNABrk_Down8270D.m
Title : dftpp / endrin / ddt SubList :
Last Update : Tue Mar 15 15:35:42 2016



AutoFind: Scans 3100, 3101, 3102; Background Corrected with Scan 3086

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	31.9	85712	PASS
68	69	0.00	2	1.5	1504	PASS
69	198	0.00	100	37.1	99696	PASS
70	69	0.00	2	0.4	400	PASS
127	198	10	80	46.5	124992	PASS
197	198	0.00	2	0.6	1535	PASS
198	198	50	100	100.0	268651	PASS
199	198	5	9	6.9	18581	PASS
275	198	10	60	25.5	68405	PASS
365	198	1	100	3.5	9483	PASS
441	442	0.01	24	17.3	36043	PASS
442	198	50	100	77.5	208107	PASS
443	442	15	24	19.5	40637	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

Quantitation Report
GEL Laboratories, LLC

07/11/2018

07/11/2018

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0953.D
Acq On : 10 Jul 2018 22:28
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 09:47:44 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

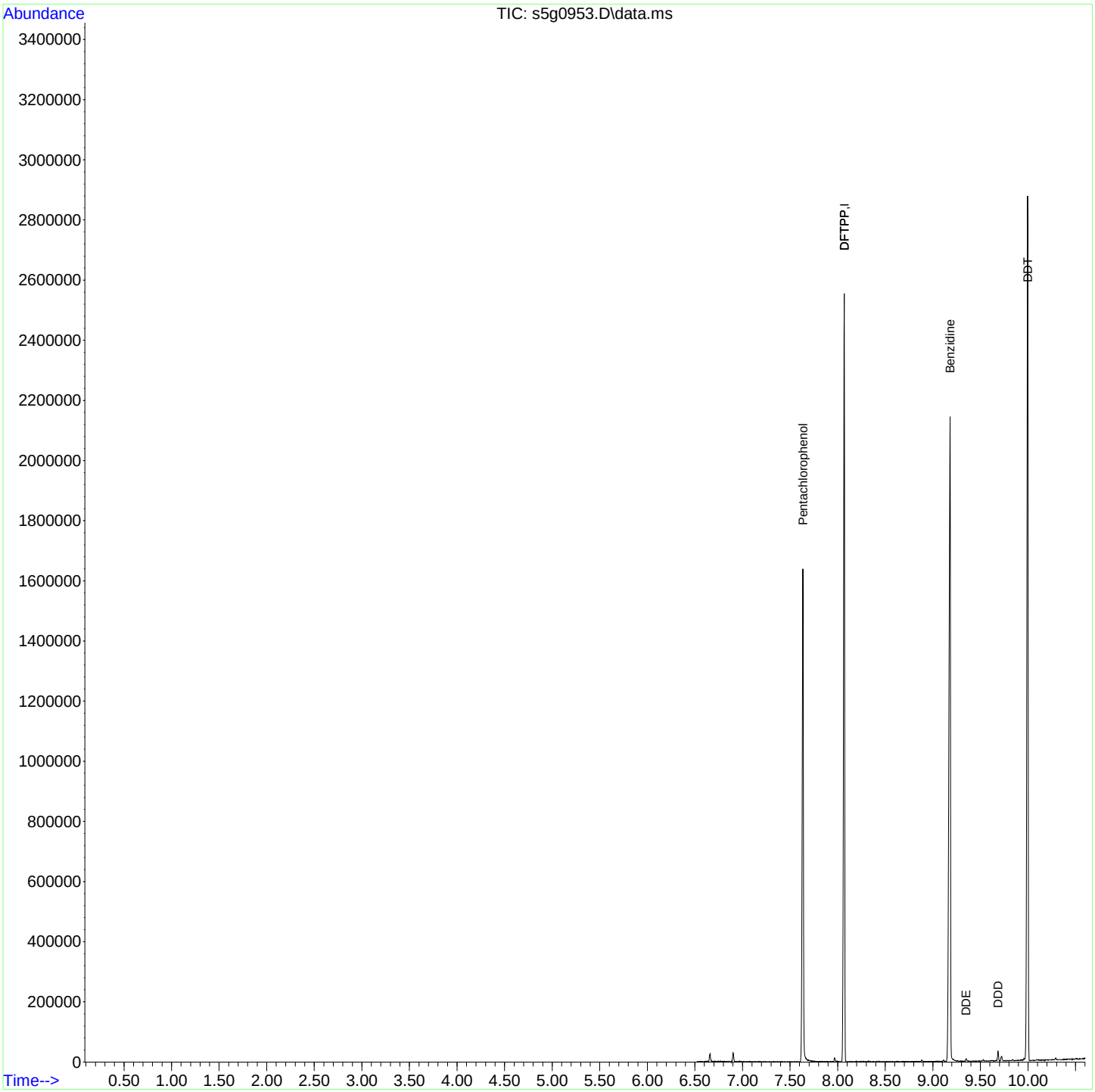
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) DFTPP	TIC	8.069	8.080	1.000	2037982	5.00	ug/l	#-0.01
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) DFTPP	TIC	8.069	8.080	1.000	2036230	5.50	ug/ml#	1
3) Pentachlorophenol	266	7.634	7.645	0.946	167808	4.08	ug/l	99
4) Benzidine	184	9.182	9.179	1.138	940056	8.77	ug/l	98
5) DDE	246	9.346	9.359	1.158	964	0.01	ug/l	86
6) DDD	235	9.686	9.697	1.200	4835	0.05	ug/l	92
7) DDT	235	9.995	10.011	1.239	501632	4.85	ug/l	98

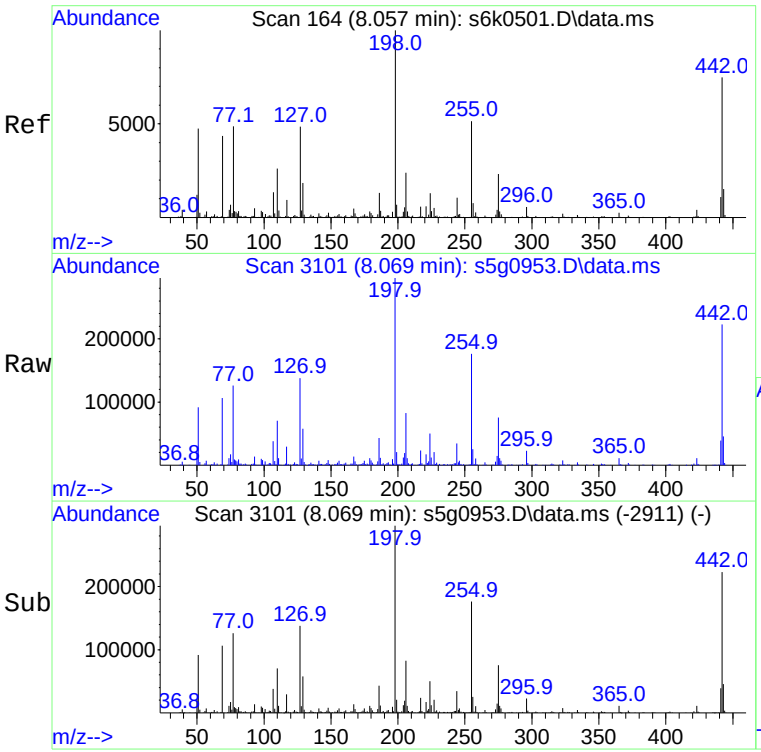
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s070918.B\
Data File : s5g0953.D
Acq On : 10 Jul 2018 22:28
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 09:47:44 2018
Quant Method : C:\msdchem\1\DATA\s070918.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

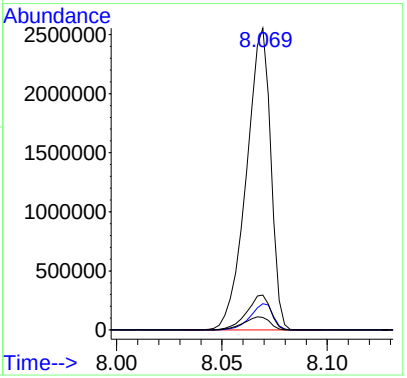


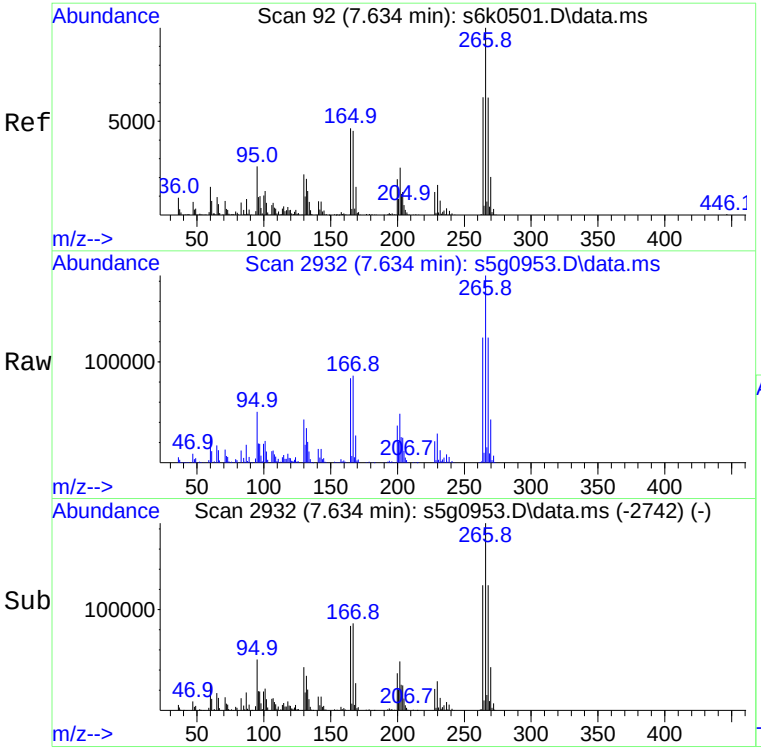


#2
DFTPP
Concen: 5.50 ug/ml
RT: 8.069 min Scan# 3101
Delta R.T. -0.010 min
Lab File: s5g0953.D
Acq: 10 Jul 2018 22:28

Tgt Ion:TIC Resp: 2036230

Ion	Ratio	Lower	Upper
TIC	100		
442	8.2	744.1	784.1#
69	4.7	472.9	512.9#
198	11.4	1025.8	1065.8#

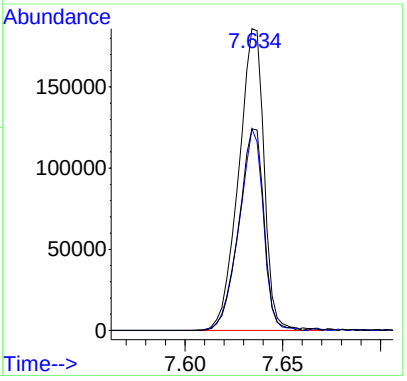


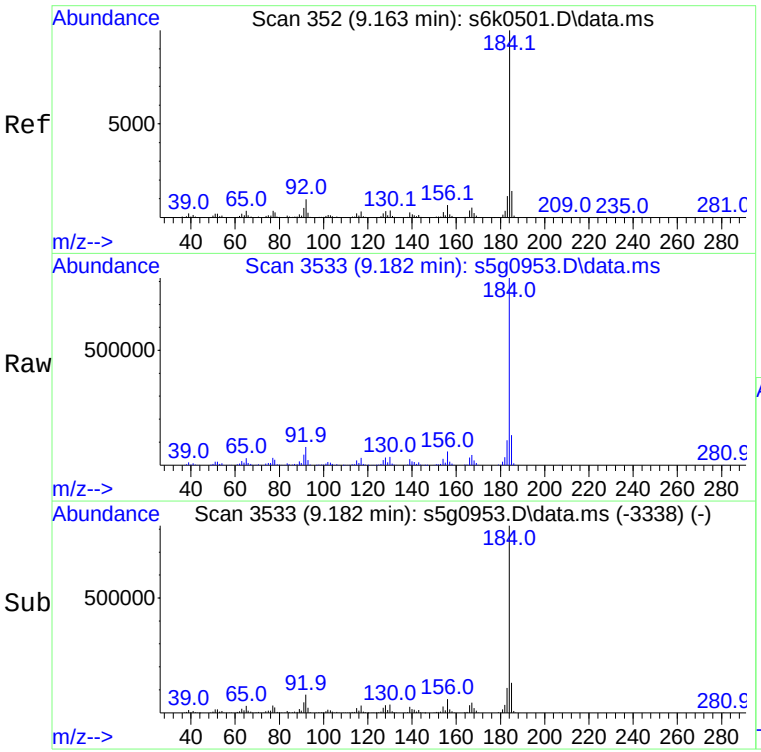


#3
Pentachlorophenol
Concen: 4.08 ug/l
RT: 7.634 min Scan# 2932
Delta R.T. -0.010 min
Lab File: s5g0953.D
Acq: 10 Jul 2018 22:28

Tgt Ion:266 Resp: 167808

Ion	Ratio	Lower	Upper
266	100		
264	64.3	0.0	163.0
268	66.6	0.0	166.8

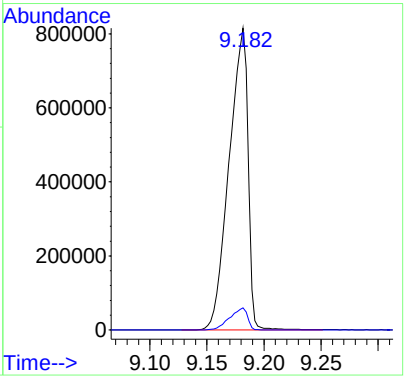


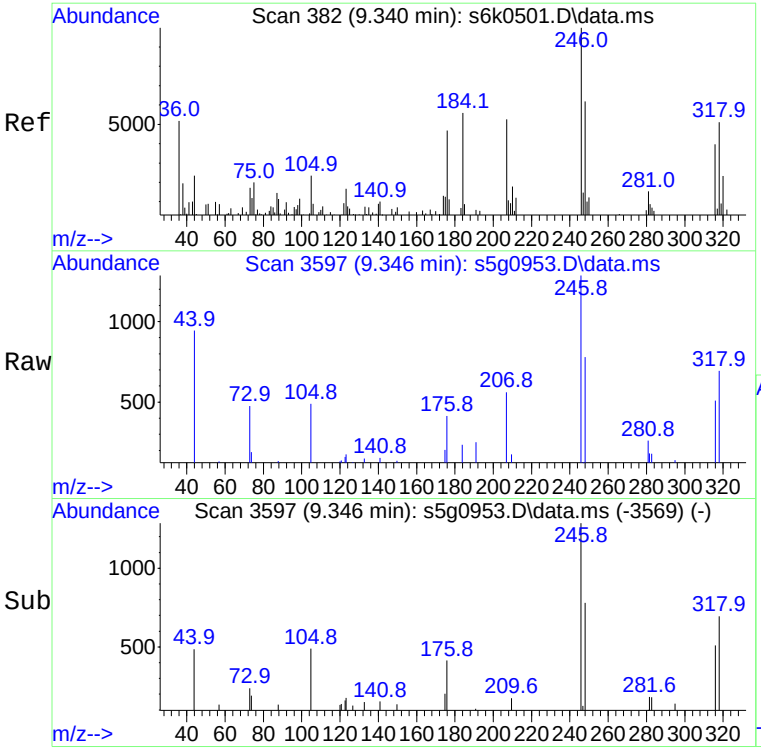


#4
Benzidine
Concen: 8.77 ug/l
RT: 9.182 min Scan# 3533
Delta R.T. 0.003 min
Lab File: s5g0953.D
Acq: 10 Jul 2018 22:28

Tgt Ion:184 Resp: 940056

Ion	Ratio	Lower	Upper
184	100		
156	6.9	0.0	106.1

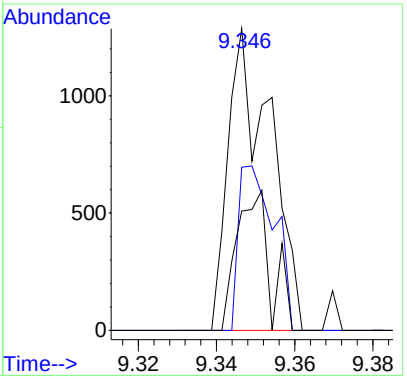


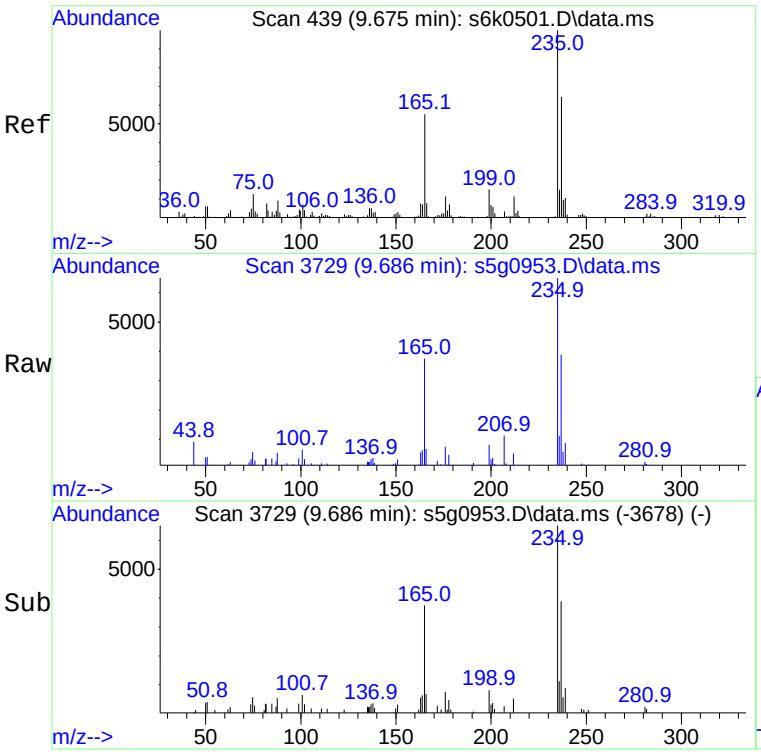


#5
DDE
Concen: 0.01 ug/l
RT: 9.346 min Scan# 3597
Delta R.T. -0.013 min
Lab File: s5g0953.D
Acq: 10 Jul 2018 22:28

Tgt Ion:246 Resp: 964

Ion	Ratio	Lower	Upper
246	100		
318	46.3	0.0	137.0
316	36.6	0.0	144.6

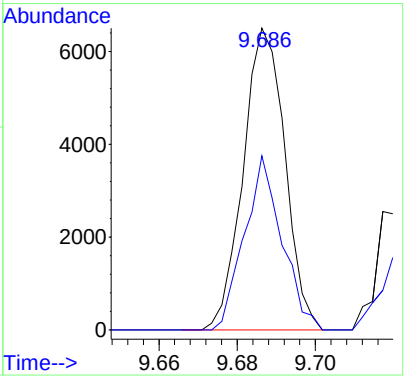


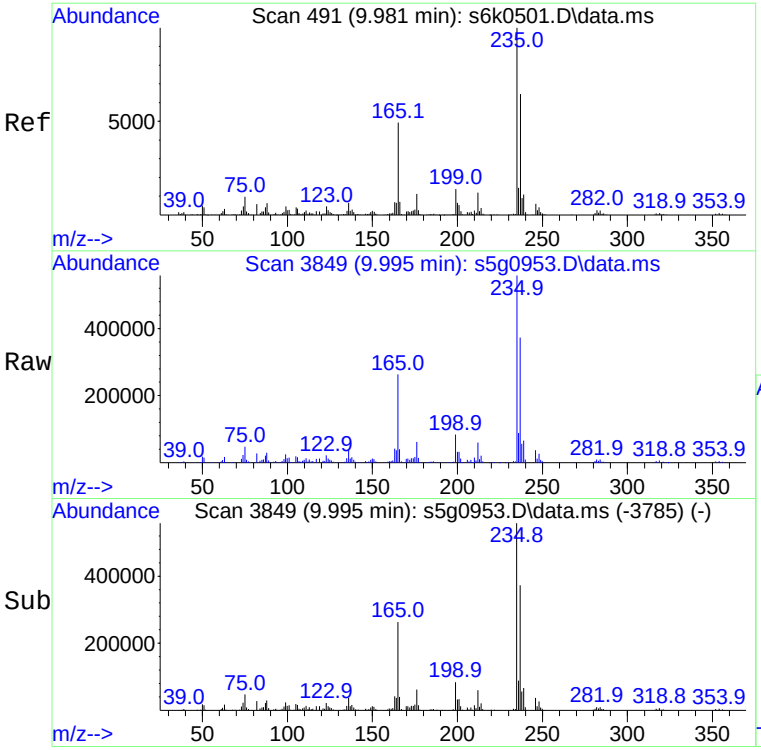


#6
DDD
Concen: 0.05 ug/l
RT: 9.686 min Scan# 3729
Delta R.T. -0.010 min
Lab File: s5g0953.D
Acq: 10 Jul 2018 22:28

Tgt Ion:235 Resp: 4835

Ion	Ratio	Lower	Upper
235	100		
165	51.8	0.0	146.5

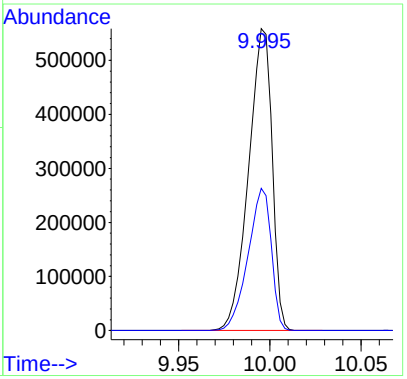




#7
DDT
Concen: 4.85 ug/l
RT: 9.995 min Scan# 3849
Delta R.T. -0.016 min
Lab File: s5g0953.D
Acq: 10 Jul 2018 22:28

Tgt Ion:235 Resp: 501632

Ion	Ratio	Lower	Upper
235	100		
165	46.5	0.0	145.4



8270 Breakdown Report

07/11/2018

Data File : C:\msdchem\1\DATA\s070918.B\s5g0953.D Vial: 1
Acq On : 10 Jul 2018 22:28 Operator: JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP Inst : MSD5
Misc : Multiplr: 1.00
IntFile : benz.P

07/11/2018

Compounds	Area/%Breakdown	8270C	8270D
DDE	964		
DDD	4835		
DDT	501632		
Breakdown	1.14%	Pass(<20)	Pass(<20)

Compounds	Tailing Factor	8270C	8270D
Benzidine	0.35	Pass(<3)	Pass(<2)
Pentachlorophenol	0.73	Pass(<5)	Pass(<2)

DFTPP Tune Report
GEL Laboratories, LLC

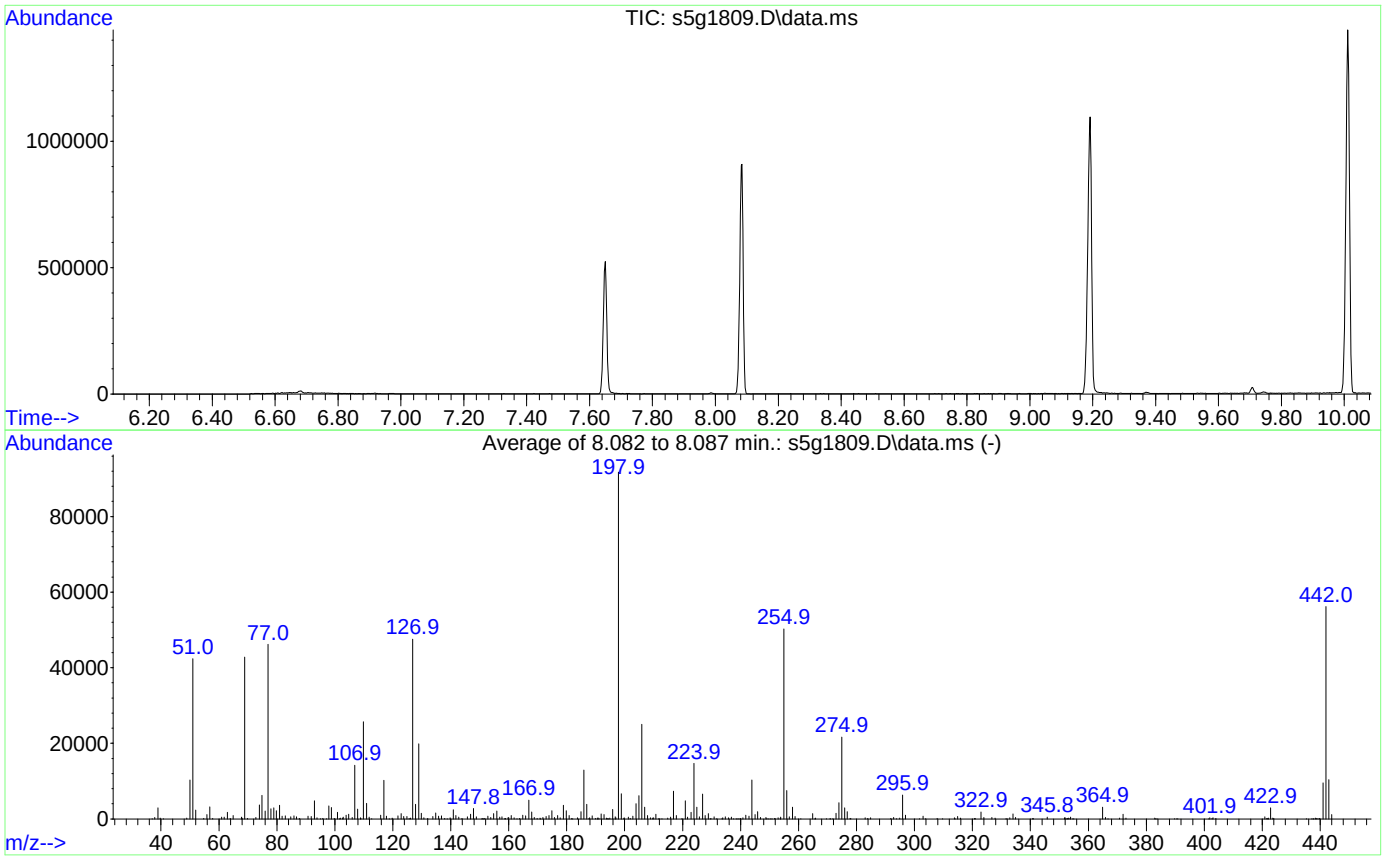
07/18/2018

07/18/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1809.D
Acq On : 18 Jul 2018 14:13
Operator : JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: benz.P

Method : C:\msdchem\1\DATA\s071818a.B\BNABrk_Down8270D.m
Title : dftpp / endrin / ddt SubList :
Last Update : Tue Mar 15 15:35:42 2016



AutoFind: Scans 3106, 3107, 3108; Background Corrected with Scan 3094

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	46.2	42413	PASS
68	69	0.00	2	1.1	475	PASS
69	198	0.00	100	46.7	42837	PASS
70	69	0.00	2	0.3	148	PASS
127	198	10	80	51.8	47576	PASS
197	198	0.00	2	0.6	573	PASS
198	198	50	100	100.0	91757	PASS
199	198	5	9	7.2	6636	PASS
275	198	10	60	23.6	21672	PASS
365	198	1	100	3.3	3056	PASS
441	442	0.01	24	16.9	9496	PASS
442	198	50	100	61.2	56139	PASS
443	442	15	24	18.5	10360	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

Quantitation Report
GEL Laboratories, LLC

07/18/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1809.D
Acq On : 18 Jul 2018 14:13
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

07/18/2018

Quant Time: Jul 18 15:23:43 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

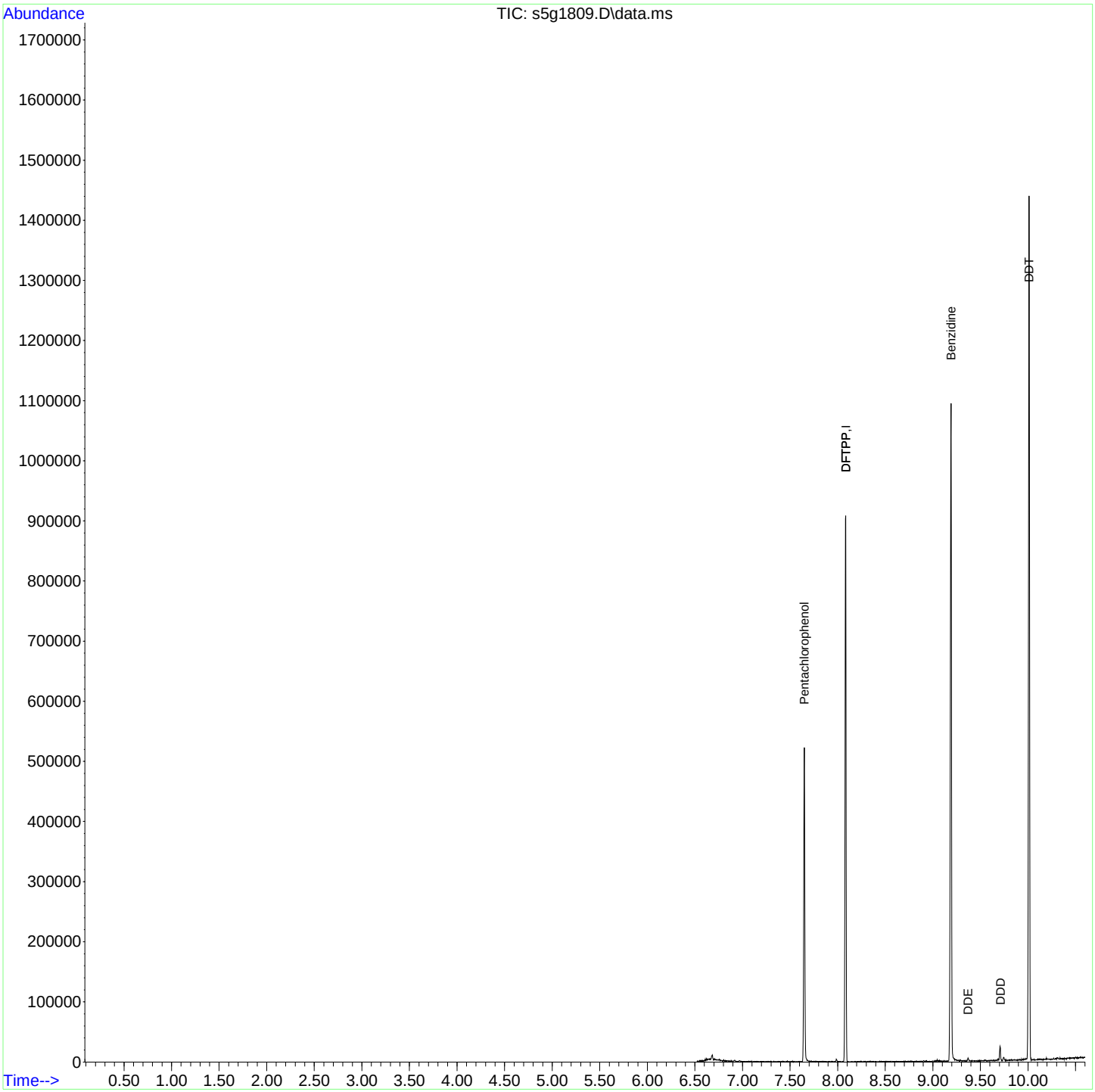
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) DFTPP	TIC	8.085	8.085	1.000	686333	5.00	ug/l	# 0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) DFTPP	TIC	8.085	8.085	1.000	686333	5.51	ug/ml#	1
3) Pentachlorophenol	266	7.650	7.652	0.946	43488	3.14	ug/l	99
4) Benzidine	184	9.192	9.194	1.137	371942	10.31	ug/l	100
5) DDE	246	9.370	9.370	1.159	412	0.01	ug/l	73
6) DDD	235	9.710	9.707	1.201	3600	0.10	ug/l	86
7) DDT	235	10.011	10.016	1.238	213230	6.12	ug/l	94

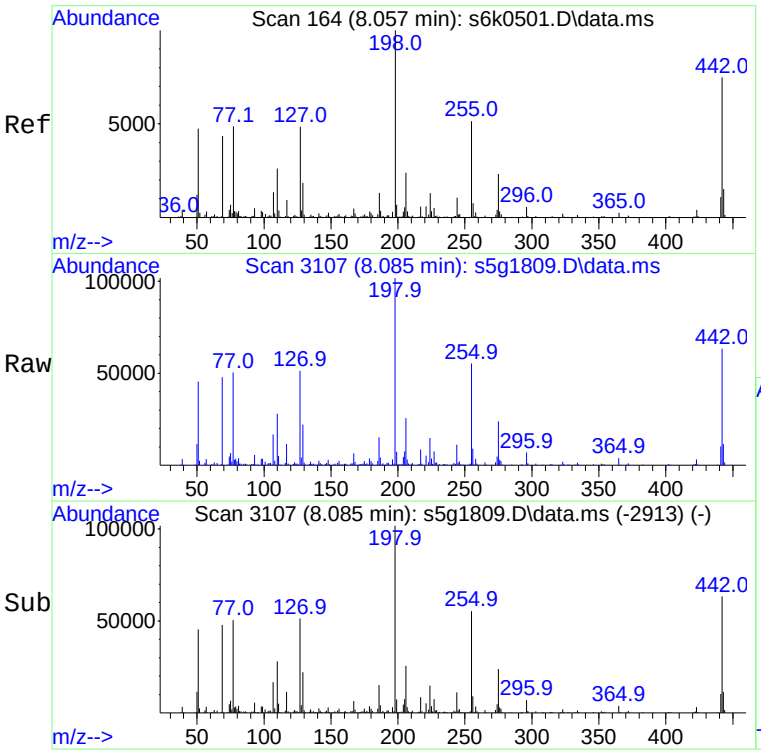
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1809.D
Acq On : 18 Jul 2018 14:13
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 18 15:23:43 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

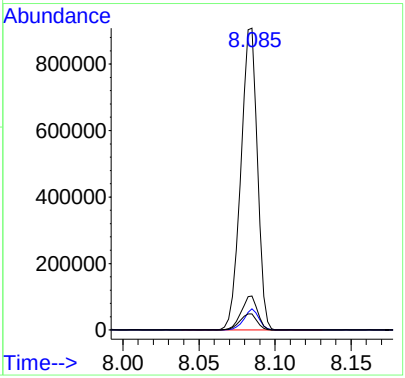


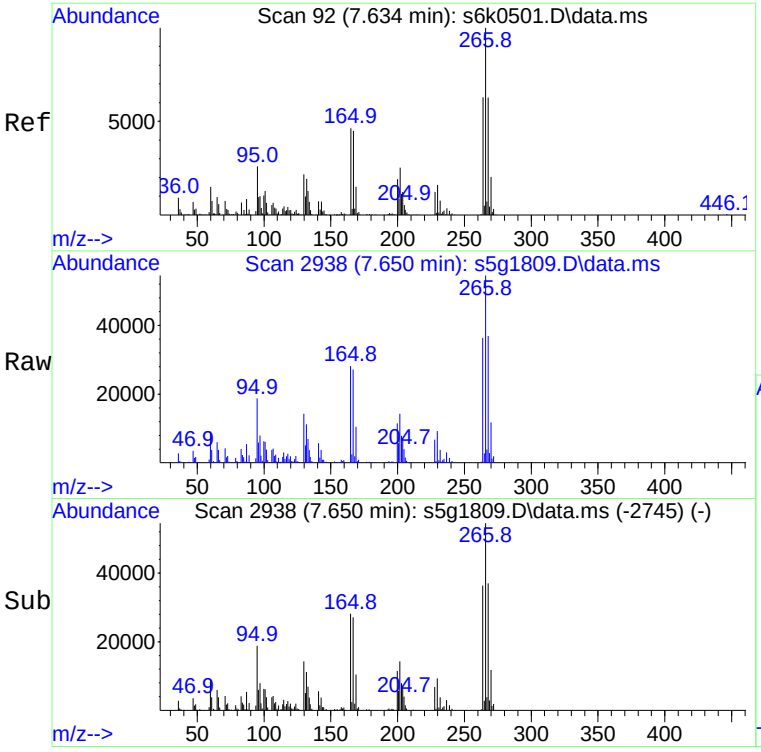


#2
DFTPP
Concen: 5.51 ug/ml
RT: 8.085 min Scan# 3107
Delta R.T. 0.000 min
Lab File: s5g1809.D
Acq: 18 Jul 2018 14:13

Tgt Ion:TIC Resp: 686333

Ion	Ratio	Lower	Upper
TIC	100		
442	6.3	779.4	819.4#
69	5.6	451.3	491.3#
198	11.0	1152.5	1192.5#

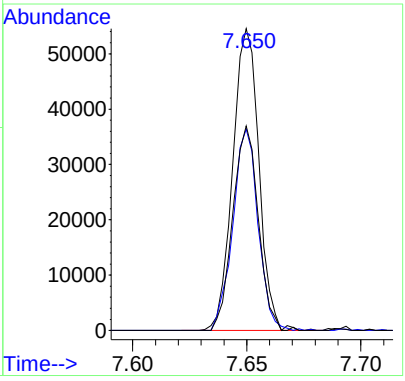


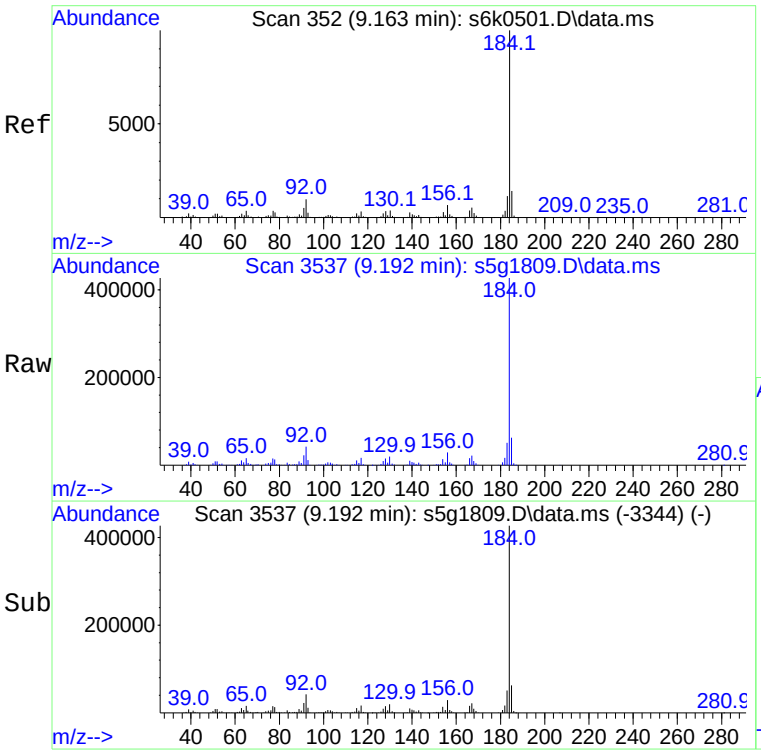


#3
Pentachlorophenol
Concen: 3.14 ug/l
RT: 7.650 min Scan# 2938
Delta R.T. -0.002 min
Lab File: s5g1809.D
Acq: 18 Jul 2018 14:13

Tgt Ion:266 Resp: 43488

Ion	Ratio	Lower	Upper
266	100		
264	64.6	0.0	164.0
268	66.1	0.0	167.4

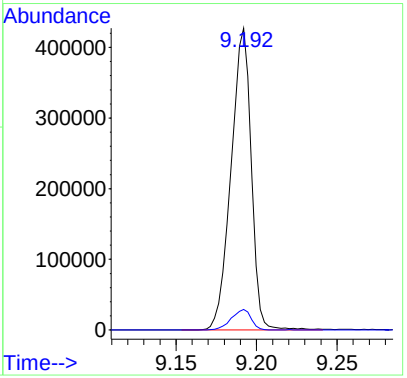


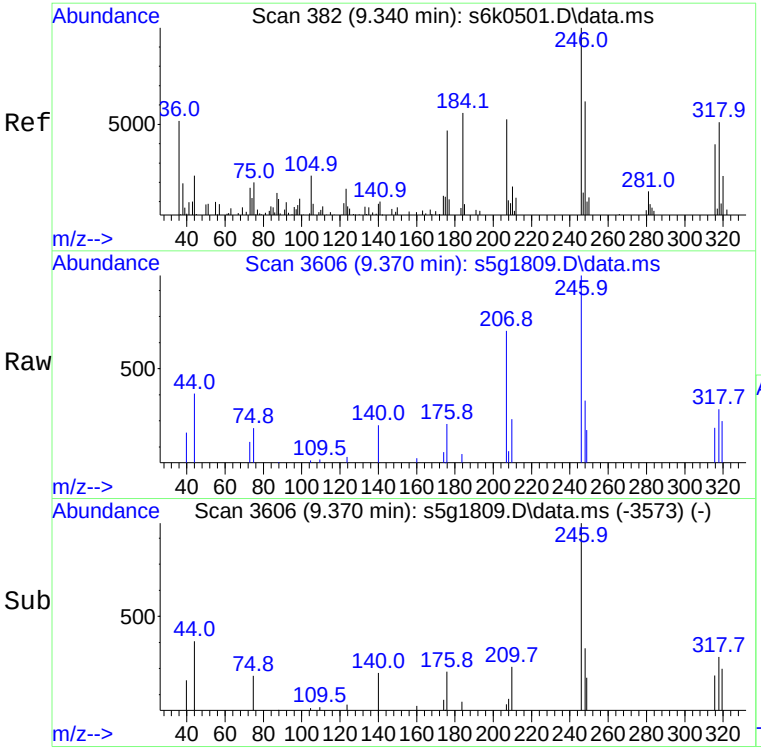


#4
Benzidine
Concen: 10.31 ug/l
RT: 9.192 min Scan# 3537
Delta R.T. -0.002 min
Lab File: s5g1809.D
Acq: 18 Jul 2018 14:13

Tgt Ion:184 Resp: 371942

Ion	Ratio	Lower	Upper
184	100		
156	6.7	0.0	106.8

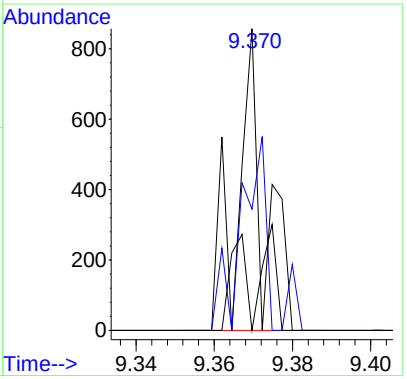


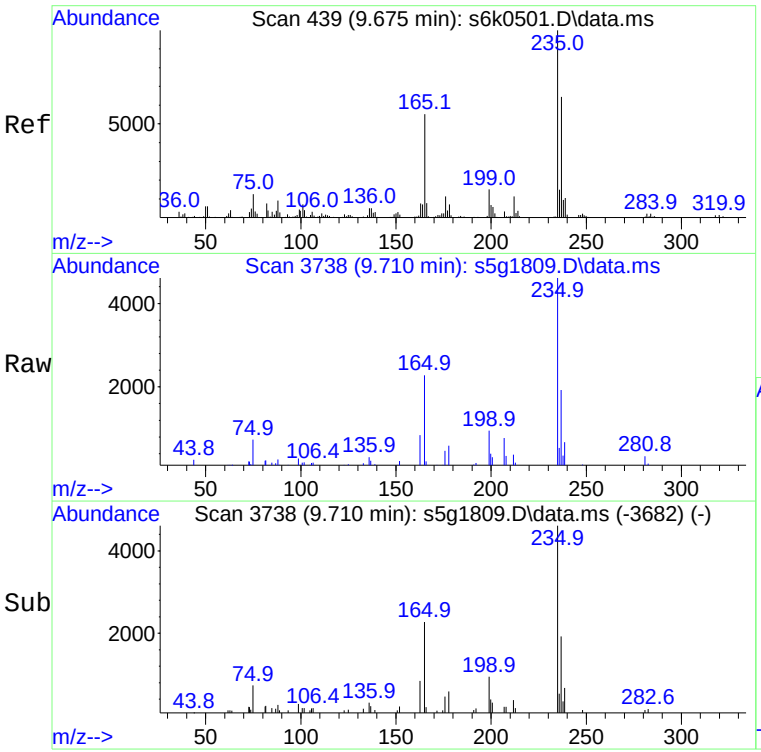


#5
DDE
Concen: 0.01 ug/l
RT: 9.370 min Scan# 3606
Delta R.T. 0.000 min
Lab File: s5g1809.D
Acq: 18 Jul 2018 14:13

Tgt Ion:246 Resp: 412

Ion	Ratio	Lower	Upper
246	100		
318	65.0	0.0	141.2
316	36.4	0.0	130.2

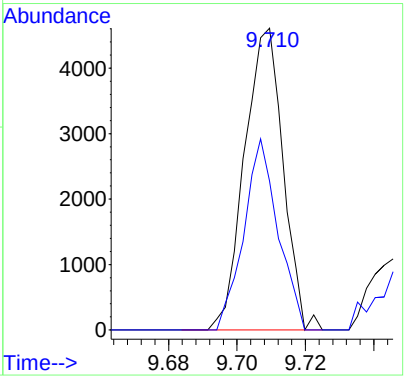


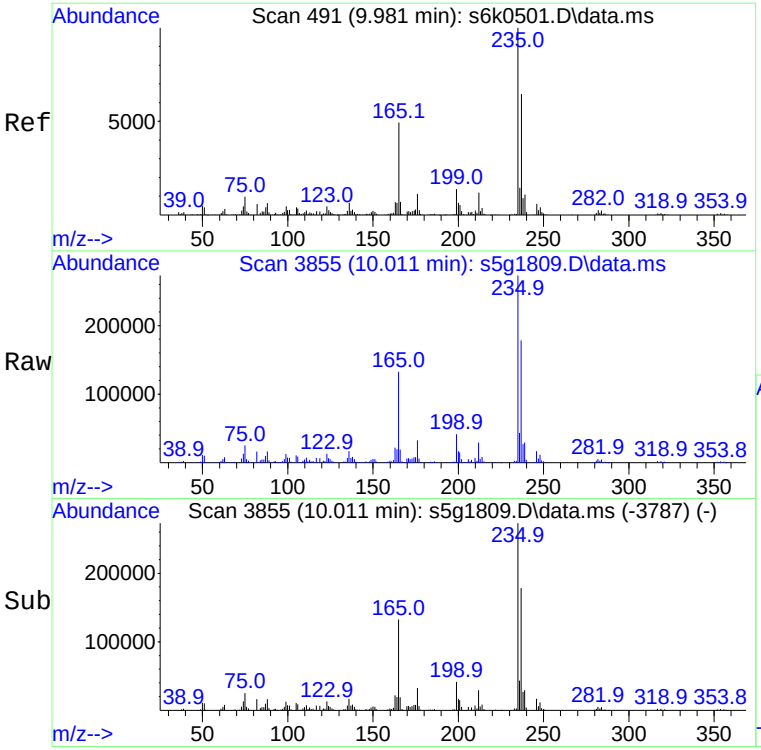


#6
DDD
Concen: 0.10 ug/l
RT: 9.710 min Scan# 3738
Delta R.T. 0.003 min
Lab File: s5g1809.D
Acq: 18 Jul 2018 14:13

Tgt Ion:235 Resp: 3600

Ion	Ratio	Lower	Upper
235	100		
165	56.0	0.0	146.7

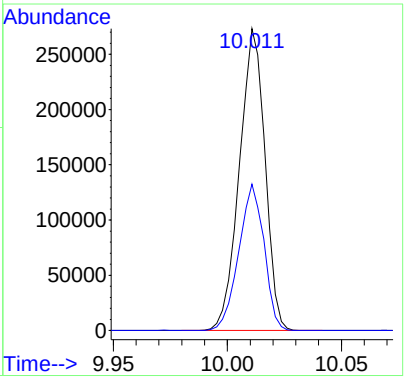




#7
DDT
Concen: 6.12 ug/l
RT: 10.011 min Scan# 3855
Delta R.T. -0.005 min
Lab File: s5g1809.D
Acq: 18 Jul 2018 14:13

Tgt Ion:235 Resp: 213230

Ion	Ratio	Lower	Upper
235	100		
165	47.8	0.0	144.0



8270 Breakdown Report

07/18/2018

Data File : C:\msdchem\1\DATA\s071818a.B\s5g1809.D Vial: 1
Acq On : 18 Jul 2018 14:13 Operator: JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP Inst : MSD5
Misc : Multiplr: 1.00
IntFile : benz.P

07/18/2018

Compounds	Area/%Breakdown	8270C	8270D
DDE	412		
DDD	3600		
DDT	213230		
Breakdown	1.85%	Pass(<20)	Pass(<20)

Compounds	Tailing Factor	8270C	8270D
Benzidine	0.64	Pass(<3)	Pass(<2)
Pentachlorophenol	0.98	Pass(<5)	Pass(<2)

07/20/2018

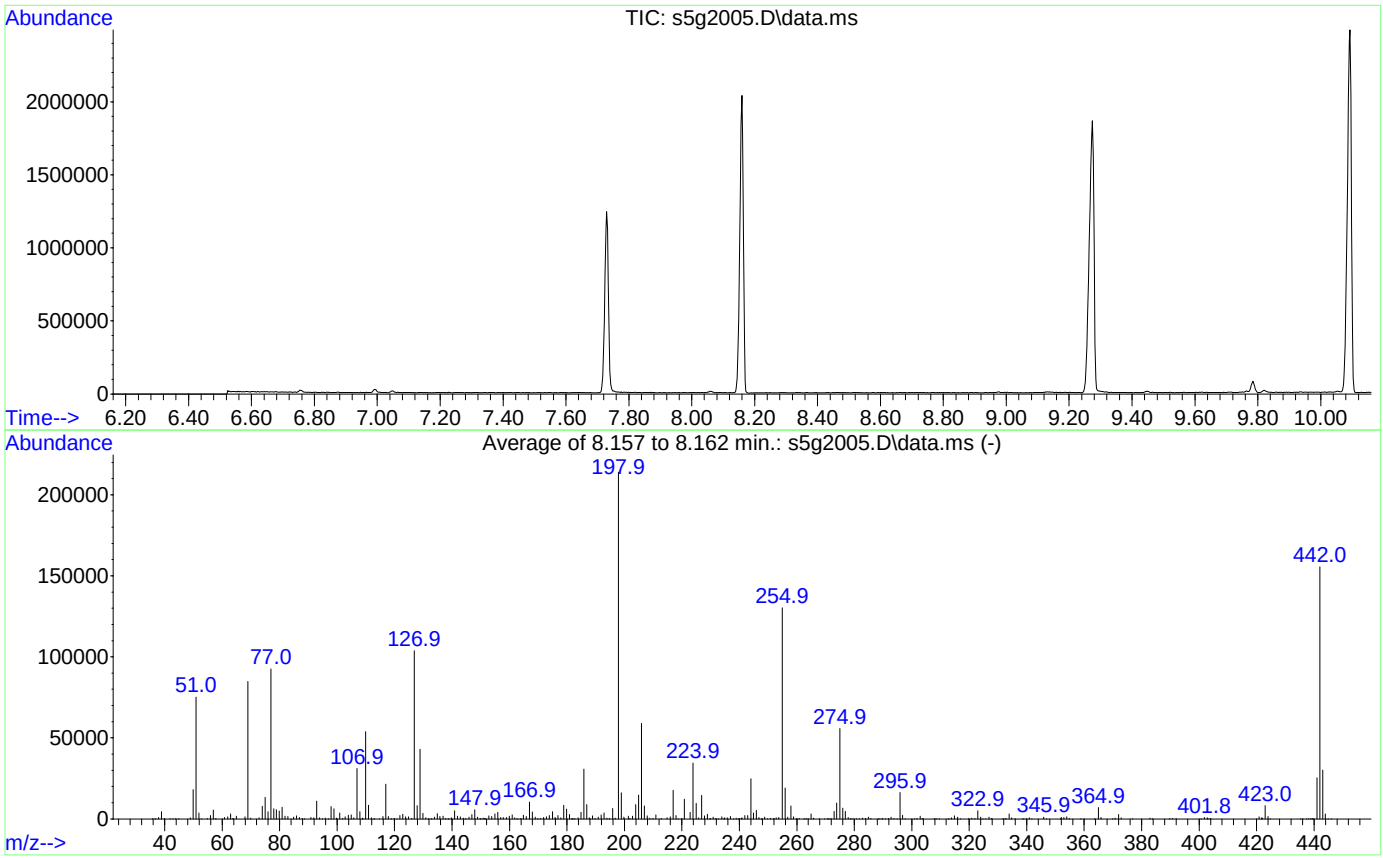
07/23/2018

DFTPP Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2005.D
Acq On : 20 Jul 2018 10:20
Operator : JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: benz.P

Method : C:\msdchem\1\DATA\s072018.B\BNABrk_Down8270D.m
Title : dftpp / endrin / ddt SubList :
Last Update : Tue Mar 15 15:35:42 2016



AutoFind: Scans 3135, 3136, 3137; Background Corrected with Scan 3124

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.1	75151	PASS
68	69	0.00	2	1.4	1211	PASS
69	198	0.00	100	39.6	84840	PASS
70	69	0.00	2	0.5	452	PASS
127	198	10	80	48.5	103773	PASS
197	198	0.00	2	0.3	540	PASS
198	198	50	100	100.0	214037	PASS
199	198	5	9	7.5	16019	PASS
275	198	10	60	26.1	55845	PASS
365	198	1	100	3.3	6981	PASS
441	442	0.01	24	16.4	25459	PASS
442	198	50	100	72.6	155477	PASS
443	442	15	24	19.4	30187	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

07/20/2018

07/23/2018

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2005.D
Acq On : 20 Jul 2018 10:20
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 20 14:32:53 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

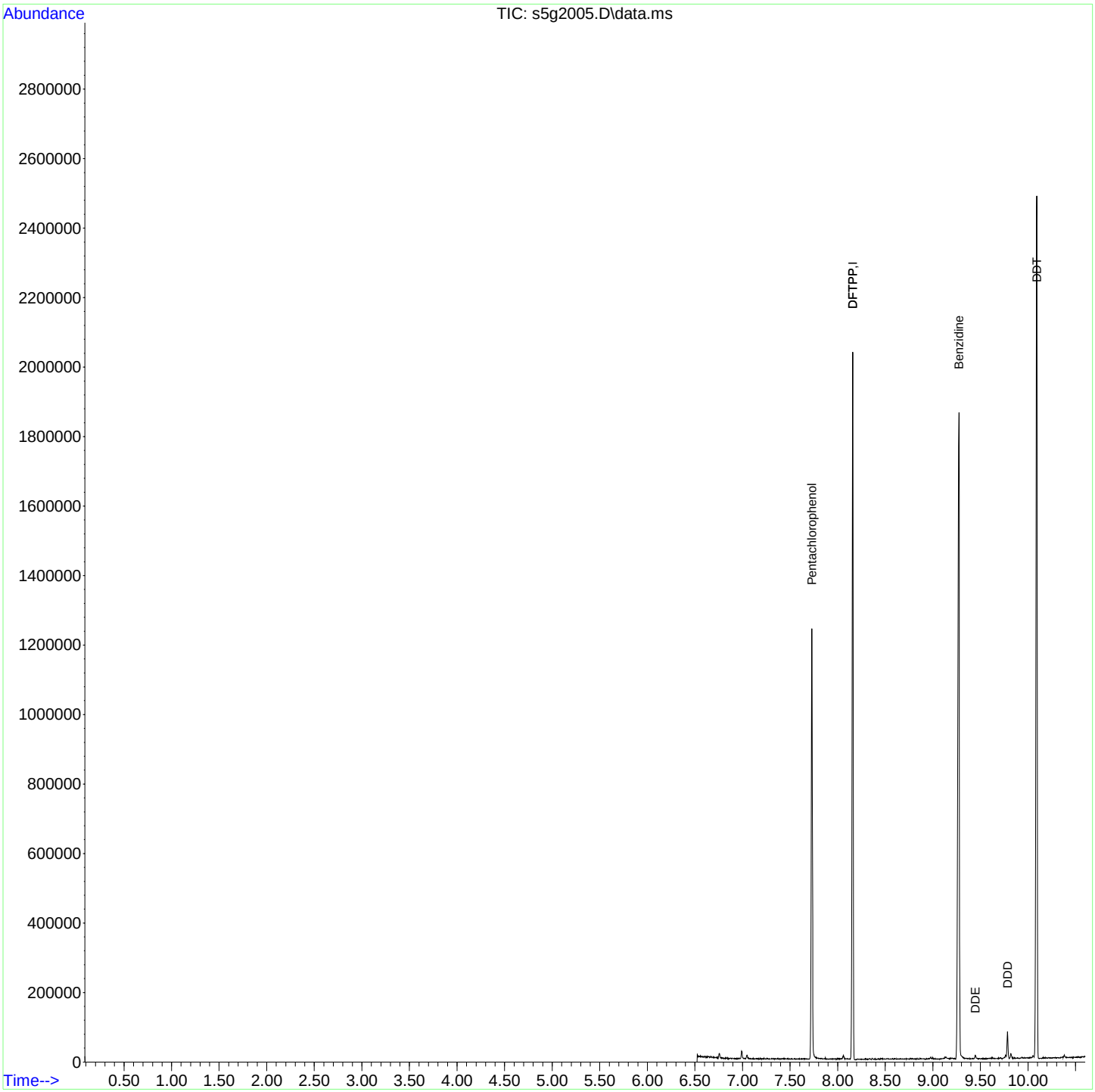
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) DFTPP	TIC	8.159	8.165	1.000	1589210	5.00	ug/l	# 0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) DFTPP	TIC	8.159	8.165	1.000	1589210	5.51	ug/ml#	1
3) Pentachlorophenol	266	7.729	7.732	0.947	119379	3.72	ug/l	99
4) Benzidine	184	9.274	9.274	1.137	766513	9.17	ug/l	100
5) DDE	246	9.447	9.452	1.158	1033	0.01	ug/l	85
6) DDD	235	9.784	9.789	1.199	11288	0.14	ug/l	94
7) DDT	235	10.093	10.098	1.237	431002	5.34	ug/l	97

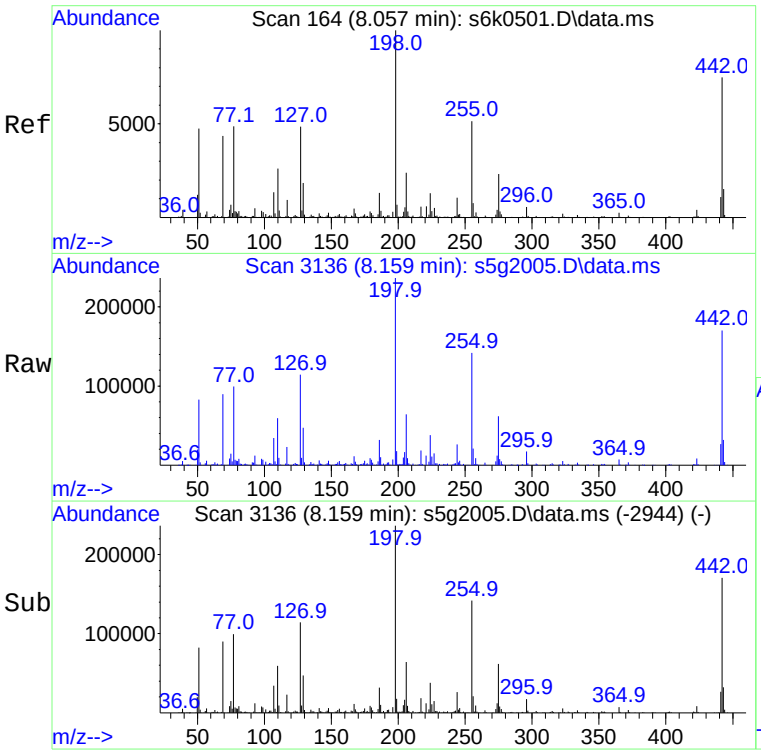
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s072018.B\
Data File : s5g2005.D
Acq On : 20 Jul 2018 10:20
Operator : JLD1
InstName : MSD5
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 20 14:32:53 2018
Quant Method : C:\msdchem\1\DATA\s072018.B\BNABrk_Down8270D.m
Quant Title : dftpp / endrin / ddt SubList :
QLast Update : Tue Mar 15 15:35:42 2016
Response via : Initial Calibration
Integrator: RTE

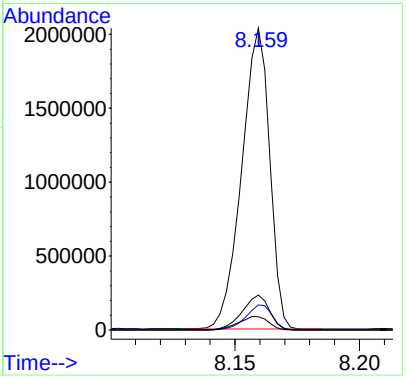


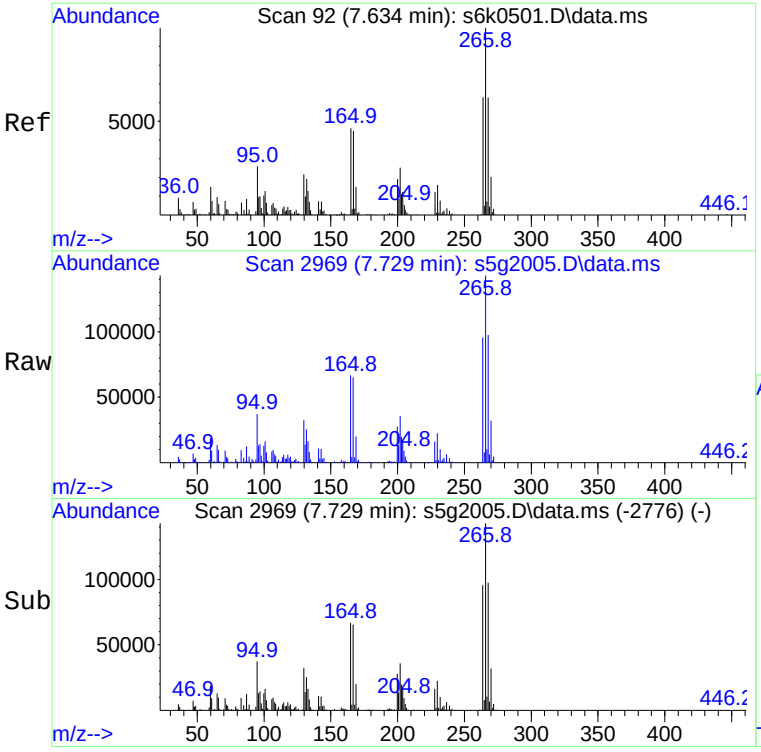


#2
DFTPP
Concen: 5.51 ug/ml
RT: 8.159 min Scan# 3136
Delta R.T. -0.005 min
Lab File: s5g2005.D
Acq: 20 Jul 2018 10:20

Tgt Ion:TIC Resp: 1589210

Ion	Ratio	Lower	Upper
TIC	100		
442	7.9	779.4	819.4#
69	4.8	451.3	491.3#
198	11.2	1152.5	1192.5#

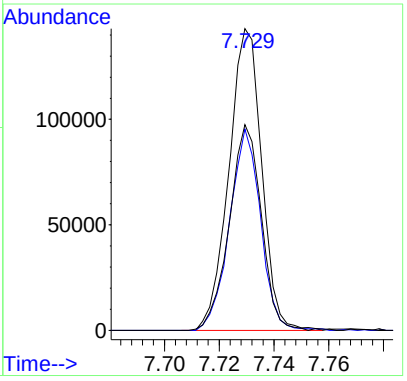


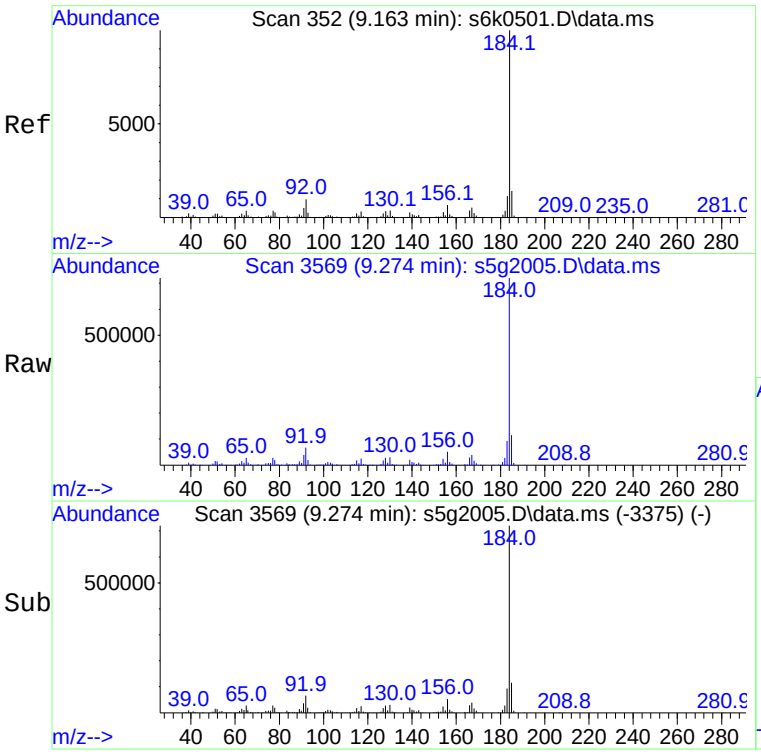


#3
Pentachlorophenol
Concen: 3.72 ug/l
RT: 7.729 min Scan# 2969
Delta R.T. -0.003 min
Lab File: s5g2005.D
Acq: 20 Jul 2018 10:20

Tgt Ion:266 Resp: 119379

Ion	Ratio	Lower	Upper
266	100		
264	63.4	0.0	164.0
268	66.5	0.0	167.4

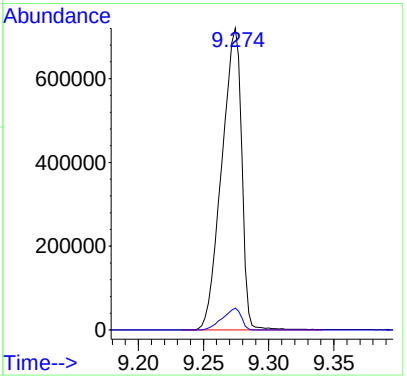


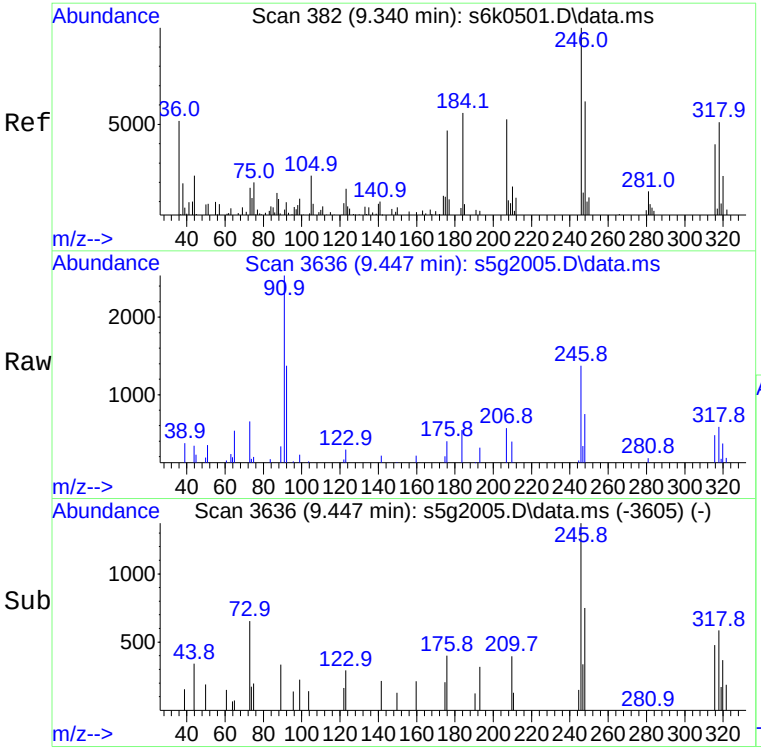


#4
Benzidine
Concen: 9.17 ug/l
RT: 9.274 min Scan# 3569
Delta R.T. -0.000 min
Lab File: s5g2005.D
Acq: 20 Jul 2018 10:20

Tgt Ion:184 Resp: 766513

Ion	Ratio	Lower	Upper
184	100		
156	6.8	0.0	106.8

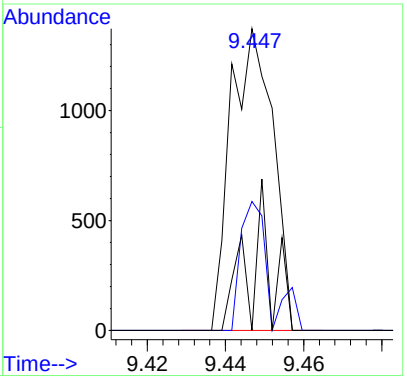


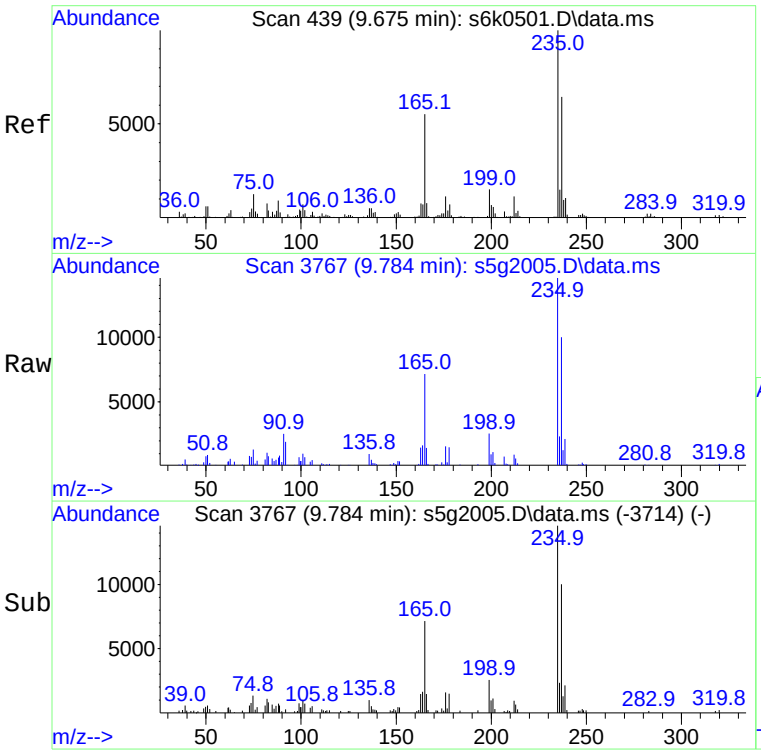


#5
DDE
Concen: 0.01 ug/l
RT: 9.447 min Scan# 3636
Delta R.T. -0.005 min
Lab File: s5g2005.D
Acq: 20 Jul 2018 10:20

Tgt Ion:246 Resp: 1033

Ion	Ratio	Lower	Upper
246	100		
318	28.6	0.0	141.2
316	26.5	0.0	130.2

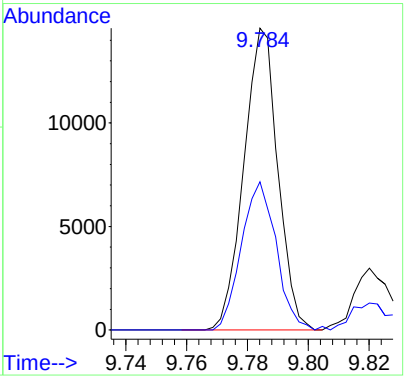


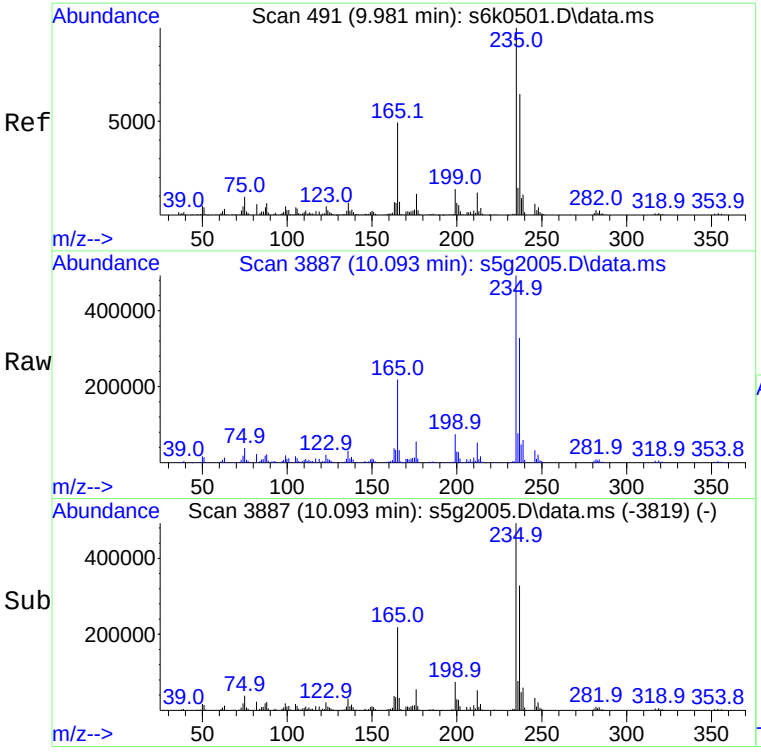


#6
DDD
Concen: 0.14 ug/l
RT: 9.784 min Scan# 3767
Delta R.T. -0.005 min
Lab File: s5g2005.D
Acq: 20 Jul 2018 10:20

Tgt Ion:235 Resp: 11288

Ion	Ratio	Lower	Upper
235	100		
165	50.4	0.0	146.7

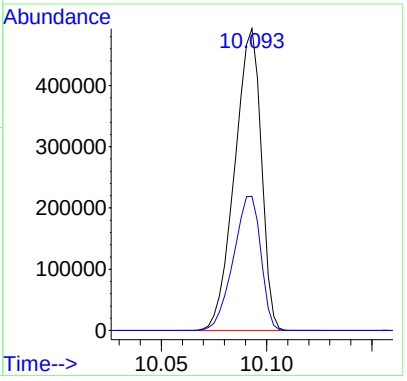




#7
DDT
Concen: 5.34 ug/l
RT: 10.093 min Scan# 3887
Delta R.T. -0.005 min
Lab File: s5g2005.D
Acq: 20 Jul 2018 10:20

Tgt Ion:235 Resp: 431002

Ion	Ratio	Lower	Upper
235	100		
165	45.9	0.0	144.0



8270 Breakdown Report

Data File : C:\msdchem\1\DATA\s072018.B\s5g2005.D Vial: 1
Acq On : 20 Jul 2018 10:20 Operator: JLD1
Sample : |WBN180611-99|DFTPP|1|SVM|1|DFTPP Inst : MSD5
Misc : Multiplr: 1.00
IntFile : benz.P

07/23/2018

Compounds	Area/%Breakdown	8270C	8270D
DDE	1033		
DDD	11288		
DDT	431002		
Breakdown	2.78%	Pass(<20)	Pass(<20)

Compounds	Tailing Factor	8270C	8270D
Benzidine	0.47	Pass(<3)	Pass(<2)
Pentachlorophenol	0.93	Pass(<5)	Pass(<2)

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204071088**				
Client Sample:	**QC for batch 1783052**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**MB for batch 1783052**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 17:07**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1815.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl	U	333	ug/kg	100	333
95-94-3	1,2,4,5-Tetrachlorobenzene	U	333	ug/kg	100	333
58-90-2	2,3,4,6-Tetrachlorophenol	U	333	ug/kg	100	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	100	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	100	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	100	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	100	333
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	100	667
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	100	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	100	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	10.0	33.3
95-57-8	2-Chlorophenol	U	333	ug/kg	100	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	100	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	10.0	33.3
88-75-5	2-Nitrophenol	U	333	ug/kg	100	333
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	100	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	133	333
106-47-8	4-Chloroaniline	U	333	ug/kg	100	333
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	100	333
100-02-7	4-Nitrophenol	U	333	ug/kg	100	333
83-32-9	Acenaphthene	U	33.3	ug/kg	10.0	33.3
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
98-86-2	Acetophenone	U	333	ug/kg	100	333
120-12-7	Anthracene	U	33.3	ug/kg	10.0	33.3
1912-24-9	Atrazine	U	333	ug/kg	133	333
100-52-7	Benzaldehyde	U	333	ug/kg	100	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	33.3	ug/kg	10.0	33.3
105-60-2	Caprolactam	U	333	ug/kg	100	333
86-74-8	Carbazole	U	33.3	ug/kg	10.0	33.3
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
84-74-2	Di-n-butylphthalate	U	33.3	ug/kg	10.0	33.3
117-84-0	Di-n-octylphthalate	U	33.3	ug/kg	10.0	33.3

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204071088**				
Client Sample:	**QC for batch 1783052**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**MB for batch 1783052**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 17:07**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1815.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
132-64-9	Dibenzofuran	U	333	ug/kg	100	333
84-66-2	Diethylphthalate	U	33.3	ug/kg	10.0	33.3
131-11-3	Dimethylphthalate	U	33.3	ug/kg	10.0	33.3
122-39-4	Diphenylamine	U	333	ug/kg	100	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
118-74-1	Hexachlorobenzene	U	333	ug/kg	100	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	100	333
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	100	333
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
78-59-1	Isophorone	U	333	ug/kg	100	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	100	333
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
98-95-3	Nitrobenzene	U	333	ug/kg	100	333
87-86-5	Pentachlorophenol	U	333	ug/kg	100	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
108-95-2	Phenol	U	333	ug/kg	100	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	333	ug/kg	100	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	100	333
117-81-7	bis(2-Ethylhexyl)phthalate	U	33.3	ug/kg	10.0	33.3
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
99-09-2	m-Nitroaniline	U	333	ug/kg	100	333
95-48-7	o-Cresol	U	333	ug/kg	100	333
88-74-4	o-Nitroaniline	U	333	ug/kg	110	333
100-01-6	p-Nitroaniline	U	333	ug/kg	100	333

Quantitation Report
GEL Laboratories, LLC

07/19/2018

07/19/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1815.D
Acq On : 18 Jul 2018 17:07
Operator : JLD1
InstName : MSD5
Sample : |1204071088|1783053|1|SVM|1|MB|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 19 08:12:53 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	190708	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.535	7.540	1.000	666519	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.835	9.845	1.000	372630	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.712	11.716	1.000	726935	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.302	15.316	1.000	730240	40.00	ng/uL	-0.01
87) A Perylene-d12	264	18.807	18.816	1.000	609532	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	190708	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.535	7.540	1.000	666519	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.835	9.845	1.000	372630	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.712	11.716	1.000	726935	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.302	15.316	1.000	730240	40.00	ng/uL	-0.01
147) B Perylene-d12	264	18.807	18.816	1.000	609532	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.712	11.716	1.000	726935	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.302	15.316	1.000	730240	40.00	ng/uL	-0.01
155) D Naphthalene-d8	136	7.535	7.540	1.000	666519	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.835	9.845	1.000	372630	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.712	11.716	1.000	726935	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.302	15.316	1.000	730240	40.00	ng/uL	-0.01
169) E Naphthalene-d8	136	7.535	7.540	1.000	666519	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.807	18.816	1.000	609532	40.00	ng/uL	0.00
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.073	4.063	0.705	405669	60.90	ng/uL	0.01
7) Phenol-d5	99	5.231	5.227	0.905	556379	64.53	ng/uL	0.00
22) Nitrobenzene-d5	82	6.550	6.562	0.869	272438	37.94	ng/uL	-0.01
43) 2-Fluorobiphenyl	172	8.964	8.979	0.911	493897	34.82	ng/uL	-0.01
62) 2,4,6-Tribromophenol	330	10.835	10.834	1.102	153935	69.10	ng/uL	0.00
79) p-Terphenyl-d14	244	13.693	13.674	0.895	647380	31.84	ng/uL	0.02

Compound	Amount	Range	Recovery
5) 2-Fluorophenol	100.000	36 - 104	61%
7) Phenol-d5	100.000	39 - 106	65%
22) Nitrobenzene-d5	50.000	34 - 109	76%
43) 2-Fluorobiphenyl	50.000	35 - 107	70%
62) 2,4,6-Tribromophenol	100.000	39 - 115	69%
79) p-Terphenyl-d14	50.000	45 - 119	64%

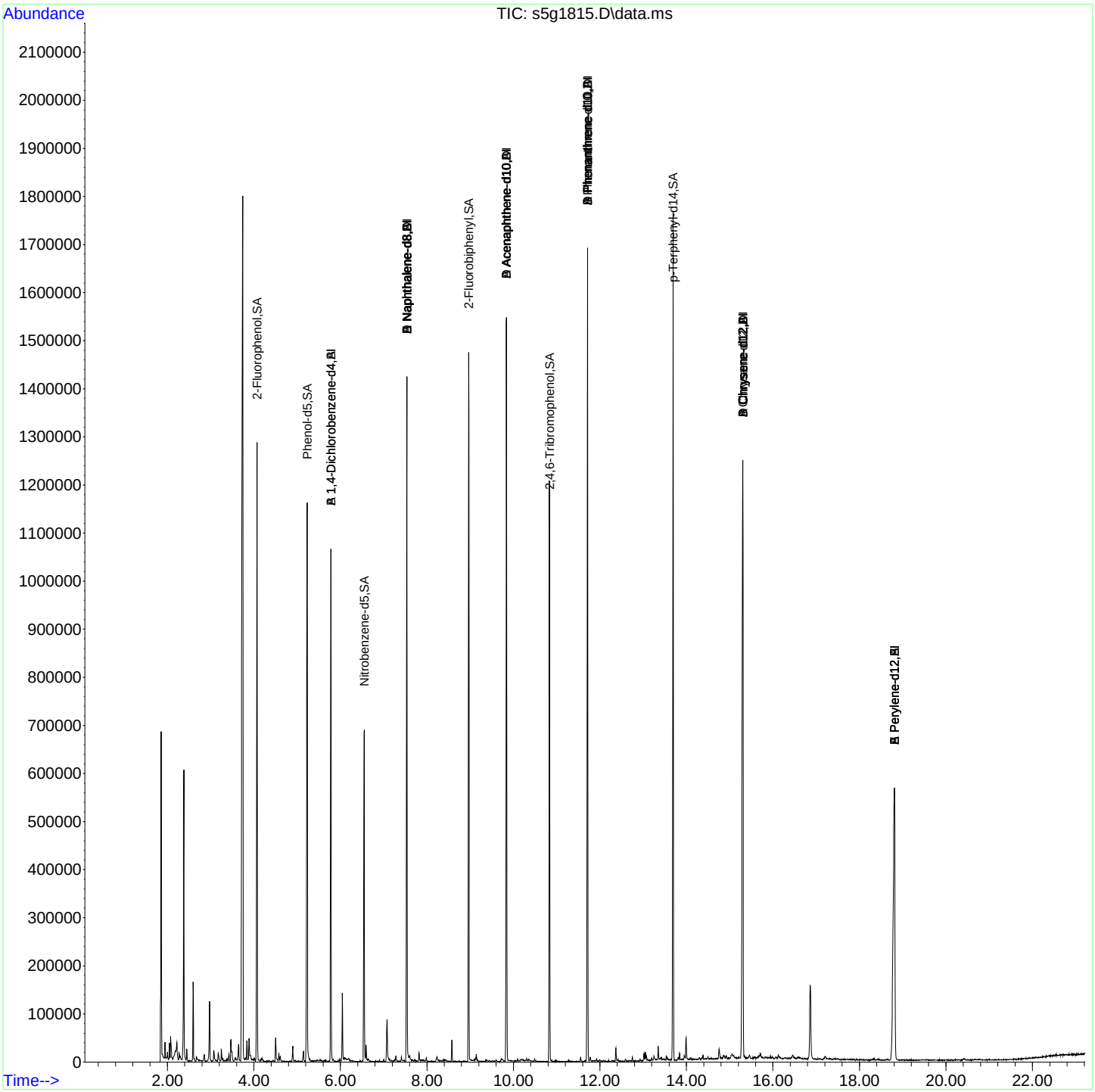
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1815.D
Acq On    : 18 Jul 2018  17:07
Operator  : JLD1
InstName  : MSD5
Sample    : |1204071088|1783053|1|SVM|1|MB|||
Misc      : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial  : 7   Sample Multiplier: 1

Quant Time: Jul 19 08:12:53 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title  : BNA01                                          SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE
```



Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204071089**				
Client Sample:	**QC for batch 1783052**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**LCS for batch 1783052**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 17:37**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.12 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1816.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl		1230	ug/kg	99.6	332
95-94-3	1,2,4,5-Tetrachlorobenzene		1090	ug/kg	99.6	332
58-90-2	2,3,4,6-Tetrachlorophenol		1120	ug/kg	99.6	332
95-95-4	2,4,5-Trichlorophenol		1120	ug/kg	99.6	332
88-06-2	2,4,6-Trichlorophenol		1150	ug/kg	99.6	332
120-83-2	2,4-Dichlorophenol		1150	ug/kg	99.6	332
105-67-9	2,4-Dimethylphenol		973	ug/kg	99.6	332
51-28-5	2,4-Dinitrophenol	J	639	ug/kg	99.6	664
121-14-2	2,4-Dinitrotoluene		1130	ug/kg	99.6	332
606-20-2	2,6-Dinitrotoluene		1140	ug/kg	99.6	332
91-58-7	2-Chloronaphthalene		978	ug/kg	9.96	33.2
95-57-8	2-Chlorophenol		1140	ug/kg	99.6	332
534-52-1	2-Methyl-4,6-dinitrophenol		750	ug/kg	99.6	332
91-57-6	2-Methylnaphthalene		1010	ug/kg	9.96	33.2
88-75-5	2-Nitrophenol		1230	ug/kg	99.6	332
91-94-1	3,3'-Dichlorobenzidine		1020	ug/kg	99.6	332
101-55-3	4-Bromophenylphenylether		1030	ug/kg	99.6	332
59-50-7	4-Chloro-3-methylphenol		1170	ug/kg	133	332
106-47-8	4-Chloroaniline		826	ug/kg	99.6	332
7005-72-3	4-Chlorophenylphenylether		1060	ug/kg	99.6	332
100-02-7	4-Nitrophenol		1240	ug/kg	99.6	332
83-32-9	Acenaphthene		1070	ug/kg	9.96	33.2
208-96-8	Acenaphthylene		1080	ug/kg	9.96	33.2
98-86-2	Acetophenone		1130	ug/kg	99.6	332
120-12-7	Anthracene		1030	ug/kg	9.96	33.2
1912-24-9	Atrazine		1280	ug/kg	133	332
100-52-7	Benzaldehyde		469	ug/kg	99.6	332
56-55-3	Benzo(a)anthracene		1080	ug/kg	9.96	33.2
50-32-8	Benzo(a)pyrene		1060	ug/kg	9.96	33.2
205-99-2	Benzo(b)fluoranthene		1060	ug/kg	9.96	33.2
191-24-2	Benzo(ghi)perylene		909	ug/kg	9.96	33.2
207-08-9	Benzo(k)fluoranthene		1080	ug/kg	9.96	33.2
85-68-7	Butylbenzylphthalate		1170	ug/kg	9.96	33.2
105-60-2	Caprolactam		1350	ug/kg	99.6	332
86-74-8	Carbazole		1130	ug/kg	9.96	33.2
218-01-9	Chrysene		1110	ug/kg	9.96	33.2
84-74-2	Di-n-butylphthalate		1190	ug/kg	9.96	33.2
117-84-0	Di-n-octylphthalate		1400	ug/kg	9.96	33.2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204071089**				
Client Sample:	**QC for batch 1783052**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**LCS for batch 1783052**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 17:37**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.12 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1816.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene		969	ug/kg	9.96	33.2
132-64-9	Dibenzofuran		1050	ug/kg	99.6	332
84-66-2	Diethylphthalate		1130	ug/kg	9.96	33.2
131-11-3	Dimethylphthalate		1090	ug/kg	9.96	33.2
122-39-4	Diphenylamine		1000	ug/kg	99.6	332
206-44-0	Fluoranthene		1180	ug/kg	9.96	33.2
86-73-7	Fluorene		1030	ug/kg	9.96	33.2
118-74-1	Hexachlorobenzene		1030	ug/kg	99.6	332
87-68-3	Hexachlorobutadiene		1090	ug/kg	99.6	332
77-47-4	Hexachlorocyclopentadiene		731	ug/kg	99.6	332
67-72-1	Hexachloroethane		1070	ug/kg	99.6	332
193-39-5	Indeno(1,2,3-cd)pyrene		957	ug/kg	9.96	33.2
78-59-1	Isophorone		1030	ug/kg	99.6	332
621-64-7	N-Nitrosodipropylamine		1060	ug/kg	99.6	332
91-20-3	Naphthalene		1070	ug/kg	9.96	33.2
98-95-3	Nitrobenzene		1180	ug/kg	99.6	332
87-86-5	Pentachlorophenol		1160	ug/kg	99.6	332
85-01-8	Phenanthrene		1020	ug/kg	9.96	33.2
108-95-2	Phenol		1080	ug/kg	99.6	332
129-00-0	Pyrene		901	ug/kg	9.96	33.2
108-60-1	bis(2-Chloro-1-methylethyl)ether		1160	ug/kg	99.6	332
111-91-1	bis(2-Chloroethoxy)methane		1050	ug/kg	99.6	332
111-44-4	bis(2-Chloroethyl) ether		1090	ug/kg	99.6	332
117-81-7	bis(2-Ethylhexyl)phthalate		1320	ug/kg	9.96	33.2
65794-96-9	m,p-Cresols		1240	ug/kg	99.6	332
99-09-2	m-Nitroaniline		964	ug/kg	99.6	332
95-48-7	o-Cresol		1140	ug/kg	99.6	332
88-74-4	o-Nitroaniline		1110	ug/kg	110	332
100-01-6	p-Nitroaniline		1080	ug/kg	99.6	332

Quantitation Report
GEL Laboratories, LLC

07/19/2018

07/19/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1816.D
Acq On : 18 Jul 2018 17:37
Operator : JLD1
InstName : MSD5
Sample : |1204071089|1783053|1|SVM|1|LCS|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 19 08:13:08 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	176092	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.540	7.540	1.000	601198	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.840	9.845	1.000	344876	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.717	11.716	1.000	689249	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.312	15.316	1.000	681510	40.00	ng/uL	0.00
87) A Perylene-d12	264	18.817	18.816	1.000	625643	40.00	ng/uL	0.00
95) B 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	176092	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.540	7.540	1.000	601198	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.840	9.845	1.000	344876	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.717	11.716	1.000	689249	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.312	15.316	1.000	681510	40.00	ng/uL	0.00
147) B Perylene-d12	264	18.817	18.816	1.000	625643	40.00	ng/uL	0.00
150) J Phenanthrene-d10	188	11.717	11.716	1.000	689249	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.312	15.316	1.000	681510	40.00	ng/uL	0.00
155) D Naphthalene-d8	136	7.540	7.540	1.000	601198	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.840	9.845	1.000	344876	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.717	11.716	1.000	689249	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.312	15.316	1.000	681510	40.00	ng/uL	0.00
169) E Naphthalene-d8	136	7.540	7.540	1.000	601198	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.817	18.816	1.000	625643	40.00	ng/uL	0.00
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.069	4.063	0.704	374921	60.96	ng/uL	0.00
7) Phenol-d5	99	5.236	5.227	0.906	498560	62.63	ng/uL	0.00
22) Nitrobenzene-d5	82	6.555	6.562	0.869	221858	34.26	ng/uL	0.00
43) 2-Fluorobiphenyl	172	8.969	8.979	0.911	403925	30.77	ng/uL	0.00
62) 2,4,6-Tribromophenol	330	10.840	10.834	1.102	140973	68.37	ng/uL	0.00
79) p-Terphenyl-d14	244	13.693	13.674	0.894	595940	31.40	ng/uL	0.02

Compound	Amount	Range	Recovery
5) 2-Fluorophenol	100.000	36 - 104	61%
7) Phenol-d5	100.000	39 - 106	63%
22) Nitrobenzene-d5	50.000	34 - 109	69%
43) 2-Fluorobiphenyl	50.000	35 - 107	62%
62) 2,4,6-Tribromophenol	100.000	39 - 115	68%
79) p-Terphenyl-d14	50.000	45 - 119	63%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
3) N-Methyl-N-nitrosometh...	74	2.674	2.669	0.463	125377	27.67	ng/uL	96
4) Pyridine	79	2.731	2.711	0.473	148464	19.49	ng/uL	99
6) Aniline	93	5.321	5.326	0.921	257530	26.35	ng/uL	99
8) Phenol	94	5.255	5.246	0.909	251789	32.65	ng/uL	93
9) bis(2-Chloroethyl) ether	93	5.402	5.401	0.935	203710	32.97	ng/uL	99
10) 2-Chlorophenol	128	5.483	5.481	0.949	208208	34.23	ng/uL	98
11) n-Decane	43	5.531	5.533	0.957	186251	25.84	ng/uL	98
12) 1,3-Dichlorobenzene	146	5.697	5.703	0.986	196085	29.37	ng/uL	99
13) 1,4-Dichlorobenzene	146	5.802	5.802	1.004	191050	30.39	ng/uL	99
14) 1,2-Dichlorobenzene	146	6.012	6.014	1.040	191371	31.30	ng/uL	99
15) bis(2-Chloro-1-methyle...	45	6.155	6.150	1.065	370461	34.91	ng/uL	99
16) Benzyl alcohol	108	5.964	5.957	1.032	139964	33.83	ng/uL	98
17) o-Cresol	107	6.107	6.089	1.057	163614	34.37	ng/uL	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1816.D
Acq On : 18 Jul 2018 17:37
Operator : JLD1
InstName : MSD5
Sample : |1204071089|1783053|1|SVM|1|LCS|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 19 08:13:08 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
18)	m,p-Cresols	107	6.321	6.315	1.094	239061	37.25	ng/uL#	54
19)	N-Nitrosodipropylamine	70	6.345	6.334	1.098	148921	31.88	ng/uL#	44
20)	Hexachloroethane	117	6.483	6.480	1.122	82160	32.09	ng/uL	99
23)	Nitrobenzene	77	6.583	6.590	0.873	224483	35.49	ng/uL	100
24)	Isophorone	82	6.912	6.916	0.917	397004	31.04	ng/uL	99
25)	2-Nitrophenol	139	7.012	7.020	0.930	111093	37.11	ng/uL	99
26)	2,4-Dimethylphenol	122	7.064	7.063	0.937	152715	29.31	ng/uL	98
27)	bis(2-Chloroethoxy)met...	93	7.207	7.209	0.956	233324	31.73	ng/uL	98
28)	2,4-Dichlorophenol	162	7.340	7.337	0.973	179256	34.58	ng/uL	100
29)	Benzoic acid	105	7.217	7.171	0.957	111779	39.76	ng/uL	92
30)	1,2,4-Trichlorobenzene	180	7.455	7.460	0.989	192306	32.77	ng/uL	99
31)	alpha-Terpineol	59	7.583	7.578	1.006	176002	32.82	ng/uL	100
32)	Naphthalene	128	7.569	7.573	1.004	486800	32.22	ng/uL	100
33)	4-Chloroaniline	127	7.640	7.635	1.013	166426	24.89	ng/uL	97
34)	Hexachlorobutadiene	225	7.726	7.729	1.025	125069	32.79	ng/uL	98
35)	4-Chloro-3-methylphenol	107	8.283	8.263	1.099	184113	35.23	ng/uL	98
36)	2-Methylnaphthalene	142	8.488	8.485	1.126	361452	30.54	ng/uL	99
37)	1-Methylnaphthalene	142	8.621	8.618	1.143	345608	32.10	ng/uL	100
39)	Hexachlorocyclopentadiene	237	8.693	8.699	0.883	92371	22.01	ng/uL	98
40)	2,3-Dichloroaniline	161	8.855	8.865	0.900	181591	29.63	ng/uL	99
41)	2,4,6-Trichlorophenol	196	8.855	8.860	0.900	135822	34.55	ng/uL	98
42)	2,4,5-Trichlorophenol	196	8.897	8.903	0.904	140443	33.65	ng/uL	99
44)	2-Chloronaphthalene	162	9.126	9.135	0.927	336217	29.46	ng/uL	95
45)	o-Nitroaniline	65	9.255	9.263	0.940	122276	33.39	ng/uL	98
47)	m-Nitroaniline	138	9.783	9.788	0.994	91502	29.03	ng/uL	97
48)	Dimethylphthalate	163	9.493	9.499	0.965	430031	32.84	ng/uL	100
50)	2,6-Dinitrotoluene	165	9.574	9.575	0.973	105802	34.28	ng/uL	98
51)	2,4-Dinitrotoluene	165	10.078	10.082	1.024	140062	34.04	ng/uL	91
52)	Acenaphthylene	152	9.659	9.670	0.982	547571	32.59	ng/uL	99
53)	Acenaphthene	154	9.883	9.888	1.004	324676	32.18	ng/uL	99
54)	2,4-Dinitrophenol	184	9.907	9.911	1.007	15359	19.25	ng/uL#	1
55)	Dibenzofuran	168	10.102	10.105	1.027	485862	31.72	ng/uL	98
56)	2,3,4,6-Tetrachlorophenol	232	10.250	10.252	1.042	120088	33.77	ng/uL	98
57)	Diethylphthalate	149	10.388	10.389	1.056	446607	33.93	ng/uL	100
58)	4-Nitrophenol	139	9.978	9.977	1.014	83214	37.29	ng/uL	97
59)	Fluorene	166	10.536	10.541	1.071	393795	31.04	ng/uL	99
60)	4-Chlorophenylphenylether	204	10.531	10.531	1.070	222581	31.78	ng/uL	98
61)	p-Nitroaniline	138	10.564	10.560	1.074	94718	32.47	ng/uL	98
64)	2-Methyl-4,6-dinitroph...	198	10.593	10.598	0.904	40679	22.59	ng/uL	95
65)	Diphenylamine	169	10.683	10.688	0.912	348001	30.11	ng/uL	98
66)	1,2-Diphenylhydrazine	77	10.736	10.741	0.916	433981	32.83	ng/uL	99
67)	4-Bromophenylphenylether	248	11.150	11.153	0.952	146621	30.97	ng/uL	98
68)	Hexachlorobenzene	284	11.221	11.228	0.958	148649	30.88	ng/uL	99
69)	Pentachlorophenol	266	11.464	11.465	0.978	87519	35.03	ng/uL	98
70)	n-Octadecane	57	11.555	11.555	0.986	328529	33.73	ng/uL	99
72)	Phenanthrene	178	11.745	11.749	1.002	560165	30.85	ng/uL	99
73)	Anthracene	178	11.812	11.811	1.008	590923	31.16	ng/uL	99
74)	Carbazole	167	12.007	12.005	1.025	586715	33.97	ng/uL	100
75)	Di-n-butylphthalate	149	12.426	12.422	1.061	779385	35.75	ng/uL	99
76)	Fluoranthene	202	13.226	13.223	1.129	772318	35.52	ng/uL	99
78)	Pyrene	202	13.512	13.494	0.882	757094	27.15	ng/uL	99
80)	Butylbenzylphthalate	149	14.350	14.337	0.937	385705	35.23	ng/uL	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1816.D
Acq On : 18 Jul 2018 17:37
Operator : JLD1
InstName : MSD5
Sample : |1204071089|1783053|1|SVM|1|LCS|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 19 08:13:08 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

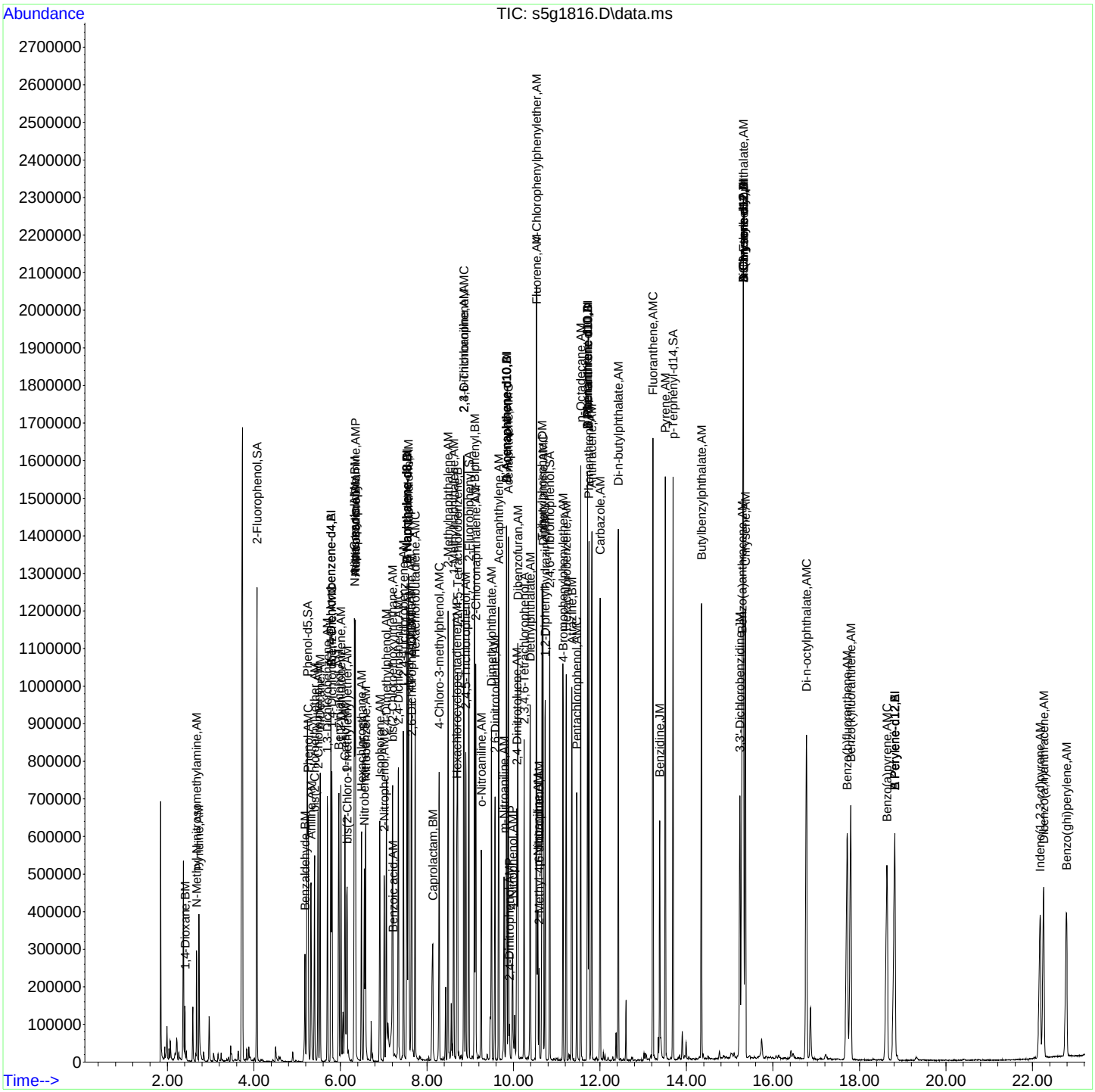
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
81)	bis(2-Ethylhexyl)phtha...	149	15.317	15.321	1.000	469388	39.65	ng/uL	99
82)	Benzo(a)anthracene	228	15.288	15.293	0.998	729441	32.46	ng/uL	98
83)	Chrysene	228	15.364	15.364	1.003	660429	33.50	ng/uL	99
86)	Di-n-octylphthalate	149	16.774	16.783	1.095	886765	42.15	ng/uL	97
88)	Benzo(b)fluoranthene	252	17.717	17.716	0.942	655108	31.94	ng/uL	99
89)	Benzo(k)fluoranthene	252	17.802	17.797	0.946	630408	32.46	ng/uL	100
90)	Benzo(a)pyrene	252	18.636	18.642	0.990	592026	31.81	ng/uL	100
91)	Indeno(1,2,3-cd)pyrene	276	22.179	22.140	1.179	416050	28.81	ng/uL	99
92)	Dibenzo(a,h)anthracene	278	22.260	22.211	1.183	406746	29.19	ng/uL	90
93)	Benzo(ghi)perylene	276	22.788	22.749	1.211	391616	27.39	ng/uL	98
96)	1,4-Dioxane	88	2.407	2.388	0.417	40147	17.84	ng/uL	94
105)	Benzaldehyde	77	5.178	5.189	0.896	68353	14.14	ng/uL	98
107)	N-Nitrosopyrrolidine	100	6.326	6.306	1.095	106607	35.19	ng/uL#	30
108)	Acetophenone	105	6.345	6.334	1.098	246641	34.09	ng/uL#	66
114)	2,6-Dichlorophenol	162	7.650	7.644	1.015	162414	39.99	ng/uL	100
116)	Caprolactam	113	8.136	8.103	1.079	66220	40.55	ng/uL	99
120)	1,2,4,5-Tetrachloroben...	216	8.707	8.713	0.885	197067	32.89	ng/uL	99
121)	1,1-Biphenyl	154	9.102	9.106	0.925	449279	37.17	ng/uL	99
134)	Atrazine	200	11.350	11.347	0.969	146599	38.44	ng/uL	99
151)	Benzidine	184	13.383	13.374	1.142	299008	26.97	ng/uL	99
154)	3,3'-Dichlorobenzidine	252	15.236	15.226	0.995	237373	30.86	ng/uL	99
159)	Tributylphosphate	99	10.659	10.669	1.083	545920	42.31	ng/uL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1816.D
Acq On : 18 Jul 2018 17:37
Operator : JLD1
InstName : MSD5
Sample : |1204071089|1783053|1|SVM|1|LCS|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 19 08:13:08 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204071090**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1783052**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonMS**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**10**
Run Date:	**07/18/2018 21:22**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.29 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1823.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl	U	3530	ug/kg	1060	3530
95-94-3	1,2,4,5-Tetrachlorobenzene	U	3530	ug/kg	1060	3530
58-90-2	2,3,4,6-Tetrachlorophenol	U	3530	ug/kg	1060	3530
95-95-4	2,4,5-Trichlorophenol	U	3530	ug/kg	1060	3530
88-06-2	2,4,6-Trichlorophenol	U	3530	ug/kg	1060	3530
120-83-2	2,4-Dichlorophenol	U	3530	ug/kg	1060	3530
105-67-9	2,4-Dimethylphenol	U	3530	ug/kg	1060	3530
51-28-5	2,4-Dinitrophenol	J	3840	ug/kg	1060	7070
121-14-2	2,4-Dinitrotoluene	U	3530	ug/kg	1060	3530
606-20-2	2,6-Dinitrotoluene	U	3530	ug/kg	1060	3530
91-58-7	2-Chloronaphthalene		746	ug/kg	106	353
95-57-8	2-Chlorophenol	U	3530	ug/kg	1060	3530
534-52-1	2-Methyl-4,6-dinitrophenol	J	2220	ug/kg	1060	3530
91-57-6	2-Methylnaphthalene		717	ug/kg	106	353
88-75-5	2-Nitrophenol	U	3530	ug/kg	1060	3530
91-94-1	3,3'-Dichlorobenzidine	U	3530	ug/kg	1060	3530
101-55-3	4-Bromophenylphenylether	U	3530	ug/kg	1060	3530
59-50-7	4-Chloro-3-methylphenol	U	3530	ug/kg	1410	3530
106-47-8	4-Chloroaniline	U	3530	ug/kg	1060	3530
7005-72-3	4-Chlorophenylphenylether	U	3530	ug/kg	1060	3530
100-02-7	4-Nitrophenol	U	3530	ug/kg	1060	3530
83-32-9	Acenaphthene		710	ug/kg	106	353
208-96-8	Acenaphthylene		813	ug/kg	106	353
98-86-2	Acetophenone	U	3530	ug/kg	1060	3530
120-12-7	Anthracene		788	ug/kg	106	353
1912-24-9	Atrazine	U	3530	ug/kg	1410	3530
100-52-7	Benzaldehyde	U	3530	ug/kg	1060	3530
56-55-3	Benzo(a)anthracene		961	ug/kg	106	353
50-32-8	Benzo(a)pyrene		873	ug/kg	106	353
205-99-2	Benzo(b)fluoranthene		1020	ug/kg	106	353
191-24-2	Benzo(ghi)perylene		611	ug/kg	106	353
207-08-9	Benzo(k)fluoranthene		855	ug/kg	106	353
85-68-7	Butylbenzylphthalate		816	ug/kg	106	353
105-60-2	Caprolactam	U	3530	ug/kg	1060	3530
86-74-8	Carbazole		806	ug/kg	106	353
218-01-9	Chrysene		968	ug/kg	106	353
84-74-2	Di-n-butylphthalate		898	ug/kg	106	353
117-84-0	Di-n-octylphthalate		975	ug/kg	106	353

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204071090**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1783052**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonMS**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**10**
Run Date:	**07/18/2018 21:22**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.29 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1823.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene		622	ug/kg	106	353
132-64-9	Dibenzofuran	U	3530	ug/kg	1060	3530
84-66-2	Diethylphthalate		816	ug/kg	106	353
131-11-3	Dimethylphthalate		770	ug/kg	106	353
122-39-4	Diphenylamine	U	3530	ug/kg	1060	3530
206-44-0	Fluoranthene		1260	ug/kg	106	353
86-73-7	Fluorene		788	ug/kg	106	353
118-74-1	Hexachlorobenzene	U	3530	ug/kg	1060	3530
87-68-3	Hexachlorobutadiene	U	3530	ug/kg	1060	3530
77-47-4	Hexachlorocyclopentadiene	U	3530	ug/kg	1060	3530
67-72-1	Hexachloroethane	U	3530	ug/kg	1060	3530
193-39-5	Indeno(1,2,3-cd)pyrene		643	ug/kg	106	353
78-59-1	Isophorone	U	3530	ug/kg	1060	3530
621-64-7	N-Nitrosodipropylamine	U	3530	ug/kg	1060	3530
91-20-3	Naphthalene		686	ug/kg	106	353
98-95-3	Nitrobenzene	U	3530	ug/kg	1060	3530
87-86-5	Pentachlorophenol	J	2040	ug/kg	1060	3530
85-01-8	Phenanthrene		908	ug/kg	106	353
108-95-2	Phenol	U	3530	ug/kg	1060	3530
129-00-0	Pyrene		1040	ug/kg	106	353
108-60-1	bis(2-Chloro-1-methylethyl)ether	U	3530	ug/kg	1060	3530
111-91-1	bis(2-Chloroethoxy)methane	U	3530	ug/kg	1060	3530
111-44-4	bis(2-Chloroethyl) ether	U	3530	ug/kg	1060	3530
117-81-7	bis(2-Ethylhexyl)phthalate		898	ug/kg	106	353
65794-96-9	m,p-Cresols	U	3530	ug/kg	1060	3530
99-09-2	m-Nitroaniline	U	3530	ug/kg	1060	3530
95-48-7	o-Cresol	U	3530	ug/kg	1060	3530
88-74-4	o-Nitroaniline	U	3530	ug/kg	1170	3530
100-01-6	p-Nitroaniline	U	3530	ug/kg	1060	3530

Quantitation Report
GEL Laboratories, LLC

07/19/2018

07/19/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1823.D
Acq On : 18 Jul 2018 21:22
Operator : JLD1
InstName : MSD5
Sample : |1204071090|1783053|10|SVM|1|MS|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 13 Sample Multiplier: 10

Quant Time: Jul 19 08:23:41 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) A 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	216620	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.535	7.540	1.000	741695	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.840	9.845	1.000	420412	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.712	11.716	1.000	788249	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.302	15.316	1.000	714499	40.00	ng/uL	-0.01
87) A Perylene-d12	264	18.797	18.816	1.000	501307	40.00	ng/uL	-0.02
95) B 1,4-Dichlorobenzene-d4	152	5.778	5.778	1.000	216620	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.535	7.540	1.000	741695	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.840	9.845	1.000	420412	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.712	11.716	1.000	788249	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.302	15.316	1.000	714499	40.00	ng/uL	-0.01
147) B Perylene-d12	264	18.797	18.816	1.000	501307	40.00	ng/uL	-0.02
150) J Phenanthrene-d10	188	11.712	11.716	1.000	788249	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.302	15.316	1.000	714499	40.00	ng/uL	-0.01
155) D Naphthalene-d8	136	7.535	7.540	1.000	741695	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.840	9.845	1.000	420412	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.712	11.716	1.000	788249	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.302	15.316	1.000	714499	40.00	ng/uL	-0.01
169) E Naphthalene-d8	136	7.535	7.540	1.000	741695	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.797	18.816	1.000	501307	40.00	ng/uL	-0.02
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.050	4.063	0.701	26429	34.93	ng/uL	-0.01
7) Phenol-d5	99	5.212	5.227	0.902	36642	37.42	ng/uL	-0.02
22) Nitrobenzene-d5	82	6.540	6.562	0.868	15918	19.92	ng/uL	-0.02
43) 2-Fluorobiphenyl	172	8.959	8.979	0.910	33214	20.76	ng/uL	-0.02
62) 2,4,6-Tribromophenol	330	10.826	10.834	1.100	8497	33.81	ng/uL	0.00
79) p-Terphenyl-d14	244	13.683	13.674	0.894	43330	21.78	ng/uL	0.00

Compound	Amount	Range	Recovery
5) 2-Fluorophenol	100.000	36 - 104	35%#
7) Phenol-d5	100.000	39 - 106	37%#
22) Nitrobenzene-d5	50.000	34 - 109	40%
43) 2-Fluorobiphenyl	50.000	35 - 107	42%
62) 2,4,6-Tribromophenol	100.000	39 - 115	34%#
79) p-Terphenyl-d14	50.000	45 - 119	44%#

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
3) N-Methyl-N-nitrosometh...	74	2.673	2.669	0.463	8786	1.58	ng/uL	95
29) Benzoic acid	105	7.093	7.171	0.941	2955	10.50	ng/uL	94
32) Naphthalene	128	7.559	7.573	1.003	36138	1.94	ng/uL	99
36) 2-Methylnaphthalene	142	8.483	8.485	1.126	29604	2.03	ng/uL	100
37) 1-Methylnaphthalene	142	8.612	8.618	1.143	28638	2.16	ng/uL	99
44) 2-Chloronaphthalene	162	9.121	9.135	0.927	29372	2.11	ng/uL	95
48) Dimethylphthalate	163	9.478	9.499	0.963	34877	2.18	ng/uL	98
52) Acenaphthylene	152	9.655	9.670	0.981	47110	2.30	ng/uL	99
53) Acenaphthene	154	9.874	9.888	1.003	24745	2.01	ng/uL	97
54) 2,4-Dinitrophenol	184	9.902	9.911	1.006	590	10.86	ng/uL#	1
57) Diethylphthalate	149	10.374	10.389	1.054	37120	2.31	ng/uL	98
59) Fluorene	166	10.526	10.541	1.070	34556	2.23	ng/uL	98
64) 2-Methyl-4,6-dinitroph...	198	10.578	10.598	0.903	1791	6.27	ng/uL	95

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1823.D
Acq On : 18 Jul 2018 21:22
Operator : JLD1
InstName : MSD5
Sample : |1204071090|1783053|10|SVM|1|MS|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 13 Sample Multiplier: 10

Quant Time: Jul 19 08:23:41 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

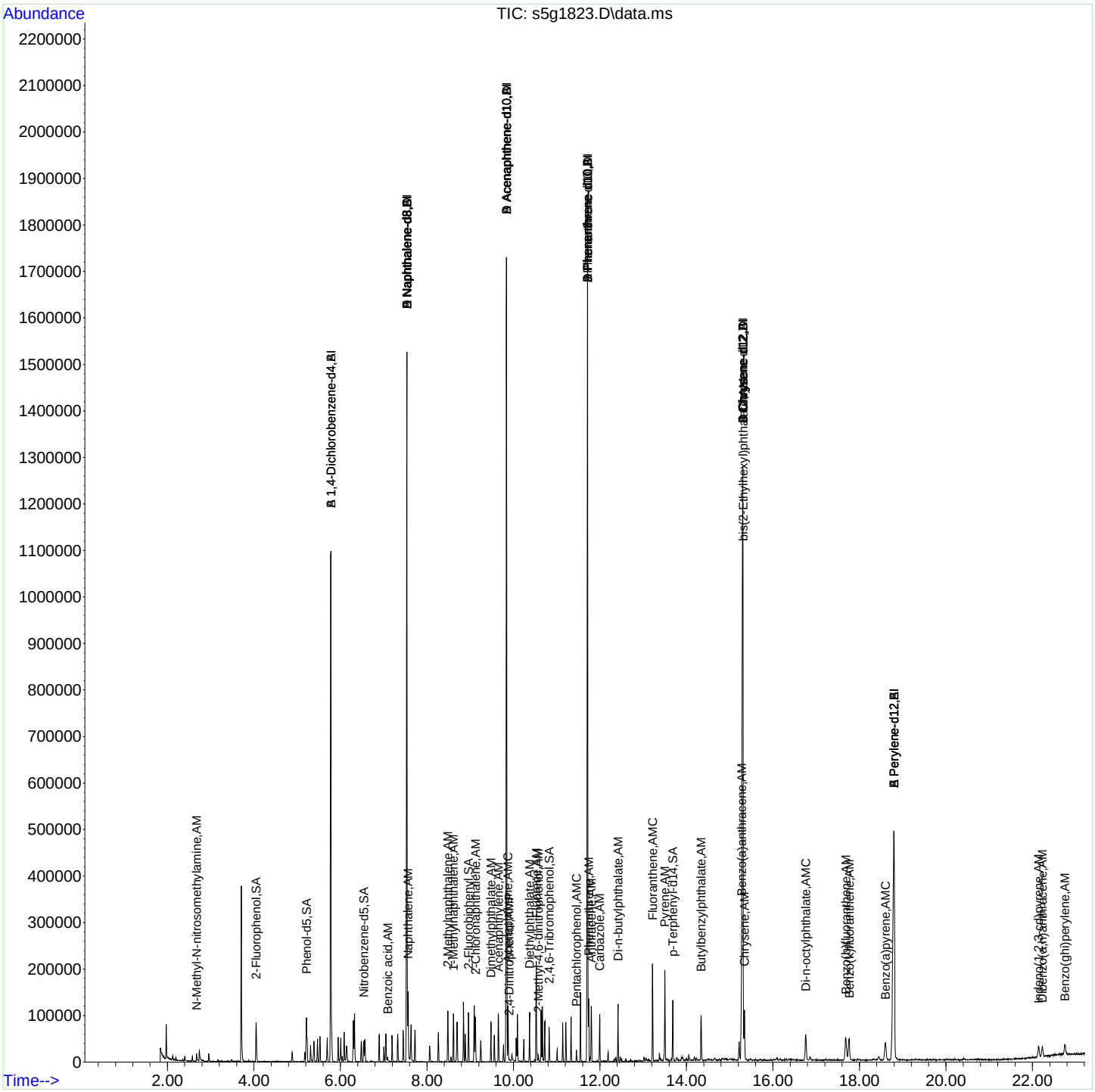
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
69) Pentachlorophenol	266	11.455	11.465	0.978	3288	5.76	ng/uL	91
72) Phenanthrene	178	11.740	11.749	1.002	53343	2.57	ng/uL	99
73) Anthracene	178	11.797	11.811	1.007	48402	2.23	ng/uL	99
74) Carbazole	167	11.993	12.005	1.024	44961	2.28	ng/uL	98
75) Di-n-butylphthalate	149	12.416	12.422	1.060	63361	2.54	ng/uL	99
76) Fluoranthene	202	13.216	13.223	1.128	88485	3.56	ng/uL	97
78) Pyrene	202	13.502	13.494	0.882	86356	2.95	ng/uL	99
80) Butylbenzylphthalate	149	14.340	14.337	0.937	26531	2.31	ng/uL	99
81) bis(2-Ethylhexyl)phtha...	149	15.307	15.321	1.000	31489	2.54	ng/uL	99
82) Benzo(a)anthracene	228	15.274	15.293	0.998	64095	2.72	ng/uL	97
83) Chrysene	228	15.340	15.364	1.002	56558	2.74	ng/uL	98
86) Di-n-octylphthalate	149	16.759	16.783	1.095	52989	2.76	ng/uL	97
88) Benzo(b)fluoranthene	252	17.683	17.716	0.941	47347	2.88	ng/uL	99
89) Benzo(k)fluoranthene	252	17.764	17.797	0.945	37625	2.42	ng/uL	92
90) Benzo(a)pyrene	252	18.602	18.642	0.990	36806	2.47	ng/uL	99
91) Indeno(1,2,3-cd)pyrene	276	22.140	22.140	1.178	21034	1.82	ng/uL	97
92) Dibenzo(a,h)anthracene	278	22.226	22.211	1.182	19635	1.76	ng/uL	72
93) Benzo(ghi)perylene	276	22.750	22.749	1.210	19838	1.73	ng/uL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1823.D
Acq On : 18 Jul 2018 21:22
Operator : JLD1
InstName : MSD5
Sample : |1204071090|1783053|10|SVM|1|MS|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 13 Sample Multiplier: 10

Quant Time: Jul 19 08:23:41 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204071091**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1783052**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonMSD**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**10**
Run Date:	**07/18/2018 21:52**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.09 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1824.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
92-52-4	1,1'-Biphenyl	J	1370	ug/kg	1070	3560
95-94-3	1,2,4,5-Tetrachlorobenzene	J	1210	ug/kg	1070	3560
58-90-2	2,3,4,6-Tetrachlorophenol	J	1170	ug/kg	1070	3560
95-95-4	2,4,5-Trichlorophenol	J	1260	ug/kg	1070	3560
88-06-2	2,4,6-Trichlorophenol	J	1240	ug/kg	1070	3560
120-83-2	2,4-Dichlorophenol	J	1120	ug/kg	1070	3560
105-67-9	2,4-Dimethylphenol	U	3560	ug/kg	1070	3560
51-28-5	2,4-Dinitrophenol	J	4060	ug/kg	1070	7110
121-14-2	2,4-Dinitrotoluene	J	1170	ug/kg	1070	3560
606-20-2	2,6-Dinitrotoluene	J	1170	ug/kg	1070	3560
91-58-7	2-Chloronaphthalene		1120	ug/kg	107	356
95-57-8	2-Chlorophenol	J	1100	ug/kg	1070	3560
534-52-1	2-Methyl-4,6-dinitrophenol	J	2620	ug/kg	1070	3560
91-57-6	2-Methylnaphthalene		1060	ug/kg	107	356
88-75-5	2-Nitrophenol	U	3560	ug/kg	1070	3560
91-94-1	3,3'-Dichlorobenzidine	U	3560	ug/kg	1070	3560
101-55-3	4-Bromophenylphenylether	J	1220	ug/kg	1070	3560
59-50-7	4-Chloro-3-methylphenol	U	3560	ug/kg	1420	3560
106-47-8	4-Chloroaniline	U	3560	ug/kg	1070	3560
7005-72-3	4-Chlorophenylphenylether	J	1240	ug/kg	1070	3560
100-02-7	4-Nitrophenol	J	1120	ug/kg	1070	3560
83-32-9	Acenaphthene		1080	ug/kg	107	356
208-96-8	Acenaphthylene		1250	ug/kg	107	356
98-86-2	Acetophenone	J	1140	ug/kg	1070	3560
120-12-7	Anthracene		1330	ug/kg	107	356
1912-24-9	Atrazine	J	1640	ug/kg	1420	3560
100-52-7	Benzaldehyde	U	3560	ug/kg	1070	3560
56-55-3	Benzo(a)anthracene		1470	ug/kg	107	356
50-32-8	Benzo(a)pyrene		1320	ug/kg	107	356
205-99-2	Benzo(b)fluoranthene		1450	ug/kg	107	356
191-24-2	Benzo(ghi)perylene		943	ug/kg	107	356
207-08-9	Benzo(k)fluoranthene		1410	ug/kg	107	356
85-68-7	Butylbenzylphthalate		1440	ug/kg	107	356
105-60-2	Caprolactam	J	1260	ug/kg	1070	3560
86-74-8	Carbazole		1430	ug/kg	107	356
218-01-9	Chrysene		1430	ug/kg	107	356
84-74-2	Di-n-butylphthalate		1590	ug/kg	107	356
117-84-0	Di-n-octylphthalate		1670	ug/kg	107	356

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454715**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204071091**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1783052**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonMSD**	**Method:**	**SW846 3541/8270D**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**1783053**	**Inst:**	**MSD5.I**	**Dilution:**	**10**
Run Date:	**07/18/2018 21:52**	**Analyst:**	**JLD1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/18/2018 10:12**	**Aliquot:**	**30.09 g**	**Final Volume:**	**1 mL**
Data File:	**s071818a.B\s5g1824.D**	**Column:**	**DB-5ms**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
53-70-3	Dibenzo(a,h)anthracene		950	ug/kg	107	356
132-64-9	Dibenzofuran	J	1220	ug/kg	1070	3560
84-66-2	Diethylphthalate		1320	ug/kg	107	356
131-11-3	Dimethylphthalate		1250	ug/kg	107	356
122-39-4	Diphenylamine	J	1330	ug/kg	1070	3560
206-44-0	Fluoranthene		1850	ug/kg	107	356
86-73-7	Fluorene		1270	ug/kg	107	356
118-74-1	Hexachlorobenzene	J	1270	ug/kg	1070	3560
87-68-3	Hexachlorobutadiene	U	3560	ug/kg	1070	3560
77-47-4	Hexachlorocyclopentadiene	U	3560	ug/kg	1070	3560
67-72-1	Hexachloroethane	U	3560	ug/kg	1070	3560
193-39-5	Indeno(1,2,3-cd)pyrene		1010	ug/kg	107	356
78-59-1	Isophorone	U	3560	ug/kg	1070	3560
621-64-7	N-Nitrosodipropylamine	J	1120	ug/kg	1070	3560
91-20-3	Naphthalene		1020	ug/kg	107	356
98-95-3	Nitrobenzene	J	1160	ug/kg	1070	3560
87-86-5	Pentachlorophenol	J	2610	ug/kg	1070	3560
85-01-8	Phenanthrene		1450	ug/kg	107	356
108-95-2	Phenol	J	1100	ug/kg	1070	3560
129-00-0	Pyrene		1490	ug/kg	107	356
108-60-1	bis(2-Chloro-1-methylethyl)ether	J	1120	ug/kg	1070	3560
111-91-1	bis(2-Chloroethoxy)methane	U	3560	ug/kg	1070	3560
111-44-4	bis(2-Chloroethyl) ether	U	3560	ug/kg	1070	3560
117-81-7	bis(2-Ethylhexyl)phthalate		1590	ug/kg	107	356
65794-96-9	m,p-Cresols	J	1210	ug/kg	1070	3560
99-09-2	m-Nitroaniline	J	1120	ug/kg	1070	3560
95-48-7	o-Cresol	J	1100	ug/kg	1070	3560
88-74-4	o-Nitroaniline	U	3560	ug/kg	1170	3560
100-01-6	p-Nitroaniline	J	1220	ug/kg	1070	3560

Quantitation Report
GEL Laboratories, LLC

07/19/2018

07/19/2018

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1824.D
Acq On : 18 Jul 2018 21:52
Operator : JLD1
InstName : MSD5
Sample : |1204071091|1783053|10|SVM|1|MSD|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 14 Sample Multiplier: 10

Quant Time: Jul 19 08:23:59 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
Internal Standards								Dev(Min)
1) A 1,4-Dichlorobenzene-d4	152	5.773	5.778	1.000	221891	40.00	ng/uL	0.00
21) A Naphthalene-d8	136	7.535	7.540	1.000	756004	40.00	ng/uL	0.00
38) A Acenaphthene-d10	164	9.840	9.845	1.000	425841	40.00	ng/uL	0.00
63) A Phenanthrene-d10	188	11.711	11.716	1.000	807000	40.00	ng/uL	0.00
77) A Chrysene-d12	240	15.302	15.316	1.000	767773	40.00	ng/uL	-0.01
87) A Perylene-d12	264	18.802	18.816	1.000	564996	40.00	ng/uL	-0.01
95) B 1,4-Dichlorobenzene-d4	152	5.773	5.778	1.000	221891	40.00	ng/uL	0.00
111) B Naphthalene-d8	136	7.535	7.540	1.000	756004	40.00	ng/uL	0.00
119) B Acenaphthene-d10	164	9.840	9.845	1.000	425841	40.00	ng/uL	0.00
128) B Phenanthrene-d10	188	11.711	11.716	1.000	807000	40.00	ng/uL	0.00
141) B Chrysene-d12	240	15.302	15.316	1.000	767773	40.00	ng/uL	-0.01
147) B Perylene-d12	264	18.802	18.816	1.000	564996	40.00	ng/uL	-0.01
150) J Phenanthrene-d10	188	11.711	11.716	1.000	807000	40.00	ng/uL	0.00
152) J Chrysene-d12	240	15.302	15.316	1.000	767773	40.00	ng/uL	-0.01
155) D Naphthalene-d8	136	7.535	7.540	1.000	756004	40.00	ng/uL	0.00
157) D Acenaphthene-d10	164	9.840	9.845	1.000	425841	40.00	ng/uL	0.00
160) D Phenanthrene-d10	188	11.711	11.716	1.000	807000	40.00	ng/uL	0.00
167) D Chrysene-d12	240	15.302	15.316	1.000	767773	40.00	ng/uL	-0.01
169) E Naphthalene-d8	136	7.535	7.540	1.000	756004	40.00	ng/uL	0.00
171) E Perylene-d12	264	18.802	18.816	1.000	564996	40.00	ng/uL	-0.01
System Monitoring Compounds								Dev(Min)
5) 2-Fluorophenol	112	4.049	4.063	0.701	39785	51.33	ng/uL	-0.01
7) Phenol-d5	99	5.211	5.227	0.903	55110	54.94	ng/uL	-0.02
22) Nitrobenzene-d5	82	6.540	6.562	0.868	22783	27.97	ng/uL	-0.02
43) 2-Fluorobiphenyl	172	8.964	8.979	0.911	48642	30.01	ng/uL	-0.01
62) 2,4,6-Tribromophenol	330	10.826	10.834	1.100	15465	60.74	ng/uL	0.00
79) p-Terphenyl-d14	244	13.683	13.674	0.894	78458	36.70	ng/uL	0.00

Compound	Amount	Range	Recovery
5) 2-Fluorophenol	100.000	36 - 104	51%
7) Phenol-d5	100.000	39 - 106	55%
22) Nitrobenzene-d5	50.000	34 - 109	56%
43) 2-Fluorobiphenyl	50.000	35 - 107	60%
62) 2,4,6-Tribromophenol	100.000	39 - 115	61%
79) p-Terphenyl-d14	50.000	45 - 119	73%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
3) N-Methyl-N-nitrosometh...	74	2.673	2.669	0.463	12969	2.27	ng/uL	98
8) Phenol	94	5.230	5.246	0.906	30038	3.09	ng/uL	95
10) 2-Chlorophenol	128	5.468	5.481	0.947	23782	3.10	ng/uL	99
15) bis(2-Chloro-1-methyle...	45	6.145	6.150	1.064	42152	3.15	ng/uL	98
17) o-Cresol	107	6.088	6.089	1.054	18541	3.09	ng/uL	99
18) m,p-Cresols	107	6.302	6.315	1.092	27409	3.39	ng/uL	91
19) N-Nitrosodipropylamine	70	6.321	6.334	1.095	18569	3.15	ng/uL	98
23) Nitrobenzene	77	6.569	6.590	0.872	25879	3.25	ng/uL	97
28) 2,4-Dichlorophenol	162	7.326	7.337	0.972	20509	3.15	ng/uL	99
29) Benzoic acid	105	7.107	7.171	0.943	11311	12.27	ng/uL	93
32) Naphthalene	128	7.564	7.573	1.004	54764	2.88	ng/uL	100
36) 2-Methylnaphthalene	142	8.483	8.485	1.126	44437	2.99	ng/uL	98
37) 1-Methylnaphthalene	142	8.611	8.618	1.143	43041	3.18	ng/uL	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1824.D
Acq On : 18 Jul 2018 21:52
Operator : JLD1
InstName : MSD5
Sample : |1204071091|1783053|10|SVM|1|MSD|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 14 Sample Multiplier: 10

Quant Time: Jul 19 08:23:59 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
40)	2,3-Dichloroaniline	161	8.849	8.865	0.899	24869	3.29	ng/uL	99
41)	2,4,6-Trichlorophenol	196	8.845	8.860	0.899	16918	3.49	ng/uL	92
42)	2,4,5-Trichlorophenol	196	8.888	8.903	0.903	18168	3.53	ng/uL	98
44)	2-Chloronaphthalene	162	9.121	9.135	0.927	44224	3.14	ng/uL	97
47)	m-Nitroaniline	138	9.769	9.788	0.993	12304	3.16	ng/uL	99
48)	Dimethylphthalate	163	9.483	9.499	0.964	56547	3.50	ng/uL	99
50)	2,6-Dinitrotoluene	165	9.559	9.575	0.971	12566	3.30	ng/uL	98
51)	2,4-Dinitrotoluene	165	10.069	10.082	1.023	16676	3.28	ng/uL	87
52)	Acenaphthylene	152	9.654	9.670	0.981	72739	3.51	ng/uL	99
53)	Acenaphthene	154	9.873	9.888	1.003	37946	3.05	ng/uL	96
54)	2,4-Dinitrophenol	184	9.902	9.911	1.006	1834	11.42	ng/uL	89
55)	Dibenzofuran	168	10.092	10.105	1.026	65050	3.44	ng/uL	100
56)	2,3,4,6-Tetrachlorophenol	232	10.240	10.252	1.041	14456	3.29	ng/uL	95
57)	Diethylphthalate	149	10.373	10.389	1.054	60244	3.71	ng/uL	98
58)	4-Nitrophenol	139	9.964	9.977	1.013	8657	3.14	ng/uL	97
59)	Fluorene	166	10.526	10.541	1.070	55693	3.56	ng/uL	100
60)	4-Chlorophenylphenylether	204	10.526	10.531	1.070	30208	3.49	ng/uL	97
61)	p-Nitroaniline	138	10.540	10.560	1.071	12380	3.44	ng/uL	96
64)	2-Methyl-4,6-dinitroph...	198	10.578	10.598	0.903	4881	7.36	ng/uL	93
65)	Diphenylamine	169	10.669	10.688	0.911	50607	3.74	ng/uL	99
66)	1,2-Diphenylhydrazine	77	10.726	10.741	0.916	60872	3.93	ng/uL	97
67)	4-Bromophenylphenylether	248	11.140	11.153	0.951	18947	3.42	ng/uL	98
68)	Hexachlorobenzene	284	11.211	11.228	0.957	20199	3.58	ng/uL	97
69)	Pentachlorophenol	266	11.459	11.465	0.978	8747	7.35	ng/uL	95
70)	n-Octadecane	57	11.550	11.555	0.986	50353	4.42	ng/uL	98
72)	Phenanthrene	178	11.740	11.749	1.002	86620	4.07	ng/uL	98
73)	Anthracene	178	11.802	11.811	1.008	83376	3.75	ng/uL	99
74)	Carbazole	167	11.992	12.005	1.024	81420	4.03	ng/uL	99
75)	Di-n-butylphthalate	149	12.416	12.422	1.060	114126	4.47	ng/uL	99
76)	Fluoranthene	202	13.216	13.223	1.128	132469	5.20	ng/uL	98
78)	Pyrene	202	13.502	13.494	0.882	131220	4.18	ng/uL	99
80)	Butylbenzylphthalate	149	14.340	14.337	0.937	50047	4.06	ng/uL	98
81)	bis(2-Ethylhexyl)phtha...	149	15.307	15.321	1.000	59606	4.47	ng/uL	100
82)	Benzo(a)anthracene	228	15.273	15.293	0.998	104242	4.12	ng/uL	99
83)	Chrysene	228	15.340	15.364	1.002	89071	4.01	ng/uL	98
86)	Di-n-octylphthalate	149	16.759	16.783	1.095	103242	4.70	ng/uL	97
88)	Benzo(b)fluoranthene	252	17.683	17.716	0.940	75761	4.09	ng/uL	98
89)	Benzo(k)fluoranthene	252	17.759	17.797	0.945	69216	3.95	ng/uL	99
90)	Benzo(a)pyrene	252	18.607	18.642	0.990	62435	3.71	ng/uL	98
91)	Indeno(1,2,3-cd)pyrene	276	22.145	22.140	1.178	36864	2.83	ng/uL	97
92)	Dibenzo(a,h)anthracene	278	22.226	22.211	1.182	33590	2.67	ng/uL	97
93)	Benzo(ghi)perylene	276	22.754	22.749	1.210	34192	2.65	ng/uL	99
107)	N-Nitrosopyrrolidine	100	6.292	6.306	1.090	11833	3.10	ng/uL	100
108)	Acetophenone	105	6.326	6.334	1.096	29258	3.21	ng/uL	99
114)	2,6-Dichlorophenol	162	7.635	7.644	1.013	18380	3.60	ng/uL	98
116)	Caprolactam	113	8.069	8.103	1.071	7285	3.55	ng/uL	96
120)	1,2,4,5-Tetrachloroben...	216	8.697	8.713	0.884	25153	3.40	ng/uL	99
121)	1,1-Biphenyl	154	9.092	9.106	0.924	57584	3.86	ng/uL	98
134)	Atrazine	200	11.335	11.347	0.968	20563	4.61	ng/uL	96
159)	Tributylphosphate	99	10.640	10.669	1.081	79079	4.96	ng/uL	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1824.D
Acq On : 18 Jul 2018 21:52
Operator : JLD1
InstName : MSD5
Sample : |1204071091|1783053|10|SVM|1|MSD|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 14 Sample Multiplier: 10

Quant Time: Jul 19 08:23:59 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE

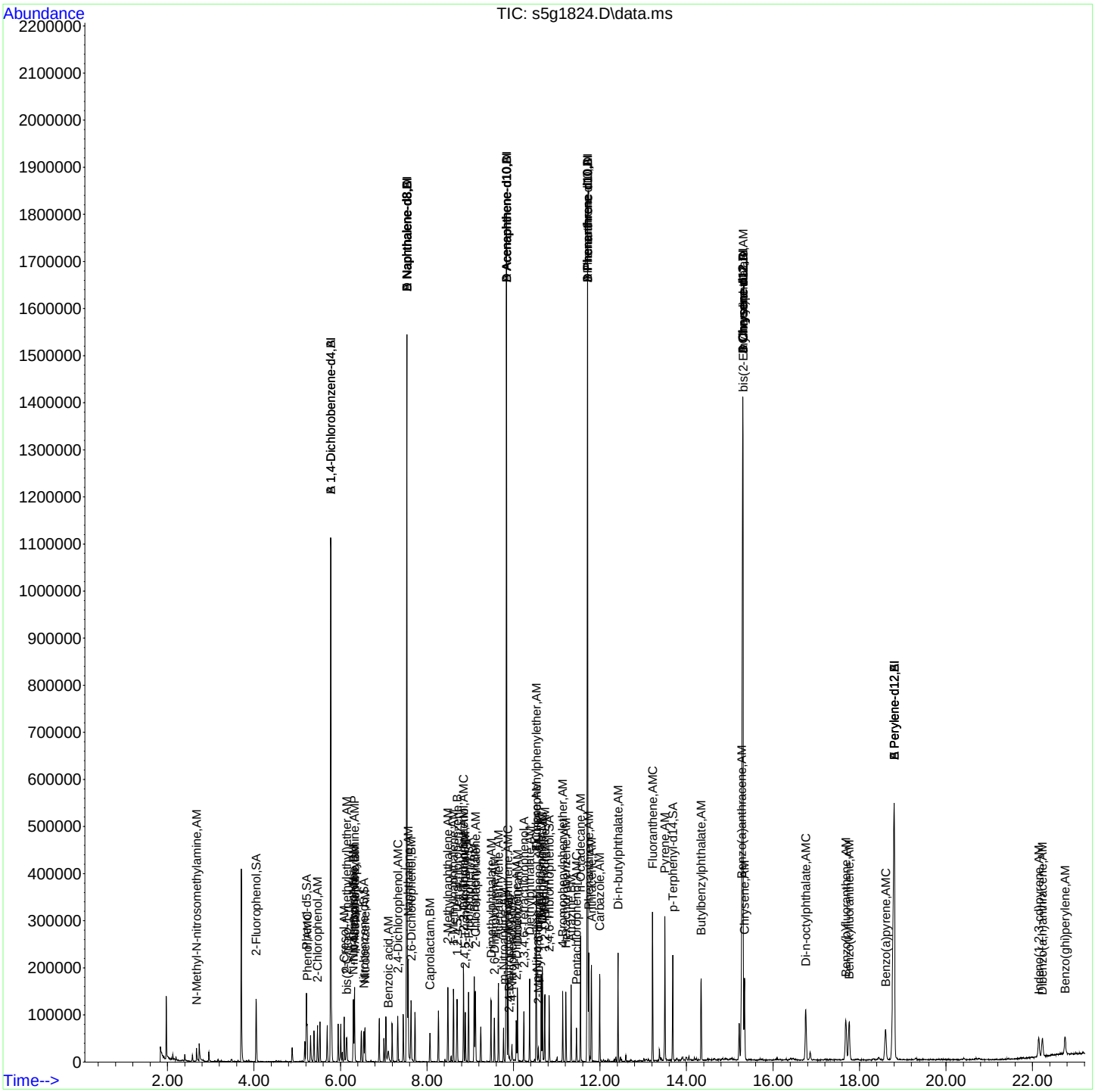
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\s071818a.B\
Data File : s5g1824.D
Acq On : 18 Jul 2018 21:52
Operator : JLD1
InstName : MSD5
Sample : |1204071091|1783053|10|SVM|1|MSD|||
Misc : |MSD827D4_S|SOIL|QC A|MIX[A,B,J,D]||
ALS Vial : 14 Sample Multiplier: 10

Quant Time: Jul 19 08:23:59 2018
Quant Method : C:\msdchem\1\DATA\s071818a.B\MSD5_8270C_8270D_070918.m
Quant Title : BNA01 SubList :
QLast Update : Wed Jul 11 08:32:38 2018
Response via : Initial Calibration
Integrator: RTE



Miscellaneous

Prep Logbook

Automated Soxhlet Extraction

Batch ID: **1783052** **Verified by:** _____

Analyst: **Stacey Grant**

Method: **SW846 3541**

Lab SOP: **GL-OA-E-066 REV# 8**

Instrument: **Semi-Volatiles Manual**

Sample ID	Prep Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1204071088 MB	18-JUL-2018 10:12:00	30	1	0.03333
1204071089 LCS	18-JUL-2018 10:12:00	30.12	1	0.0332
454679001	18-JUL-2018 10:12:00	30.25	1	0.03306
454679002	18-JUL-2018 10:12:00	30.33	1	0.03297
454679003	18-JUL-2018 10:12:00	30.23	1	0.03308
454688003	18-JUL-2018 10:12:00	30.3	1	0.033
1204071090 MS (454688003)	18-JUL-2018 10:12:00	30.29	1	0.03301
1204071091 MSD (454688003)	18-JUL-2018 10:12:00	30.09	1	0.03323
454715001	18-JUL-2018 10:12:00	30.14	1	0.03318
454715002	18-JUL-2018 10:12:00	30.5	1	0.03279
454715003	18-JUL-2018 10:12:00	30.49	1	0.0328

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1204071089	BENZIDINE/Atrazine LCS	WE180611-49	1	mL
LCS	1204071089	BNA LCS w/o Benzidine/Atrazine 50ppm	WE180706-40	1	mL
MS	1204071090	BENZIDINE/Atrazine LCS	WE180611-49	1	mL
MS	1204071090	BNA LCS w/o Benzidine/Atrazine 50ppm	WE180706-40	1	mL
MSD	1204071091	BENZIDINE/Atrazine LCS	WE180611-49	1	mL
MSD	1204071091	BNA LCS w/o Benzidine/Atrazine 50ppm	WE180706-40	1	mL
SURR	All	BNA for all Surrogate	UE180526-12	1	mL
REGNT	All	Sand pure 40-100 mesh	180618-A	30	g
REGNT	All	Acetone	2800324-B4	60	mL
REGNT	All	Methylene Chloride	2811213	60	mL

Comments:

Soxtherm Unit:: 8A,9A
Final Solvent: Methylene Chloride
Start Time:: 10:35
End Time:: 11:45
Verified by: MD

ORGANIC RUN LOG - INSTRUMENT ID#MSD5

07/12/2018

GEL ORGANIC RUN LOG

DATE: 9-Jul-18 METHOD: See Data OPERATOR: JLD1 Sequence Number: S070918.B

Multiplier Voltage: 1894
Internal Std ID: UBN171221-01.3
Internal Std ID: WBN170612-99 (SIM)
Solvent Reference ID: 2766142

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
GEL SOP: GL-OA-E-009

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comments
07/09/2018	08:20	s5g0901.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	DUSE
07/09/2018	09:48	s5g0902.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	DUSE
07/09/2018	10:34	s5g0903.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	DUSE
07/09/2018	12:24	s5g0904.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	DUSE
07/09/2018	12:42	s5g0905.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	DUSE
07/09/2018	12:59	S5G0906.D	BENZIDINE			1	2	JLD1	DUSE
07/09/2018	13:23	S5G0907.D	BENZIDINE			1	2	JLD1	DUSE
07/09/2018	13:46	S5G0908.D	BENZIDINE			1	2	JLD1	DUSE
07/09/2018	14:11	s5g0909.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	DUSE
07/09/2018	14:42	S5G0910.D	BENZIDINE-10			1	99	JLD1	DUSE
07/09/2018	16:03	s5g0911.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	DUSE
07/09/2018	16:19	s5g0912.D	BLANK			1	2	JLD1	SCREEN
07/09/2018	16:49	s5g0913.D	BLANK			1	3	JLD1	BLANK
07/09/2018	17:19	s5g0914.D	WBN180620-08.1	M1	ICAL	1	4	JLD1	DUSE
07/09/2018	17:49	s5g0915.D	WBN180620-07	M2	ICAL	1	5	JLD1	DUSE
07/09/2018	18:27	s5g0916.D	WBN180620-06	M3	ICAL	1	6	JLD1	DUSE
07/09/2018	19:05	s5g0917.D	WBN180620-05.1	M4	ICAL	1	7	JLD1	DUSE
07/09/2018	19:43	s5g0918.D	WBN180620-04	M5	ICAL	1	8	JLD1	DUSE
07/09/2018	20:20	s5g0919.D	WBN180620-03	M6	ICAL	1	9	JLD1	DUSE
07/09/2018	20:58	s5g0920.D	WBN180620-02	M7	ICAL	1	10	JLD1	DUSE
07/09/2018	21:36	s5g0921.D	WBN180620-01	M8	ICAL	1	11	JLD1	DUSE
07/09/2018	22:14	s5g0922.D	WBN180517-09.1	MICV	ICV	1	12	JLD1	DUSE
07/09/2018	22:51	s5g0923.D	WBN180518-43	BZ2	ICAL	1	13	JLD1	USE
07/09/2018	23:21	s5g0924.D	WBN180518-44	BZ3	ICAL	1	14	JLD1	USE
07/09/2018	23:51	s5g0925.D	WBN180518-45.1	BZ4	ICAL	1	15	JLD1	USE
07/10/2018	00:21	s5g0926.D	WBN180518-46	BZ5	ICAL	1	16	JLD1	USE
07/10/2018	00:51	s5g0927.D	WBN180518-47	BZ6	ICAL	1	17	JLD1	USE
07/10/2018	01:22	s5g0928.D	WBN180518-48	BZ7	ICAL	1	18	JLD1	DUSE; **INJECTION ERROR**
07/10/2018	01:52	s5g0929.D	WBN180518-49	BZ8	ICAL	1	19	JLD1	USE
07/10/2018	02:22	s5g0930.D	WBN180518-50.4	BZICV	ICV	1	20	JLD1	USE
07/10/2018	09:48	s5g0931.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	USE
07/10/2018	10:05	s5g0932.D	BLANK			1	2	JLD1	BLANK

ORGANIC RUN LOG - INSTRUMENT ID#MSD5

GEL ORGANIC RUN LOG

07/10/2018 10:36	s5g0933.D	WBN180620-08.1	M1	ICAL	1	3	JLD1	USE
07/10/2018 11:06	s5g0934.D	WBN180620-07.1	M2	ICAL	1	4	JLD1	USE
07/10/2018 11:44	s5g0935.D	WBN180620-06.1	M3	ICAL	1	5	JLD1	USE
07/10/2018 12:19	s5g0936.D	WBN180620-05.1	M4	ICAL	1	6	JLD1	USE
07/10/2018 12:57	s5g0937.D	WBN180620-04	M5	ICAL	1	7	JLD1	DUSE
07/10/2018 13:35	s5g0938.D	WBN180620-03	M6	ICAL	1	8	JLD1	USE
07/10/2018 14:13	s5g0939.D	WBN180620-02	M7	ICAL	1	9	JLD1	USE
07/10/2018 14:50	s5g0940.D	WBN180620-01	M8	ICAL	1	10	JLD1	USE
07/10/2018 15:25	s5g0941.D	WBN180517-09.1	MICV	ICV	1	11	JLD1	DUSE
07/10/2018 16:34	s5g0942.D	WBN180620-04	M5	ICAL	1	7	JLD1	USE
07/10/2018 17:12	s5g0943.D	WBN180620-01	M8	ICAL	1	10	JLD1	DUSE
07/10/2018 17:49	s5g0944.D	WBN180517-09.1	MICV	ICV	1	11	JLD1	USE
07/10/2018 18:27	s5g0945.D	WBN180419-25	P2	ICAL	1	12	JLD1	USE
07/10/2018 18:58	s5g0946.D	WBN180419-24	P3	ICAL	1	13	JLD1	USE
07/10/2018 19:28	s5g0947.D	WBN180419-23.1	P4	ICAL	1	14	JLD1	USE
07/10/2018 19:58	s5g0948.D	WBN180419-22	P5	ICAL	1	15	JLD1	USE
07/10/2018 20:28	s5g0949.D	WBN180419-21	P6	ICAL	1	16	JLD1	USE
07/10/2018 20:58	s5g0950.D	WBN180419-20	P7	ICAL	1	17	JLD1	USE
07/10/2018 21:29	s5g0951.D	WBN180419-19	P8	ICAL	1	18	JLD1	USE
07/10/2018 21:59	s5g0952.D	WBN180705-26	PICV	ICV	1	19	JLD1	USE
07/10/2018 22:28	s5g0953.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	USE
07/10/2018 22:45	s5g0954.D	BLANK			1	2	JLD1	BLANK
07/10/2018 23:16	s5g0955.D	WBN180709-17	A2	ICAL	1	20	JLD1	USE
07/10/2018 23:46	s5g0956.D	WBN180709-16	A3	ICAL	1	21	JLD1	USE
07/11/2018 00:16	s5g0957.D	WBN180709-18	A9	ICAL	1	22	JLD1	USE
07/11/2018 00:46	s5g0958.D	WBN180709-15.2	A4	ICAL	1	23	JLD1	USE
07/11/2018 01:16	s5g0959.D	WBN180709-14	A5	ICAL	1	24	JLD1	USE
07/11/2018 01:47	s5g0960.D	WBN180709-19	A10	ICAL	1	25	JLD1	USE
07/11/2018 02:17	s5g0961.D	WBN180709-13	A6	ICAL	1	26	JLD1	USE
07/11/2018 02:47	s5g0962.D	WBN180709-12	A7	ICAL	1	27	JLD1	USE
07/11/2018 03:17	s5g0963.D	WBN180709-11	A8	ICAL	1	28	JLD1	USE
07/11/2018 03:48	s5g0964.D	WBN180517-19	AICV	ICV	1	29	JLD1	USE
07/11/2018 04:18	s5g0965.D	WBN180710-31	H2	ICAL	1	30	JLD1	USE
07/11/2018 04:48	s5g0966.D	WBN180710-32	H3	ICAL	1	31	JLD1	USE
07/11/2018 05:18	s5g0967.D	WBN180710-33.1	H4	ICAL	1	32	JLD1	USE
07/11/2018 05:49	s5g0968.D	WBN180710-34	H5	ICAL	1	33	JLD1	USE
07/11/2018 06:19	s5g0969.D	WBN180710-35	H6	ICAL	1	34	JLD1	USE
07/11/2018 06:49	s5g0970.D	WBN180710-36	H7	ICAL	1	35	JLD1	USE
07/11/2018 07:19	s5g0971.D	WBN180710-31	H2	ICAL	1	30	JLD1	DUSE
07/11/2018 07:50	s5g0972.D	WBN180710-32	H3	ICAL	1	31	JLD1	DUSE
07/11/2018 08:20	s5g0973.D	WBN180710-33.1	H4	ICAL	1	32	JLD1	DUSE

ORGANIC RUN LOG - INSTRUMENT ID#MSD5

GEL ORGANIC RUN LOG

07/11/2018 08:50	s5g0974.D	WBN180710-33.2	HCCV	CCV	1	36	JLD1	USE

ORGANIC RUN LOG - INSTRUMENT ID#MSD5

07/20/2018

GEL ORGANIC RUN LOG

DATE: 18-Jul-18 METHOD: See Data OPERATOR: JLD1 Sequence Number: S071818A.B

Multiplier Voltage: 1871
Internal Std ID: UBN171221-01.3
Internal Std ID: WBN170612-99 (SIM)
Solvent Reference ID: 2766142

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
GEL SOP: GL-OA-E-009

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comments
07/18/2018	14:13	s5g1809.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	USE
07/18/2018	14:29	s5g1810.D	WBN180620-05.2	MCCV	CCV	1	2	JLD1	USE; 158063
07/18/2018	15:07	s5g1811.D	WBN180712-23.3	PCCV	CCV	1	5	JLD1	USE (ISTD HIGH)
07/18/2018	15:37	s5g1812.D	WBN180712-45.3	BCCV	CCV	1	3	JLD1	USE
07/18/2018	16:07	s5g1813.D	WBN180709-15.3	ACCV	CCV	1	4	JLD1	USE
07/18/2018	16:37	s5g1814.D	WBN180710-33.2	HCCV	CCV	1	6	JLD1	USE
07/18/2018	17:07	s5g1815.D	1204071088	MB	1783053	1	7	JLD1	USE
07/18/2018	17:37	s5g1816.D	1204071089	LCS	1783053	1	8	JLD1	USE
07/18/2018	18:07	s5g1817.D	1204071084	MB	1783048	1	18	JLD1	USE
07/18/2018	18:45	s5g1818.D	1204071085	LCS	1783048	1	19	JLD1	USE
07/18/2018	19:22	s5g1819.D	454679001	OLAB	1783053	5	9	JLD1	USE
07/18/2018	19:53	s5g1820.D	454679002	OLAB	1783053	1	10	JLD1	USE
07/18/2018	20:23	s5g1821.D	454679003	OLAB	1783053	5	11	JLD1	USE
07/18/2018	20:53	s5g1822.D	454688003	DMAX	1783053	10	12	JLD1	USE
07/18/2018	21:22	s5g1823.D	1204071090	MS	1783053	10	13	JLD1	USE; 3 SURR LOW
07/18/2018	21:52	s5g1824.D	1204071091	MSD	1783053	10	14	JLD1	USE
07/18/2018	22:22	s5g1825.D	454715001	URSC	1783053	1	15	JLD1	USE
07/18/2018	22:52	s5g1826.D	454715002	URSC	1783053	1	16	JLD1	USE
07/18/2018	23:22	s5g1827.D	454715003	URSC	1783053	1	17	JLD1	DUSE; RR (HIT PRESENT WAS HIGH IN CCV) SEE S5G2010
07/18/2018	23:52	s5g1828.D	454685016	CPRC	1783048	1	20	JLD1	USE
07/19/2018	00:22	s5g1829.D	454685017	CPRC	1783048	1	21	JLD1	USE
07/19/2018	00:59	s5g1830.D	1204071086	MS	1783048	1	22	JLD1	USE
07/19/2018	01:37	s5g1831.D	1204071087	MSD	1783048	1	23	JLD1	USE
07/19/2018	02:14	s5g1832.D	454687001	LLNL	1783048	1	24	JLD1	DUSE; OUT OF TUNE; SEE S5G1915

ORGANIC RUN LOG - INSTRUMENT ID#MSD5

07/20/2018

GEL ORGANIC RUN LOG

07/23/2018

DATE: 20-Jul-18 METHOD: See Data OPERATOR: JLD1 Sequence Number: S072018.B

Multiplier Voltage: 1871
Internal Std ID: UBN171221-01.3
Internal Std ID: WBN170612-99 (SIM)
Solvent Reference ID: 2766142

Calibration Information:
Initial Calibration Dates: See Calibration History
Initial Calibration Std ID's: See Associated Data and Run Log
GEL SOP: GL-OA-E-009

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Dil. Factor	AS Slot #	Analyst	Comments
07/20/2018	08:10	s5g2001.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	DUSE
07/20/2018	08:27	s5g2002.D	WBN180620-05.2	MCCV	CCV	1	2	JLD1	DUSE
07/20/2018	09:15	s5g2003.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	DUSE
07/20/2018	09:32	s5g2004.D	WBN180620-05.2	MCCV	CCV	1	2	JLD1	DUSE
07/20/2018	10:20	s5g2005.D	WBN180611-99	DFTPP	DFTPP	1	1	JLD1	USE
07/20/2018	10:37	s5g2006.D	WBN180620-05.2	MCCV	CCV	1	2	JLD1	USE; 124956
07/20/2018	11:44	s5g2007.D	WBN180709-15.3	ACCV	CCV	1	3	JLD1	USE
07/20/2018	12:14	s5g2008.D	WBN180712-45.3	BCCV	CCV	1	4	JLD1	DUSE
07/20/2018	13:00	s5g2009.D	WBN180712-45.1	BCCV	CCV	1	5	JLD1	USE
07/20/2018	13:30	s5g2010.D	454715003	URSC	1783053	1	6	JLD1	USE

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
URS Energy & Construction (URSC)
SDG #: 454715

Product: **Determination of Metals by ICP**
Analytical Method: SW846 3050B/6010D
Analytical Procedure: GL-MA-E-013 REV# 30
Analytical Batch: 1782974

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3050B/6020
Analytical Procedure: GL-MA-E-014 REV# 32
Analytical Batch: 1782963

Product: **Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**
Analytical Method: SW846 7471A
Analytical Procedure: GL-MA-E-010 REV# 36
Analytical Batch: 1783215

Preparation Method: SW846 3050B
Preparation Procedure: GL-MA-E-009 REV# 28
Preparation Batches: 1782962 and 1782972

Preparation Method: SW846 7471A Prep
Preparation Procedure: GL-MA-E-010 REV# 36
Preparation Batch: 1783214

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
454715001	SW01
454715002	SW02
454715003	SW03
1204070940	Method Blank (MB)**ICP**
1204070941	Laboratory Control Sample (LCS)
1204070944	454715001(SW01L) Serial Dilution (SD)
1204070942	454715001(SW01S) Matrix Spike (MS)
1204070943	454715001(SW01SD) Matrix Spike Duplicate (MSD)
1204072646	454715001(SW01PS) Post Spike (PS)
1204070925	Method Blank (MB)**ICP-MS**
1204070926	Laboratory Control Sample (LCS)
1204070929	454715001(SW01L) Serial Dilution (SD)
1204070927	454715001(SW01D) Sample Duplicate (DUP)
1204070928	454715001(SW01S) Matrix Spike (MS)
1204071412	Method Blank (MB)**CVAA**
1204071413	Laboratory Control Sample (LCS)
1204071425	453960001(NonSDGL) Serial Dilution (SD)
1204071423	453960001(NonSDGD) Sample Duplicate (DUP)
1204071424	453960001(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements
The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of zinc. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected. 454715001 (SW01), 454715002 (SW02) and 454715003 (SW03)-ICP.

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement
The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analytes. The post spike recoveries were within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recoveries may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204070942 (SW01MS)	Antimony	66.8* (75%-125%)
	Barium	153* (75%-125%)
	Lead	70.4* (75%-125%)
	Nickel	74.7* (75%-125%)
	Potassium	240* (75%-125%)
	Thallium	73.9* (75%-125%)
1204070943 (SW01MSD)	Barium	148* (75%-125%)
	Lead	74.1* (75%-125%)
	Potassium	233* (75%-125%)

MS/MSD Relative Percent Difference (RPD) Statement
The RPD values between qualifying analyte results in the MS and MSD were not within the acceptance limits. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The MSD %RPD recovery may be attributed to possible sample non-homogeneity and/or possible matrix interferences may be suspected.

Sample	Analyte	Value
1204070942MS and 1204070943MSD (SW01)	Antimony	RPD 23.9* (0%-20%)

Technical Information

Preparation/Analytical Method Verification
Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.
Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples required dilutions for antimony in order to minimize suppression due to matrix interferences. 454715001 (SW01), 454715002 (SW02) and 454715003 (SW03)-ICP.

Analyte	**454715**		
	001	**002**	**003**
Antimony	10X	10X	10X
Selenium	2X	2X	2X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

URSC013 URS Energy & Construction (2012-SC-SPRU-29463-171)

Client SDG: 454715 GEL Work Order: 454715

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
B Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
J Value is estimated
N Metals--The Matrix spike sample recovery is not within specified control limits
Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
Q Quality Issue: Sample was received out of temperature specification > 12C.
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Jamie Johnson**

Date: 09 AUG 2018 **Title: Group Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454715 **METHOD TYPE:** SW846

SAMPLE ID: 454715001 **CLIENT ID:** SW01

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 17−JUL−18 **LEVEL:** Low **%SOLIDS:** 92.4

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
7429−90−5	Aluminum	8530	mg/kg			P	7.1	1	OPTIMA3	072318−1
7440−36−0	Antimony	3.45	mg/kg	U	*N	P	3.45	10	OPTIMA3	072318−1
7440−38−2	Arsenic	9.13	mg/kg			P	0.522	1	OPTIMA3	072318−1
7440−39−3	Barium	50.3	mg/kg		N	P	0.104	1	OPTIMA3	072318−1
7440−41−7	Beryllium	0.594	mg/kg			P	0.104	1	OPTIMA3	072318−1
7440−43−9	Cadmium	0.104	mg/kg	U		P	0.104	1	OPTIMA3	072318−1
7440−70−2	Calcium	20000	mg/kg			P	8.36	1	OPTIMA3	072318−1
7440−47−3	Chromium	14.5	mg/kg			P	0.157	1	OPTIMA3	072318−1
7440−48−4	Cobalt	12.9	mg/kg			P	0.157	1	OPTIMA3	072318−1
7440−50−8	Copper	31.1	mg/kg			P	0.313	1	OPTIMA3	072318−1
7439−89−6	Iron	24700	mg/kg			P	8.36	1	OPTIMA3	072318−1
7439−92−1	Lead	18	mg/kg		N	P	0.345	1	OPTIMA3	072318−1
7439−95−4	Magnesium	9190	mg/kg			P	8.88	1	OPTIMA3	072318−1
7439−96−5	Manganese	405	mg/kg			P	0.209	1	OPTIMA3	072318−1
7439−97−6	Mercury	0.0245	mg/kg			AV	0.00426	1	HG4	071918WS1−3
7440−02−0	Nickel	29.8	mg/kg		N	P	0.157	1	OPTIMA3	072318−1
7440−09−7	Potassium	1120	mg/kg		N	P	6.68	1	OPTIMA3	072318−1
7782−49−2	Selenium	0.863	mg/kg	B		MS	0.383	2	ICPMS14	180719−2
7440−22−4	Silver	0.645	mg/kg			P	0.104	1	OPTIMA3	072318−1
7440−23−5	Sodium	63.3	mg/kg			P	7.31	1	OPTIMA3	072318−1
7440−28−0	Thallium	1.15	mg/kg	B	N	P	0.522	1	OPTIMA3	072318−1
7440−62−2	Vanadium	17.4	mg/kg			P	0.104	1	OPTIMA3	072318−1
7440−66−6	Zinc	48	mg/kg			P	0.418	1	OPTIMA3	072318−1

***Analytical Methods:**

MS **SW846 3050B/6020**
P **SW846 3050B/6010D**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454715 **METHOD TYPE:** SW846

SAMPLE ID: 454715001 **CLIENT ID:** SW01

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 17−JUL−18 **LEVEL:** Low **%SOLIDS:** 92.4

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
AV	SW846 7471A									

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454715 **METHOD TYPE:** SW846

SAMPLE ID: 454715002 **CLIENT ID:** SW02

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 17−JUL−18 **LEVEL:** Low **%SOLIDS:** 92.7

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
7429−90−5	Aluminum	9040	mg/kg			P	7.28	1	OPTIMA3	072318−1
7440−36−0	Antimony	3.53	mg/kg	U	*N	P	3.53	10	OPTIMA3	072318−1
7440−38−2	Arsenic	7.82	mg/kg			P	0.535	1	OPTIMA3	072318−1
7440−39−3	Barium	63.3	mg/kg		N	P	0.107	1	OPTIMA3	072318−1
7440−41−7	Beryllium	0.656	mg/kg			P	0.107	1	OPTIMA3	072318−1
7440−43−9	Cadmium	0.107	mg/kg	U		P	0.107	1	OPTIMA3	072318−1
7440−70−2	Calcium	21600	mg/kg			P	8.56	1	OPTIMA3	072318−1
7440−47−3	Chromium	14.8	mg/kg			P	0.16	1	OPTIMA3	072318−1
7440−48−4	Cobalt	11.1	mg/kg			P	0.16	1	OPTIMA3	072318−1
7440−50−8	Copper	29.5	mg/kg			P	0.321	1	OPTIMA3	072318−1
7439−89−6	Iron	25300	mg/kg			P	8.56	1	OPTIMA3	072318−1
7439−92−1	Lead	11.4	mg/kg		N	P	0.353	1	OPTIMA3	072318−1
7439−95−4	Magnesium	9720	mg/kg			P	9.09	1	OPTIMA3	072318−1
7439−96−5	Manganese	441	mg/kg			P	0.214	1	OPTIMA3	072318−1
7439−97−6	Mercury	0.0223	mg/kg			AV	0.00376	1	HG4	071918WS1−3
7440−02−0	Nickel	26.6	mg/kg		N	P	0.16	1	OPTIMA3	072318−1
7440−09−7	Potassium	1280	mg/kg		N	P	6.85	1	OPTIMA3	072318−1
7782−49−2	Selenium	0.876	mg/kg	B		MS	0.371	2	ICPMS14	180719−2
7440−22−4	Silver	0.627	mg/kg			P	0.107	1	OPTIMA3	072318−1
7440−23−5	Sodium	90.7	mg/kg			P	7.49	1	OPTIMA3	072318−1
7440−28−0	Thallium	1.12	mg/kg	B	N	P	0.535	1	OPTIMA3	072318−1
7440−62−2	Vanadium	18.9	mg/kg			P	0.107	1	OPTIMA3	072318−1
7440−66−6	Zinc	51.4	mg/kg			P	0.428	1	OPTIMA3	072318−1

***Analytical Methods:**

MS **SW846 3050B/6020**
P **SW846 3050B/6010D**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454715 **METHOD TYPE:** SW846

SAMPLE ID: 454715002 **CLIENT ID:** SW02

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 17−JUL−18 **LEVEL:** Low **%SOLIDS:** 92.7

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
AV	SW846 7471A									

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454715 **METHOD TYPE:** SW846

SAMPLE ID: 454715003 **CLIENT ID:** SW03

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 17−JUL−18 **LEVEL:** Low **%SOLIDS:** 91.5

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
7429−90−5	Aluminum	8190	mg/kg			P	7.15	1	OPTIMA3	072318−1
7440−36−0	Antimony	3.47	mg/kg	U	*N	P	3.47	10	OPTIMA3	072318−1
7440−38−2	Arsenic	6.89	mg/kg			P	0.525	1	OPTIMA3	072318−1
7440−39−3	Barium	51.8	mg/kg		N	P	0.105	1	OPTIMA3	072318−1
7440−41−7	Beryllium	0.621	mg/kg			P	0.105	1	OPTIMA3	072318−1
7440−43−9	Cadmium	0.105	mg/kg	U		P	0.105	1	OPTIMA3	072318−1
7440−70−2	Calcium	19400	mg/kg			P	8.41	1	OPTIMA3	072318−1
7440−47−3	Chromium	13.5	mg/kg			P	0.158	1	OPTIMA3	072318−1
7440−48−4	Cobalt	10	mg/kg			P	0.158	1	OPTIMA3	072318−1
7440−50−8	Copper	26.6	mg/kg			P	0.315	1	OPTIMA3	072318−1
7439−89−6	Iron	23400	mg/kg			P	8.41	1	OPTIMA3	072318−1
7439−92−1	Lead	11	mg/kg		N	P	0.347	1	OPTIMA3	072318−1
7439−95−4	Magnesium	9240	mg/kg			P	8.93	1	OPTIMA3	072318−1
7439−96−5	Manganese	444	mg/kg			P	0.21	1	OPTIMA3	072318−1
7439−97−6	Mercury	0.0217	mg/kg			AV	0.00413	1	HG4	071918WS1−3
7440−02−0	Nickel	24.6	mg/kg		N	P	0.158	1	OPTIMA3	072318−1
7440−09−7	Potassium	1100	mg/kg		N	P	6.73	1	OPTIMA3	072318−1
7782−49−2	Selenium	0.815	mg/kg	B		MS	0.375	2	ICPMS14	180719−2
7440−22−4	Silver	0.588	mg/kg			P	0.105	1	OPTIMA3	072318−1
7440−23−5	Sodium	89.1	mg/kg			P	7.36	1	OPTIMA3	072318−1
7440−28−0	Thallium	1.16	mg/kg	B	N	P	0.525	1	OPTIMA3	072318−1
7440−62−2	Vanadium	17.2	mg/kg			P	0.105	1	OPTIMA3	072318−1
7440−66−6	Zinc	48.6	mg/kg			P	0.42	1	OPTIMA3	072318−1

***Analytical Methods:**

MS **SW846 3050B/6020**
P **SW846 3050B/6010D**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454715 **METHOD TYPE:** SW846

SAMPLE ID: 454715003 **CLIENT ID:** SW03

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 17−JUL−18 **LEVEL:** Low **%SOLIDS:** 91.5

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
AV	SW846 7471A									

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG4,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Mercury	5.04	ug/L	5	ug/L	100.8	90.0 − 110.0	AV	19−JUL−18 12:11	071918WS1−3
	Selenium	49	ug/L	50	ug/L	98	90.0 − 110.0	MS	19−JUL−18 20:17	180719−2
	Aluminum	5320	ug/L	5000	ug/L	106.4	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Antimony	499	ug/L	500	ug/L	99.8	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Arsenic	506	ug/L	500	ug/L	101.1	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Barium	507	ug/L	500	ug/L	101.3	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Beryllium	248	ug/L	250	ug/L	99.3	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Cadmium	504	ug/L	500	ug/L	100.8	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Calcium	5400	ug/L	5000	ug/L	108.1	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Chromium	499	ug/L	500	ug/L	99.9	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Cobalt	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Copper	509	ug/L	500	ug/L	101.8	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Iron	5210	ug/L	5000	ug/L	104.1	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Lead	507	ug/L	500	ug/L	101.4	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Magnesium	5390	ug/L	5000	ug/L	107.8	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Manganese	505	ug/L	500	ug/L	101	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Nickel	500	ug/L	500	ug/L	100	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Potassium	2560	ug/L	2500	ug/L	102.5	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Silver	252	ug/L	250	ug/L	100.7	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Sodium	2530	ug/L	2500	ug/L	101.3	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Thallium	515	ug/L	500	ug/L	103	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Vanadium	507	ug/L	500	ug/L	101.5	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
CCV01										
	Mercury	5.02	ug/L	5	ug/L	100.3	80.0 − 120.0	AV	19−JUL−18 12:16	071918WS1−3
	Selenium	50	ug/L	50	ug/L	100	90.0 − 110.0	MS	19−JUL−18 20:33	180719−2
	Aluminum	5400	ug/L	5000	ug/L	107.9	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Antimony	505	ug/L	500	ug/L	100.9	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Arsenic	523	ug/L	500	ug/L	104.6	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Barium	518	ug/L	500	ug/L	103.6	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Beryllium	517	ug/L	500	ug/L	103.5	90.0 − 110.0	P	23−JUL−18 06:26	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG4,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Cadmium	518	ug/L	500	ug/L	103.5	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Calcium	5410	ug/L	5000	ug/L	108.1	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Chromium	509	ug/L	500	ug/L	101.8	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Cobalt	514	ug/L	500	ug/L	102.8	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Copper	516	ug/L	500	ug/L	103.3	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Iron	5320	ug/L	5000	ug/L	106.4	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Lead	515	ug/L	500	ug/L	103	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Magnesium	5440	ug/L	5000	ug/L	108.8	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Manganese	519	ug/L	500	ug/L	103.8	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Nickel	520	ug/L	500	ug/L	103.9	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Potassium	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Silver	516	ug/L	500	ug/L	103.3	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Thallium	514	ug/L	500	ug/L	102.9	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Vanadium	519	ug/L	500	ug/L	103.7	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Zinc	514	ug/L	500	ug/L	102.7	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
CCV02										
	Mercury	4.96	ug/L	5	ug/L	99.2	80.0 − 120.0	AV	19−JUL−18 12:36	071918WS1−3
	Selenium	50.8	ug/L	50	ug/L	101.6	90.0 − 110.0	MS	19−JUL−18 20:43	180719−2
	Aluminum	4920	ug/L	5000	ug/L	98.5	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Antimony	472	ug/L	500	ug/L	94.5	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Arsenic	503	ug/L	500	ug/L	100.6	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Barium	479	ug/L	500	ug/L	95.9	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Beryllium	483	ug/L	500	ug/L	96.5	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Cadmium	492	ug/L	500	ug/L	98.3	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Chromium	478	ug/L	500	ug/L	95.7	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Cobalt	483	ug/L	500	ug/L	96.5	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Copper	472	ug/L	500	ug/L	94.3	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Iron	4990	ug/L	5000	ug/L	99.8	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Lead	492	ug/L	500	ug/L	98.5	90.0 − 110.0	P	23−JUL−18 07:29	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG4,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Magnesium	5190	ug/L	5000	ug/L	103.9	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Manganese	480	ug/L	500	ug/L	96	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Nickel	489	ug/L	500	ug/L	97.9	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Potassium	4760	ug/L	5000	ug/L	95.3	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Silver	477	ug/L	500	ug/L	95.3	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Sodium	9590	ug/L	10000	ug/L	95.9	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Thallium	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Vanadium	481	ug/L	500	ug/L	96.3	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
	Zinc	482	ug/L	500	ug/L	96.4	90.0 − 110.0	P	23−JUL−18 07:29	072318−1
CCV03										
	Mercury	4.97	ug/L	5	ug/L	99.5	80.0 − 120.0	AV	19−JUL−18 12:57	071918WS1−3
	Selenium	49.3	ug/L	50	ug/L	98.6	90.0 − 110.0	MS	19−JUL−18 22:54	180719−2
	Aluminum	4850	ug/L	5000	ug/L	97.1	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Antimony	455	ug/L	500	ug/L	91	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Arsenic	493	ug/L	500	ug/L	98.5	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Barium	471	ug/L	500	ug/L	94.2	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Beryllium	473	ug/L	500	ug/L	94.7	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Cadmium	478	ug/L	500	ug/L	95.7	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Calcium	4940	ug/L	5000	ug/L	98.9	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Chromium	467	ug/L	500	ug/L	93.3	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Cobalt	471	ug/L	500	ug/L	94.2	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Copper	465	ug/L	500	ug/L	93	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Iron	4880	ug/L	5000	ug/L	97.6	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Lead	476	ug/L	500	ug/L	95.2	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Magnesium	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Manganese	471	ug/L	500	ug/L	94.3	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Nickel	479	ug/L	500	ug/L	95.8	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Potassium	4670	ug/L	5000	ug/L	93.3	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Silver	470	ug/L	500	ug/L	94	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Sodium	9410	ug/L	10000	ug/L	94.1	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Thallium	475	ug/L	500	ug/L	95.1	90.0 − 110.0	P	23−JUL−18 07:55	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG4,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Vanadium	474	ug/L	500	ug/L	94.8	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Zinc	469	ug/L	500	ug/L	93.9	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
CCV04										
	Mercury	4.92	ug/L	5	ug/L	98.5	80.0 − 120.0	AV	19−JUL−18 13:17	071918WS1−3
	Selenium	48.3	ug/L	50	ug/L	96.5	90.0 − 110.0	MS	19−JUL−18 23:07	180719−2
	Aluminum	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Antimony	473	ug/L	500	ug/L	94.7	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Arsenic	512	ug/L	500	ug/L	102.4	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Barium	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Beryllium	489	ug/L	500	ug/L	97.7	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Cadmium	497	ug/L	500	ug/L	99.4	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Calcium	5140	ug/L	5000	ug/L	102.9	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Chromium	481	ug/L	500	ug/L	96.1	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Cobalt	487	ug/L	500	ug/L	97.5	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Copper	476	ug/L	500	ug/L	95.2	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Iron	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Lead	494	ug/L	500	ug/L	98.9	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Magnesium	5190	ug/L	5000	ug/L	103.8	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Manganese	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Nickel	494	ug/L	500	ug/L	98.8	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Potassium	4770	ug/L	5000	ug/L	95.4	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Silver	481	ug/L	500	ug/L	96.1	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Sodium	9580	ug/L	10000	ug/L	95.8	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Thallium	493	ug/L	500	ug/L	98.7	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Vanadium	486	ug/L	500	ug/L	97.2	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Zinc	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
CCV05										
	Selenium	48.7	ug/L	50	ug/L	97.4	90.0 − 110.0	MS	19−JUL−18 23:34	180719−2
	Aluminum	5030	ug/L	5000	ug/L	100.7	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Antimony	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Arsenic	522	ug/L	500	ug/L	104.4	90.0 − 110.0	P	23−JUL−18 08:55	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG4,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Barium	494	ug/L	500	ug/L	98.8	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Beryllium	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Cadmium	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Calcium	5250	ug/L	5000	ug/L	105.1	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Chromium	489	ug/L	500	ug/L	97.9	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Cobalt	495	ug/L	500	ug/L	99.1	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Copper	484	ug/L	500	ug/L	96.8	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Iron	5180	ug/L	5000	ug/L	103.5	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Lead	505	ug/L	500	ug/L	100.9	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Magnesium	5360	ug/L	5000	ug/L	107.3	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Manganese	494	ug/L	500	ug/L	98.7	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Nickel	503	ug/L	500	ug/L	100.6	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Potassium	4850	ug/L	5000	ug/L	97.1	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Silver	490	ug/L	500	ug/L	98	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Sodium	9730	ug/L	10000	ug/L	97.3	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Thallium	499	ug/L	500	ug/L	99.8	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Vanadium	495	ug/L	500	ug/L	99	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Zinc	496	ug/L	500	ug/L	99.1	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
CCV06										
	Aluminum	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Antimony	475	ug/L	500	ug/L	94.9	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Arsenic	510	ug/L	500	ug/L	102	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Barium	487	ug/L	500	ug/L	97.5	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Beryllium	490	ug/L	500	ug/L	98	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Cadmium	496	ug/L	500	ug/L	99.3	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Chromium	482	ug/L	500	ug/L	96.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Copper	479	ug/L	500	ug/L	95.8	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Iron	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Lead	495	ug/L	500	ug/L	98.9	90.0 − 110.0	P	23−JUL−18 10:32	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG4,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Magnesium	5200	ug/L	5000	ug/L	104	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Manganese	487	ug/L	500	ug/L	97.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Nickel	495	ug/L	500	ug/L	98.9	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Potassium	4840	ug/L	5000	ug/L	96.8	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Silver	483	ug/L	500	ug/L	96.7	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Sodium	9710	ug/L	10000	ug/L	97.1	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Thallium	492	ug/L	500	ug/L	98.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Vanadium	488	ug/L	500	ug/L	97.6	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Zinc	487	ug/L	500	ug/L	97.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
CCV07										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Antimony	464	ug/L	500	ug/L	92.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Arsenic	499	ug/L	500	ug/L	99.9	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Barium	475	ug/L	500	ug/L	95	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Beryllium	478	ug/L	500	ug/L	95.5	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Cadmium	484	ug/L	500	ug/L	96.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Calcium	5020	ug/L	5000	ug/L	100.5	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Chromium	472	ug/L	500	ug/L	94.3	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Cobalt	478	ug/L	500	ug/L	95.6	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Copper	466	ug/L	500	ug/L	93.2	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Iron	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Lead	484	ug/L	500	ug/L	96.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Magnesium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Manganese	475	ug/L	500	ug/L	95	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Nickel	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Potassium	4660	ug/L	5000	ug/L	93.1	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Silver	471	ug/L	500	ug/L	94.2	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Sodium	9430	ug/L	10000	ug/L	94.3	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Thallium	482	ug/L	500	ug/L	96.4	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Vanadium	476	ug/L	500	ug/L	95.2	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Zinc	474	ug/L	500	ug/L	94.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG4,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number

***Analytical Methods:**

MS	**SW846 3050B/6020**
P	**SW846 3050B/6010D**
AV	**SW846 7471A**

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG4,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.178	ug/L	.2	ug/L	89	70.0 − 130.0	AV	19−JUL−18 12:14	071918WS1−3
	Selenium	5.11	ug/L	5	ug/L	102.1	70.0 − 130.0	MS	19−JUL−18 20:23	180719−2
PQL01										
	Aluminum	203	ug/L	200	ug/L	101.4	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Antimony	8.37	ug/L	10	ug/L	83.7	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Arsenic	28.9	ug/L	30	ug/L	96.3	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Barium	4.92	ug/L	5	ug/L	98.5	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Beryllium	4.88	ug/L	5	ug/L	97.7	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Cadmium	5.03	ug/L	5	ug/L	100.6	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Calcium	184	ug/L	200	ug/L	92	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Chromium	4.98	ug/L	5	ug/L	99.6	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Cobalt	5.42	ug/L	5	ug/L	108.5	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Copper	10.1	ug/L	10	ug/L	101.1	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Iron	103	ug/L	100	ug/L	103.3	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Lead	10.7	ug/L	10	ug/L	106.8	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Magnesium	328	ug/L	300	ug/L	109.4	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Manganese	9.88	ug/L	10	ug/L	98.8	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Nickel	4.79	ug/L	5	ug/L	95.8	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Potassium	178	ug/L	150	ug/L	118.3	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Silver	5.43	ug/L	5	ug/L	108.6	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Sodium	284	ug/L	300	ug/L	94.7	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Thallium	18.5	ug/L	20	ug/L	92.6	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Vanadium	4.7	ug/L	5	ug/L	94	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Zinc	7.47	ug/L	10	ug/L	74.7	80.0 − 120.0	P	23−JUL−18 06:09	072318−1

***Analytical Methods:**

MS	**SW846 3050B/6020**
P	**SW846 3050B/6010D**
AV	**SW846 7471A**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454715

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	19−JUL−18 12:12	071918WS1−3
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	19−JUL−18 20:20	180719−2
	Aluminum	68.0	+/−100	U	68.0	200	SOL	P	23−JUL−18 06:06	072318−1
	Antimony	3.3	+/−5	U	3.3	10.0	SOL	P	23−JUL−18 06:06	072318−1
	Arsenic	5.0	+/−15	U	5.0	30.0	SOL	P	23−JUL−18 06:06	072318−1
	Barium	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Beryllium	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Cadmium	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Calcium	80.0	+/−125	U	80.0	250	SOL	P	23−JUL−18 06:06	072318−1
	Chromium	1.5	+/−2.5	U	1.5	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Cobalt	1.5	+/−2.5	U	1.5	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Copper	3.0	+/−5	U	3.0	10.0	SOL	P	23−JUL−18 06:06	072318−1
	Iron	80.0	+/−125	U	80.0	250	SOL	P	23−JUL−18 06:06	072318−1
	Lead	3.3	+/−5	U	3.3	10.0	SOL	P	23−JUL−18 06:06	072318−1
	Magnesium	85.0	+/−150	U	85.0	300	SOL	P	23−JUL−18 06:06	072318−1
	Manganese	2.0	+/−5	U	2.0	10.0	SOL	P	23−JUL−18 06:06	072318−1
	Nickel	1.5	+/−2.5	U	1.5	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Potassium	64.0	+/−125	U	64.0	250	SOL	P	23−JUL−18 06:06	072318−1
	Silver	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Sodium	70.0	+/−125	U	70.0	250	SOL	P	23−JUL−18 06:06	072318−1
	Thallium	5.0	+/−10	U	5.0	20.0	SOL	P	23−JUL−18 06:06	072318−1
	Vanadium	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Zinc	4.0	+/−5	U	4.0	10.0	SOL	P	23−JUL−18 06:06	072318−1
CCB01										
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	19−JUL−18 12:18	071918WS1−3
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	19−JUL−18 20:37	180719−2
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 06:28	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 06:28	072318−1
	Arsenic	−5.04	+/−30	B	5.0	30.0	SOL	P	23−JUL−18 06:28	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454715

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 06:28	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 06:28	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 06:28	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 06:28	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 06:28	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 06:28	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 06:28	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 06:28	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 06:28	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 06:28	072318−1
CCB02										
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	19−JUL−18 12:38	071918WS1−3
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	19−JUL−18 20:47	180719−2
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 07:32	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 07:32	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 07:32	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:32	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:32	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:32	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 07:32	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 07:32	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 07:32	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 07:32	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 07:32	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 07:32	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454715

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 07:32	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 07:32	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 07:32	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 07:32	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:32	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 07:32	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 07:32	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:32	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 07:32	072318−1
CCB03										
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	19−JUL−18 12:58	071918WS1−3
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	19−JUL−18 22:57	180719−2
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 07:58	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 07:58	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 07:58	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 07:58	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 07:58	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 07:58	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 07:58	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 07:58	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 07:58	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 07:58	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 07:58	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 07:58	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454715

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 07:58	072318−1
CCB04										
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	19−JUL−18 13:19	071918WS1−3
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	19−JUL−18 23:11	180719−2
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 08:37	072318−1
	Antimony	−3.55	+/−10	B	3.3	10.0	SOL	P	23−JUL−18 08:37	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 08:37	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:37	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 08:37	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:37	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 08:37	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 08:37	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 08:37	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 08:37	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 08:37	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 08:37	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 08:37	072318−1
CCB05										
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	19−JUL−18 23:37	180719−2
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 08:58	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 08:58	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 08:58	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454715

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:58	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 08:58	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:58	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 08:58	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 08:58	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 08:58	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 08:58	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 08:58	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 08:58	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 08:58	072318−1
CCB06										
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 10:34	072318−1
	Antimony	−3.39	+/−10	B	3.3	10.0	SOL	P	23−JUL−18 10:34	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 10:34	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 10:34	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 10:34	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 10:34	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 10:34	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454715

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 10:34	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 10:34	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 10:34	072318−1
	Silver	1.04	+/−5	B	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 10:34	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 10:34	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 10:34	072318−1
CCB07										
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 10:51	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 10:51	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 10:51	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 10:51	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 10:51	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 10:51	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 10:51	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 10:51	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 10:51	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 10:51	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 10:51	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 10:51	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 10:51	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454715

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run

***Analytical Methods:**

MS	**SW846 3050B/6020**
P	**SW846 3050B/6010D**
AV	**SW846 7471A**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 454715
Contract: URSC00114
Matrix: Soil

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204070925								
	Selenium	0.34	mg/kg	+/−0.945	U	MS	0.34	0.945
1204070940								
	Aluminum	6.16	mg/kg	+/−9.06	U	P	6.16	9.06
	Antimony	0.299	mg/kg	+/−0.453	U	P	0.299	0.453
	Arsenic	0.453	mg/kg	+/−1.36	U	P	0.453	1.36
	Barium	0.0906	mg/kg	+/−0.226	U	P	0.0906	0.226
	Beryllium	0.0906	mg/kg	+/−0.226	U	P	0.0906	0.226
	Cadmium	0.0906	mg/kg	+/−0.226	U	P	0.0906	0.226
	Calcium	7.25	mg/kg	+/−11.3	U	P	7.25	11.3
	Chromium	0.136	mg/kg	+/−0.226	U	P	0.136	0.226
	Cobalt	0.136	mg/kg	+/−0.226	U	P	0.136	0.226
	Copper	0.272	mg/kg	+/−0.453	U	P	0.272	0.453
	Iron	7.25	mg/kg	+/−11.3	U	P	7.25	11.3
	Lead	0.299	mg/kg	+/−0.453	U	P	0.299	0.453
	Magnesium	7.7	mg/kg	+/−13.6	U	P	7.7	13.6
	Manganese	0.181	mg/kg	+/−0.453	U	P	0.181	0.453
	Nickel	0.136	mg/kg	+/−0.226	U	P	0.136	0.226
	Potassium	5.8	mg/kg	+/−11.3	U	P	5.8	11.3
	Silver	0.0906	mg/kg	+/−0.226	U	P	0.0906	0.226
	Sodium	6.34	mg/kg	+/−11.3	U	P	6.34	11.3
	Thallium	0.453	mg/kg	+/−0.906	U	P	0.453	0.906
	Vanadium	0.0906	mg/kg	+/−0.226	U	P	0.0906	0.226
	Zinc	0.362	mg/kg	+/−0.453	U	P	0.362	0.453
1204071412								
	Mercury	0.00387	mg/kg	+/−0.0115	U	AV	0.00387	0.0115

***Analytical Methods:**

AV	**SW846 7471B**
MS	**SW846 3050B/6020**
P	**SW846 3050B/6010D**

METALS
−4−
Interference Check Sample

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	491000	ug/L	500000	ug/L	98.2	80.0 − 120.0	23−JUL−18 06:12	072318−1
	Antimony	0.193	ug/L					23−JUL−18 06:12	072318−1
	Arsenic	−4.38	ug/L					23−JUL−18 06:12	072318−1
	Barium	1.69	ug/L					23−JUL−18 06:12	072318−1
	Beryllium	0.423	ug/L					23−JUL−18 06:12	072318−1
	Cadmium	−0.155	ug/L					23−JUL−18 06:12	072318−1
	Calcium	488000	ug/L	500000	ug/L	97.5	80.0 − 120.0	23−JUL−18 06:12	072318−1
	Chromium	1.12	ug/L					23−JUL−18 06:12	072318−1
	Cobalt	−0.106	ug/L					23−JUL−18 06:12	072318−1
	Copper	0.578	ug/L					23−JUL−18 06:12	072318−1
	Iron	193000	ug/L	200000	ug/L	96.4	80.0 − 120.0	23−JUL−18 06:12	072318−1
	Lead	0.246	ug/L					23−JUL−18 06:12	072318−1
	Magnesium	485000	ug/L	500000	ug/L	97	80.0 − 120.0	23−JUL−18 06:12	072318−1
	Manganese	0.395	ug/L					23−JUL−18 06:12	072318−1
	Nickel	−0.07	ug/L					23−JUL−18 06:12	072318−1
	Potassium	87.2	ug/L					23−JUL−18 06:12	072318−1
	Silver	1.15	ug/L					23−JUL−18 06:12	072318−1
	Sodium	−46.8	ug/L					23−JUL−18 06:12	072318−1
	Thallium	3.74	ug/L					23−JUL−18 06:12	072318−1
	Vanadium	0.884	ug/L					23−JUL−18 06:12	072318−1
	Zinc	6.98	ug/L					23−JUL−18 06:12	072318−1
ICSAB01									
	Aluminum	499000	ug/L	500000	ug/L	99.8	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Antimony	491	ug/L	500	ug/L	98.2	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Arsenic	520	ug/L	500	ug/L	104	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Barium	485	ug/L	500	ug/L	97	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Beryllium	246	ug/L	250	ug/L	98.4	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Cadmium	463	ug/L	500	ug/L	92.6	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Calcium	495000	ug/L	500000	ug/L	99.1	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Chromium	484	ug/L	500	ug/L	96.7	80.0 − 120.0	23−JUL−18 06:15	072318−1

METALS
−4−
Interference Check Sample

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cobalt	469	ug/L	500	ug/L	93.9	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Copper	534	ug/L	500	ug/L	107	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Iron	195000	ug/L	200000	ug/L	97.6	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Lead	473	ug/L	500	ug/L	94.6	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Magnesium	487000	ug/L	500000	ug/L	97.5	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Manganese	489	ug/L	500	ug/L	97.8	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Nickel	465	ug/L	500	ug/L	92.9	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Potassium	5500	ug/L	5000	ug/L	110	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Silver	262	ug/L	250	ug/L	105	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Sodium	5180	ug/L	5000	ug/L	104	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Thallium	474	ug/L	500	ug/L	94.7	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Vanadium	503	ug/L	500	ug/L	101	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Zinc	490	ug/L	500	ug/L	98	80.0 − 120.0	23−JUL−18 06:15	072318−1

METALS
−4−
Interference Check Sample

SDG No: 454715

Contract: URSC00114 **Lab Code:** GEL

Instrument: ICPMS14

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Selenium	0.172	ug/L					19−JUL−18 20:27	180719−2
ICSAB01									
	Selenium	19.1	ug/L	20	ug/L	95.7	80.0 − 120.0	19−JUL−18 20:30	180719−2

METALS
−5a−

Matrix Spike Summary

SDG NO.	454715	**Client ID**	SW01S
Contract:	URSC00114	**Level:**	Low
Matrix:	SOIL	**% Solids:**	92.4
Sample ID:	454715001	**Spike ID:**	1204070928

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Selenium	mg/kg	75−125	5.05		0.863	B	5.09	82.2		MS

***Analytical Methods:**

MS **SW846 3050B/6020**

METALS
−5a−

Matrix Spike Summary

SDG NO. 454715 **Client ID** SW01S

Contract: URSC00114 **Level:** Low

Matrix: SOIL **% Solids:** 92.4

Sample ID: 454715001 **Spike ID:** 1204070942

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	mg/kg		11300		8530		505	546	N/A	P
Antimony	mg/kg	75−125	33.7		3.45	U	50.5	66.8	N	P
Arsenic	mg/kg	75−125	53.5		9.13		50.5	87.8		P
Barium	mg/kg	75−125	128		50.3		50.5	153	N	P
Beryllium	mg/kg	75−125	44.8		0.594		50.5	87.6		P
Cadmium	mg/kg	75−125	42.1		0.104	U	50.5	83.5		P
Calcium	mg/kg		25000		20000		505	997	N/A	P
Chromium	mg/kg	75−125	59.7		14.5		50.5	89.5		P
Cobalt	mg/kg	75−125	52.2		12.9		50.5	77.8		P
Copper	mg/kg	75−125	78.7		31.1		50.5	94.2		P
Iron	mg/kg		26600		24700		505	370	N/A	P
Lead	mg/kg	75−125	53.6		18		50.5	70.4	N	P
Magnesium	mg/kg		10300		9190		505	222	N/A	P
Manganese	mg/kg		486		405		50.5	162	N/A	P
Nickel	mg/kg	75−125	67.5		29.8		50.5	74.7	N	P
Potassium	mg/kg	75−125	2330		1120		505	240	N	P
Silver	mg/kg	75−125	9.67		0.645		10.1	89.4		P
Sodium	mg/kg	75−125	519		63.3		505	90.2		P
Thallium	mg/kg	75−125	38.5		1.15	B	50.5	73.9	N	P
Vanadium	mg/kg	75−125	67.8		17.4		50.5	99.9		P
Zinc	mg/kg	75−125	95.3		48		50.5	93.6		P

METALS
−5a−

Matrix Spike Summary

SDG NO.	454715	**Client ID:**	SW01S
Contract:	URSC00114	**Level:**	Low
Matrix:	SOIL	**% Solids:**	92.4
Sample ID:	454715001	**Spike ID:**	1204070942

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*

***Analytical Methods:**

P **SW846 3050B/6010D**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 454715 **Client ID** SW01SD

Contract: URSC00114 **Level:** Low

Matrix: SOIL **% Solids:** 92.4

Sample ID: 454715001 **Spike ID:** 1204070943

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	mg/kg		11200		8530		538	500	N/A	P
Antimony	mg/kg	75−125	42.8		3.45	U	53.8	79.7		P
Arsenic	mg/kg	75−125	57.9		9.13		53.8	90.6		P
Barium	mg/kg	75−125	130		50.3		53.8	148	N	P
Beryllium	mg/kg	75−125	48.9		0.594		53.8	89.8		P
Cadmium	mg/kg	75−125	46.4		0.104	U	53.8	86.3		P
Calcium	mg/kg		21300		20000		538	254	N/A	P
Chromium	mg/kg	75−125	62.1		14.5		53.8	88.4		P
Cobalt	mg/kg	75−125	56.2		12.9		53.8	80.4		P
Copper	mg/kg	75−125	76.6		31.1		53.8	84.6		P
Iron	mg/kg		26200		24700		538	279	N/A	P
Lead	mg/kg	75−125	57.9		18		53.8	74.1	N	P
Magnesium	mg/kg		10200		9190		538	190	N/A	P
Manganese	mg/kg		481		405		53.8	142	N/A	P
Nickel	mg/kg	75−125	70.2		29.8		53.8	75.1		P
Potassium	mg/kg	75−125	2370		1120		538	233	N	P
Silver	mg/kg	75−125	10.5		0.645		10.8	91.7		P
Sodium	mg/kg	75−125	544		63.3		538	89.4		P
Thallium	mg/kg	75−125	43		1.15	B	53.8	77.7		P
Vanadium	mg/kg	75−125	69.4		17.4		53.8	96.8		P
Zinc	mg/kg	75−125	104		48		53.8	104		P

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO.	454715	**Client ID:**	SW01SD
Contract:	URSC00114	**Level:**	Low
Matrix:	SOIL	**% Solids:**	92.4
Sample ID:	454715001	**Spike ID:**	1204070943

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*

***Analytical Methods:**

P **SW846 3050B/6010D**

METALS
−5a−

Matrix Spike Summary

SDG NO. 454715 **Client ID** DRM0358.1806001−001S

Contract: URSC00114 **Level:** Low

Matrix: SOIL **% Solids:** 99

Sample ID: 453960001 **Spike ID:** 1204071424

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Mercury	mg/kg	80−120	0.132	Q	0.00878	BQ	0.12	103		AV

***Analytical Methods:**

AV **SW846 7471B**

METALS
−5a−

Spike Summary

SDG NO. 454715 **Client ID** SW01PS

Contract: URSC00114 **Level:** Low

Matrix: SOIL **% Solids:** 92.4

Sample ID: 454715001 **Spike ID:** 1204072646

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Antimony	ug/L	75−125	481		3.45	U	500	96.1		P
Barium	ug/L	75−125	983		482		500	100		P
Lead	ug/L	75−125	656		173		500	96.7		P
Nickel	ug/L	75−125	770		285		500	97		P
Potassium	ug/L	75−125	16100		10700		5000	107		P
Thallium	ug/L	75−125	487		11.1	B	500	95.2		P

***Analytical Methods:**

P **SW846 3050B/6010D**

Metals
−6−
Duplicate Sample Summary

SDG No.: 454715 **Lab Code:** GEL

Contract: URSC00114 **Client ID:** SW01D

Matrix: SOIL **Level:** Low

Sample ID: 454715001 **Duplicate ID:** 1204070927 **Percent Solids for Dup:** 92.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Selenium	mg/kg	+/−1.01	0.863	B	0.797	B	7.98		MS

***Analytical Methods:**
MS SW846 3050B/6020

Metals
−6−
Duplicate Sample Summary

SDG No.: 454715 **Lab Code:** GEL

Contract: URSC00114 **Client ID:** SW01SD

Matrix: SOIL **Level:** Low

Sample ID: 1204070942 **Duplicate ID:** 1204070943 **Percent Solids for Dup:** 92.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	mg/kg	+/−20	11300		11200		.562		P
Antimony	mg/kg	+/−20	33.7		42.8		23.9	*	P
Arsenic	mg/kg	+/−20	53.5		57.9		7.94		P
Barium	mg/kg	+/−20	128		130		1.74		P
Beryllium	mg/kg	+/−20	44.8		48.9		8.77		P
Cadmium	mg/kg	+/−20	42.1		46.4		9.69		P
Calcium	mg/kg	+/−20	25000		21300		15.8		P
Chromium	mg/kg	+/−20	59.7		62.1		3.89		P
Cobalt	mg/kg	+/−20	52.2		56.2		7.27		P
Copper	mg/kg	+/−20	78.7		76.6		2.67		P
Iron	mg/kg	+/−20	26600		26200		1.41		P
Lead	mg/kg	+/−20	53.6		57.9		7.72		P
Magnesium	mg/kg	+/−20	10300		10200		1		P
Manganese	mg/kg	+/−20	486		481		1.03		P
Nickel	mg/kg	+/−20	67.5		70.2		3.89		P
Potassium	mg/kg	+/−20	2330		2370		1.81		P
Silver	mg/kg	+/−20	9.67		10.5		8.39		P
Sodium	mg/kg	+/−20	519		544		4.82		P
Thallium	mg/kg	+/−20	38.5		43		11		P
Vanadium	mg/kg	+/−20	67.8		69.4		2.37		P
Zinc	mg/kg	+/−20	95.3		104		8.86		P

***Analytical Methods:**
P SW846 3050B/6010D

Metals
−6−
Duplicate Sample Summary

SDG No.: 454715 **Lab Code:** GEL

Contract: URSC00114 **Client ID:** DRM0358.1806001−001D

Matrix: SOIL **Level:** Low

Sample ID: 453960001 **Duplicate ID:** 1204071423 **Percent Solids for Dup:** 99

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Mercury	mg/kg	+/−.0116	0.00878	BQ	0.00858	BQ	2.35		AV

***Analytical Methods:**
AV SW846 7471B

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 454715

Contract: URSC00114

Aqueous LCS Source: **Solid LCS Source:** Inorganic Ventures

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204070926								
	Selenium	mg/kg	4.64	3.93		84.7	80−120	MS

***Analytical Methods:**

MS **SW846 3050B/6020**

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 454715

Contract: URSC00114

Aqueous LCS Source:

Solid LCS Source: Inorganic Ventures

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204070941								
	Aluminum	mg/kg	466	430		92.2	80−120	P
	Antimony	mg/kg	46.6	41.5		89	80−120	P
	Arsenic	mg/kg	46.6	42.9		91.9	80−120	P
	Barium	mg/kg	46.6	42.1		90.2	80−120	P
	Beryllium	mg/kg	46.6	43.2		92.7	80−120	P
	Cadmium	mg/kg	46.6	42.8		91.8	80−120	P
	Calcium	mg/kg	466	443		94.9	80−120	P
	Chromium	mg/kg	46.6	41.5		88.9	80−120	P
	Cobalt	mg/kg	46.6	42.2		90.4	80−120	P
	Copper	mg/kg	46.6	41.5		88.9	80−120	P
	Iron	mg/kg	466	439		94.2	80−120	P
	Lead	mg/kg	46.6	42.6		91.3	80−120	P
	Magnesium	mg/kg	466	453		97.1	80−120	P
	Manganese	mg/kg	46.6	42.2		90.4	80−120	P
	Nickel	mg/kg	46.6	42.4		90.9	80−120	P
	Potassium	mg/kg	466	419		89.8	80−120	P
	Silver	mg/kg	9.33	8.64		92.6	80−120	P
	Sodium	mg/kg	466	417		89.5	80−120	P
	Thallium	mg/kg	46.6	42.9		91.9	80−120	P
	Vanadium	mg/kg	46.6	42		90.1	80−120	P
	Zinc	mg/kg	46.6	41.6		89.2	80−120	P

***Analytical Methods:**

P **SW846 3050B/6010D**

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 454715

Contract: URSC00114

Aqueous LCS Source: **Solid LCS Source:** GEL

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204071413								
	Mercury	mg/kg	.113	.116		102	80−120	AV

***Analytical Methods:**

AV **SW846 7471B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 454715 **Client ID** SW01L

Contract: URSC00114

Matrix: SOLID **Level:** Low

Sample ID: 454715001 **Serial Dilution ID:** 1204070929

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Selenium	4.06	B	9	U	48.03			MS

***Analytical Methods:**

MS **SW846 3050B/6020**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 454715 **Client ID** SW01L

Contract: URSC00114

Matrix: SOLID **Level:** Low

Sample ID: 454715001 **Serial Dilution ID:** 1204070944

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	81700		92100		12.718		20	P
Antimony	3.3	U	16.5	U				P
Arsenic	87.4		80.3	B	8.089			P
Barium	482		530		9.96		20	P
Beryllium	5.69		7.7	B	35.363			P
Cadmium	1	U	5	U				P
Calcium	191000		211000		10.383		20	P
Chromium	139		156		12.67		20	P
Cobalt	124		143		15.237			P
Copper	298		312		4.884		20	P
Iron	237000		261000		10.039		20	P
Lead	173		198		14.955			P
Magnesium	88000		98000		11.384		20	P
Manganese	3880		4360		12.425		20	P
Nickel	285		329		15.375		20	P
Potassium	10700		11800		10.19		20	P
Silver	6.18		11.8	B	90.304			P
Sodium	606		763	B	25.892			P
Thallium	11.1	B	25	U	13.649			P
Vanadium	167		184		10.387		20	P
Zinc	460		525		14.152		20	P

***Analytical Methods:**

P **SW846 3050B/6010D**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 454715 **Client ID** DRM0358.1806001−001L

Contract: URSC00114

Matrix: SOLID **Level:** Low

Sample ID: 453960001 **Serial Dilution ID:** 1204071425

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Mercury	.155	BQQ	.335	U	64.516			AV

***Analytical Methods:**

AV **SW846 7471B**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 454715 **Method Type:** P

Contract: URSC00114 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 1782972							
1204070940	MB for batch 1782972	MB	S	18−JUL−18	.552g	50mL	
1204070941	LCS for batch 1782972	LCS	S	18−JUL−18	.536g	50mL	
1204070942	SW01S	MS	S	18−JUL−18	.536g	50mL	92.4
1204070943	SW01SD	MSD	S	18−JUL−18	.503g	50mL	92.4
454715001	SW01	SAMPLE	S	18−JUL−18	.518g	50mL	92.4
454715002	SW02	SAMPLE	S	18−JUL−18	.504g	50mL	92.7
454715003	SW03	SAMPLE	S	18−JUL−18	.52g	50mL	91.5

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 454715 **Method Type:** MS

Contract: URSC00114 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 1782962							
1204070925	MB for batch 1782962	MB	S	18−JUL−18	.529g	50mL	
1204070926	LCS for batch 1782962	LCS	S	18−JUL−18	.539g	50mL	
1204070928	SW01S	MS	S	18−JUL−18	.531g	50mL	92.4
1204070927	SW01D	DUP	S	18−JUL−18	.538g	50mL	92.4
454715001	SW01	SAMPLE	S	18−JUL−18	.509g	50mL	92.4
454715002	SW02	SAMPLE	S	18−JUL−18	.523g	50mL	92.7
454715003	SW03	SAMPLE	S	18−JUL−18	.524g	50mL	91.5

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 454715 **Method Type:** AV

Contract: URSC00114 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 1783214							
1204071412	MB for batch 1783214	MB	m	18−JUL−18	.52g	30mL	
1204071413	LCS for batch 1783214	LCS	m	18−JUL−18	.529g	30mL	
1204071424	DRM0358.1806001−001S	MS	S	18−JUL−18	.506g	30mL	99
1204071423	DRM0358.1806001−001D	DUP	S	18−JUL−18	.523g	30mL	99
454715001	SW01	SAMPLE	S	18−JUL−18	.511g	30mL	92.4
454715002	SW02	SAMPLE	S	18−JUL−18	.576g	30mL	92.7
454715003	SW03	SAMPLE	S	18−JUL−18	.532g	30mL	91.5

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL

Client Sdg: 454715

Inst Name: OPTIMA3

Instrument Type: P

Start Date: 23-JUL-18

End Date: 23-JUL-18

Data File: 072318-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	05:52:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
S0.1	1	05:56:15		X	X	X	X	X		X	X	X		X		X		X	X		X		X	X	X
S0.5	1	05:58:23	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X		X		X	X	X
SCAL	1	06:00:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
S10	1	06:03:16	X						X				X		X							X			
ICV01	1	06:04:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ICB01	1	06:06:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
PQL01	1	06:09:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ICSA01	1	06:12:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ICSAB01	1	06:15:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
LR01	1	06:17:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
LR02	1	06:23:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCV01	1	06:26:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB01	1	06:28:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	1	06:33:46																							
ZZZZZZ	1	06:37:01																							
ZZZZZZ	1	06:39:25																							
ZZZZZZ	1	06:42:32																							
ZZZZZZ	1	06:45:38																							
ZZZZZZ	1	06:48:45																							
ZZZZZZ	1	06:51:52																							
ZZZZZZ	1	06:54:59																							
ZZZZZZ	5	06:57:23																							
CCV	1	07:00:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
PQL	1	07:02:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	07:06:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	10	07:09:12																							
CCV	1	07:12:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	07:14:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCV02	1	07:29:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB02	1	07:32:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204070940	1	07:35:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204070941	1	07:38:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454715001	1	07:40:53	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204070942	1	07:43:21	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204070943	1	07:45:51	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204070944	5	07:48:21	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454715002	1	07:50:43	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454715003	1	07:53:11	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCV03	1	07:55:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB03	1	07:58:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL

Client Sdg: 454715

Inst Name: OPTIMA3

Instrument Type: P

Start Date: 23-JUL-18

End Date: 23-JUL-18

Data File: 072318-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	08:01:13																							
ZZZZZZ	1	08:04:23																							
ZZZZZZ	1	08:06:47																							
ZZZZZZ	1	08:09:15																							
ZZZZZZ	1	08:11:56																							
ZZZZZZ	5	08:14:38																							
CCV	1	08:17:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	08:19:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	1	08:22:34																							
ZZZZZZ	1	08:25:16																							
ZZZZZZ	1	08:27:43																							
ZZZZZZ	1	08:30:23																							
ZZZZZZ	1	08:32:52																							
CCV04	1	08:35:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB04	1	08:37:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454715001	10	08:41:34		X																					
1204070942	10	08:44:04		X																					
1204070943	10	08:46:26		X																					
1204070944	50	08:48:48		X																					
454715002	10	08:50:54		X																					
454715003	10	08:53:16		X																					
CCV05	1	08:55:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB05	1	08:58:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	10	09:01:12																							
ZZZZZZ	10	09:03:37																							
ZZZZZZ	10	09:05:59																							
ZZZZZZ	50	09:08:21																							
ZZZZZZ	10	09:10:28																							
ZZZZZZ	10	09:12:50																							
ZZZZZZ	10	09:15:12																							
ZZZZZZ	10	09:17:34																							
ZZZZZZ	10	09:19:56																							
CCV	1	09:22:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	09:24:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	1	09:31:36																							
ZZZZZZ	1	09:34:51																							
ZZZZZZ	1	09:37:15																							
ZZZZZZ	1	09:40:22																							
ZZZZZZ	1	09:43:29																							
ZZZZZZ	5	09:45:53																							
CCV	1	09:49:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL

Client Sdg: 454715

Inst Name: OPTIMA3

Instrument Type: P

Start Date: 23-JUL-18

End Date: 23-JUL-18

Data File: 072318-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
PQL	1	09:51:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	09:54:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCV	1	09:57:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	10:00:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	1	10:03:13																							
ZZZZZZ	1	10:06:22																							
ZZZZZZ	1	10:08:46																							
ZZZZZZ	1	10:11:53																							
ZZZZZZ	1	10:15:00																							
ZZZZZZ	5	10:17:24																							
CCV	1	10:20:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
PQL	1	10:22:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	10:26:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	10	10:29:12																							
CCV06	1	10:32:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB06	1	10:34:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204072646	1	10:38:58				X								X				X	X				X		
1204072646	10	10:41:37		X																					
ZZZZZZ	1	10:44:01																							
ZZZZZZ	10	10:46:31																							
CCV07	1	10:48:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB07	1	10:51:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL

Client Sdg: 454715

Inst Name: HG4

Instrument Type: AV

Start Date: 19-JUL-18

End Date: 19-JUL-18

Data File: 071918WS1-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	12:01:00															X								
S0.2	1	12:02:00															X								
S0.5	1	12:04:00															X								
S2.0	1	12:06:00															X								
S5.0	1	12:07:00															X								
S10.0	1	12:09:00															X								
ICV01	1	12:11:00															X								
ICB01	1	12:12:00															X								
CRDL01	1	12:14:00															X								
CCV01	1	12:16:00															X								
CCB01	1	12:18:00															X								
1204071412	1	12:19:00															X								
1204071413	1	12:21:00															X								
ZZZZZZ	1	12:23:00																							
1204071423	1	12:24:00															X								
1204071424	1	12:26:00															X								
1204071425	5	12:28:00															X								
ZZZZZZ	1	12:29:00																							
ZZZZZZ	1	12:31:00																							
ZZZZZZ	1	12:33:00																							
ZZZZZZ	1	12:34:00																							
CCV02	1	12:36:00															X								
CCB02	1	12:38:00															X								
ZZZZZZ	1	12:40:00																							
ZZZZZZ	1	12:41:00																							
ZZZZZZ	1	12:43:00																							
ZZZZZZ	5	12:45:00																							
ZZZZZZ	1	12:46:00																							
ZZZZZZ	1	12:48:00																							
ZZZZZZ	1	12:50:00																							
ZZZZZZ	1	12:51:00																							
ZZZZZZ	1	12:53:00																							
ZZZZZZ	1	12:55:00																							
CCV03	1	12:57:00															X								
CCB03	1	12:58:00															X								
ZZZZZZ	1	13:00:00																							
ZZZZZZ	1	13:02:00																							
ZZZZZZ	1	13:03:00																							
ZZZZZZ	1	13:05:00																							
ZZZZZZ	1	13:07:00																							
454715001	1	13:08:00															X								

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL

Client Sdg: 454715

Inst Name: HG4

Instrument Type: AV

Start Date: 19-JUL-18

End Date: 19-JUL-18

Data File: 071918WS1-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
454715002	1	13:10:00															X								
454715003	1	13:12:00															X								
ZZZZZZ	1	13:14:00																							
ZZZZZZ	1	13:15:00																							
CCV04	1	13:17:00															X								
CCB04	1	13:19:00															X								

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL

Client Sdg: 454715

Inst Name: ICPMS14

Instrument Type: MS

Start Date: 19-JUL-18

End Date: 19-JUL-18

Data File: 180719-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	20:07:37																		X					
S10	1	20:10:53																		X					
S100	1	20:14:09																		X					
ICV01	1	20:17:26																		X					
ICB01	1	20:20:42																		X					
CRDL01	1	20:23:59																		X					
ICSA01	1	20:27:15																		X					
ICSAB01	1	20:30:31																		X					
CCV01	1	20:33:49																		X					
CCB01	1	20:37:08																		X					
LR01	1	20:40:26																		X					
CCV02	1	20:43:43																		X					
CCB02	1	20:47:00																		X					
ZZZZZZ	2	20:50:17																							
ZZZZZZ	40	20:53:33																							
ZZZZZZ	10	20:56:49																							
ZZZZZZ	10	21:00:05																							
ZZZZZZ	10	21:03:22																							
ZZZZZZ	50	21:06:38																							
ZZZZZZ	10	21:09:55																							
ZZZZZZ	10	21:13:12																							
ZZZZZZ	10	21:16:28																							
CCV	1	21:19:46																		X					
CCB	1	21:23:04																		X					
ZZZZZZ	10	21:26:22																							
ZZZZZZ	10	21:29:38																							
ZZZZZZ	10	21:32:54																							
ZZZZZZ	10	21:36:10																							
ZZZZZZ	10	21:39:26																							
ZZZZZZ	10	21:42:42																							
ZZZZZZ	10	21:45:58																							
ZZZZZZ	10	21:49:14																							
CCV	1	21:52:31																		X					
CCB	1	21:55:48																		X					
ZZZZZZ	2	21:59:05																							
ZZZZZZ	2	22:02:21																							
ZZZZZZ	2	22:05:37																							
ZZZZZZ	10	22:08:53																							
ZZZZZZ	2	22:12:09																							
ZZZZZZ	2	22:15:25																							
ZZZZZZ	2	22:18:41																							

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL

Client Sdg: 454715

Inst Name: ICPMS14

Instrument Type: MS

Start Date: 19-JUL-18

End Date: 19-JUL-18

Data File: 180719-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	2	22:21:57																							
CCV	1	22:25:14																		X					
CCB	1	22:28:32																		X					
ZZZZZZ	2	22:31:48																							
ZZZZZZ	2	22:35:04																							
ZZZZZZ	2	22:38:20																							
ZZZZZZ	2	22:41:36																							
ZZZZZZ	2	22:44:52																							
ZZZZZZ	2	22:48:08																							
ZZZZZZ	2	22:51:24																							
CCV03	1	22:54:41																		X					
CCB03	1	22:57:59																		X					
1204070925	2	23:01:15																		X					
1204070926	2	23:04:31																		X					
CCV04	1	23:07:48																		X					
CCB04	1	23:11:06																		X					
454715001	2	23:14:24																		X					
1204070927	2	23:17:39																		X					
1204070928	2	23:20:56																		X					
1204070929	10	23:24:13																		X					
454715002	2	23:27:29																		X					
454715003	2	23:30:45																		X					
CCV05	1	23:34:03																		X					
CCB05	1	23:37:21																		X					

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 454715

Contract: URSC00114 **Lab Code: GEL** **MDL** **Effective Date:** 01−SEP−16

Instrument(s): ICPMS14 **Verified on:** 30−MAY−18

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		22.75	50.0
	Arsenic		1.69	5.0
	Barium		0.5	2.0
	Beryllium		0.1	0.5
	Cadmium		0.1	1.0
	Calcium		67.0	200
	Chromium		1.0	3.0
	Cobalt		0.3	1.0
	Copper		0.33	1.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Nickel		0.5	2.0
	Potassium		80.0	300
	Selenium		1.8	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.7	2.0
	Vanadium		1.5	5.0
	Zinc		4.0	10.0

METALS
−10−
Instrument Detection Limits

SDG NO. 454715

Contract: URSC00114 **Lab Code: GEL** **MDL** **Hg Effective Date:** 01−MAY−12

Instrument(s):	**Verified on:**
HG4	18−JUN−18
HG4	18−JUN−18

MERCURY	**Analyte**	**Wavelength (nm)**	**MDL ug/L**	**RDL ug/L**
SOLID	Mercury	253.7	0.067	0.2

METALS
−10−
Instrument Detection Limits

SDG NO. 454715

Contract: URSC00114 **Lab Code: GEL** **MDL** **Effective Date:** 23−JAN−11

Instrument(s): OPTIMA3 **Verified on:** 30−MAR−18

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10.0
	Arsenic	188.979	5.0	30.0
	Barium	233.527	1.0	5.0
	Beryllium	313.107	1.0	5.0
	Cadmium	226.502	1.0	5.0
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5.0
	Cobalt	228.616	1.5	5.0
	Copper	324.752	3.0	10.0
	Iron	238.204	80.0	250
	Lead	220.353	3.3	10.0
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10.0
	Nickel	231.604	1.5	5.0
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30.0
	Silver	328.068	1.0	5.0
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20.0
	Vanadium	292.402	1.0	5.0
	Zinc	213.857	4.0	10.0

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
Contract: URSC00114
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 454715
Effective Dates: 14−FEB−18

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Calcium	317.933	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	−0.68182	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.36064	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	−0.20977	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	−2.43110	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	589.592	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.08043	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	367.007	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
Contract: URSC00114
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 454715
Effective Dates: 14−FEB−18

Parmname	Wavelength	Boron	Cadmium	Calcium	Chromium	Cobalt
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	22.2745	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	−2.87735	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	−0.01199	−0.23265	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	3.92642
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	−0.12824
Calcium	317.933	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.32429	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	−0.03857	0.00000	−1.84823
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	−0.27570
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	−0.07076	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	589.592	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.03037	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.33470	5.79216
Tin	189.927	0.00000	0.00000	0.02623	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	−0.05535	0.35976	0.00000
Uranium	367.007	0.00000	0.00000	0.49135	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	−2.00387	0.00000
Zinc	213.857	0.00000	0.00000	−0.01057	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454715
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Copper	Iron	Lead	Magnesium	Manganese
Aluminum	**396.153**	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	0.00000	0.07899	0.00000	0.00000	0.00000
Arsenic	**188.979**	0.00000	0.04587	0.00000	0.00000	0.00000
Barium	**233.527**	0.00000	0.02180	0.00000	0.00000	0.00000
Beryllium	**313.107**	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	**249.677**	0.00000	−3.80099	0.00000	0.00000	0.00000
Cadmium	**226.502**	0.00000	0.09045	0.00000	0.00000	0.00000
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	−0.02250	0.00000	−0.02746	0.42232
Cobalt	**228.616**	0.00000	−0.00650	0.00000	0.00000	0.00000
Copper	**324.752**	0.00000	−0.06696	0.00000	0.00000	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	−0.05605	−0.04275	0.00000	0.00000	0.00000
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	−0.05250	0.00000	0.03779	0.00000
Molybdenum	**202.031**	0.00000	−0.01942	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	−0.00835	0.00000	0.00000	0.00000
Phosphorous	**214.914**	11.5616	0.89778	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	−1.29103	0.00000	0.00000	0.00000
Selenium	**196.026**	0.00000	−0.42501	0.00000	0.00000	0.00000
Silicon	**251.611**	0.00000	0.17484	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	−0.16666	0.00000	0.00000	0.00000
Sodium	**589.592**	0.00000	0.66191	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	**181.975**	0.00000	−0.02102	0.00000	0.00000	1.20261
Thallium	**190.801**	0.00000	−0.00996	0.00000	0.00000	0.00000
Tin	**189.927**	0.00000	−0.01885	0.00000	0.01769	0.00000
Titanium	**334.94**	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	**367.007**	0.00000	4.68515	0.00000	0.00000	0.00000
Vanadium	**292.402**	0.00000	−0.11818	0.00000	0.00000	0.00000
Zinc	**213.857**	0.26856	0.09024	0.00000	0.04456	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
Contract: URSC00114
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 454715
Effective Dates: 14−FEB−18

Parmname	Wavelength	Molybdenum	Nickel	Phosphorous	Potassium	Selenium
Aluminum	**396.153**	46.4992	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	−11.3506	0.00000	0.00000	0.00000	0.00000
Arsenic	**188.979**	−6.19920	0.00000	0.00000	0.00000	0.00000
Barium	**233.527**	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	**313.107**	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	**249.677**	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	**226.502**	0.00000	−0.39139	0.00000	0.00000	0.00000
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	**228.616**	−1.52983	0.00000	0.00000	0.00000	0.00000
Copper	**324.752**	0.65227	0.00000	0.00000	0.00000	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	**202.031**	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	**214.914**	8.61561	0.00000	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	**196.026**	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	**251.611**	16.5669	0.00000	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	**589.592**	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	**181.975**	−4.19158	0.00000	0.00000	0.00000	0.00000
Thallium	**190.801**	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	**189.927**	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	**334.94**	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	**367.007**	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	**292.402**	−9.86752	0.00000	0.00000	0.00000	0.00000
Zinc	**213.857**	0.00000	5.43263	0.00000	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454715
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Silicon	Silver	Sodium	Strontium	Sulfur
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Calcium	317.933	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	589.592	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	367.007	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454715
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Thallium	Tin	Titanium	Uranium	Vanadium
Aluminum	**396.153**	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	0.00000	−2.26792	−0.87028	0.00000	−1.35139
Arsenic	**188.979**	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	**233.527**	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	**313.107**	0.00000	0.00000	0.00000	−0.24653	0.00000
Boron	**249.677**	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	**226.502**	0.00000	0.00000	0.15743	0.00000	0.00000
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	0.00000	0.00000	0.79281	−0.47821
Cobalt	**228.616**	0.00000	0.00000	1.96686	0.00000	0.00000
Copper	**324.752**	0.00000	0.00000	0.00000	−0.61588	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	0.00000	0.00000	0.00000	0.76728	0.00000
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	**202.031**	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	**214.914**	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	**196.026**	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	**251.611**	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	0.00000	0.00000	0.57735	−1.57979
Sodium	**589.592**	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	**181.975**	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	**190.801**	0.00000	0.00000	−9.70069	−0.39670	−0.15590
Tin	**189.927**	0.00000	0.00000	−3.68936	0.00000	0.00000
Titanium	**334.94**	0.00000	0.00000	0.00000	0.46265	0.00000
Uranium	**367.007**	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	**292.402**	0.00000	0.00000	0.86352	−0.58460	0.00000
Zinc	**213.857**	0.00000	0.00000	−1.79228	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454715
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Zinc
Aluminum	396.153	0.00000
Antimony	206.836	0.00000
Arsenic	188.979	0.00000
Barium	233.527	0.00000
Beryllium	313.107	0.00000
Boron	249.677	0.00000
Cadmium	226.502	0.00000
Calcium	317.933	0.00000
Chromium	267.716	0.00000
Cobalt	228.616	0.00000
Copper	324.752	0.00000
Iron	238.204	0.00000
Lead	220.353	0.00000
Magnesium	279.077	0.00000
Manganese	257.61	0.00000
Molybdenum	202.031	0.00000
Nickel	231.604	0.00000
Phosphorous	214.914	0.00000
Potassium	766.49	0.00000
Selenium	196.026	0.00000
Silicon	251.611	0.00000
Silver	328.068	0.00000
Sodium	589.592	0.00000
Strontium	421.552	0.00000
Sulfur	181.975	0.00000
Thallium	190.801	0.00000
Tin	189.927	0.00000
Titanium	334.94	0.00000
Uranium	367.007	0.00000
Vanadium	292.402	0.00000
Zinc	213.857	0.00000

METALS
−12−
Linear Ranges

SDG NO. 454715

Contract: URSC00114 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Selenium	20	1000	ug/L	12−JUN−18
Silver	20	1000	ug/L	12−JUN−18
Sodium	20	500000	ug/L	12−JUN−18
Thallium	20	1000	ug/L	12−JUN−18
Vanadium	20	10000	ug/L	12−JUN−18
Zinc	20	15000	ug/L	12−JUN−18
Potassium	20	200000	ug/L	12−JUN−18
Aluminum	20	500000	ug/L	12−JUN−18
Antimony	20	1000	ug/L	12−JUN−18
Arsenic	20	10000	ug/L	12−JUN−18
Barium	20	15000	ug/L	12−JUN−18
Beryllium	20	1000	ug/L	12−JUN−18
Cadmium	20	10000	ug/L	12−JUN−18
Calcium	20	500000	ug/L	12−JUN−18
Chromium	20	25000	ug/L	12−JUN−18
Cobalt	20	10000	ug/L	12−JUN−18
Copper	20	20000	ug/L	12−JUN−18
Iron	20	500000	ug/L	12−JUN−18
Lead	20	25000	ug/L	12−JUN−18
Magnesium	20	500000	ug/L	12−JUN−18
Manganese	20	10000	ug/L	12−JUN−18
Nickel	20	10000	ug/L	12−JUN−18

METALS
−12−
Linear Ranges

SDG NO. 454715

Contract: URSC00114 **Lab Code: GEL**

Instrument ID ICPMS14

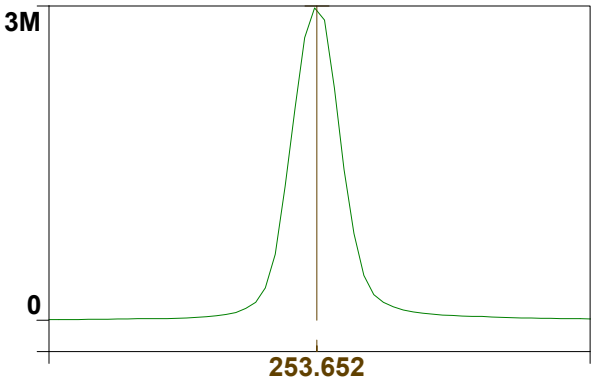
Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17

Raw Data

Method: Hg_ReAlign
Result: 072318

Sample ID: Hg_ReAlign

Hg 253.652 **Rep: 1**



Intensity: 2701292.0
Conc:

1

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7/23/2018 05:51:50 Hg ReAlign... Actual peak offset (nm): 0.002
Drift (nm): -0.001 Slit adjustment: -4

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Analysis Begun

Start Time: 7/23/2018 05:52:47
Logged In Analyst: Optima3
Spectrometer: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 7/23/2018 04:11:23
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\072318.sif
Batch ID:
Results Data Set: 072318
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: S0
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 8
Date Collected: 7/23/2018 05:52:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22124.3	22124.3	100	%	05:53:59
1	Al 396.153Radial†	-82.8	-82.7	[0.00]	µg/L	05:53:59
1	Ca 317.933Radial†	292.1	291.5	[0.00]	µg/L	05:53:59
1	Fe 238.204 Radial†	36.1	36.0	[0.00]	µg/L	05:53:59
1	K 766.490 Radial†	428.9	428.0	[0.00]	µg/L	05:53:39
1	Mg 279.077 IEC†	55.7	55.6	[0.00]	µg/L	05:53:59
1	Na 589.592 Radial†	139.3	139.0	[0.00]	µg/L	05:53:59
1	Sr 421.552†	227.7	227.2	[0.00]	µg/L	05:53:39
1	Sc 361.383	367327.4	367327.4	100.31	%	05:54:55
1	Y 371.029	360951.9	360951.9	100.30	%	05:54:55
1	Ag 328.068†	-660.5	-658.4	[0.00]	µg/L	05:54:55
1	As 188.979†	-11.8	-11.7	[0.00]	µg/L	05:55:16
1	B 249.677†	162.2	161.7	[0.00]	µg/L	05:55:16
1	Ba 233.527†	-17.2	-17.1	[0.00]	µg/L	05:55:16
1	Be 313.107†	-3621.8	-3610.8	[0.00]	µg/L	05:54:55
1	Cd 226.502†	-318.5	-317.5	[0.00]	µg/L	05:55:16
1	Co 228.616†	-223.9	-223.3	[0.00]	µg/L	05:55:16
1	Cr 267.716†	127.3	126.9	[0.00]	µg/L	05:55:16
1	Cu 324.752†	1906.7	1900.9	[0.00]	µg/L	05:54:55
1	Mn 257.610†	436.7	435.3	[0.00]	µg/L	05:55:16
1	Mo 202.031†	30.7	30.6	[0.00]	µg/L	05:55:16
1	Ni 231.604†	-182.4	-181.8	[0.00]	µg/L	05:55:16
1	P 214.914†	142.9	142.5	[0.00]	µg/L	05:55:16
1	Pb 220.353†	-64.0	-63.8	[0.00]	µg/L	05:55:16
1	S 181.975 Axial†	90.2	89.9	[0.00]	µg/L	05:55:16
1	Sb 206.836†	154.4	153.9	[0.00]	µg/L	05:55:16
1	Se 196.026†	-23.7	-23.6	[0.00]	µg/L	05:55:16
1	SiO2†	1056.7	1053.4	[0.00]	µg/L	05:55:16
1	Si 251.611†	-15.9	-15.9	[0.00]	µg/L	05:55:16
1	Sn 189.927†	45.6	45.4	[0.00]	µg/L	05:55:16
1	Ti 334.940†	-764.0	-761.7	[0.00]	µg/L	05:54:55
1	Tl 190.801†	-77.7	-77.4	[0.00]	µg/L	05:55:16
1	U 367.007†	907.9	905.1	[0.00]	µg/L	05:54:55
1	V 292.402†	-119.4	-119.1	[0.00]	µg/L	05:55:16
1	Zn 213.857†	889.6	886.9	[0.00]	µg/L	05:55:16
2	Sc RADIAL	22087.3	22087.3	100	%	05:54:24
2	Al 396.153Radial†	-94.9	-94.9	[0.00]	µg/L	05:54:24
2	Ca 317.933Radial†	287.2	287.1	[0.00]	µg/L	05:54:24
2	Fe 238.204 Radial†	30.4	30.3	[0.00]	µg/L	05:54:24
2	K 766.490 Radial†	466.1	466.0	[0.00]	µg/L	05:54:04
2	Mg 279.077 IEC†	60.3	60.2	[0.00]	µg/L	05:54:24
2	Na 589.592 Radial†	126.5	126.4	[0.00]	µg/L	05:54:24

2	Sr 421.552†	270.9	270.8	[0.00]	µg/L	05:54:04
2	Sc 361.383	368148.4	368148.4	100.53	%	05:55:21
2	Y 371.029	362130.5	362130.5	100.63	%	05:55:21
2	Ag 328.068†	-711.9	-708.2	[0.00]	µg/L	05:55:21
2	As 188.979†	-14.3	-14.3	[0.00]	µg/L	05:55:41
2	B 249.677†	196.5	195.5	[0.00]	µg/L	05:55:41
2	Ba 233.527†	-15.4	-15.4	[0.00]	µg/L	05:55:41
2	Be 313.107†	-3571.1	-3552.3	[0.00]	µg/L	05:55:21
2	Cd 226.502†	-330.6	-328.9	[0.00]	µg/L	05:55:41
2	Co 228.616†	-234.5	-233.3	[0.00]	µg/L	05:55:41
2	Cr 267.716†	102.2	101.6	[0.00]	µg/L	05:55:41
2	Cu 324.752†	1880.3	1870.4	[0.00]	µg/L	05:55:21
2	Mn 257.610†	468.8	466.3	[0.00]	µg/L	05:55:41
2	Mo 202.031†	24.2	24.1	[0.00]	µg/L	05:55:41
2	Ni 231.604†	-197.4	-196.4	[0.00]	µg/L	05:55:41
2	P 214.914†	129.3	128.6	[0.00]	µg/L	05:55:41
2	Pb 220.353†	-64.5	-64.2	[0.00]	µg/L	05:55:41
2	S 181.975 Axial†	93.3	92.8	[0.00]	µg/L	05:55:41
2	Sb 206.836†	154.0	153.2	[0.00]	µg/L	05:55:41
2	Se 196.026†	-23.5	-23.4	[0.00]	µg/L	05:55:41
2	SiO2†	1074.3	1068.7	[0.00]	µg/L	05:55:41
2	Si 251.611†	11.0	11.0	[0.00]	µg/L	05:55:41
2	Sn 189.927†	52.6	52.4	[0.00]	µg/L	05:55:41
2	Ti 334.940†	-676.3	-672.7	[0.00]	µg/L	05:55:21
2	Tl 190.801†	-76.1	-75.7	[0.00]	µg/L	05:55:41
2	U 367.007†	802.9	798.7	[0.00]	µg/L	05:55:21
2	V 292.402†	-151.1	-150.3	[0.00]	µg/L	05:55:41
2	Zn 213.857†	901.2	896.4	[0.00]	µg/L	05:55:41
3	Sc RADIAL	22028.8	22028.8	99.8	%	05:54:49
3	Al 396.153Radial†	-104.1	-104.4	[0.00]	µg/L	05:54:49
3	Ca 317.933Radial†	309.7	310.5	[0.00]	µg/L	05:54:49
3	Fe 238.204 Radial†	38.7	38.8	[0.00]	µg/L	05:54:49
3	K 766.490 Radial†	370.1	371.0	[0.00]	µg/L	05:54:29
3	Mg 279.077 IEC†	52.3	52.4	[0.00]	µg/L	05:54:49
3	Na 589.592 Radial†	117.1	117.3	[0.00]	µg/L	05:54:49
3	Sr 421.552†	282.8	283.5	[0.00]	µg/L	05:54:29
3	Sc 361.383	363139.8	363139.8	99.163	%	05:55:46
3	Y 371.029	356503.9	356503.9	99.067	%	05:55:46
3	Ag 328.068†	-678.7	-684.4	[0.00]	µg/L	05:55:46
3	As 188.979†	-12.3	-12.4	[0.00]	µg/L	05:56:06
3	B 249.677†	161.0	162.4	[0.00]	µg/L	05:56:06
3	Ba 233.527†	-13.9	-14.1	[0.00]	µg/L	05:56:06
3	Be 313.107†	-3528.9	-3558.7	[0.00]	µg/L	05:55:46
3	Cd 226.502†	-320.2	-322.9	[0.00]	µg/L	05:56:06
3	Co 228.616†	-208.9	-210.7	[0.00]	µg/L	05:56:06
3	Cr 267.716†	136.1	137.3	[0.00]	µg/L	05:56:06
3	Cu 324.752†	1972.4	1989.0	[0.00]	µg/L	05:55:46
3	Mn 257.610†	465.0	468.9	[0.00]	µg/L	05:56:06
3	Mo 202.031†	43.8	44.1	[0.00]	µg/L	05:56:06
3	Ni 231.604†	-231.7	-233.7	[0.00]	µg/L	05:56:06
3	P 214.914†	122.9	124.0	[0.00]	µg/L	05:56:06
3	Pb 220.353†	-62.1	-62.6	[0.00]	µg/L	05:56:06
3	S 181.975 Axial†	93.5	94.3	[0.00]	µg/L	05:56:06
3	Sb 206.836†	155.4	156.7	[0.00]	µg/L	05:56:06
3	Se 196.026†	-24.1	-24.3	[0.00]	µg/L	05:56:06
3	SiO2†	1064.6	1073.6	[0.00]	µg/L	05:56:06
3	Si 251.611†	-19.6	-19.7	[0.00]	µg/L	05:56:06
3	Sn 189.927†	44.4	44.8	[0.00]	µg/L	05:56:06
3	Ti 334.940†	-724.1	-730.3	[0.00]	µg/L	05:55:46
3	Tl 190.801†	-81.1	-81.8	[0.00]	µg/L	05:56:06
3	U 367.007†	938.7	946.6	[0.00]	µg/L	05:55:46
3	V 292.402†	-125.2	-126.2	[0.00]	µg/L	05:56:06
3	Zn 213.857†	902.6	910.2	[0.00]	µg/L	05:56:06

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	366205.2	2686.29	0.73%	100.00	%
Sc RADIAL	22080.1	48.19	0.22%	100	%
Y 371.029	359862.1	2967.37	0.82%	100.00	%

Ag 328.068†	-683.7	24.87	3.64%	[0.00]	µg/L
Al 396.153Radial†	-94.0	10.88	11.58%	[0.00]	µg/L
As 188.979†	-12.8	1.31	10.22%	[0.00]	µg/L
B 249.677†	173.2	19.31	11.15%	[0.00]	µg/L
Ba 233.527†	-15.5	1.54	9.94%	[0.00]	µg/L
Be 313.107†	-3573.9	32.06	0.90%	[0.00]	µg/L
Ca 317.933Radial†	296.3	12.41	4.19%	[0.00]	µg/L
Cd 226.502†	-323.1	5.70	1.76%	[0.00]	µg/L
Co 228.616†	-222.4	11.31	5.09%	[0.00]	µg/L
Cr 267.716†	121.9	18.33	15.03%	[0.00]	µg/L
Cu 324.752†	1920.1	61.59	3.21%	[0.00]	µg/L
Fe 238.204 Radial†	35.1	4.31	12.30%	[0.00]	µg/L
K 766.490 Radial†	421.7	47.81	11.34%	[0.00]	µg/L
Mg 279.077 IEC†	56.1	3.95	7.05%	[0.00]	µg/L
Mn 257.610†	456.9	18.69	4.09%	[0.00]	µg/L
Mo 202.031†	33.0	10.21	30.98%	[0.00]	µg/L
Na 589.592 Radial†	127.6	10.87	8.52%	[0.00]	µg/L
Ni 231.604†	-204.0	26.74	13.11%	[0.00]	µg/L
P 214.914†	131.7	9.62	7.31%	[0.00]	µg/L
Pb 220.353†	-63.5	0.81	1.27%	[0.00]	µg/L
S 181.975 Axial†	92.3	2.20	2.38%	[0.00]	µg/L
Sb 206.836†	154.6	1.86	1.20%	[0.00]	µg/L
Se 196.026†	-23.8	0.47	1.99%	[0.00]	µg/L
SiO2†	1065.2	10.52	0.99%	[0.00]	µg/L
Si 251.611†	-8.2	16.73	203.81%	[0.00]	µg/L
Sn 189.927†	47.5	4.20	8.85%	[0.00]	µg/L
Sr 421.552†	260.5	29.50	11.32%	[0.00]	µg/L
Ti 334.940†	-721.5	45.14	6.26%	[0.00]	µg/L
Tl 190.801†	-78.3	3.14	4.00%	[0.00]	µg/L
U 367.007†	883.5	76.29	8.64%	[0.00]	µg/L
V 292.402†	-131.9	16.38	12.42%	[0.00]	µg/L
Zn 213.857†	897.8	11.70	1.30%	[0.00]	µg/L

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Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 5

Autosampler Location: 2
Date Collected: 7/23/2018 05:56:15
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22529.6	22529.6	102	%	05:56:47
1	K 766.490 Radial†	1593.4	1140.0	[1000]	µg/L	05:56:47
1	Sr 421.552†	17704.0	17090.3	[100]	µg/L	05:56:47
1	Sc 361.383	363962.8	363962.8	99.388	%	05:57:04
1	Y 371.029	355858.6	355858.6	98.887	%	05:57:04
1	Ag 328.068†	9328.4	10069.6	[100]	µg/L	05:57:04
1	As 188.979†	195.2	209.2	[100]	µg/L	05:57:24
1	B 249.677†	3077.1	2922.8	[100]	µg/L	05:57:04
1	Ba 233.527†	11606.0	11693.0	[100]	µg/L	05:57:24
1	Be 313.107†	116788.4	121081.9	[100]	µg/L	05:57:04
1	Cd 226.502†	9445.5	9826.8	[100]	µg/L	05:57:04
1	Co 228.616†	4181.5	4429.7	[100]	µg/L	05:57:24
1	Cr 267.716†	5109.1	5018.7	[100]	µg/L	05:57:24
1	Cu 324.752†	15732.4	13909.2	[100]	µg/L	05:57:04
1	Mn 257.610†	66037.0	65987.0	[100]	µg/L	05:57:04
1	Mo 202.031†	1780.1	1758.1	[100]	µg/L	05:57:24
1	Ni 231.604†	3520.2	3745.9	[100]	µg/L	05:57:24
1	P 214.914†	882.1	755.9	[500]	µg/L	05:57:24
1	Pb 220.353†	761.7	829.9	[100]	µg/L	05:57:24
1	S 181.975 Axial†	260.5	169.8	[200]	µg/L	05:57:24
1	Sb 206.836†	497.3	345.8	[100]	µg/L	05:57:24
1	Se 196.026†	184.9	209.8	[100]	µg/L	05:57:24
1	SiO2†	7321.7	6301.5	[1069.5]	µg/L	05:57:04
1	Si 251.611†	8973.6	9037.1	[500]	µg/L	05:57:04
1	Sn 189.927†	851.9	809.6	[100]	µg/L	05:57:24
1	Ti 334.940†	22686.8	23548.1	[100]	µg/L	05:57:04
1	Tl 190.801†	403.7	484.5	[100]	µg/L	05:57:24
1	U 367.007†	1229.3	353.4	[100]	µg/L	05:57:04
1	V 292.402†	7403.0	7580.5	[100]	µg/L	05:57:04
1	Zn 213.857†	15364.2	14561.0	[100]	µg/L	05:57:04
2	Sc RADIAL	22707.0	22707.0	103	%	05:56:52
2	K 766.490 Radial†	1673.3	1205.4	[1000]	µg/L	05:56:52
2	Sr 421.552†	17886.5	17132.2	[100]	µg/L	05:56:52
2	Sc 361.383	364971.6	364971.6	99.663	%	05:57:29
2	Y 371.029	357014.8	357014.8	99.209	%	05:57:29
2	Ag 328.068†	9369.1	10084.4	[100]	µg/L	05:57:29
2	As 188.979†	217.7	231.2	[100]	µg/L	05:57:49
2	B 249.677†	3095.9	2933.2	[100]	µg/L	05:57:29
2	Ba 233.527†	11610.6	11665.3	[100]	µg/L	05:57:49
2	Be 313.107†	117341.9	121312.5	[100]	µg/L	05:57:29
2	Cd 226.502†	9539.9	9895.2	[100]	µg/L	05:57:29
2	Co 228.616†	4184.2	4420.8	[100]	µg/L	05:57:49
2	Cr 267.716†	5109.7	5005.0	[100]	µg/L	05:57:49
2	Cu 324.752†	15834.4	13967.8	[100]	µg/L	05:57:29
2	Mn 257.610†	66428.0	66195.7	[100]	µg/L	05:57:29
2	Mo 202.031†	1796.5	1769.6	[100]	µg/L	05:57:49
2	Ni 231.604†	3515.7	3731.5	[100]	µg/L	05:57:49
2	P 214.914†	883.0	754.2	[500]	µg/L	05:57:49
2	Pb 220.353†	769.4	835.6	[100]	µg/L	05:57:49
2	S 181.975 Axial†	256.6	165.1	[200]	µg/L	05:57:49
2	Sb 206.836†	485.4	332.5	[100]	µg/L	05:57:49
2	Se 196.026†	179.7	204.1	[100]	µg/L	05:57:49
2	SiO2†	7374.5	6334.2	[1069.5]	µg/L	05:57:29
2	Si 251.611†	9066.6	9105.4	[500]	µg/L	05:57:29
2	Sn 189.927†	845.9	801.3	[100]	µg/L	05:57:49
2	Ti 334.940†	22801.2	23599.8	[100]	µg/L	05:57:29
2	Tl 190.801†	397.6	477.3	[100]	µg/L	05:57:49
2	U 367.007†	1128.9	249.3	[100]	µg/L	05:57:29

2	V 292.402†	7494.1	7651.3	[100]	µg/L	05:57:29
2	Zn 213.857†	15465.9	14620.3	[100]	µg/L	05:57:29
3	Sc RADIAL	22521.8	22521.8	102	%	05:56:57
3	K 766.490 Radial†	1570.8	1118.3	[1000]	µg/L	05:56:57
3	Sr 421.552†	17749.7	17141.1	[100]	µg/L	05:56:57
3	Sc 361.383	366569.7	366569.7	100.10	%	05:57:55
3	Y 371.029	358731.3	358731.3	99.686	%	05:57:55
3	Ag 328.068†	9304.1	9978.5	[100]	µg/L	05:57:55
3	As 188.979†	200.0	212.5	[100]	µg/L	05:58:15
3	B 249.677†	3103.1	2926.8	[100]	µg/L	05:57:55
3	Ba 233.527†	11584.1	11588.1	[100]	µg/L	05:58:15
3	Be 313.107†	116845.7	120303.4	[100]	µg/L	05:57:55
3	Cd 226.502†	9468.2	9781.9	[100]	µg/L	05:57:55
3	Co 228.616†	4190.0	4408.2	[100]	µg/L	05:58:15
3	Cr 267.716†	5084.9	4957.9	[100]	µg/L	05:58:15
3	Cu 324.752†	15735.7	13799.9	[100]	µg/L	05:57:55
3	Mn 257.610†	66191.2	65668.5	[100]	µg/L	05:57:55
3	Mo 202.031†	1800.1	1765.3	[100]	µg/L	05:58:15
3	Ni 231.604†	3480.1	3680.6	[100]	µg/L	05:58:15
3	P 214.914†	887.5	754.9	[500]	µg/L	05:58:15
3	Pb 220.353†	761.4	824.2	[100]	µg/L	05:58:15
3	S 181.975 Axial†	258.0	165.4	[200]	µg/L	05:58:15
3	Sb 206.836†	489.3	334.2	[100]	µg/L	05:58:15
3	Se 196.026†	199.2	222.8	[100]	µg/L	05:58:15
3	SiO2†	7351.8	6279.2	[1069.5]	µg/L	05:57:55
3	Si 251.611†	8965.6	8964.9	[500]	µg/L	05:57:55
3	Sn 189.927†	851.5	803.1	[100]	µg/L	05:58:15
3	Ti 334.940†	22659.4	23358.4	[100]	µg/L	05:57:55
3	Tl 190.801†	395.4	473.4	[100]	µg/L	05:58:15
3	U 367.007†	1323.5	438.8	[100]	µg/L	05:57:55
3	V 292.402†	7473.5	7597.9	[100]	µg/L	05:57:55
3	Zn 213.857†	15396.8	14483.7	[100]	µg/L	05:57:55

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	365168.0	1314.48	0.36%	99.717	%
Sc RADIAL	22586.1	104.74	0.46%	102	%
Y 371.029	357201.6	1445.46	0.40%	99.261	%
Ag 328.068†	10044.2	57.33	0.57%	[100]	µg/L
As 188.979†	217.6	11.86	5.45%	[100]	µg/L
B 249.677†	2927.6	5.24	0.18%	[100]	µg/L
Ba 233.527†	11648.8	54.35	0.47%	[100]	µg/L
Be 313.107†	120899.3	528.74	0.44%	[100]	µg/L
Cd 226.502†	9834.6	57.10	0.58%	[100]	µg/L
Co 228.616†	4419.6	10.78	0.24%	[100]	µg/L
Cr 267.716†	4993.9	31.90	0.64%	[100]	µg/L
Cu 324.752†	13892.3	85.20	0.61%	[100]	µg/L
K 766.490 Radial†	1154.6	45.35	3.93%	[1000]	µg/L
Mn 257.610†	65950.4	265.50	0.40%	[100]	µg/L
Mo 202.031†	1764.4	5.82	0.33%	[100]	µg/L
Ni 231.604†	3719.3	34.29	0.92%	[100]	µg/L
P 214.914†	755.0	0.82	0.11%	[500]	µg/L
Pb 220.353†	829.9	5.68	0.68%	[100]	µg/L
S 181.975 Axial†	166.8	2.64	1.58%	[200]	µg/L
Sb 206.836†	337.5	7.25	2.15%	[100]	µg/L
Se 196.026†	212.2	9.60	4.53%	[100]	µg/L
SiO2†	6305.0	27.64	0.44%	[1069.5]	µg/L
Si 251.611†	9035.8	70.25	0.78%	[500]	µg/L
Sn 189.927†	804.7	4.39	0.55%	[100]	µg/L
Sr 421.552†	17121.2	27.11	0.16%	[100]	µg/L
Ti 334.940†	23502.1	127.08	0.54%	[100]	µg/L
Tl 190.801†	478.4	5.65	1.18%	[100]	µg/L
U 367.007†	347.2	94.89	27.33%	[100]	µg/L
V 292.402†	7609.9	36.89	0.48%	[100]	µg/L
Zn 213.857†	14555.0	68.54	0.47%	[100]	µg/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 5

Autosampler Location: 3
Date Collected: 7/23/2018 05:58:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22380.5	22380.5	101	%	05:58:59
1	Al 396.153Radial†	16472.8	16345.6	[5000]	µg/L	05:58:59
1	Ca 317.933Radial†	25028.1	24395.8	[5000]	µg/L	05:58:59
1	K 766.490 Radial†	6017.6	5515.1	[5000]	µg/L	05:58:59
1	Mg 279.077 IEC†	3307.8	3207.4	[5000]	µg/L	05:58:59
1	Sr 421.552†	86959.9	85532.1	[500]	µg/L	05:58:54
1	Sc 361.383	367619.8	367619.8	100.39	%	05:59:26
1	Y 371.029	358244.9	358244.9	99.551	%	05:59:26
1	Ag 328.068†	48637.0	49133.6	[500]	µg/L	05:59:26
1	As 188.979†	1123.5	1132.0	[500]	µg/L	05:59:46
1	B 249.677†	15212.1	14980.3	[500]	µg/L	05:59:26
1	Ba 233.527†	59688.6	59474.5	[500]	µg/L	05:59:26
1	Be 313.107†	600779.4	602041.5	[500]	µg/L	05:59:26
1	Cd 226.502†	48339.0	48476.1	[500]	µg/L	05:59:26
1	Co 228.616†	21349.9	21490.2	[500]	µg/L	05:59:46
1	Cr 267.716†	24943.1	24725.2	[500]	µg/L	05:59:46
1	Cu 324.752†	70339.0	68148.2	[500]	µg/L	05:59:26
1	Mn 257.610†	320993.7	319301.7	[500]	µg/L	05:59:26
1	Mo 202.031†	8774.0	8707.3	[500]	µg/L	05:59:46
1	Ni 231.604†	18144.7	18278.8	[500]	µg/L	05:59:46
1	P 214.914†	3857.5	3711.0	[2500]	µg/L	05:59:46
1	Pb 220.353†	3993.5	4041.6	[500]	µg/L	05:59:46
1	S 181.975 Axial†	896.1	800.3	[1000]	µg/L	05:59:46
1	Sb 206.836†	1886.3	1724.4	[500]	µg/L	05:59:46
1	Se 196.026†	1035.1	1054.9	[500]	µg/L	05:59:46
1	SiO2†	32759.2	31567.9	[5347.5]	µg/L	05:59:26
1	Si 251.611†	45287.7	45121.6	[2500]	µg/L	05:59:26
1	Sn 189.927†	4032.2	3969.1	[500]	µg/L	05:59:46
1	Ti 334.940†	115987.1	116262.3	[500]	µg/L	05:59:26
1	Tl 190.801†	2243.0	2312.7	[500]	µg/L	05:59:46
1	U 367.007†	2295.3	1403.0	[500]	µg/L	05:59:26
1	V 292.402†	38209.0	38193.9	[500]	µg/L	05:59:26
1	Zn 213.857†	66603.1	65449.0	[500]	µg/L	05:59:26
2	Sc RADIAL	22371.4	22371.4	101	%	05:59:09
2	Al 396.153Radial†	16389.2	16269.9	[5000]	µg/L	05:59:09
2	Ca 317.933Radial†	25003.1	24381.2	[5000]	µg/L	05:59:09
2	K 766.490 Radial†	5948.1	5449.1	[5000]	µg/L	05:59:09
2	Mg 279.077 IEC†	3325.4	3226.0	[5000]	µg/L	05:59:09
2	Sr 421.552†	86949.7	85557.3	[500]	µg/L	05:59:04
2	Sc 361.383	364916.5	364916.5	99.648	%	05:59:52
2	Y 371.029	355340.9	355340.9	98.744	%	05:59:52
2	Ag 328.068†	48365.3	49219.8	[500]	µg/L	05:59:52
2	As 188.979†	1112.9	1129.6	[500]	µg/L	06:00:12
2	B 249.677†	15223.2	15103.8	[500]	µg/L	05:59:52
2	Ba 233.527†	59351.2	59576.3	[500]	µg/L	05:59:52
2	Be 313.107†	597804.1	603489.2	[500]	µg/L	05:59:52
2	Cd 226.502†	47832.3	48324.3	[500]	µg/L	05:59:52
2	Co 228.616†	21340.1	21637.8	[500]	µg/L	06:00:12
2	Cr 267.716†	24984.8	24951.1	[500]	µg/L	06:00:12
2	Cu 324.752†	70074.2	68401.5	[500]	µg/L	05:59:52
2	Mn 257.610†	319679.8	320351.9	[500]	µg/L	05:59:52
2	Mo 202.031†	8745.8	8743.7	[500]	µg/L	06:00:12
2	Ni 231.604†	18165.5	18433.6	[500]	µg/L	06:00:12
2	P 214.914†	3876.9	3758.9	[2500]	µg/L	06:00:12
2	Pb 220.353†	4011.7	4089.3	[500]	µg/L	06:00:12
2	S 181.975 Axial†	891.0	801.8	[1000]	µg/L	06:00:12
2	Sb 206.836†	1895.1	1747.2	[500]	µg/L	06:00:12
2	Se 196.026†	1041.2	1068.6	[500]	µg/L	06:00:12

2	SiO2†	32641.0	31691.0	[5347.5]	µg/L	05:59:52
2	Si 251.611†	45140.8	45308.5	[2500]	µg/L	05:59:52
2	Sn 189.927†	4038.1	4004.9	[500]	µg/L	06:00:12
2	Ti 334.940†	115743.1	116873.4	[500]	µg/L	05:59:52
2	Tl 190.801†	2261.5	2347.8	[500]	µg/L	06:00:12
2	U 367.007†	2321.3	1446.1	[500]	µg/L	05:59:52
2	V 292.402†	37884.4	38150.0	[500]	µg/L	05:59:52
2	Zn 213.857†	66189.9	65525.9	[500]	µg/L	05:59:52
3	Sc RADIAL	22252.5	22252.5	101	%	05:59:19
3	Al 396.153Radial†	16411.6	16378.5	[5000]	µg/L	05:59:19
3	Ca 317.933Radial†	24855.0	24366.1	[5000]	µg/L	05:59:19
3	K 766.490 Radial†	6061.3	5592.7	[5000]	µg/L	05:59:19
3	Mg 279.077 IEC†	3304.9	3223.2	[5000]	µg/L	05:59:19
3	Sr 421.552†	87095.6	86160.4	[500]	µg/L	05:59:14
3	Sc 361.383	363643.1	363643.1	99.300	%	06:00:18
3	Y 371.029	354606.6	354606.6	98.540	%	06:00:18
3	Ag 328.068†	48339.1	49363.3	[500]	µg/L	06:00:18
3	As 188.979†	1120.5	1141.2	[500]	µg/L	06:00:38
3	B 249.677†	15132.0	15065.4	[500]	µg/L	06:00:18
3	Ba 233.527†	58985.9	59417.1	[500]	µg/L	06:00:18
3	Be 313.107†	594822.3	602587.1	[500]	µg/L	06:00:18
3	Cd 226.502†	47490.5	48148.2	[500]	µg/L	06:00:18
3	Co 228.616†	21548.7	21922.9	[500]	µg/L	06:00:38
3	Cr 267.716†	25166.4	25221.7	[500]	µg/L	06:00:38
3	Cu 324.752†	69652.0	68222.7	[500]	µg/L	06:00:18
3	Mn 257.610†	317777.6	319559.7	[500]	µg/L	06:00:18
3	Mo 202.031†	8824.1	8853.3	[500]	µg/L	06:00:38
3	Ni 231.604†	18304.0	18637.0	[500]	µg/L	06:00:38
3	P 214.914†	3916.5	3812.4	[2500]	µg/L	06:00:38
3	Pb 220.353†	4036.2	4128.1	[500]	µg/L	06:00:38
3	S 181.975 Axial†	905.7	819.8	[1000]	µg/L	06:00:38
3	Sb 206.836†	1873.5	1732.1	[500]	µg/L	06:00:38
3	Se 196.026†	1033.5	1064.6	[500]	µg/L	06:00:38
3	SiO2†	32446.6	31609.9	[5347.5]	µg/L	06:00:18
3	Si 251.611†	44923.8	45248.5	[2500]	µg/L	06:00:18
3	Sn 189.927†	4080.7	4061.9	[500]	µg/L	06:00:38
3	Ti 334.940†	115273.6	116807.3	[500]	µg/L	06:00:18
3	Tl 190.801†	2276.7	2371.0	[500]	µg/L	06:00:38
3	U 367.007†	2377.4	1510.7	[500]	µg/L	06:00:18
3	V 292.402†	37868.9	38267.6	[500]	µg/L	06:00:18
3	Zn 213.857†	65709.9	65275.1	[500]	µg/L	06:00:18

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	365393.1	2030.76	0.56%	99.778	%
Sc RADIAL	22334.8	71.41	0.32%	101	%
Y 371.029	356064.2	1923.95	0.54%	98.945	%
Ag 328.068†	49238.9	116.07	0.24%	[500]	µg/L
Al 396.153Radial†	16331.3	55.70	0.34%	[5000]	µg/L
As 188.979†	1134.2	6.11	0.54%	[500]	µg/L
B 249.677†	15049.8	63.16	0.42%	[500]	µg/L
Ba 233.527†	59489.3	80.64	0.14%	[500]	µg/L
Be 313.107†	602706.0	731.12	0.12%	[500]	µg/L
Ca 317.933Radial†	24381.1	14.84	0.06%	[5000]	µg/L
Cd 226.502†	48316.2	164.08	0.34%	[500]	µg/L
Co 228.616†	21683.7	219.98	1.01%	[500]	µg/L
Cr 267.716†	24966.0	248.62	1.00%	[500]	µg/L
Cu 324.752†	68257.5	130.19	0.19%	[500]	µg/L
K 766.490 Radial†	5519.0	71.89	1.30%	[5000]	µg/L
Mg 279.077 IEC†	3218.9	10.05	0.31%	[5000]	µg/L
Mn 257.610†	319737.8	547.29	0.17%	[500]	µg/L
Mo 202.031†	8768.1	76.03	0.87%	[500]	µg/L
Ni 231.604†	18449.8	179.60	0.97%	[500]	µg/L
P 214.914†	3760.8	50.72	1.35%	[2500]	µg/L
Pb 220.353†	4086.4	43.33	1.06%	[500]	µg/L
S 181.975 Axial†	807.3	10.82	1.34%	[1000]	µg/L
Sb 206.836†	1734.6	11.56	0.67%	[500]	µg/L
Se 196.026†	1062.7	7.06	0.66%	[500]	µg/L
SiO2†	31623.0	62.57	0.20%	[5347.5]	µg/L

Si 251.611†	45226.2	95.39	0.21%	[2500]	µg/L
Sn 189.927†	4012.0	46.81	1.17%	[500]	µg/L
Sr 421.552†	85750.0	355.68	0.41%	[500]	µg/L
Ti 334.940†	116647.7	335.35	0.29%	[500]	µg/L
Tl 190.801†	2343.8	29.37	1.25%	[500]	µg/L
U 367.007†	1453.3	54.19	3.73%	[500]	µg/L
V 292.402†	38203.8	59.41	0.16%	[500]	µg/L
Zn 213.857†	65416.6	128.48	0.20%	[500]	µg/L

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Sequence No.: 4 | **Autosampler Location: 4**
Sample ID: SCAL | **Date Collected: 7/23/2018 06:00:47**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22398.5	22398.5	101	%	06:01:23
1	Al 396.153Radial†	32414.3	32047.6	[10000]	µg/L	06:01:23
1	Ca 317.933Radial†	49923.1	48917.2	[10000]	µg/L	06:01:23
1	Fe 238.204 Radial†	53368.7	52575.2	[10000]	µg/L	06:01:23
1	K 766.490 Radial†	11606.2	11019.5	[10000]	µg/L	06:01:23
1	Mg 279.077 IEC†	6525.7	6376.9	[10000]	µg/L	06:01:23
1	Na 589.592 Radial†	6770.6	6546.8	[10000]	µg/L	06:01:23
1	Sr 421.552†	174227.8	171491.1	[1000]	µg/L	06:01:18
1	Sc 361.383	362103.6	362103.6	98.880	%	06:01:52
1	Y 371.029	351472.0	351472.0	97.669	%	06:01:52
1	Ag 328.068†	96954.5	98736.4	[1000]	µg/L	06:01:52
1	As 188.979†	2246.5	2284.8	[1000]	µg/L	06:02:12
1	B 249.677†	29881.5	30046.8	[1000]	µg/L	06:01:52
1	Ba 233.527†	117554.5	118901.6	[1000]	µg/L	06:01:52
1	Be 313.107†	1184892.2	1201887.5	[1000]	µg/L	06:01:52
1	Cd 226.502†	94782.6	96179.3	[1000]	µg/L	06:01:52
1	Co 228.616†	42715.9	43422.1	[1000]	µg/L	06:01:52
1	Cr 267.716†	49844.0	50286.7	[1000]	µg/L	06:01:52
1	Cu 324.752†	136561.5	136188.3	[1000]	µg/L	06:01:52
1	Mn 257.610†	629148.5	635818.1	[1000]	µg/L	06:01:52
1	Mo 202.031†	17432.2	17596.7	[1000]	µg/L	06:02:12
1	Ni 231.604†	35298.5	35902.3	[1000]	µg/L	06:02:12
1	P 214.914†	7523.0	7476.5	[5000]	µg/L	06:02:12
1	Pb 220.353†	7897.3	8050.3	[1000]	µg/L	06:02:12
1	S 181.975 Axial†	1704.0	1631.0	[2000]	µg/L	06:02:12
1	Sb 206.836†	3618.8	3505.2	[1000]	µg/L	06:02:12
1	Se 196.026†	2065.0	2112.2	[1000]	µg/L	06:02:12
1	SiO2†	63613.6	63268.9	[10695]	µg/L	06:01:52
1	Si 251.611†	89295.1	90314.7	[5000]	µg/L	06:01:52
1	Sn 189.927†	7987.4	8030.4	[1000]	µg/L	06:02:12
1	Ti 334.940†	231829.8	235177.3	[1000]	µg/L	06:01:52
1	Tl 190.801†	4512.2	4641.6	[1000]	µg/L	06:02:12
1	U 367.007†	3667.8	2825.8	[1000]	µg/L	06:01:52
1	V 292.402†	75638.2	76626.8	[1000]	µg/L	06:01:52
1	Zn 213.857†	130505.2	131085.6	[1000]	µg/L	06:01:52
2	Sc RADIAL	22516.7	22516.7	102	%	06:01:33
2	Al 396.153Radial†	32437.5	31902.6	[10000]	µg/L	06:01:33
2	Ca 317.933Radial†	49984.5	48719.1	[10000]	µg/L	06:01:33
2	Fe 238.204 Radial†	53348.1	52278.7	[10000]	µg/L	06:01:33
2	K 766.490 Radial†	11551.8	10906.2	[10000]	µg/L	06:01:33
2	Mg 279.077 IEC†	6548.3	6365.3	[10000]	µg/L	06:01:33
2	Na 589.592 Radial†	6795.7	6536.3	[10000]	µg/L	06:01:33
2	Sr 421.552†	172014.9	168419.3	[1000]	µg/L	06:01:28
2	Sc 361.383	361966.3	361966.3	98.842	%	06:02:20
2	Y 371.029	351883.0	351883.0	97.783	%	06:02:20
2	Ag 328.068†	97204.4	99026.4	[1000]	µg/L	06:02:20
2	As 188.979†	2218.1	2256.9	[1000]	µg/L	06:02:40
2	B 249.677†	30017.6	30195.9	[1000]	µg/L	06:02:20
2	Ba 233.527†	117644.1	119037.4	[1000]	µg/L	06:02:20
2	Be 313.107†	1188734.0	1206229.0	[1000]	µg/L	06:02:20
2	Cd 226.502†	95128.5	96565.6	[1000]	µg/L	06:02:20
2	Co 228.616†	42714.1	43436.7	[1000]	µg/L	06:02:20
2	Cr 267.716†	49893.7	50356.0	[1000]	µg/L	06:02:20
2	Cu 324.752†	136625.7	136305.6	[1000]	µg/L	06:02:20
2	Mn 257.610†	630186.2	637109.4	[1000]	µg/L	06:02:20
2	Mo 202.031†	17426.8	17597.9	[1000]	µg/L	06:02:40
2	Ni 231.604†	35286.7	35903.9	[1000]	µg/L	06:02:40
2	P 214.914†	7546.3	7503.0	[5000]	µg/L	06:02:40

2	Pb 220.353†	7904.0	8060.1	[1000]	µg/L	06:02:40
2	S 181.975 Axial†	1701.0	1628.6	[2000]	µg/L	06:02:40
2	Sb 206.836†	3594.5	3482.0	[1000]	µg/L	06:02:40
2	Se 196.026†	2048.8	2096.5	[1000]	µg/L	06:02:40
2	SiO2†	63745.4	63426.6	[10695]	µg/L	06:02:20
2	Si 251.611†	89623.7	90681.5	[5000]	µg/L	06:02:20
2	Sn 189.927†	7988.7	8034.8	[1000]	µg/L	06:02:40
2	Ti 334.940†	232356.4	235799.1	[1000]	µg/L	06:02:20
2	Tl 190.801†	4534.7	4666.1	[1000]	µg/L	06:02:40
2	U 367.007†	3702.7	2862.6	[1000]	µg/L	06:02:20
2	V 292.402†	75794.5	76814.0	[1000]	µg/L	06:02:20
2	Zn 213.857†	130944.0	131579.7	[1000]	µg/L	06:02:20
3	Sc RADIAL	22544.4	22544.4	102	%	06:01:43
3	Al 396.153Radial†	32746.8	32166.4	[10000]	µg/L	06:01:43
3	Ca 317.933Radial†	50460.3	49124.8	[10000]	µg/L	06:01:43
3	Fe 238.204 Radial†	54016.8	52869.4	[10000]	µg/L	06:01:43
3	K 766.490 Radial†	11705.3	11042.6	[10000]	µg/L	06:01:43
3	Mg 279.077 IEC†	6628.3	6435.7	[10000]	µg/L	06:01:43
3	Na 589.592 Radial†	6871.2	6602.1	[10000]	µg/L	06:01:43
3	Sr 421.552†	172969.8	169147.2	[1000]	µg/L	06:01:38
3	Sc 361.383	361154.6	361154.6	98.621	%	06:02:47
3	Y 371.029	350985.3	350985.3	97.533	%	06:02:47
3	Ag 328.068†	96628.9	98663.9	[1000]	µg/L	06:02:47
3	As 188.979†	2251.1	2295.3	[1000]	µg/L	06:03:07
3	B 249.677†	29781.6	30024.9	[1000]	µg/L	06:02:47
3	Ba 233.527†	116775.4	118424.0	[1000]	µg/L	06:02:47
3	Be 313.107†	1180977.5	1201066.9	[1000]	µg/L	06:02:47
3	Cd 226.502†	94509.0	96153.7	[1000]	µg/L	06:02:47
3	Co 228.616†	42492.6	43309.2	[1000]	µg/L	06:02:47
3	Cr 267.716†	49608.2	50180.0	[1000]	µg/L	06:02:47
3	Cu 324.752†	135865.6	135845.5	[1000]	µg/L	06:02:47
3	Mn 257.610†	626186.8	634486.9	[1000]	µg/L	06:02:47
3	Mo 202.031†	17549.5	17762.0	[1000]	µg/L	06:03:07
3	Ni 231.604†	35387.5	36086.4	[1000]	µg/L	06:03:07
3	P 214.914†	7580.0	7554.3	[5000]	µg/L	06:03:07
3	Pb 220.353†	7917.4	8091.6	[1000]	µg/L	06:03:07
3	S 181.975 Axial†	1699.8	1631.2	[2000]	µg/L	06:03:07
3	Sb 206.836†	3609.3	3505.1	[1000]	µg/L	06:03:07
3	Se 196.026†	2078.3	2131.1	[1000]	µg/L	06:03:07
3	SiO2†	63361.3	63182.1	[10695]	µg/L	06:02:47
3	Si 251.611†	88960.5	90212.8	[5000]	µg/L	06:02:47
3	Sn 189.927†	8038.7	8103.6	[1000]	µg/L	06:03:07
3	Ti 334.940†	230681.7	234629.2	[1000]	µg/L	06:02:47
3	Tl 190.801†	4564.8	4706.9	[1000]	µg/L	06:03:07
3	U 367.007†	3607.5	2774.5	[1000]	µg/L	06:02:47
3	V 292.402†	75286.3	76471.1	[1000]	µg/L	06:02:47
3	Zn 213.857†	130056.9	130977.9	[1000]	µg/L	06:02:47

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	361741.5	512.87	0.14%	98.781	%
Sc RADIAL	22486.5	77.51	0.34%	102	%
Y 371.029	351446.8	449.40	0.13%	97.662	%
Ag 328.068†	98808.9	191.81	0.19%	[1000]	µg/L
Al 396.153Radial†	32038.9	132.14	0.41%	[10000]	µg/L
As 188.979†	2279.0	19.86	0.87%	[1000]	µg/L
B 249.677†	30089.2	93.08	0.31%	[1000]	µg/L
Ba 233.527†	118787.7	322.19	0.27%	[1000]	µg/L
Be 313.107†	1203061.1	2773.97	0.23%	[1000]	µg/L
Ca 317.933Radial†	48920.4	202.88	0.41%	[10000]	µg/L
Cd 226.502†	96299.6	230.78	0.24%	[1000]	µg/L
Co 228.616†	43389.4	69.77	0.16%	[1000]	µg/L
Cr 267.716†	50274.3	88.67	0.18%	[1000]	µg/L
Cu 324.752†	136113.1	239.10	0.18%	[1000]	µg/L
Fe 238.204 Radial†	52574.4	295.35	0.56%	[10000]	µg/L
K 766.490 Radial†	10989.5	73.01	0.66%	[10000]	µg/L
Mg 279.077 IEC†	6392.6	37.76	0.59%	[10000]	µg/L
Mn 257.610†	635804.8	1311.29	0.21%	[1000]	µg/L
Mo 202.031†	17652.2	95.09	0.54%	[1000]	µg/L

Na 589.592 Radial†	6561.7	35.33	0.54%	[10000]	µg/L
Ni 231.604†	35964.2	105.84	0.29%	[1000]	µg/L
P 214.914†	7511.3	39.56	0.53%	[5000]	µg/L
Pb 220.353†	8067.3	21.61	0.27%	[1000]	µg/L
S 181.975 Axial†	1630.3	1.46	0.09%	[2000]	µg/L
Sb 206.836†	3497.4	13.41	0.38%	[1000]	µg/L
Se 196.026†	2113.3	17.34	0.82%	[1000]	µg/L
SiO2†	63292.6	123.97	0.20%	[10695]	µg/L
Si 251.611†	90403.0	246.50	0.27%	[5000]	µg/L
Sn 189.927†	8056.2	41.07	0.51%	[1000]	µg/L
Sr 421.552†	169685.9	1605.19	0.95%	[1000]	µg/L
Ti 334.940†	235201.9	585.31	0.25%	[1000]	µg/L
Tl 190.801†	4671.5	33.01	0.71%	[1000]	µg/L
U 367.007†	2821.0	44.28	1.57%	[1000]	µg/L
V 292.402†	76637.3	171.69	0.22%	[1000]	µg/L
Zn 213.857†	131214.4	320.90	0.24%	[1000]	µg/L

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Sequence No.: 5 | **Autosampler Location: 5**
Sample ID: S10 | **Date Collected: 7/23/2018 06:03:16**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22016.2	22016.2	99.7	%	06:03:46
1	Al 396.153Radial†	155179.7	155724.4	[50000]	µg/L	06:03:46
1	Ca 317.933Radial†	233301.2	233682.5	[50000]	µg/L	06:03:46
1	Fe 238.204 Radial†	102225.7	102487.6	[20000]	µg/L	06:03:46
1	Mg 279.077 IEC†	30619.3	30652.2	[50000]	µg/L	06:03:46
1	Na 589.592 Radial†	13060.0	12970.3	[20000]	µg/L	06:03:46
1	Sc 361.383	358762.2	358762.2	97.968	%	06:04:03
1	Y 371.029	348117.5	348117.5	96.736	%	06:04:03
2	Sc RADIAL	22132.5	22132.5	100	%	06:03:52
2	Al 396.153Radial†	155193.0	154919.6	[50000]	µg/L	06:03:52
2	Ca 317.933Radial†	233081.6	232233.5	[50000]	µg/L	06:03:52
2	Fe 238.204 Radial†	102212.6	101935.6	[20000]	µg/L	06:03:52
2	Mg 279.077 IEC†	30537.0	30408.7	[50000]	µg/L	06:03:52
2	Na 589.592 Radial†	13097.5	12938.9	[20000]	µg/L	06:03:52
2	Sc 361.383	357252.2	357252.2	97.555	%	06:04:09
2	Y 371.029	346545.5	346545.5	96.300	%	06:04:09
3	Sc RADIAL	22230.7	22230.7	101	%	06:03:57
3	Al 396.153Radial†	155914.8	154952.7	[50000]	µg/L	06:03:57
3	Ca 317.933Radial†	234749.7	232863.3	[50000]	µg/L	06:03:57
3	Fe 238.204 Radial†	102789.1	102057.8	[20000]	µg/L	06:03:57
3	Mg 279.077 IEC†	30777.8	30513.3	[50000]	µg/L	06:03:57
3	Na 589.592 Radial†	13238.4	13021.1	[20000]	µg/L	06:03:57
3	Sc 361.383	357704.3	357704.3	97.679	%	06:04:14
3	Y 371.029	347004.3	347004.3	96.427	%	06:04:14

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	357906.3	774.98	0.22%	97.734	%
Sc RADIAL	22126.5	107.39	0.49%	100	%
Y 371.029	347222.4	808.35	0.23%	96.488	%
Al 396.153Radial†	155198.9	455.43	0.29%	[50000]	µg/L
Ca 317.933Radial†	232926.4	726.58	0.31%	[50000]	µg/L
Fe 238.204 Radial†	102160.3	289.95	0.28%	[20000]	µg/L
Mg 279.077 IEC†	30524.7	122.18	0.40%	[50000]	µg/L
Na 589.592 Radial†	12976.8	41.46	0.32%	[20000]	µg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	98.76	0.00000	0.999998	
Al 396.153Radial	3	Lin Thru 0	0.0	3.109	0.00000	0.999969	
As 188.979	3	Lin Thru 0	0.0	2.276	0.00000	0.999991	
B 249.677	3	Lin Thru 0	0.0	30.08	0.00000	0.999997	
Ba 233.527	3	Lin Thru 0	0.0	118.8	0.00000	0.999998	
Be 313.107	3	Lin Thru 0	0.0	1204	0.00000	1.000000	
Ca 317.933Radial	3	Lin Thru 0	0.0	4.669	0.00000	0.999945	
Cd 226.502	3	Lin Thru 0	0.0	96.38	0.00000	0.999997	
Co 228.616	3	Lin Thru 0	0.0	43.39	0.00000	0.999999	
Cr 267.716	3	Lin Thru 0	0.0	50.20	0.00000	0.999996	
Cu 324.752	3	Lin Thru 0	0.0	136.2	0.00000	0.999998	
Fe 238.204 Radia	2	Lin Thru 0	0.0	5.138	0.00000	0.999932	
K 766.490 Radial	3	Lin Thru 0	0.0	1.100	0.00000	0.999989	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.6119	0.00000	0.999946	
Mn 257.610	3	Lin Thru 0	0.0	636.7	0.00000	0.999992	
Mo 202.031	3	Lin Thru 0	0.0	17.63	0.00000	0.999997	

Na 589.592 Radia	2	Lin Thru 0	0.0	0.6503	0.00000	0.999990
Ni 231.604	3	Lin Thru 0	0.0	36.16	0.00000	0.999944
P 214.914	3	Lin Thru 0	0.0	1.503	0.00000	1.000000
Pb 220.353	3	Lin Thru 0	0.0	8.090	0.00000	0.999984
S 181.975 Axial	3	Lin Thru 0	0.0	0.8137	0.00000	0.999990
Sb 206.836	3	Lin Thru 0	0.0	3.491	0.00000	0.999990
Se 196.026	3	Lin Thru 0	0.0	2.116	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	5.917	0.00000	1.000000
Si 251.611	3	Lin Thru 0	0.0	18.08	0.00000	1.000000
Sn 189.927	3	Lin Thru 0	0.0	8.050	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	170.1	0.00000	0.999991
Ti 334.940	3	Lin Thru 0	0.0	234.8	0.00000	0.999995
Tl 190.801	3	Lin Thru 0	0.0	4.676	0.00000	0.999997
U 367.007	3	Lin Thru 0	0.0	2.843	0.00000	0.999733
V 292.402	3	Lin Thru 0	0.0	76.59	0.00000	0.999999
Zn 213.857	3	Lin Thru 0	0.0	131.3	0.00000	0.999952

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Sequence No.: 6 | **Autosampler Location: 9**
Sample ID: ICV | **Date Collected: 7/23/2018 06:04:22**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	22464.8	22464.8	102	%			06:04:58
1	Al 396.153Radial†	16906.9	16711.3	5351.2	µg/L	5351.2	ppb	06:04:58
1	Ca 317.933Radial†	25956.5	25215.7	5400.1	µg/L	5400.1	ppb	06:04:58
1	Fe 238.204 Radial†	27185.7	26685.1	5193.8	µg/L	5193.8	ppb	06:04:58
1	K 766.490 Radial†	3317.3	2838.8	2579.4	µg/L	2579.4	ppb	06:04:58
1	Mg 279.077 IEC†	3426.7	3312.0	5412.5	µg/L	5412.5	ppb	06:04:58
1	Na 589.592 Radial†	1803.1	1644.7	2522.3	µg/L	2522.3	ppb	06:04:58
1	Sr 421.552†	87985.5	86218.2	506.90	µg/L	506.90	ppb	06:04:53
1	Sc 361.383	366620.7	366620.7	100.11	%			06:05:25
1	Y 371.029	358080.4	358080.4	99.505	%			06:05:25
1	Ag 328.068†	24015.9	24672.3	251.26	µg/L	251.26	ppb	06:05:25
1	As 188.979†	1122.0	1133.5	502.87	µg/L	502.87	ppb	06:05:45
1	B 249.677†	15370.1	15179.5	522.82	µg/L	522.82	ppb	06:05:25
1	Ba 233.527†	60088.4	60035.9	505.19	µg/L	505.19	ppb	06:05:25
1	Be 313.107†	294741.4	297981.3	247.89	µg/L	247.89	ppb	06:05:25
1	Cd 226.502†	48280.4	48548.8	503.33	µg/L	503.33	ppb	06:05:25
1	Co 228.616†	21544.3	21742.3	501.03	µg/L	501.03	ppb	06:05:45
1	Cr 267.716†	25215.1	25064.6	498.97	µg/L	498.97	ppb	06:05:45
1	Cu 324.752†	71143.3	69142.5	507.90	µg/L	507.90	ppb	06:05:25
1	Mn 257.610†	321284.7	320463.7	503.63	µg/L	503.63	ppb	06:05:25
1	Mo 202.031†	8899.4	8856.3	502.47	µg/L	502.47	ppb	06:05:45
1	Ni 231.604†	17862.8	18046.5	498.91	µg/L	498.91	ppb	06:05:45
1	P 214.914†	3862.2	3726.2	2465.9	µg/L	2465.9	ppb	06:05:45
1	Pb 220.353†	4033.1	4092.1	506.20	µg/L	506.20	ppb	06:05:45
1	S 181.975 Axial†	2063.7	1969.0	2417.0	µg/L	2417.0	ppb	06:05:45
1	Sb 206.836†	1906.4	1749.6	497.70	µg/L	497.70	ppb	06:05:45
1	Se 196.026†	5324.3	5342.0	2527.2	µg/L	2527.2	ppb	06:05:45
1	SiO2†	64402.8	63264.6	10668	µg/L	10668	ppb	06:05:25
1	Si 251.611†	90424.4	90330.2	4986.7	µg/L	4986.7	ppb	06:05:25
1	Sn 189.927†	4117.9	4065.7	506.94	µg/L	506.94	ppb	06:05:45
1	Ti 334.940†	117780.4	118368.5	503.91	µg/L	503.91	ppb	06:05:25
1	Tl 190.801†	2320.2	2395.9	513.96	µg/L	513.96	ppb	06:05:45
1	U 367.007†	2342.8	1456.7	489.4	µg/L	489.4	ppb	06:05:25
1	V 292.402†	38245.2	38333.7	506.72	µg/L	506.72	ppb	06:05:25
1	Zn 213.857†	67953.7	66978.9	506.77	µg/L	506.77	ppb	06:05:25
2	Sc RADIAL	22412.6	22412.6	102	%			06:05:08
2	Al 396.153Radial†	16760.4	16605.7	5317.3	µg/L	5317.3	ppb	06:05:08
2	Ca 317.933Radial†	25936.9	25255.8	5408.7	µg/L	5408.7	ppb	06:05:08
2	Fe 238.204 Radial†	27239.2	26800.1	5216.1	µg/L	5216.1	ppb	06:05:08
2	K 766.490 Radial†	3278.9	2808.6	2552.0	µg/L	2552.0	ppb	06:05:08
2	Mg 279.077 IEC†	3414.0	3307.3	5404.8	µg/L	5404.8	ppb	06:05:08
2	Na 589.592 Radial†	1821.0	1666.4	2555.7	µg/L	2555.7	ppb	06:05:08
2	Sr 421.552†	87597.6	86037.7	505.84	µg/L	505.84	ppb	06:05:03
2	Sc 361.383	366113.1	366113.1	99.975	%			06:05:51
2	Y 371.029	357454.4	357454.4	99.331	%			06:05:51
2	Ag 328.068†	23998.2	24687.9	251.44	µg/L	251.44	ppb	06:05:51
2	As 188.979†	1126.7	1139.8	505.63	µg/L	505.63	ppb	06:06:11
2	B 249.677†	15399.1	15229.7	524.58	µg/L	524.58	ppb	06:05:51
2	Ba 233.527†	60181.1	60211.8	506.67	µg/L	506.67	ppb	06:05:51
2	Be 313.107†	294894.7	298542.8	248.35	µg/L	248.35	ppb	06:05:51
2	Cd 226.502†	48205.8	48541.0	503.24	µg/L	503.24	ppb	06:05:51
2	Co 228.616†	21517.4	21745.2	501.10	µg/L	501.10	ppb	06:06:11
2	Cr 267.716†	25158.9	25043.3	498.57	µg/L	498.57	ppb	06:06:11
2	Cu 324.752†	71148.4	69246.2	508.64	µg/L	508.64	ppb	06:05:51
2	Mn 257.610†	321454.6	321078.6	504.59	µg/L	504.59	ppb	06:05:51
2	Mo 202.031†	8886.3	8855.6	502.42	µg/L	502.42	ppb	06:06:11
2	Ni 231.604†	17841.3	18049.8	499.00	µg/L	499.00	ppb	06:06:11
2	P 214.914†	3864.0	3733.3	2470.6	µg/L	2470.6	ppb	06:06:11

2	Pb 220.353†	4024.5	4089.1	505.85 µg/L	505.85 ppb		06:06:11
2	S 181.975 Axial†	2050.5	1958.7	2404.2 µg/L	2404.2 ppb		06:06:11
2	Sb 206.836†	1892.8	1738.7	494.57 µg/L	494.57 ppb		06:06:11
2	Se 196.026†	5295.8	5320.9	2517.2 µg/L	2517.2 ppb		06:06:11
2	SiO2†	64411.7	63362.7	10684 µg/L	10684 ppb		06:05:51
2	Si 251.611†	90584.0	90615.0	5002.5 µg/L	5002.5 ppb		06:05:51
2	Sn 189.927†	4109.9	4063.4	506.65 µg/L	506.65 ppb		06:06:11
2	Ti 334.940†	117625.6	118376.7	503.95 µg/L	503.95 ppb		06:05:51
2	Tl 190.801†	2319.0	2397.9	514.39 µg/L	514.39 ppb		06:06:11
2	U 367.007†	2271.5	1388.6	465.3 µg/L	465.3 ppb		06:05:51
2	V 292.402†	38169.2	38310.6	506.41 µg/L	506.41 ppb		06:05:51
2	Zn 213.857†	68009.6	67128.9	507.91 µg/L	507.91 ppb		06:05:51
3	Sc RADIAL	22391.3	22391.3	101 %			06:05:18
3	Al 396.153Radial†	16671.6	16533.9	5294.0 µg/L	5294.0 ppb		06:05:18
3	Ca 317.933Radial†	25885.8	25229.8	5403.1 µg/L	5403.1 ppb		06:05:18
3	Fe 238.204 Radial†	27185.6	26772.8	5210.8 µg/L	5210.8 ppb		06:05:18
3	K 766.490 Radial†	3277.7	2810.5	2553.7 µg/L	2553.7 ppb		06:05:18
3	Mg 279.077 IEC†	3374.5	3271.5	5346.4 µg/L	5346.4 ppb		06:05:18
3	Na 589.592 Radial†	1795.7	1643.1	2519.9 µg/L	2519.9 ppb		06:05:18
3	Sr 421.552†	87049.3	85579.3	503.14 µg/L	503.14 ppb		06:05:13
3	Sc 361.383	364276.6	364276.6	99.473 %			06:06:16
3	Y 371.029	355632.3	355632.3	98.825 %			06:06:16
3	Ag 328.068†	24014.2	24825.1	252.81 µg/L	252.81 ppb		06:06:16
3	As 188.979†	1127.1	1145.9	508.33 µg/L	508.33 ppb		06:06:36
3	B 249.677†	15428.8	15337.3	528.12 µg/L	528.12 ppb		06:06:16
3	Ba 233.527†	60018.0	60351.3	507.85 µg/L	507.85 ppb		06:06:16
3	Be 313.107†	293996.9	299127.4	248.84 µg/L	248.84 ppb		06:06:16
3	Cd 226.502†	48151.5	48729.5	505.20 µg/L	505.20 ppb		06:06:16
3	Co 228.616†	21525.5	21861.9	503.79 µg/L	503.79 ppb		06:06:36
3	Cr 267.716†	25147.9	25159.1	500.84 µg/L	500.84 ppb		06:06:36
3	Cu 324.752†	71035.9	69491.9	510.47 µg/L	510.47 ppb		06:06:16
3	Mn 257.610†	320720.6	321961.7	505.98 µg/L	505.98 ppb		06:06:16
3	Mo 202.031†	8903.6	8917.8	505.95 µg/L	505.95 ppb		06:06:36
3	Ni 231.604†	17869.9	18168.5	502.28 µg/L	502.28 ppb		06:06:36
3	P 214.914†	3846.8	3735.4	2472.0 µg/L	2472.0 ppb		06:06:36
3	Pb 220.353†	4030.8	4115.7	509.10 µg/L	509.10 ppb		06:06:36
3	S 181.975 Axial†	2057.0	1975.5	2424.9 µg/L	2424.9 ppb		06:06:36
3	Sb 206.836†	1917.9	1773.4	504.54 µg/L	504.54 ppb		06:06:36
3	Se 196.026†	5312.3	5364.2	2537.7 µg/L	2537.7 ppb		06:06:36
3	SiO2†	64174.3	63448.9	10699 µg/L	10699 ppb		06:06:16
3	Si 251.611†	90326.7	90813.1	5013.4 µg/L	5013.4 ppb		06:06:16
3	Sn 189.927†	4115.9	4090.2	509.99 µg/L	509.99 ppb		06:06:36
3	Ti 334.940†	117472.3	118815.8	505.81 µg/L	505.81 ppb		06:06:16
3	Tl 190.801†	2320.5	2411.1	517.23 µg/L	517.23 ppb		06:06:36
3	U 367.007†	2370.7	1499.8	504.5 µg/L	504.5 ppb		06:06:16
3	V 292.402†	38177.4	38511.4	509.08 µg/L	509.08 ppb		06:06:16
3	Zn 213.857†	67807.3	67268.5	508.96 µg/L	508.96 ppb		06:06:16

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	365670.1	99.854	%	0.3368				0.34%
Sc RADIAL	22422.9	102	%	0.17				0.17%
Y 371.029	357055.7	99.220	%	0.3534				0.36%
Ag 328.068†	24728.4	251.84	µg/L	0.846	251.84	ppb	0.846	0.34%
QC value within limits for Ag 328.068 Recovery = 100.73%								
Al 396.153Radial†	16617.0	5320.8	µg/L	28.77	5320.8	ppb	28.77	0.54%
QC value within limits for Al 396.153Radial Recovery = 106.42%								
As 188.979†	1139.7	505.61	µg/L	2.729	505.61	ppb	2.729	0.54%
QC value within limits for As 188.979 Recovery = 101.12%								
B 249.677†	15248.8	525.18	µg/L	2.700	525.18	ppb	2.700	0.51%
QC value within limits for B 249.677 Recovery = 105.04%								
Ba 233.527†	60199.7	506.57	µg/L	1.330	506.57	ppb	1.330	0.26%
QC value within limits for Ba 233.527 Recovery = 101.31%								
Be 313.107†	298550.5	248.36	µg/L	0.478	248.36	ppb	0.478	0.19%
QC value within limits for Be 313.107 Recovery = 99.34%								
Ca 317.933Radial†	25233.8	5404.0	µg/L	4.36	5404.0	ppb	4.36	0.08%
QC value within limits for Ca 317.933Radial Recovery = 108.08%								
Cd 226.502†	48606.4	503.92	µg/L	1.107	503.92	ppb	1.107	0.22%
QC value within limits for Cd 226.502 Recovery = 100.78%								

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Co 228.616†            21783.1      501.97 µg/L         1.574      501.97 ppb          1.574   0.31%
   QC value within limits for Co 228.616  Recovery = 100.39%
Cr 267.716†            25089.0      499.46 µg/L         1.213      499.46 ppb          1.213   0.24%
   QC value within limits for Cr 267.716  Recovery = 99.89%
Cu 324.752†            69293.5      509.00 µg/L         1.324      509.00 ppb          1.324   0.26%
   QC value within limits for Cu 324.752  Recovery = 101.80%
Fe 238.204 Radial†     26752.7      5206.9 µg/L         11.69      5206.9 ppb          11.69   0.22%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.14%
K 766.490 Radial†       2819.3      2561.7 µg/L         15.37      2561.7 ppb          15.37   0.60%
   QC value within limits for K 766.490 Radial  Recovery = 102.47%
Mg 279.077 IEC†         3296.9      5387.9 µg/L         36.17      5387.9 ppb          36.17   0.67%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.76%
Mn 257.610†           321168.0      504.73 µg/L         1.183      504.73 ppb          1.183   0.23%
   QC value within limits for Mn 257.610  Recovery = 100.95%
Mo 202.031†             8876.6      503.61 µg/L         2.025      503.61 ppb          2.025   0.40%
   QC value within limits for Mo 202.031  Recovery = 100.72%
Na 589.592 Radial†      1651.4      2532.6 µg/L         20.02      2532.6 ppb          20.02   0.79%
   QC value within limits for Na 589.592 Radial  Recovery = 101.31%
Ni 231.604†            18088.3      500.07 µg/L         1.921      500.07 ppb          1.921   0.38%
   QC value within limits for Ni 231.604  Recovery = 100.01%
P 214.914†              3731.6      2469.5 µg/L          3.19      2469.5 ppb           3.19   0.13%
   QC value within limits for P 214.914  Recovery = 98.78%
Pb 220.353†             4098.9      507.05 µg/L         1.787      507.05 ppb          1.787   0.35%
   QC value within limits for Pb 220.353  Recovery = 101.41%
S 181.975 Axial†        1967.7      2415.4 µg/L         10.44      2415.4 ppb          10.44   0.43%
   QC value within limits for S 181.975 Axial  Recovery = 96.61%
Sb 206.836†             1753.9      498.94 µg/L         5.098      498.94 ppb          5.098   1.02%
   QC value within limits for Sb 206.836  Recovery = 99.79%
Se 196.026†             5342.4      2527.4 µg/L         10.22      2527.4 ppb          10.22   0.40%
   QC value within limits for Se 196.026  Recovery = 101.10%
SiO2†                  63358.7       10684 µg/L         15.50       10684 ppb          15.50   0.15%
   QC value within limits for SiO2  Recovery = 99.89%
Si 251.611†            90586.1      5000.9 µg/L         13.40      5000.9 ppb          13.40   0.27%
   QC value within limits for Si 251.611  Recovery = 100.02%
Sn 189.927†             4073.1      507.86 µg/L         1.849      507.86 ppb          1.849   0.36%
   QC value within limits for Sn 189.927  Recovery = 101.57%
Sr 421.552†            85945.0      505.29 µg/L         1.937      505.29 ppb          1.937   0.38%
   QC value within limits for Sr 421.552  Recovery = 101.06%
Ti 334.940†           118520.3      504.56 µg/L         1.082      504.56 ppb          1.082   0.21%
   QC value within limits for Ti 334.940  Recovery = 100.91%
Tl 190.801†             2401.6      515.19 µg/L         1.772      515.19 ppb          1.772   0.34%
   QC value within limits for Tl 190.801  Recovery = 103.04%
U 367.007†              1448.4       486.4 µg/L         19.75       486.4 ppb          19.75   4.06%
   QC value within limits for U 367.007  Recovery = 97.28%
V 292.402†             38385.2      507.40 µg/L         1.463      507.40 ppb          1.463   0.29%
   QC value within limits for V 292.402  Recovery = 101.48%
Zn 213.857†            67125.4      507.88 µg/L         1.093      507.88 ppb          1.093   0.22%
   QC value within limits for Zn 213.857  Recovery = 101.58%
All analyte(s) passed QC.
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Sequence No.: 7 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 7/23/2018 06:06:45**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	22182.1	22182.1	100	%			06:07:36
1	Al 396.153Radial†	-104.5	-10.1	-3.2662	µg/L	-3.2662	ppb	06:07:36
1	Ca 317.933Radial†	281.8	-15.8	-3.3918	µg/L	-3.3918	ppb	06:07:36
1	Fe 238.204 Radial†	28.4	-6.8	-1.3258	µg/L	-1.3258	ppb	06:07:36
1	K 766.490 Radial†	529.2	105.1	95.497	µg/L	95.497	ppb	06:07:16
1	Mg 279.077 IEC†	62.7	6.4	10.407	µg/L	10.407	ppb	06:07:36
1	Na 589.592 Radial†	99.7	-28.3	-43.558	µg/L	-43.558	ppb	06:07:36
1	Sr 421.552†	196.3	-65.1	-0.3827	µg/L	-0.3827	ppb	06:07:16
1	Sc 361.383	362307.2	362307.2	98.936	%			06:08:32
1	Y 371.029	356044.2	356044.2	98.939	%			06:08:32
1	Ag 328.068†	-724.3	-48.4	-0.4940	µg/L	-0.4940	ppb	06:08:32
1	As 188.979†	-14.0	-1.4	-0.6044	µg/L	-0.6044	ppb	06:08:52
1	B 249.677†	225.5	54.7	1.8110	µg/L	1.8110	ppb	06:08:52
1	Ba 233.527†	-8.1	7.3	0.0618	µg/L	0.0618	ppb	06:08:52
1	Be 313.107†	-3527.8	8.1	0.0081	µg/L	0.0081	ppb	06:08:32
1	Cd 226.502†	-307.3	12.5	0.1300	µg/L	0.1300	ppb	06:08:52
1	Co 228.616†	-206.1	14.1	0.3267	µg/L	0.3267	ppb	06:08:52
1	Cr 267.716†	120.6	0.0	-0.0042	µg/L	-0.0042	ppb	06:08:52
1	Cu 324.752†	1934.8	35.5	0.2634	µg/L	0.2634	ppb	06:08:32
1	Mn 257.610†	574.9	124.2	0.1950	µg/L	0.1950	ppb	06:08:52
1	Mo 202.031†	45.2	12.8	0.7246	µg/L	0.7246	ppb	06:08:52
1	Ni 231.604†	-177.1	25.0	0.6904	µg/L	0.6904	ppb	06:08:52
1	P 214.914†	115.2	-15.3	-10.183	µg/L	-10.183	ppb	06:08:52
1	Pb 220.353†	-52.8	10.2	1.2550	µg/L	1.2550	ppb	06:08:52
1	S 181.975 Axial†	92.3	1.0	1.2215	µg/L	1.2215	ppb	06:08:52
1	Sb 206.836†	164.0	11.1	3.1967	µg/L	3.1967	ppb	06:08:52
1	Se 196.026†	-29.0	-5.5	-2.6012	µg/L	-2.6012	ppb	06:08:52
1	SiO2†	1069.5	15.8	2.6336	µg/L	2.6336	ppb	06:08:52
1	Si 251.611†	23.6	32.1	1.7618	µg/L	1.7618	ppb	06:08:52
1	Sn 189.927†	53.4	6.4	0.8018	µg/L	0.8018	ppb	06:08:52
1	Ti 334.940†	-669.7	44.6	0.1874	µg/L	0.1874	ppb	06:08:32
1	Tl 190.801†	-88.9	-11.5	-2.4676	µg/L	-2.4676	ppb	06:08:52
1	U 367.007†	889.4	15.5	5.451	µg/L	5.451	ppb	06:08:32
1	V 292.402†	-154.7	-24.5	-0.3104	µg/L	-0.3104	ppb	06:08:52
1	Zn 213.857†	834.2	-54.7	-0.4204	µg/L	-0.4204	ppb	06:08:52
2	Sc RADIAL	22149.3	22149.3	100	%			06:08:01
2	Al 396.153Radial†	-135.8	-41.4	-13.302	µg/L	-13.302	ppb	06:08:01
2	Ca 317.933Radial†	275.6	-21.6	-4.6323	µg/L	-4.6323	ppb	06:08:01
2	Fe 238.204 Radial†	39.4	4.3	0.8314	µg/L	0.8314	ppb	06:08:01
2	K 766.490 Radial†	415.0	-8.0	-7.2377	µg/L	-7.2377	ppb	06:07:41
2	Mg 279.077 IEC†	71.7	15.4	25.229	µg/L	25.229	ppb	06:08:01
2	Na 589.592 Radial†	118.6	-9.3	-14.311	µg/L	-14.311	ppb	06:08:01
2	Sr 421.552†	216.9	-44.3	-0.2602	µg/L	-0.2602	ppb	06:07:41
2	Sc 361.383	364623.4	364623.4	99.568	%			06:08:58
2	Y 371.029	358316.3	358316.3	99.570	%			06:08:58
2	Ag 328.068†	-680.6	0.1	-0.0146	µg/L	-0.0146	ppb	06:08:58
2	As 188.979†	-12.1	0.6	0.2754	µg/L	0.2754	ppb	06:09:18
2	B 249.677†	231.8	59.6	1.9829	µg/L	1.9829	ppb	06:09:18
2	Ba 233.527†	-7.3	8.2	0.0693	µg/L	0.0693	ppb	06:09:18
2	Be 313.107†	-3557.2	1.3	0.0081	µg/L	0.0081	ppb	06:08:58
2	Cd 226.502†	-300.8	21.0	0.2175	µg/L	0.2175	ppb	06:09:18
2	Co 228.616†	-211.1	10.4	0.2381	µg/L	0.2381	ppb	06:09:18
2	Cr 267.716†	101.0	-20.5	-0.4317	µg/L	-0.4317	ppb	06:09:18
2	Cu 324.752†	1989.8	78.3	0.5931	µg/L	0.5931	ppb	06:08:58
2	Mn 257.610†	526.4	71.8	0.1128	µg/L	0.1128	ppb	06:09:18
2	Mo 202.031†	28.3	-4.5	-0.2556	µg/L	-0.2556	ppb	06:09:18
2	Ni 231.604†	-212.0	-9.0	-0.2494	µg/L	-0.2494	ppb	06:09:18
2	P 214.914†	132.5	1.3	0.8833	µg/L	0.8833	ppb	06:09:18

2	Pb 220.353†	-73.7	-10.5	-1.3268	µg/L	-1.3268	ppb	06:09:18
2	S 181.975 Axial†	92.1	0.2	0.2587	µg/L	0.2587	ppb	06:09:18
2	Sb 206.836†	156.2	2.2	0.6467	µg/L	0.6467	ppb	06:09:18
2	Se 196.026†	-23.0	0.6	0.2954	µg/L	0.2954	ppb	06:09:18
2	SiO2†	1060.6	-0.1	0.0020	µg/L	0.0020	ppb	06:09:18
2	Si 251.611†	12.0	20.3	1.1266	µg/L	1.1266	ppb	06:09:18
2	Sn 189.927†	43.0	-4.3	-0.5348	µg/L	-0.5348	ppb	06:09:18
2	Ti 334.940†	-631.1	87.7	0.3602	µg/L	0.3602	ppb	06:08:58
2	Tl 190.801†	-85.4	-7.4	-1.5773	µg/L	-1.5773	ppb	06:09:18
2	U 367.007†	961.8	82.5	29.01	µg/L	29.01	ppb	06:08:58
2	V 292.402†	-110.3	21.0	0.2889	µg/L	0.2889	ppb	06:09:18
2	Zn 213.857†	825.6	-68.6	-0.5224	µg/L	-0.5224	ppb	06:09:18
3	Sc RADIAL	22135.6	22135.6	100	%			06:08:26
3	Al 396.153Radial†	-135.8	-41.5	-13.360	µg/L	-13.360	ppb	06:08:26
3	Ca 317.933Radial†	284.0	-13.0	-2.7872	µg/L	-2.7872	ppb	06:08:26
3	Fe 238.204 Radial†	36.9	1.8	0.3476	µg/L	0.3476	ppb	06:08:26
3	K 766.490 Radial†	398.8	-23.9	-21.696	µg/L	-21.696	ppb	06:08:06
3	Mg 279.077 IEC†	56.4	0.1	0.2384	µg/L	0.2384	ppb	06:08:26
3	Na 589.592 Radial†	114.2	-13.7	-21.055	µg/L	-21.055	ppb	06:08:26
3	Sr 421.552†	301.4	40.1	0.2361	µg/L	0.2361	ppb	06:08:06
3	Sc 361.383	362027.9	362027.9	98.859	%			06:09:23
3	Y 371.029	355402.2	355402.2	98.761	%			06:09:23
3	Ag 328.068†	-672.3	3.7	0.0221	µg/L	0.0221	ppb	06:09:23
3	As 188.979†	-7.8	4.9	2.1580	µg/L	2.1580	ppb	06:09:43
3	B 249.677†	208.7	37.9	1.2570	µg/L	1.2570	ppb	06:09:43
3	Ba 233.527†	-7.8	7.6	0.0642	µg/L	0.0642	ppb	06:09:43
3	Be 313.107†	-3374.5	160.5	0.1391	µg/L	0.1391	ppb	06:09:23
3	Cd 226.502†	-310.1	9.4	0.0974	µg/L	0.0974	ppb	06:09:43
3	Co 228.616†	-182.1	38.2	0.8812	µg/L	0.8812	ppb	06:09:43
3	Cr 267.716†	109.5	-11.2	-0.2424	µg/L	-0.2424	ppb	06:09:43
3	Cu 324.752†	1909.7	11.7	0.0998	µg/L	0.0998	ppb	06:09:23
3	Mn 257.610†	506.6	55.6	0.0873	µg/L	0.0873	ppb	06:09:43
3	Mo 202.031†	43.1	10.6	0.6026	µg/L	0.6026	ppb	06:09:43
3	Ni 231.604†	-203.2	-1.6	-0.0456	µg/L	-0.0456	ppb	06:09:43
3	P 214.914†	105.2	-25.2	-16.810	µg/L	-16.810	ppb	06:09:43
3	Pb 220.353†	-69.4	-6.7	-0.8421	µg/L	-0.8421	ppb	06:09:43
3	S 181.975 Axial†	86.6	-4.8	-5.8611	µg/L	-5.8611	ppb	06:09:43
3	Sb 206.836†	150.4	-2.4	-0.6879	µg/L	-0.6879	ppb	06:09:43
3	Se 196.026†	-16.6	6.9	3.2813	µg/L	3.2813	ppb	06:09:43
3	SiO2†	1062.2	9.2	1.5246	µg/L	1.5246	ppb	06:09:43
3	Si 251.611†	14.7	23.1	1.2665	µg/L	1.2665	ppb	06:09:43
3	Sn 189.927†	43.0	-4.0	-0.4965	µg/L	-0.4965	ppb	06:09:43
3	Ti 334.940†	-672.6	41.2	0.1642	µg/L	0.1642	ppb	06:09:23
3	Tl 190.801†	-89.6	-12.3	-2.6300	µg/L	-2.6300	ppb	06:09:43
3	U 367.007†	940.3	67.7	23.80	µg/L	23.80	ppb	06:09:23
3	V 292.402†	-177.7	-47.9	-0.6063	µg/L	-0.6063	ppb	06:09:43
3	Zn 213.857†	811.3	-77.2	-0.5878	µg/L	-0.5878	ppb	06:09:43

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	362986.2	99.121	%	0.3891				0.39%
Sc RADIAL	22155.7	100	%	0.11				0.11%
Y 371.029	356587.6	99.090	%	0.4255				0.43%
Ag 328.068†	-14.9	-0.1622	µg/L	0.28797	-0.1622	ppb	0.28797	177.59%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-31.0	-9.9761	µg/L	5.81102	-9.9761	ppb	5.81102	58.25%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.4	0.6097	µg/L	1.41123	0.6097	ppb	1.41123	231.48%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	50.7	1.6837	µg/L	0.37935	1.6837	ppb	0.37935	22.53%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.7	0.0651	µg/L	0.00386	0.0651	ppb	0.00386	5.93%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	56.6	0.0518	µg/L	0.07567	0.0518	ppb	0.07567	146.19%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-16.8	-3.6038	µg/L	0.94066	-3.6038	ppb	0.94066	26.10%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	14.3	0.1483	µg/L	0.06208	0.1483	ppb	0.06208	41.86%
QC value within limits for Cd 226.502 Recovery = Not calculated								

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Co 228.616†                20.9      0.4820 µg/L       0.34854      0.4820 ppb        0.34854  72.31%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -10.6     -0.2261 µg/L       0.21421     -0.2261 ppb        0.21421  94.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                41.8      0.3188 µg/L       0.25123      0.3188 ppb        0.25123  78.81%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.3     -0.0490 µg/L       1.13191     -0.0490 ppb        1.13191 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          24.4      22.188 µg/L       63.8980      22.188 ppb        63.8980 287.99%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             7.3      11.958 µg/L       12.5672      11.958 ppb        12.5672 105.10%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                83.9      0.1317 µg/L       0.05627      0.1317 ppb        0.05627  42.73%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 6.3      0.3572 µg/L       0.53415      0.3572 ppb        0.53415 149.54%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -17.1     -26.308 µg/L       15.3148     -26.308 ppb        15.3148  58.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 4.8      0.1318 µg/L       0.49438      0.1318 ppb        0.49438 375.13%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -13.1     -8.7032 µg/L       8.93886     -8.7032 ppb        8.93886 102.71%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -2.3     -0.3046 µg/L       1.37228     -0.3046 ppb        1.37228 450.47%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -1.2     -1.4603 µg/L       3.84152     -1.4603 ppb        3.84152 263.07%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 3.6      1.0518 µg/L       1.97372      1.0518 ppb        1.97372 187.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.7      0.3252 µg/L       2.94132      0.3252 ppb        2.94132 904.52%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                       8.3      1.3867 µg/L       1.32120      1.3867 ppb        1.32120  95.28%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                25.2      1.3850 µg/L       0.33372      1.3850 ppb        0.33372  24.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.6     -0.0765 µg/L       0.76089     -0.0765 ppb        0.76089 994.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -23.1     -0.1356 µg/L       0.32768     -0.1356 ppb        0.32768 241.65%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                57.8      0.2373 µg/L       0.10709      0.2373 ppb        0.10709  45.13%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -10.4     -2.2249 µg/L       0.56673     -2.2249 ppb        0.56673  25.47%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 367.007†                 55.2       19.42 µg/L        12.374       19.42 ppb         12.374  63.72%
   QC value within limits for U 367.007  Recovery = Not calculated
V 292.402†                -17.1     -0.2092 µg/L       0.45610     -0.2092 ppb        0.45610 217.97%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -66.8     -0.5102 µg/L       0.08436     -0.5102 ppb        0.08436  16.54%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 8 | **Autosampler Location: 101**
Sample ID: PQL | **Date Collected: 7/23/2018 06:09:52**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	22177.6	22177.6	100	%			06:10:43
1	Al 396.153Radial†	520.4	612.1	196.39	µg/L	196.39	ppb	06:10:43
1	Ca 317.933Radial†	1161.2	859.7	184.12	µg/L	184.12	ppb	06:10:43
1	Fe 238.204 Radial†	563.8	526.3	102.44	µg/L	102.44	ppb	06:10:43
1	K 766.490 Radial†	629.8	205.4	186.68	µg/L	186.68	ppb	06:10:23
1	Mg 279.077 IEC†	264.5	207.3	338.73	µg/L	338.73	ppb	06:10:43
1	Na 589.592 Radial†	317.2	188.2	289.28	µg/L	289.28	ppb	06:10:43
1	Sr 421.552†	1114.5	849.1	4.9895	µg/L	4.9895	ppb	06:10:23
1	Sc 361.383	363111.2	363111.2	99.155	%			06:11:39
1	Y 371.029	356248.5	356248.5	98.996	%			06:11:39
1	Ag 328.068†	-120.5	562.2	5.6735	µg/L	5.6735	ppb	06:11:39
1	As 188.979†	48.4	61.6	27.164	µg/L	27.164	ppb	06:12:00
1	B 249.677†	1596.9	1437.3	48.153	µg/L	48.153	ppb	06:12:00
1	Ba 233.527†	554.3	574.5	4.8331	µg/L	4.8331	ppb	06:12:00
1	Be 313.107†	2239.9	5832.9	4.8680	µg/L	4.8680	ppb	06:11:39
1	Cd 226.502†	159.1	483.5	5.0074	µg/L	5.0074	ppb	06:12:00
1	Co 228.616†	15.4	237.9	5.4898	µg/L	5.4898	ppb	06:12:00
1	Cr 267.716†	363.1	244.3	4.8111	µg/L	4.8111	ppb	06:12:00
1	Cu 324.752†	3243.4	1350.9	9.9628	µg/L	9.9628	ppb	06:11:39
1	Mn 257.610†	6675.9	6275.9	9.8624	µg/L	9.8624	ppb	06:11:39
1	Mo 202.031†	207.6	176.4	10.009	µg/L	10.009	ppb	06:12:00
1	Ni 231.604†	-35.9	167.7	4.6377	µg/L	4.6377	ppb	06:12:00
1	P 214.914†	345.4	216.6	143.89	µg/L	143.89	ppb	06:12:00
1	Pb 220.353†	24.4	88.1	10.856	µg/L	10.856	ppb	06:12:00
1	S 181.975 Axial†	166.8	75.9	93.249	µg/L	93.249	ppb	06:12:00
1	Sb 206.836†	185.5	32.5	9.3350	µg/L	9.3350	ppb	06:12:00
1	Se 196.026†	42.7	66.8	31.637	µg/L	31.637	ppb	06:12:00
1	SiO2†	2229.2	1183.0	199.43	µg/L	199.43	ppb	06:12:00
1	Si 251.611†	1726.5	1749.4	96.574	µg/L	96.574	ppb	06:12:00
1	Sn 189.927†	120.2	73.7	9.1753	µg/L	9.1753	ppb	06:12:00
1	Ti 334.940†	500.4	1226.2	5.1941	µg/L	5.1941	ppb	06:11:39
1	Tl 190.801†	10.9	89.3	19.140	µg/L	19.140	ppb	06:12:00
1	U 367.007†	1085.9	211.7	73.97	µg/L	73.97	ppb	06:11:39
1	V 292.402†	208.8	342.4	4.6284	µg/L	4.6284	ppb	06:12:00
1	Zn 213.857†	1870.2	988.3	7.4829	µg/L	7.4829	ppb	06:12:00
2	Sc RADIAL	22237.2	22237.2	101	%			06:11:08
2	Al 396.153Radial†	580.0	669.8	214.94	µg/L	214.94	ppb	06:11:08
2	Ca 317.933Radial†	1164.0	859.4	184.05	µg/L	184.05	ppb	06:11:08
2	Fe 238.204 Radial†	578.6	539.5	105.00	µg/L	105.00	ppb	06:11:08
2	K 766.490 Radial†	578.1	152.4	138.50	µg/L	138.50	ppb	06:10:48
2	Mg 279.077 IEC†	256.2	198.4	324.16	µg/L	324.16	ppb	06:11:08
2	Na 589.592 Radial†	314.7	184.9	284.15	µg/L	284.15	ppb	06:11:08
2	Sr 421.552†	1183.8	914.9	5.3768	µg/L	5.3768	ppb	06:10:48
2	Sc 361.383	363345.1	363345.1	99.219	%			06:12:05
2	Y 371.029	356740.6	356740.6	99.133	%			06:12:05
2	Ag 328.068†	-165.4	517.0	5.2212	µg/L	5.2212	ppb	06:12:05
2	As 188.979†	58.1	71.4	31.445	µg/L	31.445	ppb	06:12:25
2	B 249.677†	1603.1	1442.6	48.337	µg/L	48.337	ppb	06:12:25
2	Ba 233.527†	566.5	586.4	4.9335	µg/L	4.9335	ppb	06:12:25
2	Be 313.107†	2244.6	5836.2	4.8685	µg/L	4.8685	ppb	06:12:05
2	Cd 226.502†	166.8	491.2	5.0864	µg/L	5.0864	ppb	06:12:25
2	Co 228.616†	12.4	235.0	5.4226	µg/L	5.4226	ppb	06:12:25
2	Cr 267.716†	380.1	261.1	5.1536	µg/L	5.1536	ppb	06:12:25
2	Cu 324.752†	3293.1	1398.9	10.309	µg/L	10.309	ppb	06:12:05
2	Mn 257.610†	6724.0	6320.1	9.9321	µg/L	9.9321	ppb	06:12:05
2	Mo 202.031†	217.4	186.2	10.562	µg/L	10.562	ppb	06:12:25
2	Ni 231.604†	-59.6	143.9	3.9791	µg/L	3.9791	ppb	06:12:25
2	P 214.914†	319.6	190.4	126.46	µg/L	126.46	ppb	06:12:25

2	Pb 220.353†	31.4	95.2	11.740 µg/L	11.740 ppb	06:12:25
2	S 181.975 Axial†	162.7	71.6	87.951 µg/L	87.951 ppb	06:12:25
2	Sb 206.836†	178.5	25.3	7.2741 µg/L	7.2741 ppb	06:12:25
2	Se 196.026†	34.6	58.7	27.777 µg/L	27.777 ppb	06:12:25
2	SiO2†	2200.4	1152.4	194.24 µg/L	194.24 ppb	06:12:25
2	Si 251.611†	1726.7	1748.5	96.514 µg/L	96.514 ppb	06:12:25
2	Sn 189.927†	126.3	79.8	9.9282 µg/L	9.9282 ppb	06:12:25
2	Ti 334.940†	433.6	1158.5	4.9101 µg/L	4.9101 ppb	06:12:05
2	Tl 190.801†	6.7	85.1	18.245 µg/L	18.245 ppb	06:12:25
2	U 367.007†	1059.8	184.7	64.44 µg/L	64.44 ppb	06:12:05
2	V 292.402†	202.0	335.5	4.5382 µg/L	4.5382 ppb	06:12:25
2	Zn 213.857†	1883.9	1000.9	7.5816 µg/L	7.5816 ppb	06:12:25
3	Sc RADIAL	22146.5	22146.5	100 %		06:11:33
3	Al 396.153Radial†	521.9	614.3	197.11 µg/L	197.11 ppb	06:11:33
3	Ca 317.933Radial†	1158.8	859.0	183.95 µg/L	183.95 ppb	06:11:33
3	Fe 238.204 Radial†	563.2	526.5	102.47 µg/L	102.47 ppb	06:11:33
3	K 766.490 Radial†	651.8	228.1	207.34 µg/L	207.34 ppb	06:11:13
3	Mg 279.077 IEC†	253.5	196.6	321.37 µg/L	321.37 ppb	06:11:33
3	Na 589.592 Radial†	310.0	181.5	278.91 µg/L	278.91 ppb	06:11:33
3	Sr 421.552†	1087.6	823.8	4.8411 µg/L	4.8411 ppb	06:11:13
3	Sc 361.383	365175.7	365175.7	99.719 %		06:12:30
3	Y 371.029	358059.1	358059.1	99.499 %		06:12:30
3	Ag 328.068†	-148.9	534.4	5.3990 µg/L	5.3990 ppb	06:12:30
3	As 188.979†	50.7	63.7	28.046 µg/L	28.046 ppb	06:12:50
3	B 249.677†	1600.8	1432.1	47.981 µg/L	47.981 ppb	06:12:50
3	Ba 233.527†	578.1	595.2	5.0073 µg/L	5.0073 ppb	06:12:50
3	Be 313.107†	2311.5	5891.9	4.9142 µg/L	4.9142 ppb	06:12:30
3	Cd 226.502†	159.3	482.8	5.0003 µg/L	5.0003 ppb	06:12:50
3	Co 228.616†	9.8	232.2	5.3574 µg/L	5.3574 ppb	06:12:50
3	Cr 267.716†	372.6	251.7	4.9685 µg/L	4.9685 ppb	06:12:50
3	Cu 324.752†	3277.2	1366.3	10.069 µg/L	10.069 ppb	06:12:30
3	Mn 257.610†	6704.8	6266.8	9.8482 µg/L	9.8482 ppb	06:12:30
3	Mo 202.031†	205.1	172.7	9.8004 µg/L	9.8004 ppb	06:12:50
3	Ni 231.604†	4.3	208.3	5.7589 µg/L	5.7589 ppb	06:12:50
3	P 214.914†	336.5	205.8	136.68 µg/L	136.68 ppb	06:12:50
3	Pb 220.353†	13.2	76.7	9.4569 µg/L	9.4569 ppb	06:12:50
3	S 181.975 Axial†	164.8	72.9	89.525 µg/L	89.525 ppb	06:12:50
3	Sb 206.836†	183.7	29.6	8.5091 µg/L	8.5091 ppb	06:12:50
3	Se 196.026†	41.2	65.1	30.805 µg/L	30.805 ppb	06:12:50
3	SiO2†	2203.7	1144.7	192.97 µg/L	192.97 ppb	06:12:50
3	Si 251.611†	1721.5	1734.5	95.753 µg/L	95.753 ppb	06:12:50
3	Sn 189.927†	123.6	76.4	9.5090 µg/L	9.5090 ppb	06:12:50
3	Ti 334.940†	506.6	1229.6	5.2139 µg/L	5.2139 ppb	06:12:30
3	Tl 190.801†	6.4	84.7	18.166 µg/L	18.166 ppb	06:12:50
3	U 367.007†	1059.2	178.7	62.36 µg/L	62.36 ppb	06:12:30
3	V 292.402†	233.7	366.2	4.9305 µg/L	4.9305 ppb	06:12:50
3	Zn 213.857†	1862.6	970.0	7.3376 µg/L	7.3376 ppb	06:12:50

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	363877.4	99.364	%	0.3087				0.31%
Sc RADIAL	22187.1	100	%	0.21				0.21%
Y 371.029	357016.1	99.209	%	0.2601				0.26%
Ag 328.068†	537.8	5.4312	µg/L	0.22786	5.4312	ppb	0.22786	4.20%
QC value within limits for Ag 328.068 Recovery = 108.62%								
Al 396.153Radial†	632.1	202.81	µg/L	10.508	202.81	ppb	10.508	5.18%
QC value within limits for Al 396.153Radial Recovery = 101.41%								
As 188.979†	65.6	28.885	µg/L	2.2608	28.885	ppb	2.2608	7.83%
QC value within limits for As 188.979 Recovery = 96.28%								
B 249.677†	1437.3	48.157	µg/L	0.1784	48.157	ppb	0.1784	0.37%
QC value within limits for B 249.677 Recovery = 96.31%								
Ba 233.527†	585.4	4.9246	µg/L	0.08746	4.9246	ppb	0.08746	1.78%
QC value within limits for Ba 233.527 Recovery = 98.49%								
Be 313.107†	5853.7	4.8836	µg/L	0.02654	4.8836	ppb	0.02654	0.54%
QC value within limits for Be 313.107 Recovery = 97.67%								
Ca 317.933Radial†	859.4	184.04	µg/L	0.081	184.04	ppb	0.081	0.04%
QC value within limits for Ca 317.933Radial Recovery = 92.02%								
Cd 226.502†	485.9	5.0314	µg/L	0.04778	5.0314	ppb	0.04778	0.95%
QC value within limits for Cd 226.502 Recovery = 100.63%								

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Co 228.616†              235.0      5.4232 µg/L       0.06620      5.4232 ppb        0.06620   1.22%
   QC value within limits for Co 228.616  Recovery = 108.46%
Cr 267.716†              252.4      4.9777 µg/L       0.17142      4.9777 ppb        0.17142   3.44%
   QC value within limits for Cr 267.716  Recovery = 99.55%
Cu 324.752†             1372.0      10.114 µg/L        0.1774      10.114 ppb         0.1774   1.75%
   QC value within limits for Cu 324.752  Recovery = 101.14%
Fe 238.204 Radial†       530.8      103.30 µg/L         1.470      103.30 ppb          1.470   1.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.30%
K 766.490 Radial†        195.3      177.51 µg/L        35.323      177.51 ppb         35.323  19.90%
   QC value within limits for K 766.490 Radial  Recovery = 118.34%
Mg 279.077 IEC†          200.8      328.08 µg/L         9.323      328.08 ppb          9.323   2.84%
   QC value within limits for Mg 279.077 IEC  Recovery = 109.36%
Mn 257.610†             6287.6      9.8809 µg/L       0.04487      9.8809 ppb        0.04487   0.45%
   QC value within limits for Mn 257.610  Recovery = 98.81%
Mo 202.031†              178.4      10.124 µg/L        0.3937      10.124 ppb         0.3937   3.89%
   QC value within limits for Mo 202.031  Recovery = 101.24%
Na 589.592 Radial†       184.8      284.11 µg/L         5.186      284.11 ppb          5.186   1.83%
   QC value within limits for Na 589.592 Radial  Recovery = 94.70%
Ni 231.604†              173.3      4.7919 µg/L       0.89987      4.7919 ppb        0.89987  18.78%
   QC value within limits for Ni 231.604  Recovery = 95.84%
P 214.914†               204.3      135.67 µg/L         8.756      135.67 ppb          8.756   6.45%
   QC value within limits for P 214.914  Recovery = 90.45%
Pb 220.353†               86.7      10.684 µg/L        1.1512      10.684 ppb         1.1512  10.77%
   QC value within limits for Pb 220.353  Recovery = 106.84%
S 181.975 Axial†          73.5      90.241 µg/L        2.7205      90.241 ppb         2.7205   3.01%
   QC value within limits for S 181.975 Axial  Recovery = 90.24%
Sb 206.836†               29.1      8.3727 µg/L       1.03719      8.3727 ppb        1.03719  12.39%
   QC value within limits for Sb 206.836  Recovery = 83.73%
Se 196.026†               63.5      30.073 µg/L        2.0313      30.073 ppb         2.0313   6.75%
   QC value within limits for Se 196.026  Recovery = 100.24%
SiO2†                    1160.0      195.55 µg/L         3.422      195.55 ppb          3.422   1.75%
   QC value within limits for SiO2  Recovery = 91.81%
Si 251.611†             1744.2      96.280 µg/L        0.4577      96.280 ppb         0.4577   0.48%
   QC value within limits for Si 251.611  Recovery = 96.28%
Sn 189.927†               76.6      9.5375 µg/L       0.37724      9.5375 ppb        0.37724   3.96%
   QC value within limits for Sn 189.927  Recovery = 95.38%
Sr 421.552†              862.6      5.0691 µg/L       0.27661      5.0691 ppb        0.27661   5.46%
   QC value within limits for Sr 421.552  Recovery = 101.38%
Ti 334.940†             1204.8      5.1060 µg/L       0.16997      5.1060 ppb        0.16997   3.33%
   QC value within limits for Ti 334.940  Recovery = 102.12%
Tl 190.801†               86.4      18.517 µg/L        0.5407      18.517 ppb         0.5407   2.92%
   QC value within limits for Tl 190.801  Recovery = 92.59%
U 367.007†               191.7       66.93 µg/L         6.191       66.93 ppb          6.191   9.25%
   QC value greater than the upper limit for U 367.007  Recovery = 133.85%
V 292.402†               348.0      4.6990 µg/L       0.20548      4.6990 ppb        0.20548   4.37%
   QC value within limits for V 292.402  Recovery = 93.98%
Zn 213.857†              986.4      7.4674 µg/L       0.12271      7.4674 ppb        0.12271   1.64%
   QC value within limits for Zn 213.857  Recovery = 74.67%
QC Failed.  Continue with analysis.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 5

Autosampler Location: 103
Date Collected: 7/23/2018 06:12:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21637.8	21637.8	98.0	%			06:13:36
1	Al 396.153Radial†	1478277.7	1508591.2	485180	µg/L	485180	ppb	06:13:31
1	Ca 317.933Radial†	2205012.9	2249792.2	481810	µg/L	481810	ppb	06:13:31
1	Fe 238.204 Radial†	959600.5	979182.0	190580	µg/L	190580	ppb	06:13:31
1	K 766.490 Radial†	524.6	113.6	149.16	µg/L	149.16	ppb	06:13:36
1	Mg 279.077 IEC†	288570.1	294413.1	481140	µg/L	481140	ppb	06:13:36
1	Na 589.592 Radial†	244.4	121.8	-62.038	µg/L	-62.038	ppb	06:13:36
1	Sr 421.552†	1664.4	1437.9	-0.0449	µg/L	-0.0449	ppb	06:13:36
1	Sc 361.383	325909.0	325909.0	88.996	%			06:14:03
1	Y 371.029	313366.5	313366.5	87.080	%			06:14:03
1	Ag 328.068†	-2905.3	-2580.8	1.6248	µg/L	1.6248	ppb	06:14:03
1	As 188.979†	-38.7	-30.7	-3.4891	µg/L	-3.4891	ppb	06:14:23
1	B 249.677†	-19618.4	-22217.3	4.0476	µg/L	4.0476	ppb	06:14:03
1	Ba 233.527†	648.2	743.8	1.5687	µg/L	1.5687	ppb	06:14:23
1	Be 313.107†	-9193.5	-6756.3	0.4000	µg/L	0.4000	ppb	06:14:23
1	Cd 226.502†	1483.2	1989.7	-0.1967	µg/L	-0.1967	ppb	06:14:23
1	Co 228.616†	-160.4	42.2	0.2179	µg/L	0.2179	ppb	06:14:23
1	Cr 267.716†	-383.1	-552.4	0.5431	µg/L	0.5431	ppb	06:14:23
1	Cu 324.752†	343.9	-1533.6	0.7054	µg/L	0.7054	ppb	06:14:23
1	Mn 257.610†	-5744.6	-6911.8	0.3636	µg/L	0.3636	ppb	06:14:03
1	Mo 202.031†	-31.3	-68.1	-0.2795	µg/L	-0.2795	ppb	06:14:23
1	Ni 231.604†	-297.2	-130.0	0.1348	µg/L	0.1348	ppb	06:14:23
1	P 214.914†	199.5	92.5	-7.5968	µg/L	-7.5968	ppb	06:14:23
1	Pb 220.353†	-387.1	-371.4	5.3273	µg/L	5.3273	ppb	06:14:23
1	S 181.975 Axial†	169.8	98.4	-6.3167	µg/L	-6.3167	ppb	06:14:23
1	Sb 206.836†	229.2	102.9	3.4128	µg/L	3.4128	ppb	06:14:23
1	Se 196.026†	-192.5	-192.6	-6.2577	µg/L	-6.2577	ppb	06:14:23
1	SiO2†	1316.0	413.4	26.113	µg/L	26.113	ppb	06:14:23
1	Si 251.611†	384.1	439.8	10.267	µg/L	10.267	ppb	06:14:23
1	Sn 189.927†	57.3	16.9	-2.4555	µg/L	-2.4555	ppb	06:14:23
1	Ti 334.940†	-5049.8	-4952.7	0.5517	µg/L	0.5517	ppb	06:14:23
1	Tl 190.801†	-134.7	-73.0	1.6847	µg/L	1.6847	ppb	06:14:23
1	U 367.007†	3253.1	2771.8	-27.77	µg/L	-27.77	ppb	06:14:03
1	V 292.402†	-2766.5	-2976.7	0.5542	µg/L	0.5542	ppb	06:14:23
1	Zn 213.857†	4575.1	4242.9	6.8726	µg/L	6.8726	ppb	06:14:23
2	Sc RADIAL	21577.0	21577.0	97.7	%			06:13:46
2	Al 396.153Radial†	1499941.8	1535011.0	493680	µg/L	493680	ppb	06:13:41
2	Ca 317.933Radial†	2240215.3	2292155.7	490880	µg/L	490880	ppb	06:13:41
2	Fe 238.204 Radial†	973760.2	996431.0	193940	µg/L	193940	ppb	06:13:41
2	K 766.490 Radial†	437.4	25.9	70.320	µg/L	70.320	ppb	06:13:46
2	Mg 279.077 IEC†	289906.2	296610.1	484730	µg/L	484730	ppb	06:13:46
2	Na 589.592 Radial†	250.0	128.3	-56.504	µg/L	-56.504	ppb	06:13:46
2	Sr 421.552†	1699.3	1478.4	0.0331	µg/L	0.0331	ppb	06:13:46
2	Sc 361.383	326002.9	326002.9	89.022	%			06:14:29
2	Y 371.029	313605.9	313605.9	87.146	%			06:14:29
2	Ag 328.068†	-3061.2	-2755.1	0.3548	µg/L	0.3548	ppb	06:14:29
2	As 188.979†	-36.1	-27.8	-2.0392	µg/L	-2.0392	ppb	06:14:49
2	B 249.677†	-19809.5	-22425.6	10.203	µg/L	10.203	ppb	06:14:29
2	Ba 233.527†	679.9	779.3	1.7846	µg/L	1.7846	ppb	06:14:49
2	Be 313.107†	-9283.1	-6854.0	0.4300	µg/L	0.4300	ppb	06:14:49
2	Cd 226.502†	1530.6	2042.4	-0.0174	µg/L	-0.0174	ppb	06:14:49
2	Co 228.616†	-166.6	35.3	0.0462	µg/L	0.0462	ppb	06:14:49
2	Cr 267.716†	-339.6	-503.4	1.6369	µg/L	1.6369	ppb	06:14:49
2	Cu 324.752†	247.8	-1641.8	0.1163	µg/L	0.1163	ppb	06:14:49
2	Mn 257.610†	-5855.3	-7034.2	0.3798	µg/L	0.3798	ppb	06:14:29
2	Mo 202.031†	-14.1	-48.8	0.8777	µg/L	0.8777	ppb	06:14:49
2	Ni 231.604†	-300.7	-133.9	0.0922	µg/L	0.0922	ppb	06:14:49
2	P 214.914†	202.5	95.8	-6.6527	µg/L	-6.6527	ppb	06:14:49

2	Pb 220.353†	-449.4	-441.2	-2.3832	µg/L	-2.3832	ppb	06:14:49
2	S 181.975 Axial†	153.9	80.6	-30.462	µg/L	-30.462	ppb	06:14:49
2	Sb 206.836†	207.9	78.9	-3.9473	µg/L	-3.9473	ppb	06:14:49
2	Se 196.026†	-192.7	-192.7	-4.8259	µg/L	-4.8259	ppb	06:14:49
2	SiO2†	1291.1	385.1	20.501	µg/L	20.501	ppb	06:14:49
2	Si 251.611†	391.8	448.3	10.471	µg/L	10.471	ppb	06:14:49
2	Sn 189.927†	44.4	2.4	-4.3136	µg/L	-4.3136	ppb	06:14:49
2	Ti 334.940†	-5086.4	-4992.1	0.7951	µg/L	0.7951	ppb	06:14:49
2	Tl 190.801†	-119.6	-56.0	5.6199	µg/L	5.6199	ppb	06:14:49
2	U 367.007†	3276.6	2797.3	-36.81	µg/L	-36.81	ppb	06:14:29
2	V 292.402†	-2783.1	-2994.4	1.0243	µg/L	1.0243	ppb	06:14:49
2	Zn 213.857†	4617.4	4288.9	6.8415	µg/L	6.8415	ppb	06:14:49
3	Sc RADIAL	21431.5	21431.5	97.1	%			06:13:57
3	Al 396.153Radial†	1490766.3	1535981.2	493990	µg/L	493990	ppb	06:13:52
3	Ca 317.933Radial†	2222220.2	2289183.6	490240	µg/L	490240	ppb	06:13:52
3	Fe 238.204 Radial†	966498.0	995715.9	193800	µg/L	193800	ppb	06:13:52
3	K 766.490 Radial†	404.4	-5.0	42.175	µg/L	42.175	ppb	06:13:57
3	Mg 279.077 IEC†	290107.3	298831.9	488360	µg/L	488360	ppb	06:13:57
3	Na 589.592 Radial†	270.1	150.7	-21.802	µg/L	-21.802	ppb	06:13:57
3	Sr 421.552†	1689.7	1480.3	0.0556	µg/L	0.0556	ppb	06:13:57
3	Sc 361.383	324264.5	324264.5	88.547	%			06:14:54
3	Y 371.029	311988.9	311988.9	86.697	%			06:14:54
3	Ag 328.068†	-2945.3	-2642.5	1.4618	µg/L	1.4618	ppb	06:14:54
3	As 188.979†	-47.1	-40.4	-7.6236	µg/L	-7.6236	ppb	06:15:14
3	B 249.677†	-19637.6	-22350.7	12.153	µg/L	12.153	ppb	06:14:54
3	Ba 233.527†	668.9	770.9	1.7172	µg/L	1.7172	ppb	06:15:14
3	Be 313.107†	-9222.1	-6841.0	0.4382	µg/L	0.4382	ppb	06:15:14
3	Cd 226.502†	1501.3	2018.6	-0.2497	µg/L	-0.2497	ppb	06:15:14
3	Co 228.616†	-189.7	8.1	-0.5827	µg/L	-0.5827	ppb	06:15:14
3	Cr 267.716†	-360.7	-529.3	1.1709	µg/L	1.1709	ppb	06:15:14
3	Cu 324.752†	341.7	-1534.2	0.9122	µg/L	0.9122	ppb	06:15:14
3	Mn 257.610†	-5780.2	-6984.7	0.4406	µg/L	0.4406	ppb	06:14:54
3	Mo 202.031†	-57.3	-97.6	-1.8937	µg/L	-1.8937	ppb	06:15:14
3	Ni 231.604†	-316.0	-153.0	-0.4378	µg/L	-0.4378	ppb	06:15:14
3	P 214.914†	197.8	91.7	-9.1580	µg/L	-9.1580	ppb	06:15:14
3	Pb 220.353†	-445.7	-439.8	-2.2050	µg/L	-2.2050	ppb	06:15:14
3	S 181.975 Axial†	164.5	93.5	-14.668	µg/L	-14.668	ppb	06:15:14
3	Sb 206.836†	222.4	96.6	1.1121	µg/L	1.1121	ppb	06:15:14
3	Se 196.026†	-191.1	-192.1	-4.5848	µg/L	-4.5848	ppb	06:15:14
3	SiO2†	1309.0	413.0	25.386	µg/L	25.386	ppb	06:15:14
3	Si 251.611†	392.2	451.1	10.682	µg/L	10.682	ppb	06:15:14
3	Sn 189.927†	44.2	2.4	-4.3267	µg/L	-4.3267	ppb	06:15:14
3	Ti 334.940†	-5136.5	-5079.4	0.3852	µg/L	0.3852	ppb	06:15:14
3	Tl 190.801†	-126.0	-63.9	3.9260	µg/L	3.9260	ppb	06:15:14
3	U 367.007†	3310.7	2855.4	-15.46	µg/L	-15.46	ppb	06:14:54
3	V 292.402†	-2762.1	-2987.5	1.0730	µg/L	1.0730	ppb	06:15:14
3	Zn 213.857†	4642.3	4344.9	7.2352	µg/L	7.2352	ppb	06:15:14

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	325392.1	88.855	%	0.2670				0.30%
Sc RADIAL	21548.8	97.6	%	0.48				0.49%
Y 371.029	312987.1	86.974	%	0.2425				0.28%
Ag 328.068†	-2659.5	1.1472	µg/L	0.69102	1.1472	ppb	0.69102	60.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1526527.8	490950	µg/L	4998.23	490950	ppb	4998.23	1.02%
QC value within limits for Al 396.153Radial Recovery = 98.19%								
As 188.979†	-33.0	-4.3840	µg/L	2.89777	-4.3840	ppb	2.89777	66.10%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	-22331.2	8.8010	µg/L	4.23048	8.8010	ppb	4.23048	48.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	764.7	1.6902	µg/L	0.11050	1.6902	ppb	0.11050	6.54%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-6817.1	0.4228	µg/L	0.02008	0.4228	ppb	0.02008	4.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2277043.8	487640	µg/L	5064.21	487640	ppb	5064.21	1.04%
QC value within limits for Ca 317.933Radial Recovery = 97.53%								
Cd 226.502†	2016.9	-0.1546	µg/L	0.12176	-0.1546	ppb	0.12176	78.75%
QC value within limits for Cd 226.502 Recovery = Not calculated								

```
Co 228.616†                28.6     -0.1062 µg/L       0.42152     -0.1062 ppb        0.42152 396.83%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -528.4      1.1169 µg/L       0.54888      1.1169 ppb        0.54888  49.14%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -1569.9      0.5780 µg/L       0.41296      0.5780 ppb        0.41296  71.45%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    990443.0      192770 µg/L       1899.38      192770 ppb        1899.38   0.99%
   QC value within limits for Fe 238.204 Radial  Recovery = 96.39%
K 766.490 Radial†         44.8      87.218 µg/L       55.4569      87.218 ppb        55.4569  63.58%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       296618.4      484740 µg/L       3610.73      484740 ppb        3610.73   0.74%
   QC value within limits for Mg 279.077 IEC  Recovery = 96.95%
Mn 257.610†            -6976.9      0.3947 µg/L       0.04059      0.3947 ppb        0.04059  10.28%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -71.5     -0.4318 µg/L       1.39200     -0.4318 ppb        1.39200 322.35%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       133.6     -46.782 µg/L       21.8091     -46.782 ppb        21.8091  46.62%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†             -138.9     -0.0703 µg/L       0.31901     -0.0703 ppb        0.31901 454.00%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                93.3     -7.8025 µg/L       1.26527     -7.8025 ppb        1.26527  16.22%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             -417.5      0.2464 µg/L       4.40112      0.2464 ppb        4.40112 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          90.8     -17.149 µg/L       12.2623     -17.149 ppb        12.2623  71.51%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               92.8      0.1925 µg/L       3.76525      0.1925 ppb        3.76525 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†             -192.4     -5.2228 µg/L       0.90431     -5.2228 ppb        0.90431  17.31%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    403.9      24.000 µg/L        3.0517      24.000 ppb         3.0517  12.72%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              446.4      10.473 µg/L        0.2073      10.473 ppb         0.2073   1.98%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                7.2     -3.6986 µg/L       1.07660     -3.6986 ppb        1.07660  29.11%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             1465.5      0.0146 µg/L       0.05275      0.0146 ppb        0.05275 360.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†            -5008.1      0.5773 µg/L       0.20617      0.5773 ppb        0.20617  35.71%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -64.3      3.7435 µg/L       1.97390      3.7435 ppb        1.97390  52.73%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 367.007†              2808.2      -26.68 µg/L        10.714      -26.68 ppb         10.714  40.16%
   QC value within limits for U 367.007  Recovery = Not calculated
V 292.402†             -2986.2      0.8838 µg/L       0.28653      0.8838 ppb        0.28653  32.42%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             4292.3      6.9831 µg/L       0.21890      6.9831 ppb        0.21890   3.13%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

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Sequence No.: 10 **Autosampler Location: 104**
Sample ID: ICSAB **Date Collected: 7/23/2018 06:15:23**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21432.9	21432.9	97.1	%			06:15:59
1	Al 396.153Radial†	1486524.7	1531512.1	492530	µg/L	492530	ppb	06:15:54
1	Ca 317.933Radial†	2214951.3	2281547.1	488610	µg/L	488610	ppb	06:15:54
1	Fe 238.204 Radial†	961625.0	990631.3	192810	µg/L	192810	ppb	06:15:54
1	K 766.490 Radial†	6206.5	5972.2	5474.0	µg/L	5474.0	ppb	06:15:59
1	Mg 279.077 IEC†	288921.2	297590.7	486330	µg/L	486330	ppb	06:15:59
1	Na 589.592 Radial†	3529.9	3509.0	5143.6	µg/L	5143.6	ppb	06:15:59
1	Sr 421.552†	81309.2	83504.3	482.41	µg/L	482.41	ppb	06:15:59
1	Sc 361.383	323371.1	323371.1	88.303	%			06:16:27
1	Y 371.029	311719.3	311719.3	86.622	%			06:16:27
1	Ag 328.068†	19732.0	23029.3	261.99	µg/L	261.99	ppb	06:16:32
1	As 188.979†	990.7	1134.7	513.14	µg/L	513.14	ppb	06:16:32
1	B 249.677†	-5363.6	-6247.2	541.73	µg/L	541.73	ppb	06:16:27
1	Ba 233.527†	51308.8	58120.8	484.45	µg/L	484.45	ppb	06:16:32
1	Be 313.107†	251561.4	288457.5	245.98	µg/L	245.98	ppb	06:16:27
1	Cd 226.502†	40812.2	46541.4	461.96	µg/L	461.96	ppb	06:16:32
1	Co 228.616†	17769.7	20345.9	468.09	µg/L	468.09	ppb	06:16:32
1	Cr 267.716†	21041.9	23707.2	483.51	µg/L	483.51	ppb	06:16:32
1	Cu 324.752†	64588.9	71224.3	534.91	µg/L	534.91	ppb	06:16:27
1	Mn 257.610†	269197.1	304398.4	489.42	µg/L	489.42	ppb	06:16:27
1	Mo 202.031†	7735.4	8727.0	498.66	µg/L	498.66	ppb	06:16:32
1	Ni 231.604†	14504.0	16629.2	463.40	µg/L	463.40	ppb	06:16:32
1	P 214.914†	3607.4	3953.6	2550.9	µg/L	2550.9	ppb	06:16:32
1	Pb 220.353†	2984.2	3443.0	477.46	µg/L	477.46	ppb	06:16:32
1	S 181.975 Axial†	2074.8	2257.3	2644.4	µg/L	2644.4	ppb	06:16:32
1	Sb 206.836†	1732.8	1807.7	488.93	µg/L	488.93	ppb	06:16:32
1	Se 196.026†	4150.6	4724.2	2318.6	µg/L	2318.6	ppb	06:16:32
1	SiO2†	56084.1	62447.8	10487	µg/L	10487	ppb	06:16:32
1	Si 251.611†	81983.4	92851.2	5112.4	µg/L	5112.4	ppb	06:16:27
1	Sn 189.927†	3474.4	3887.1	480.12	µg/L	480.12	ppb	06:16:32
1	Ti 334.940†	100049.2	114023.3	507.16	µg/L	507.16	ppb	06:16:27
1	Tl 190.801†	1801.8	2118.7	471.74	µg/L	471.74	ppb	06:16:32
1	U 367.007†	4288.2	3972.7	382.2	µg/L	382.2	ppb	06:16:32
1	V 292.402†	30791.6	35002.2	501.93	µg/L	501.93	ppb	06:16:32
1	Zn 213.857†	60760.7	67911.2	488.92	µg/L	488.92	ppb	06:16:32
2	Sc RADIAL	21094.4	21094.4	95.5	%			06:16:10
2	Al 396.153Radial†	1494047.9	1563954.4	502960	µg/L	502960	ppb	06:16:04
2	Ca 317.933Radial†	2223482.6	2327083.1	498360	µg/L	498360	ppb	06:16:04
2	Fe 238.204 Radial†	964295.2	1009318.9	196450	µg/L	196450	ppb	06:16:04
2	K 766.490 Radial†	6165.2	6031.6	5529.0	µg/L	5529.0	ppb	06:16:10
2	Mg 279.077 IEC†	287155.8	300517.7	491120	µg/L	491120	ppb	06:16:10
2	Na 589.592 Radial†	3532.5	3570.0	5232.6	µg/L	5232.6	ppb	06:16:10
2	Sr 421.552†	81025.7	84551.3	488.40	µg/L	488.40	ppb	06:16:10
2	Sc 361.383	323946.3	323946.3	88.460	%			06:16:37
2	Y 371.029	312025.7	312025.7	86.707	%			06:16:37
2	Ag 328.068†	19745.5	23005.0	262.29	µg/L	262.29	ppb	06:16:42
2	As 188.979†	998.4	1141.4	516.31	µg/L	516.31	ppb	06:16:42
2	B 249.677†	-5341.8	-6211.8	557.06	µg/L	557.06	ppb	06:16:37
2	Ba 233.527†	51619.8	58369.1	486.46	µg/L	486.46	ppb	06:16:42
2	Be 313.107†	251467.2	287845.1	245.58	µg/L	245.58	ppb	06:16:37
2	Cd 226.502†	41195.8	46893.0	465.21	µg/L	465.21	ppb	06:16:42
2	Co 228.616†	17935.7	20497.8	471.58	µg/L	471.58	ppb	06:16:42
2	Cr 267.716†	21157.5	23795.6	485.43	µg/L	485.43	ppb	06:16:42
2	Cu 324.752†	64499.8	70993.7	533.43	µg/L	533.43	ppb	06:16:37
2	Mn 257.610†	269400.2	304086.7	489.16	µg/L	489.16	ppb	06:16:37
2	Mo 202.031†	7820.7	8808.0	503.32	µg/L	503.32	ppb	06:16:42
2	Ni 231.604†	14649.6	16764.6	467.22	µg/L	467.22	ppb	06:16:42
2	P 214.914†	3628.6	3970.3	2560.9	µg/L	2560.9	ppb	06:16:42

2	Pb 220.353†	2905.4	3347.9	466.82 µg/L	466.82 ppb		06:16:42
2	S 181.975 Axial†	2066.5	2243.7	2625.1 µg/L	2625.1 ppb		06:16:42
2	Sb 206.836†	1741.8	1814.4	490.38 µg/L	490.38 ppb		06:16:42
2	Se 196.026†	4163.2	4730.1	2323.0 µg/L	2323.0 ppb		06:16:42
2	SiO2†	56383.0	62673.0	10524 µg/L	10524 ppb		06:16:42
2	Si 251.611†	81943.3	92641.1	5100.4 µg/L	5100.4 ppb		06:16:37
2	Sn 189.927†	3489.8	3897.6	481.35 µg/L	481.35 ppb		06:16:42
2	Ti 334.940†	100114.0	113895.4	507.07 µg/L	507.07 ppb		06:16:37
2	Tl 190.801†	1810.4	2124.9	473.37 µg/L	473.37 ppb		06:16:42
2	U 367.007†	4263.1	3935.8	349.8 µg/L	349.8 ppb		06:16:42
2	V 292.402†	31032.9	35213.0	505.46 µg/L	505.46 ppb		06:16:42
2	Zn 213.857†	61303.7	68402.9	492.22 µg/L	492.22 ppb		06:16:42
3	Sc RADIAL	21430.9	21430.9	97.1 %			06:16:20
3	Al 396.153Radial†	1513735.9	1559684.4	501590 µg/L	501590 ppb		06:16:15
3	Ca 317.933Radial†	2262374.5	2330610.5	499110 µg/L	499110 ppb		06:16:15
3	Fe 238.204 Radial†	980329.2	1009990.5	196580 µg/L	196580 ppb		06:16:15
3	K 766.490 Radial†	6232.0	5999.1	5499.5 µg/L	5499.5 ppb		06:16:20
3	Mg 279.077 IEC†	287720.8	296380.5	484360 µg/L	484360 ppb		06:16:20
3	Na 589.592 Radial†	3550.7	3530.7	5172.0 µg/L	5172.0 ppb		06:16:20
3	Sr 421.552†	81036.3	83230.5	480.62 µg/L	480.62 ppb		06:16:20
3	Sc 361.383	325715.1	325715.1	88.943 %			06:16:47
3	Y 371.029	314127.6	314127.6	87.291 %			06:16:47
3	Ag 328.068†	19800.4	22945.5	261.72 µg/L	261.72 ppb		06:16:53
3	As 188.979†	1029.9	1170.7	529.17 µg/L	529.17 ppb		06:16:53
3	B 249.677†	-5408.9	-6254.5	556.16 µg/L	556.16 ppb		06:16:47
3	Ba 233.527†	51626.9	58060.2	483.85 µg/L	483.85 ppb		06:16:53
3	Be 313.107†	253554.0	288647.6	246.25 µg/L	246.25 ppb		06:16:47
3	Cd 226.502†	41079.0	46508.7	461.21 µg/L	461.21 ppb		06:16:53
3	Co 228.616†	17899.7	20347.3	468.11 µg/L	468.11 ppb		06:16:53
3	Cr 267.716†	21123.5	23627.5	481.97 µg/L	481.97 ppb		06:16:53
3	Cu 324.752†	64902.6	71050.6	533.84 µg/L	533.84 ppb		06:16:47
3	Mn 257.610†	270818.9	304027.9	489.09 µg/L	489.09 ppb		06:16:47
3	Mo 202.031†	7838.4	8779.8	501.73 µg/L	501.73 ppb		06:16:53
3	Ni 231.604†	14591.1	16608.9	462.92 µg/L	462.92 ppb		06:16:53
3	P 214.914†	3564.4	3875.8	2497.6 µg/L	2497.6 ppb		06:16:53
3	Pb 220.353†	2976.5	3410.0	474.41 µg/L	474.41 ppb		06:16:53
3	S 181.975 Axial†	2058.7	2222.3	2599.0 µg/L	2599.0 ppb		06:16:53
3	Sb 206.836†	1759.0	1823.1	492.89 µg/L	492.89 ppb		06:16:53
3	Se 196.026†	4147.7	4687.0	2302.7 µg/L	2302.7 ppb		06:16:53
3	SiO2†	56301.8	62235.5	10450 µg/L	10450 ppb		06:16:53
3	Si 251.611†	82350.5	92595.8	5097.9 µg/L	5097.9 ppb		06:16:47
3	Sn 189.927†	3517.4	3907.1	482.56 µg/L	482.56 ppb		06:16:53
3	Ti 334.940†	100484.3	113697.2	506.27 µg/L	506.27 ppb		06:16:47
3	Tl 190.801†	1830.7	2136.6	475.87 µg/L	475.87 ppb		06:16:53
3	U 367.007†	4237.8	3881.1	329.7 µg/L	329.7 ppb		06:16:53
3	V 292.402†	31016.1	35003.7	502.72 µg/L	502.72 ppb		06:16:53
3	Zn 213.857†	61260.8	67978.3	489.08 µg/L	489.08 ppb		06:16:53

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	324344.2	88.569	%	0.3336				0.38%
Sc RADIAL	21319.4	96.6	%	0.88				0.91%
Y 371.029	312624.2	86.873	%	0.3643				0.42%
Ag 328.068†	22993.3	262.00	µg/L	0.289	262.00	ppb	0.289	0.11%
QC value within limits for Ag 328.068 Recovery = 104.80%								
Al 396.153Radial†	1551717.0	499030	µg/L	5669.19	499030	ppb	5669.19	1.14%
QC value within limits for Al 396.153Radial Recovery = 99.81%								
As 188.979†	1148.9	519.54	µg/L	8.486	519.54	ppb	8.486	1.63%
QC value within limits for As 188.979 Recovery = 103.91%								
B 249.677†	-6237.9	551.65	µg/L	8.606	551.65	ppb	8.606	1.56%
QC value within limits for B 249.677 Recovery = 110.33%								
Ba 233.527†	58183.4	484.92	µg/L	1.363	484.92	ppb	1.363	0.28%
QC value within limits for Ba 233.527 Recovery = 96.98%								
Be 313.107†	288316.7	245.94	µg/L	0.337	245.94	ppb	0.337	0.14%
QC value within limits for Be 313.107 Recovery = 98.38%								
Ca 317.933Radial†	2313080.3	495360	µg/L	5860.46	495360	ppb	5860.46	1.18%
QC value within limits for Ca 317.933Radial Recovery = 99.07%								
Cd 226.502†	46647.7	462.80	µg/L	2.128	462.80	ppb	2.128	0.46%
QC value within limits for Cd 226.502 Recovery = 92.56%								

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Co 228.616†            20397.0      469.26 µg/L         2.011      469.26 ppb          2.011   0.43%
   QC value within limits for Co 228.616  Recovery = 93.85%
Cr 267.716†            23710.1      483.63 µg/L         1.734      483.63 ppb          1.734   0.36%
   QC value within limits for Cr 267.716  Recovery = 96.73%
Cu 324.752†            71089.5      534.06 µg/L         0.767      534.06 ppb          0.767   0.14%
   QC value within limits for Cu 324.752  Recovery = 106.81%
Fe 238.204 Radial†   1003313.6      195280 µg/L       2138.67      195280 ppb        2138.67   1.10%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.64%
K 766.490 Radial†       6001.0      5500.8 µg/L         27.51      5500.8 ppb          27.51   0.50%
   QC value within limits for K 766.490 Radial  Recovery = 110.02%
Mg 279.077 IEC†       298162.9      487270 µg/L       3476.23      487270 ppb        3476.23   0.71%
   QC value within limits for Mg 279.077 IEC  Recovery = 97.45%
Mn 257.610†           304171.0      489.22 µg/L         0.177      489.22 ppb          0.177   0.04%
   QC value within limits for Mn 257.610  Recovery = 97.84%
Mo 202.031†             8771.6      501.24 µg/L         2.368      501.24 ppb          2.368   0.47%
   QC value within limits for Mo 202.031  Recovery = 100.25%
Na 589.592 Radial†      3536.5      5182.7 µg/L         45.50      5182.7 ppb          45.50   0.88%
   QC value within limits for Na 589.592 Radial  Recovery = 103.65%
Ni 231.604†            16667.6      464.51 µg/L         2.355      464.51 ppb          2.355   0.51%
   QC value within limits for Ni 231.604  Recovery = 92.90%
P 214.914†              3933.2      2536.5 µg/L         34.00      2536.5 ppb          34.00   1.34%
   QC value within limits for P 214.914  Recovery = 101.46%
Pb 220.353†             3400.3      472.89 µg/L         5.482      472.89 ppb          5.482   1.16%
   QC value within limits for Pb 220.353  Recovery = 94.58%
S 181.975 Axial†        2241.1      2622.8 µg/L         22.79      2622.8 ppb          22.79   0.87%
   QC value within limits for S 181.975 Axial  Recovery = 104.91%
Sb 206.836†             1815.1      490.73 µg/L         2.005      490.73 ppb          2.005   0.41%
   QC value within limits for Sb 206.836  Recovery = 98.15%
Se 196.026†             4713.8      2314.8 µg/L         10.68      2314.8 ppb          10.68   0.46%
   QC value within limits for Se 196.026  Recovery = 92.59%
SiO2†                  62452.1       10487 µg/L         36.95       10487 ppb          36.95   0.35%
   QC value within limits for SiO2  Recovery = 98.05%
Si 251.611†            92696.0      5103.6 µg/L          7.73      5103.6 ppb           7.73   0.15%
   QC value within limits for Si 251.611  Recovery = 102.07%
Sn 189.927†             3897.2      481.34 µg/L         1.222      481.34 ppb          1.222   0.25%
   QC value within limits for Sn 189.927  Recovery = 96.27%
Sr 421.552†            83762.0      483.81 µg/L         4.074      483.81 ppb          4.074   0.84%
   QC value within limits for Sr 421.552  Recovery = 96.76%
Ti 334.940†           113872.0      506.83 µg/L         0.490      506.83 ppb          0.490   0.10%
   QC value within limits for Ti 334.940  Recovery = 101.37%
Tl 190.801†             2126.7      473.66 µg/L         2.082      473.66 ppb          2.082   0.44%
   QC value within limits for Tl 190.801  Recovery = 94.73%
U 367.007†              3929.9       353.9 µg/L         26.53       353.9 ppb          26.53   7.50%
   QC value less than the lower limit for U 367.007  Recovery = 70.78%
V 292.402†             35073.0      503.37 µg/L         1.852      503.37 ppb          1.852   0.37%
   QC value within limits for V 292.402  Recovery = 100.67%
Zn 213.857†            68097.5      490.07 µg/L         1.860      490.07 ppb          1.860   0.38%
   QC value within limits for Zn 213.857  Recovery = 98.01%
QC Failed.  Continue with analysis.
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Sequence No.: 11 | **Autosampler Location: 105**
Sample ID: LR1 | **Date Collected: 7/23/2018 06:17:01**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	20827.8	20827.8	94.3	%			06:17:37
1	Al 396.153Radial†	1427033.2	1512934.8	486110	µg/L	486110	ppb	06:17:32
1	Ca 317.933Radial†	2144805.3	2273476.3	486880	µg/L	486880	ppb	06:17:32
1	Fe 238.204 Radial†	2286191.6	2423625.5	471720	µg/L	471720	ppb	06:17:32
1	K 766.490 Radial†	227528.8	240788.5	218800	µg/L	218800	ppb	06:17:37
1	Mg 279.077 IEC†	280979.9	297819.2	486710	µg/L	486710	ppb	06:17:37
1	Na 589.592 Radial†	302509.1	320571.4	492340	µg/L	492340	ppb	06:17:32
1	Sr 421.552†	1520190.5	1611339.3	9466.6	µg/L	9466.6	ppb	06:17:32
1	Sc 361.383	317158.6	317158.6	86.607	%			06:18:11
1	Y 371.029	304528.7	304528.7	84.624	%			06:18:11
1	Ag 328.068†	-7256.4	-7694.9	2.4635	µg/L	2.4635	ppb	06:18:11
1	As 188.979†	20059.8	23174.7	10339	µg/L	10339	ppb	06:18:16
1	B 249.677†	1323647.7	1528168.2	52597	µg/L	52597	ppb	06:18:11
1	Ba 233.527†	1481574.1	1710705.7	14387	µg/L	14387	ppb	06:18:11
1	Be 313.107†	-14827.5	-13546.5	3.8972	µg/L	3.8972	ppb	06:18:11
1	Cd 226.502†	769423.3	888732.8	9172.6	µg/L	9172.6	ppb	06:18:11
1	Co 228.616†	350610.0	405052.1	9331.5	µg/L	9331.5	ppb	06:18:11
1	Cr 267.716†	1038226.6	1198659.9	23880	µg/L	23880	ppb	06:18:11
1	Cu 324.752†	2438281.0	2813425.7	20685	µg/L	20685	ppb	06:18:11
1	Mn 257.610†	5093152.3	5880319.4	9264.6	µg/L	9264.6	ppb	06:18:11
1	Mo 202.031†	152800.6	176397.3	10015	µg/L	10015	ppb	06:18:11
1	Ni 231.604†	288800.2	333665.3	9231.8	µg/L	9231.8	ppb	06:18:11
1	P 214.914†	744.7	728.1	-161.89	µg/L	-161.89	ppb	06:18:16
1	Pb 220.353†	161361.1	186378.1	23081	µg/L	23081	ppb	06:18:11
1	S 181.975 Axial†	37138.2	42789.0	52372	µg/L	52372	ppb	06:18:16
1	Sb 206.836†	1393.1	1454.0	-37.124	µg/L	-37.124	ppb	06:18:16
1	Se 196.026†	-469.9	-518.8	-35.414	µg/L	-35.414	ppb	06:18:16
1	SiO2†	553169.5	637648.4	107230	µg/L	107230	ppb	06:18:11
1	Si 251.611†	793836.7	916606.8	50490	µg/L	50490	ppb	06:18:11
1	Sn 189.927†	-281.7	-372.8	-7.3232	µg/L	-7.3232	ppb	06:18:16
1	Ti 334.940†	2043702.2	2360469.5	10059	µg/L	10059	ppb	06:18:11
1	Tl 190.801†	-316.9	-287.6	2.9215	µg/L	2.9215	ppb	06:18:16
1	U 367.007†	38331.6	43375.8	13170	µg/L	13170	ppb	06:18:11
1	V 292.402†	657196.2	758959.4	10129	µg/L	10129	ppb	06:18:11
1	Zn 213.857†	1611677.6	1860015.5	14051	µg/L	14051	ppb	06:18:11
2	Sc RADIAL	20881.2	20881.2	94.6	%			06:17:48
2	Al 396.153Radial†	1452169.3	1535643.4	493420	µg/L	493420	ppb	06:17:43
2	Ca 317.933Radial†	2183953.0	2309054.0	494500	µg/L	494500	ppb	06:17:43
2	Fe 238.204 Radial†	2325772.0	2459277.3	478650	µg/L	478650	ppb	06:17:43
2	K 766.490 Radial†	227988.4	240657.3	218680	µg/L	218680	ppb	06:17:48
2	Mg 279.077 IEC†	280933.0	297007.5	485380	µg/L	485380	ppb	06:17:48
2	Na 589.592 Radial†	307248.6	324762.5	498770	µg/L	498770	ppb	06:17:43
2	Sr 421.552†	1545656.1	1634143.5	9600.6	µg/L	9600.6	ppb	06:17:43
2	Sc 361.383	314755.2	314755.2	85.950	%			06:18:27
2	Y 371.029	302202.5	302202.5	83.977	%			06:18:27
2	Ag 328.068†	-7251.3	-7752.9	2.9190	µg/L	2.9190	ppb	06:18:27
2	As 188.979†	20116.8	23417.9	10447	µg/L	10447	ppb	06:18:32
2	B 249.677†	1317323.9	1532481.1	52767	µg/L	52767	ppb	06:18:27
2	Ba 233.527†	1472919.1	1713698.6	14412	µg/L	14412	ppb	06:18:27
2	Be 313.107†	-14621.5	-13437.6	4.1104	µg/L	4.1104	ppb	06:18:27
2	Cd 226.502†	764128.0	889355.8	9178.3	µg/L	9178.3	ppb	06:18:27
2	Co 228.616†	348619.0	405826.8	9349.3	µg/L	9349.3	ppb	06:18:27
2	Cr 267.716†	1033285.6	1202065.0	23948	µg/L	23948	ppb	06:18:27
2	Cu 324.752†	2425957.6	2820585.6	20738	µg/L	20738	ppb	06:18:27
2	Mn 257.610†	5067255.9	5895095.0	9288.3	µg/L	9288.3	ppb	06:18:27
2	Mo 202.031†	152118.1	176950.5	10046	µg/L	10046	ppb	06:18:27
2	Ni 231.604†	287155.1	334297.5	9249.4	µg/L	9249.4	ppb	06:18:27
2	P 214.914†	786.6	783.5	-130.63	µg/L	-130.63	ppb	06:18:32

2	Pb 220.353†	160410.6	186694.9	23120	µg/L	23120	ppb	06:18:27
2	S 181.975 Axial†	37274.8	43275.4	52966	µg/L	52966	ppb	06:18:32
2	Sb 206.836†	1412.8	1489.1	-29.083	µg/L	-29.083	ppb	06:18:32
2	Se 196.026†	-476.5	-530.6	-37.907	µg/L	-37.907	ppb	06:18:32
2	SiO2†	549928.9	638755.3	107410	µg/L	107410	ppb	06:18:27
2	Si 251.611†	789963.5	919099.5	50626	µg/L	50626	ppb	06:18:27
2	Sn 189.927†	-298.4	-394.7	-9.8736	µg/L	-9.8736	ppb	06:18:32
2	Ti 334.940†	2033503.1	2366622.0	10085	µg/L	10085	ppb	06:18:27
2	Tl 190.801†	-335.4	-312.0	-1.5881	µg/L	-1.5881	ppb	06:18:32
2	U 367.007†	38195.4	43555.4	13200	µg/L	13200	ppb	06:18:27
2	V 292.402†	653794.1	760795.4	10154	µg/L	10154	ppb	06:18:27
2	Zn 213.857†	1601876.1	1862821.6	14071	µg/L	14071	ppb	06:18:27
3	Sc RADIAL	20976.1	20976.1	95.0	%			06:17:59
3	Al 396.153Radial†	1435322.6	1510962.8	485480	µg/L	485480	ppb	06:17:54
3	Ca 317.933Radial†	2151809.0	2264770.2	485010	µg/L	485010	ppb	06:17:54
3	Fe 238.204 Radial†	2291659.0	2412242.3	469500	µg/L	469500	ppb	06:17:54
3	K 766.490 Radial†	229414.1	241067.4	219050	µg/L	219050	ppb	06:17:59
3	Mg 279.077 IEC†	283037.2	297878.4	486800	µg/L	486800	ppb	06:17:59
3	Na 589.592 Radial†	304129.1	320009.0	491470	µg/L	491470	ppb	06:17:54
3	Sr 421.552†	1527483.8	1607620.4	9444.8	µg/L	9444.8	ppb	06:17:54
3	Sc 361.383	314264.3	314264.3	85.816	%			06:18:43
3	Y 371.029	301577.3	301577.3	83.804	%			06:18:43
3	Ag 328.068†	-7265.1	-7782.2	1.2437	µg/L	1.2437	ppb	06:18:43
3	As 188.979†	20025.3	23347.8	10416	µg/L	10416	ppb	06:18:48
3	B 249.677†	1317559.7	1535150.0	52820	µg/L	52820	ppb	06:18:43
3	Ba 233.527†	1471832.8	1715109.8	14425	µg/L	14425	ppb	06:18:43
3	Be 313.107†	-14690.5	-13544.6	3.9188	µg/L	3.9188	ppb	06:18:43
3	Cd 226.502†	763313.4	889795.3	9183.9	µg/L	9183.9	ppb	06:18:43
3	Co 228.616†	348194.0	405965.2	9352.5	µg/L	9352.5	ppb	06:18:43
3	Cr 267.716†	1031791.2	1202201.6	23950	µg/L	23950	ppb	06:18:43
3	Cu 324.752†	2424781.2	2823623.9	20760	µg/L	20760	ppb	06:18:43
3	Mn 257.610†	5062852.1	5899173.0	9294.1	µg/L	9294.1	ppb	06:18:43
3	Mo 202.031†	151888.4	176959.3	10047	µg/L	10047	ppb	06:18:43
3	Ni 231.604†	286962.4	334594.9	9257.4	µg/L	9257.4	ppb	06:18:43
3	P 214.914†	715.0	701.4	-178.93	µg/L	-178.93	ppb	06:18:48
3	Pb 220.353†	160189.7	186729.1	23124	µg/L	23124	ppb	06:18:43
3	S 181.975 Axial†	37049.8	43081.0	52731	µg/L	52731	ppb	06:18:48
3	Sb 206.836†	1380.2	1453.7	-37.994	µg/L	-37.994	ppb	06:18:48
3	Se 196.026†	-440.1	-489.0	-22.334	µg/L	-22.334	ppb	06:18:48
3	SiO2†	549223.0	638932.2	107440	µg/L	107440	ppb	06:18:43
3	Si 251.611†	789273.7	919731.4	50662	µg/L	50662	ppb	06:18:43
3	Sn 189.927†	-218.3	-301.9	1.5870	µg/L	1.5870	ppb	06:18:48
3	Ti 334.940†	2032560.6	2369219.6	10096	µg/L	10096	ppb	06:18:43
3	Tl 190.801†	-336.8	-314.1	-2.8197	µg/L	-2.8197	ppb	06:18:48
3	U 367.007†	38238.2	43674.7	13290	µg/L	13290	ppb	06:18:43
3	V 292.402†	653078.0	761149.2	10157	µg/L	10157	ppb	06:18:43
3	Zn 213.857†	1601364.5	1865136.9	14090	µg/L	14090	ppb	06:18:43

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	315392.7	86.125	%	0.4230				0.49%
Sc RADIAL	20895.0	94.6	%	0.34				0.36%
Y 371.029	302769.5	84.135	%	0.4322				0.51%
Ag 328.068†	-7743.3	2.2087	µg/L	0.86625	2.2087	ppb	0.86625	39.22%
Al 396.153Radial†	1519847.0	488340	µg/L	4410.73	488340	ppb	4410.73	0.90%
QC value within limits for Al 396.153Radial Recovery = 97.67%								
As 188.979†	23313.5	10401	µg/L	55.35	10401	ppb	55.35	0.53%
QC value within limits for As 188.979 Recovery = 104.01%								
B 249.677†	1531933.1	52728	µg/L	116.70	52728	ppb	116.70	0.22%
QC value within limits for B 249.677 Recovery = 105.46%								
Ba 233.527†	1713171.4	14408	µg/L	18.93	14408	ppb	18.93	0.13%
QC value within limits for Ba 233.527 Recovery = 96.05%								
Be 313.107†	-13509.6	3.9754	µg/L	0.11734	3.9754	ppb	0.11734	2.95%
Ca 317.933Radial†	2282433.5	488800	µg/L	5024.40	488800	ppb	5024.40	1.03%
QC value within limits for Ca 317.933Radial Recovery = 97.76%								
Cd 226.502†	889294.6	9178.3	µg/L	5.64	9178.3	ppb	5.64	0.06%
QC value within limits for Cd 226.502 Recovery = 91.78%								
Co 228.616†	405614.7	9344.4	µg/L	11.33	9344.4	ppb	11.33	0.12%
QC value within limits for Co 228.616 Recovery = 93.44%								

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Cr 267.716†          1200975.5       23926 µg/L         39.94       23926 ppb          39.94   0.17%
   QC value within limits for Cr 267.716  Recovery = 95.70%
Cu 324.752†          2819211.7       20728 µg/L         38.46       20728 ppb          38.46   0.19%
   QC value within limits for Cu 324.752  Recovery = 103.64%
Fe 238.204 Radial†   2431715.0      473290 µg/L       4776.03      473290 ppb        4776.03   1.01%
   QC value within limits for Fe 238.204 Radial  Recovery = 94.66%
K 766.490 Radial†     240837.7      218840 µg/L        190.55      218840 ppb         190.55   0.09%
   QC value within limits for K 766.490 Radial  Recovery = 109.42%
Mg 279.077 IEC†       297568.3      486300 µg/L        795.25      486300 ppb         795.25   0.16%
   QC value within limits for Mg 279.077 IEC  Recovery = 97.26%
Mn 257.610†          5891529.1      9282.4 µg/L         15.61      9282.4 ppb          15.61   0.17%
   QC value within limits for Mn 257.610  Recovery = 92.82%
Mo 202.031†           176769.0       10036 µg/L         18.29       10036 ppb          18.29   0.18%
   QC value within limits for Mo 202.031  Recovery = 100.36%
Na 589.592 Radial†    321781.0      494190 µg/L       3987.82      494190 ppb        3987.82   0.81%
   QC value within limits for Na 589.592 Radial  Recovery = 98.84%
Ni 231.604†           334185.9      9246.2 µg/L         13.12      9246.2 ppb          13.12   0.14%
   QC value within limits for Ni 231.604  Recovery = 92.46%
P 214.914†               737.7     -157.15 µg/L        24.498     -157.15 ppb         24.498  15.59%
Pb 220.353†           186600.7       23108 µg/L         24.05       23108 ppb          24.05   0.10%
   QC value within limits for Pb 220.353  Recovery = 92.43%
S 181.975 Axial†       43048.5       52690 µg/L        299.51       52690 ppb         299.51   0.57%
   QC value within limits for S 181.975 Axial  Recovery = 105.38%
Sb 206.836†             1465.6     -34.733 µg/L        4.9131     -34.733 ppb         4.9131  14.15%
Se 196.026†             -512.8     -31.885 µg/L        8.3647     -31.885 ppb         8.3647  26.23%
SiO2†                 638445.3      107360 µg/L        116.63      107360 ppb         116.63   0.11%
   QC value within limits for SiO2  Recovery = 100.81%
Si 251.611†           918479.2       50593 µg/L         91.03       50593 ppb          91.03   0.18%
   QC value within limits for Si 251.611  Recovery = 101.19%
Sn 189.927†             -356.5     -5.2033 µg/L       6.01724     -5.2033 ppb        6.01724 115.64%
Sr 421.552†          1617701.0      9504.0 µg/L         84.36      9504.0 ppb          84.36   0.89%
   QC value within limits for Sr 421.552  Recovery = 95.04%
Ti 334.940†          2365437.0       10080 µg/L         19.11       10080 ppb          19.11   0.19%
   QC value within limits for Ti 334.940  Recovery = 100.80%
Tl 190.801†             -304.6     -0.4954 µg/L       3.02256     -0.4954 ppb        3.02256 610.11%
U 367.007†             43535.3       13220 µg/L         59.15       13220 ppb          59.15   0.45%
   QC value less than the lower limit for U 367.007  Recovery = 88.14%
V 292.402†            760301.4       10147 µg/L         15.75       10147 ppb          15.75   0.16%
   QC value within limits for V 292.402  Recovery = 101.47%
Zn 213.857†          1862658.0       14071 µg/L         19.54       14071 ppb          19.54   0.14%
   QC value within limits for Zn 213.857  Recovery = 93.80%
QC Failed.  Continue with analysis.
```

User canceled analysis.

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Analysis Begun

Start Time: 7/23/2018 06:22:59 **Plasma On Time: 7/23/2018 04:11:23**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer: Optima 5300 DV, S/N 077C7090601 **Autosampler: ESI**

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\072318.sif
Batch ID:
Results Data Set: 072318
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 12 **Autosampler Location: 108**
Sample ID: LR2 **Date Collected: 7/23/2018 06:23:00**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21540.0	21540.0	97.6	%			06:23:52
1	Al 396.153Radial†	-78.8	13.2	4.2624	µg/L	4.2624	ppb	06:23:52
1	Ca 317.933Radial†	99.6	-194.2	-41.592	µg/L	-41.592	ppb	06:23:52
1	Fe 238.204 Radial†	48.9	15.1	2.9378	µg/L	2.9378	ppb	06:23:52
1	K 766.490 Radial†	488.0	78.6	71.411	µg/L	71.411	ppb	06:23:32
1	Mg 279.077 IEC†	27.8	-27.6	-45.030	µg/L	-45.030	ppb	06:23:52
1	Na 589.592 Radial†	98.5	-26.6	-40.886	µg/L	-40.886	ppb	06:23:52
1	Sr 421.552†	351.9	100.2	0.5898	µg/L	0.5898	ppb	06:23:32
1	Sc 361.383	346721.9	346721.9	94.680	%			06:24:49
1	Y 371.029	342252.1	342252.1	95.106	%			06:24:49
1	Ag 328.068†	-300.6	366.1	-1.8229	µg/L	-1.8229	ppb	06:24:49
1	As 188.979†	-15.0	-3.1	-1.3243	µg/L	-1.3243	ppb	06:25:09
1	B 249.677†	645.9	509.0	16.923	µg/L	16.923	ppb	06:25:09
1	Ba 233.527†	-133.2	-125.2	-1.0535	µg/L	-1.0535	ppb	06:25:09
1	Be 313.107†	-6518.3	-3310.7	-0.3919	µg/L	-0.3919	ppb	06:24:49
1	Cd 226.502†	-308.0	-2.3	-0.0245	µg/L	-0.0245	ppb	06:25:09
1	Co 228.616†	-134.1	80.7	1.8476	µg/L	1.8476	ppb	06:25:09
1	Cr 267.716†	422.8	324.6	-1.1202	µg/L	-1.1202	ppb	06:25:09
1	Cu 324.752†	1363.1	-480.4	2.3635	µg/L	2.3635	ppb	06:24:49
1	Mn 257.610†	945.0	541.2	0.8503	µg/L	0.8503	ppb	06:25:09
1	Mo 202.031†	27.9	-3.5	-0.1963	µg/L	-0.1963	ppb	06:25:09
1	Ni 231.604†	-208.3	-16.0	-0.4441	µg/L	-0.4441	ppb	06:25:09
1	P 214.914†	143.9	20.2	13.508	µg/L	13.508	ppb	06:25:09
1	Pb 220.353†	23.7	88.5	3.6057	µg/L	3.6057	ppb	06:25:09
1	S 181.975 Axial†	97.7	10.9	13.388	µg/L	13.388	ppb	06:25:09
1	Sb 206.836†	135.3	-11.7	-3.5049	µg/L	-3.5049	ppb	06:25:09
1	Se 196.026†	-43.2	-21.8	-10.314	µg/L	-10.314	ppb	06:25:09
1	SiO2†	1192.4	194.2	32.843	µg/L	32.843	ppb	06:25:09
1	Si 251.611†	-19.0	-11.9	-0.6535	µg/L	-0.6535	ppb	06:25:09
1	Sn 189.927†	47.7	2.9	0.3784	µg/L	0.3784	ppb	06:25:09
1	Ti 334.940†	484.4	1233.2	0.8228	µg/L	0.8228	ppb	06:24:49
1	Tl 190.801†	-103.5	-31.0	-2.8289	µg/L	-2.8289	ppb	06:25:09
1	U 367.007†	26580.4	27190.5	9564	µg/L	9564	ppb	06:24:49
1	V 292.402†	-480.2	-375.3	0.6942	µg/L	0.6942	ppb	06:24:49
1	Zn 213.857†	986.1	143.6	1.1036	µg/L	1.1036	ppb	06:25:09
2	Sc RADIAL	21395.8	21395.8	96.9	%			06:24:18
2	Al 396.153Radial†	-69.0	22.7	7.3028	µg/L	7.3028	ppb	06:24:18
2	Ca 317.933Radial†	87.9	-205.6	-44.034	µg/L	-44.034	ppb	06:24:18
2	Fe 238.204 Radial†	57.0	23.8	4.6279	µg/L	4.6279	ppb	06:24:18
2	K 766.490 Radial†	542.4	138.1	125.46	µg/L	125.46	ppb	06:23:57
2	Mg 279.077 IEC†	34.2	-20.7	-33.894	µg/L	-33.894	ppb	06:24:18
2	Na 589.592 Radial†	74.5	-50.7	-78.005	µg/L	-78.005	ppb	06:24:18
2	Sr 421.552†	313.6	63.1	0.3719	µg/L	0.3719	ppb	06:23:57
2	Sc 361.383	347481.6	347481.6	94.887	%			06:25:14
2	Y 371.029	342976.0	342976.0	95.308	%			06:25:14

2	Ag 328.068†	-245.4	425.1	-1.2427	µg/L	-1.2427	ppb	06:25:14
2	As 188.979†	-21.7	-10.1	-4.4177	µg/L	-4.4177	ppb	06:25:34
2	B 249.677†	606.9	466.4	15.514	µg/L	15.514	ppb	06:25:34
2	Ba 233.527†	-138.0	-129.9	-1.0935	µg/L	-1.0935	ppb	06:25:34
2	Be 313.107†	-6596.7	-3378.2	-0.4408	µg/L	-0.4408	ppb	06:25:14
2	Cd 226.502†	-283.4	24.4	0.2515	µg/L	0.2515	ppb	06:25:34
2	Co 228.616†	-133.5	81.7	1.8695	µg/L	1.8695	ppb	06:25:34
2	Cr 267.716†	412.3	312.6	-1.3833	µg/L	-1.3833	ppb	06:25:34
2	Cu 324.752†	1375.9	-470.0	2.4580	µg/L	2.4580	ppb	06:25:14
2	Mn 257.610†	920.2	512.9	0.8059	µg/L	0.8059	ppb	06:25:34
2	Mo 202.031†	32.8	1.6	0.0928	µg/L	0.0928	ppb	06:25:34
2	Ni 231.604†	-225.6	-33.8	-0.9357	µg/L	-0.9357	ppb	06:25:34
2	P 214.914†	150.7	27.1	18.086	µg/L	18.086	ppb	06:25:34
2	Pb 220.353†	21.8	86.5	3.3278	µg/L	3.3278	ppb	06:25:34
2	S 181.975 Axial†	94.1	6.8	8.3712	µg/L	8.3712	ppb	06:25:34
2	Sb 206.836†	124.3	-23.6	-6.8910	µg/L	-6.8910	ppb	06:25:34
2	Se 196.026†	-36.9	-15.1	-7.1459	µg/L	-7.1459	ppb	06:25:34
2	SiO2†	1200.5	199.9	33.794	µg/L	33.794	ppb	06:25:34
2	Si 251.611†	-15.4	-8.0	-0.4431	µg/L	-0.4431	ppb	06:25:34
2	Sn 189.927†	50.9	6.1	0.7841	µg/L	0.7841	ppb	06:25:34
2	Ti 334.940†	577.3	1329.9	1.2210	µg/L	1.2210	ppb	06:25:14
2	Tl 190.801†	-107.0	-34.5	-3.5602	µg/L	-3.5602	ppb	06:25:34
2	U 367.007†	26719.0	27275.2	9593	µg/L	9593	ppb	06:25:14
2	V 292.402†	-464.7	-357.8	0.9423	µg/L	0.9423	ppb	06:25:14
2	Zn 213.857†	1014.0	170.8	1.3135	µg/L	1.3135	ppb	06:25:34
3	Sc RADIAL	21318.5	21318.5	96.6	%			06:24:43
3	Al 396.153Radial†	-70.2	21.3	6.8605	µg/L	6.8605	ppb	06:24:43
3	Ca 317.933Radial†	117.2	-174.9	-37.459	µg/L	-37.459	ppb	06:24:43
3	Fe 238.204 Radial†	60.1	27.2	5.2915	µg/L	5.2915	ppb	06:24:43
3	K 766.490 Radial†	579.9	178.9	162.59	µg/L	162.59	ppb	06:24:23
3	Mg 279.077 IEC†	28.1	-27.0	-44.120	µg/L	-44.120	ppb	06:24:43
3	Na 589.592 Radial†	95.7	-28.5	-43.763	µg/L	-43.763	ppb	06:24:43
3	Sr 421.552†	325.4	76.5	0.4504	µg/L	0.4504	ppb	06:24:23
3	Sc 361.383	348248.7	348248.7	95.097	%			06:25:40
3	Y 371.029	343936.9	343936.9	95.575	%			06:25:40
3	Ag 328.068†	-279.0	390.3	-1.6392	µg/L	-1.6392	ppb	06:25:40
3	As 188.979†	-18.3	-6.5	-2.8255	µg/L	-2.8255	ppb	06:26:00
3	B 249.677†	520.4	374.1	12.448	µg/L	12.448	ppb	06:26:00
3	Ba 233.527†	-119.0	-109.6	-0.9230	µg/L	-0.9230	ppb	06:26:00
3	Be 313.107†	-6530.3	-3293.1	-0.3518	µg/L	-0.3518	ppb	06:25:40
3	Cd 226.502†	-311.7	-4.7	-0.0503	µg/L	-0.0503	ppb	06:26:00
3	Co 228.616†	-146.5	68.4	1.5614	µg/L	1.5614	ppb	06:26:00
3	Cr 267.716†	411.4	310.7	-1.4796	µg/L	-1.4796	ppb	06:26:00
3	Cu 324.752†	1345.5	-505.2	2.2455	µg/L	2.2455	ppb	06:25:40
3	Mn 257.610†	981.8	575.6	0.9044	µg/L	0.9044	ppb	06:26:00
3	Mo 202.031†	25.4	-6.3	-0.3567	µg/L	-0.3567	ppb	06:26:00
3	Ni 231.604†	-198.4	-4.7	-0.1314	µg/L	-0.1314	ppb	06:26:00
3	P 214.914†	138.5	14.0	9.3486	µg/L	9.3486	ppb	06:26:00
3	Pb 220.353†	13.1	77.3	2.1330	µg/L	2.1330	ppb	06:26:00
3	S 181.975 Axial†	99.7	12.5	15.337	µg/L	15.337	ppb	06:26:00
3	Sb 206.836†	127.9	-20.1	-5.8945	µg/L	-5.8945	ppb	06:26:00
3	Se 196.026†	-19.9	2.8	1.3352	µg/L	1.3352	ppb	06:26:00
3	SiO2†	1195.0	191.3	32.368	µg/L	32.368	ppb	06:26:00
3	Si 251.611†	0.9	9.2	0.5136	µg/L	0.5136	ppb	06:26:00
3	Sn 189.927†	43.0	-2.3	-0.2596	µg/L	-0.2596	ppb	06:26:00
3	Ti 334.940†	547.3	1297.1	1.0472	µg/L	1.0472	ppb	06:25:40
3	Tl 190.801†	-104.0	-31.1	-2.8011	µg/L	-2.8011	ppb	06:26:00
3	U 367.007†	26977.3	27484.9	9667	µg/L	9667	ppb	06:25:40
3	V 292.402†	-529.5	-425.0	0.1051	µg/L	0.1051	ppb	06:25:40
3	Zn 213.857†	989.4	142.6	1.0940	µg/L	1.0940	ppb	06:26:00

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	347484.0	94.888	%	0.2085				0.22%
Sc RADIAL	21418.1	97.0	%	0.51				0.53%
Y 371.029	343055.0	95.330	%	0.2349				0.25%
Ag 328.068†	393.8	-1.5683	µg/L	0.29653	-1.5683	ppb	0.29653	18.91%
Al 396.153Radial†	19.1	6.1419	µg/L	1.64264	6.1419	ppb	1.64264	26.74%
As 188.979†	-6.5	-2.8558	µg/L	1.54692	-2.8558	ppb	1.54692	54.17%

B 249.677†	449.8	14.962	µg/L	2.2878	14.962	ppb	2.2878	15.29%
Ba 233.527†	-121.6	-1.0233	µg/L	0.08918	-1.0233	ppb	0.08918	8.72%
Be 313.107†	-3327.3	-0.3949	µg/L	0.04459	-0.3949	ppb	0.04459	11.29%
Ca 317.933Radial†	-191.6	-41.028	µg/L	3.3238	-41.028	ppb	3.3238	8.10%
Cd 226.502†	5.8	0.0589	µg/L	0.16729	0.0589	ppb	0.16729	284.00%
Co 228.616†	76.9	1.7595	µg/L	0.17192	1.7595	ppb	0.17192	9.77%
Cr 267.716†	316.0	-1.3277	µg/L	0.18608	-1.3277	ppb	0.18608	14.02%
Cu 324.752†	-485.2	2.3557	µg/L	0.10642	2.3557	ppb	0.10642	4.52%
Fe 238.204 Radial†	22.0	4.2857	µg/L	1.21358	4.2857	ppb	1.21358	28.32%
K 766.490 Radial†	131.9	119.82	µg/L	45.853	119.82	ppb	45.853	38.27%
Mg 279.077 IEC†	-25.1	-41.014	µg/L	6.1836	-41.014	ppb	6.1836	15.08%
Mn 257.610†	543.2	0.8535	µg/L	0.04936	0.8535	ppb	0.04936	5.78%
Mo 202.031†	-2.7	-0.1534	µg/L	0.22778	-0.1534	ppb	0.22778	148.48%
Na 589.592 Radial†	-35.3	-54.218	µg/L	20.6503	-54.218	ppb	20.6503	38.09%
Ni 231.604†	-18.2	-0.5038	µg/L	0.40545	-0.5038	ppb	0.40545	80.49%
P 214.914†	20.4	13.648	µg/L	4.3704	13.648	ppb	4.3704	32.02%
Pb 220.353†	84.1	3.0222	µg/L	0.78248	3.0222	ppb	0.78248	25.89%
S 181.975 Axial†	10.1	12.365	µg/L	3.5937	12.365	ppb	3.5937	29.06%
Sb 206.836†	-18.5	-5.4302	µg/L	1.74015	-5.4302	ppb	1.74015	32.05%
Se 196.026†	-11.4	-5.3747	µg/L	6.02294	-5.3747	ppb	6.02294	112.06%
SiO2†	195.1	33.002	µg/L	0.7264	33.002	ppb	0.7264	2.20%
Si 251.611†	-3.6	-0.1943	µg/L	0.62204	-0.1943	ppb	0.62204	320.07%
Sn 189.927†	2.3	0.3010	µg/L	0.52614	0.3010	ppb	0.52614	174.82%
Sr 421.552†	79.9	0.4707	µg/L	0.11038	0.4707	ppb	0.11038	23.45%
Ti 334.940†	1286.7	1.0303	µg/L	0.19964	1.0303	ppb	0.19964	19.38%
Tl 190.801†	-32.2	-3.0634	µg/L	0.43045	-3.0634	ppb	0.43045	14.05%
U 367.007†	27316.9	9608	µg/L	53.29	9608	ppb	53.29	0.55%
QC value within limits for U 367.007 Recovery = 96.08%								
V 292.402†	-386.0	0.5805	µg/L	0.42998	0.5805	ppb	0.42998	74.07%
Zn 213.857†	152.4	1.1704	µg/L	0.12402	1.1704	ppb	0.12402	10.60%

All analyte(s) passed QC.

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Sequence No.: 13 | **Autosampler Location: 7**
Sample ID: CCV | **Date Collected: 7/23/2018 06:26:08**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21630.0	21630.0	98.0	%			06:26:46
1	Al 396.153Radial†	16460.3	16896.8	5410.6	µg/L	5410.6	ppb	06:26:46
1	Ca 317.933Radial†	25066.2	25291.5	5416.3	µg/L	5416.3	ppb	06:26:46
1	Fe 238.204 Radial†	26859.0	27382.9	5329.6	µg/L	5329.6	ppb	06:26:46
1	K 766.490 Radial†	6084.0	5788.9	5260.4	µg/L	5260.4	ppb	06:26:46
1	Mg 279.077 IEC†	3320.8	3333.9	5448.3	µg/L	5448.3	ppb	06:26:46
1	Na 589.592 Radial†	6883.5	6899.1	10602	µg/L	10602	ppb	06:26:46
1	Sr 421.552†	86031.5	87561.4	514.80	µg/L	514.80	ppb	06:26:41
1	Sc 361.383	352517.7	352517.7	96.262	%			06:27:13
1	Y 371.029	343012.7	343012.7	95.318	%			06:27:13
1	Ag 328.068†	48327.0	50887.1	516.75	µg/L	516.75	ppb	06:27:13
1	As 188.979†	1114.5	1170.6	519.24	µg/L	519.24	ppb	06:27:34
1	B 249.677†	15571.7	16003.1	550.68	µg/L	550.68	ppb	06:27:13
1	Ba 233.527†	59465.6	61790.0	519.96	µg/L	519.96	ppb	06:27:13
1	Be 313.107†	596898.2	623648.4	518.48	µg/L	518.48	ppb	06:27:13
1	Cd 226.502†	47894.3	50077.0	519.17	µg/L	519.17	ppb	06:27:13
1	Co 228.616†	21246.3	22293.7	513.74	µg/L	513.74	ppb	06:27:34
1	Cr 267.716†	24738.4	25577.0	509.16	µg/L	509.16	ppb	06:27:34
1	Cu 324.752†	69738.3	70526.0	518.07	µg/L	518.07	ppb	06:27:13
1	Mn 257.610†	319396.3	331340.9	520.72	µg/L	520.72	ppb	06:27:13
1	Mo 202.031†	8670.4	8974.1	509.15	µg/L	509.15	ppb	06:27:34
1	Ni 231.604†	17886.0	18784.4	519.31	µg/L	519.31	ppb	06:27:34
1	P 214.914†	3778.4	3793.4	2510.3	µg/L	2510.3	ppb	06:27:34
1	Pb 220.353†	3958.5	4175.8	516.55	µg/L	516.55	ppb	06:27:34
1	S 181.975 Axial†	891.5	833.8	1021.8	µg/L	1021.8	ppb	06:27:34
1	Sb 206.836†	1859.4	1777.0	505.42	µg/L	505.42	ppb	06:27:34
1	Se 196.026†	1031.7	1095.5	520.15	µg/L	520.15	ppb	06:27:34
1	SiO2†	32576.0	32775.6	5514.5	µg/L	5514.5	ppb	06:27:13
1	Si 251.611†	44917.6	46669.9	2572.1	µg/L	2572.1	ppb	06:27:13
1	Sn 189.927†	3987.8	4095.1	510.63	µg/L	510.63	ppb	06:27:34
1	Ti 334.940†	115592.7	120802.5	514.26	µg/L	514.26	ppb	06:27:13
1	Tl 190.801†	2232.3	2397.3	514.29	µg/L	514.29	ppb	06:27:34
1	U 367.007†	2304.4	1510.4	507.8	µg/L	507.8	ppb	06:27:13
1	V 292.402†	37742.1	39339.4	519.95	µg/L	519.95	ppb	06:27:13
1	Zn 213.857†	66367.4	68046.4	514.78	µg/L	514.78	ppb	06:27:13
2	Sc RADIAL	21567.4	21567.4	97.7	%			06:26:56
2	Al 396.153Radial†	16357.2	16840.1	5392.3	µg/L	5392.3	ppb	06:26:56
2	Ca 317.933Radial†	24942.2	25238.9	5405.1	µg/L	5405.1	ppb	06:26:56
2	Fe 238.204 Radial†	26703.3	27303.1	5314.1	µg/L	5314.1	ppb	06:26:56
2	K 766.490 Radial†	5969.9	5690.1	5170.7	µg/L	5170.7	ppb	06:26:56
2	Mg 279.077 IEC†	3287.2	3309.3	5408.1	µg/L	5408.1	ppb	06:26:56
2	Na 589.592 Radial†	6805.3	6839.5	10510	µg/L	10510	ppb	06:26:56
2	Sr 421.552†	86064.2	87849.9	516.49	µg/L	516.49	ppb	06:26:51
2	Sc 361.383	350868.8	350868.8	95.812	%			06:27:40
2	Y 371.029	341468.9	341468.9	94.889	%			06:27:40
2	Ag 328.068†	47993.1	50774.5	515.59	µg/L	515.59	ppb	06:27:40
2	As 188.979†	1124.1	1186.0	526.01	µg/L	526.01	ppb	06:28:00
2	B 249.677†	15465.3	15968.1	549.45	µg/L	549.45	ppb	06:27:40
2	Ba 233.527†	58790.2	61375.4	516.47	µg/L	516.47	ppb	06:27:40
2	Be 313.107†	591520.6	620949.8	516.24	µg/L	516.24	ppb	06:27:40
2	Cd 226.502†	47422.0	49817.9	516.49	µg/L	516.49	ppb	06:27:40
2	Co 228.616†	21172.3	22320.1	514.35	µg/L	514.35	ppb	06:28:00
2	Cr 267.716†	24608.8	25562.5	508.85	µg/L	508.85	ppb	06:28:00
2	Cu 324.752†	69066.5	70165.2	515.43	µg/L	515.43	ppb	06:27:40
2	Mn 257.610†	316303.8	329672.6	518.10	µg/L	518.10	ppb	06:27:40
2	Mo 202.031†	8646.4	8991.3	510.13	µg/L	510.13	ppb	06:28:00
2	Ni 231.604†	17850.5	18834.7	520.70	µg/L	520.70	ppb	06:28:00
2	P 214.914†	3783.4	3817.1	2526.1	µg/L	2526.1	ppb	06:28:00

2	Pb 220.353†	3936.9	4172.5	516.12 µg/L	516.12 ppb		06:28:00
2	S 181.975 Axial†	885.7	832.0	1019.7 µg/L	1019.7 ppb		06:28:00
2	Sb 206.836†	1857.1	1783.6	507.33 µg/L	507.33 ppb		06:28:00
2	Se 196.026†	1038.2	1107.4	525.76 µg/L	525.76 ppb		06:28:00
2	SiO2†	32257.7	32602.4	5485.2 µg/L	5485.2 ppb		06:27:40
2	Si 251.611†	44516.6	46470.6	2561.1 µg/L	2561.1 ppb		06:27:40
2	Sn 189.927†	3978.1	4104.5	511.78 µg/L	511.78 ppb		06:28:00
2	Ti 334.940†	114269.8	119986.1	510.77 µg/L	510.77 ppb		06:27:40
2	Tl 190.801†	2213.7	2388.8	512.48 µg/L	512.48 ppb		06:28:00
2	U 367.007†	2355.3	1574.8	530.4 µg/L	530.4 ppb		06:27:40
2	V 292.402†	37371.0	39136.3	517.32 µg/L	517.32 ppb		06:27:40
2	Zn 213.857†	65902.0	67884.7	513.54 µg/L	513.54 ppb		06:27:40
3	Sc RADIAL	21523.5	21523.5	97.5 %			06:27:06
3	Al 396.153Radial†	16306.9	16822.6	5386.6 µg/L	5386.6 ppb		06:27:06
3	Ca 317.933Radial†	24853.1	25199.5	5396.6 µg/L	5396.6 ppb		06:27:06
3	Fe 238.204 Radial†	26633.9	27287.6	5311.0 µg/L	5311.0 ppb		06:27:06
3	K 766.490 Radial†	5970.8	5703.6	5182.9 µg/L	5182.9 ppb		06:27:06
3	Mg 279.077 IEC†	3308.9	3338.4	5455.7 µg/L	5455.7 ppb		06:27:06
3	Na 589.592 Radial†	6791.4	6839.4	10510 µg/L	10510 ppb		06:27:06
3	Sr 421.552†	86186.3	88154.8	518.29 µg/L	518.29 ppb		06:27:01
3	Sc 361.383	352621.2	352621.2	96.291 %			06:28:06
3	Y 371.029	343176.6	343176.6	95.363 %			06:28:06
3	Ag 328.068†	48326.2	50871.5	516.59 µg/L	516.59 ppb		06:28:06
3	As 188.979†	1123.2	1179.3	523.06 µg/L	523.06 ppb		06:28:26
3	B 249.677†	15557.2	15983.3	549.95 µg/L	549.95 ppb		06:28:06
3	Ba 233.527†	59164.3	61459.0	517.17 µg/L	517.17 ppb		06:28:06
3	Be 313.107†	595861.2	622389.4	517.43 µg/L	517.43 ppb		06:28:06
3	Cd 226.502†	47746.4	49908.8	517.43 µg/L	517.43 ppb		06:28:06
3	Co 228.616†	21250.1	22291.2	513.68 µg/L	513.68 ppb		06:28:26
3	Cr 267.716†	24704.3	25534.1	508.31 µg/L	508.31 ppb		06:28:26
3	Cu 324.752†	69409.3	70163.0	515.40 µg/L	515.40 ppb		06:28:06
3	Mn 257.610†	318326.2	330132.2	518.82 µg/L	518.82 ppb		06:28:06
3	Mo 202.031†	8688.5	8990.3	510.07 µg/L	510.07 ppb		06:28:26
3	Ni 231.604†	17870.9	18763.3	518.73 µg/L	518.73 ppb		06:28:26
3	P 214.914†	3772.0	3785.6	2505.2 µg/L	2505.2 ppb		06:28:26
3	Pb 220.353†	3930.0	4144.9	512.74 µg/L	512.74 ppb		06:28:26
3	S 181.975 Axial†	887.2	829.1	1016.0 µg/L	1016.0 ppb		06:28:26
3	Sb 206.836†	1845.9	1762.4	501.26 µg/L	501.26 ppb		06:28:26
3	Se 196.026†	1034.1	1097.7	521.19 µg/L	521.19 ppb		06:28:26
3	SiO2†	32495.7	32682.3	5498.7 µg/L	5498.7 ppb		06:28:06
3	Si 251.611†	44801.7	46535.8	2564.7 µg/L	2564.7 ppb		06:28:06
3	Sn 189.927†	4000.3	4106.8	512.08 µg/L	512.08 ppb		06:28:26
3	Ti 334.940†	115325.2	120489.4	512.93 µg/L	512.93 ppb		06:28:06
3	Tl 190.801†	2240.4	2405.0	515.93 µg/L	515.93 ppb		06:28:26
3	U 367.007†	2281.3	1485.7	499.1 µg/L	499.1 ppb		06:28:06
3	V 292.402†	37653.8	39236.2	518.60 µg/L	518.60 ppb		06:28:06
3	Zn 213.857†	66103.9	67752.6	512.55 µg/L	512.55 ppb		06:28:06

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	352002.6	96.122	%	0.2685				0.28%
Sc RADIAL	21573.6	97.7	%	0.24				0.25%
Y 371.029	342552.7	95.190	%	0.2618				0.28%
Ag 328.068†	50844.4	516.31	µg/L	0.629	516.31	ppb	0.629	0.12%
QC value within limits for Ag 328.068 Recovery = 103.26%								
Al 396.153Radial†	16853.2	5396.5	µg/L	12.51	5396.5	ppb	12.51	0.23%
QC value within limits for Al 396.153Radial Recovery = 107.93%								
As 188.979†	1178.6	522.77	µg/L	3.396	522.77	ppb	3.396	0.65%
QC value within limits for As 188.979 Recovery = 104.55%								
B 249.677†	15984.8	550.03	µg/L	0.617	550.03	ppb	0.617	0.11%
QC value greater than the upper limit for B 249.677 Recovery = 110.01%								
Ba 233.527†	61541.5	517.86	µg/L	1.845	517.86	ppb	1.845	0.36%
QC value within limits for Ba 233.527 Recovery = 103.57%								
Be 313.107†	622329.2	517.38	µg/L	1.119	517.38	ppb	1.119	0.22%
QC value within limits for Be 313.107 Recovery = 103.48%								
Ca 317.933Radial†	25243.3	5406.0	µg/L	9.88	5406.0	ppb	9.88	0.18%
QC value within limits for Ca 317.933Radial Recovery = 108.12%								
Cd 226.502†	49934.6	517.70	µg/L	1.363	517.70	ppb	1.363	0.26%
QC value within limits for Cd 226.502 Recovery = 103.54%								

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Co 228.616†            22301.7      513.92 µg/L         0.372      513.92 ppb          0.372   0.07%
   QC value within limits for Co 228.616  Recovery = 102.78%
Cr 267.716†            25557.8      508.78 µg/L         0.429      508.78 ppb          0.429   0.08%
   QC value within limits for Cr 267.716  Recovery = 101.76%
Cu 324.752†            70284.8      516.30 µg/L         1.532      516.30 ppb          1.532   0.30%
   QC value within limits for Cu 324.752  Recovery = 103.26%
Fe 238.204 Radial†     27324.5      5318.2 µg/L          9.95      5318.2 ppb           9.95   0.19%
   QC value within limits for Fe 238.204 Radial  Recovery = 106.36%
K 766.490 Radial†       5727.5      5204.7 µg/L         48.68      5204.7 ppb          48.68   0.94%
   QC value within limits for K 766.490 Radial  Recovery = 104.09%
Mg 279.077 IEC†         3327.2      5437.4 µg/L         25.59      5437.4 ppb          25.59   0.47%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.75%
Mn 257.610†           330381.9      519.21 µg/L         1.354      519.21 ppb          1.354   0.26%
   QC value within limits for Mn 257.610  Recovery = 103.84%
Mo 202.031†             8985.2      509.78 µg/L         0.546      509.78 ppb          0.546   0.11%
   QC value within limits for Mo 202.031  Recovery = 101.96%
Na 589.592 Radial†      6859.4       10541 µg/L         52.95       10541 ppb          52.95   0.50%
   QC value within limits for Na 589.592 Radial  Recovery = 105.41%
Ni 231.604†            18794.1      519.58 µg/L         1.014      519.58 ppb          1.014   0.20%
   QC value within limits for Ni 231.604  Recovery = 103.92%
P 214.914†              3798.7      2513.9 µg/L         10.91      2513.9 ppb          10.91   0.43%
   QC value within limits for P 214.914  Recovery = 100.55%
Pb 220.353†             4164.4      515.14 µg/L         2.085      515.14 ppb          2.085   0.40%
   QC value within limits for Pb 220.353  Recovery = 103.03%
S 181.975 Axial†         831.6      1019.1 µg/L          2.91      1019.1 ppb           2.91   0.29%
   QC value within limits for S 181.975 Axial  Recovery = 101.91%
Sb 206.836†             1774.3      504.67 µg/L         3.104      504.67 ppb          3.104   0.61%
   QC value within limits for Sb 206.836  Recovery = 100.93%
Se 196.026†             1100.2      522.37 µg/L         2.984      522.37 ppb          2.984   0.57%
   QC value within limits for Se 196.026  Recovery = 104.47%
SiO2†                  32686.8      5499.4 µg/L         14.68      5499.4 ppb          14.68   0.27%
   QC value within limits for SiO2  Recovery = 102.84%
Si 251.611†            46558.8      2566.0 µg/L          5.63      2566.0 ppb           5.63   0.22%
   QC value within limits for Si 251.611  Recovery = 102.64%
Sn 189.927†             4102.1      511.50 µg/L         0.769      511.50 ppb          0.769   0.15%
   QC value within limits for Sn 189.927  Recovery = 102.30%
Sr 421.552†            87855.3      516.52 µg/L         1.745      516.52 ppb          1.745   0.34%
   QC value within limits for Sr 421.552  Recovery = 103.30%
Ti 334.940†           120426.0      512.66 µg/L         1.760      512.66 ppb          1.760   0.34%
   QC value within limits for Ti 334.940  Recovery = 102.53%
Tl 190.801†             2397.0      514.24 µg/L         1.726      514.24 ppb          1.726   0.34%
   QC value within limits for Tl 190.801  Recovery = 102.85%
U 367.007†              1523.6       512.4 µg/L         16.18       512.4 ppb          16.18   3.16%
   QC value within limits for U 367.007  Recovery = 102.49%
V 292.402†             39237.3      518.63 µg/L         1.315      518.63 ppb          1.315   0.25%
   QC value within limits for V 292.402  Recovery = 103.73%
Zn 213.857†            67894.6      513.62 µg/L         1.118      513.62 ppb          1.118   0.22%
   QC value within limits for Zn 213.857  Recovery = 102.72%
QC Failed.  Continue with analysis.
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Sequence No.: 14 | **Autosampler Location: 8**
Sample ID: CCB | **Date Collected: 7/23/2018 06:28:34**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21353.4	21353.4	96.7	%			06:29:25
1	Al 396.153Radial†	-98.4	-7.8	-2.5407	µg/L	-2.5407	ppb	06:29:25
1	Ca 317.933Radial†	363.5	79.5	17.029	µg/L	17.029	ppb	06:29:25
1	Fe 238.204 Radial†	58.3	25.2	4.9125	µg/L	4.9125	ppb	06:29:25
1	K 766.490 Radial†	379.2	-29.5	-26.818	µg/L	-26.818	ppb	06:29:05
1	Mg 279.077 IEC†	68.9	15.2	24.858	µg/L	24.858	ppb	06:29:25
1	Na 589.592 Radial†	98.4	-25.8	-39.649	µg/L	-39.649	ppb	06:29:25
1	Sr 421.552†	158.2	-96.9	-0.5703	µg/L	-0.5703	ppb	06:29:05
1	Sc 361.383	348845.7	348845.7	95.260	%			06:30:21
1	Y 371.029	343089.9	343089.9	95.339	%			06:30:21
1	Ag 328.068†	-594.3	59.8	0.5913	µg/L	0.5913	ppb	06:30:21
1	As 188.979†	-22.3	-10.6	-4.6345	µg/L	-4.6345	ppb	06:30:41
1	B 249.677†	467.7	317.8	10.581	µg/L	10.581	ppb	06:30:41
1	Ba 233.527†	-17.0	-2.3	-0.0199	µg/L	-0.0199	ppb	06:30:41
1	Be 313.107†	-3517.7	-118.8	-0.0924	µg/L	-0.0924	ppb	06:30:21
1	Cd 226.502†	-306.9	0.9	0.0081	µg/L	0.0081	ppb	06:30:41
1	Co 228.616†	-206.7	5.5	0.1273	µg/L	0.1273	ppb	06:30:41
1	Cr 267.716†	131.3	15.9	0.2986	µg/L	0.2986	ppb	06:30:41
1	Cu 324.752†	2028.3	209.1	1.5497	µg/L	1.5497	ppb	06:30:21
1	Mn 257.610†	442.6	7.7	0.0124	µg/L	0.0124	ppb	06:30:41
1	Mo 202.031†	48.1	17.5	0.9946	µg/L	0.9946	ppb	06:30:41
1	Ni 231.604†	-235.7	-43.4	-1.2013	µg/L	-1.2013	ppb	06:30:41
1	P 214.914†	116.1	-9.9	-6.5883	µg/L	-6.5883	ppb	06:30:41
1	Pb 220.353†	-60.2	0.3	0.0155	µg/L	0.0155	ppb	06:30:41
1	S 181.975 Axial†	86.7	-1.3	-1.6184	µg/L	-1.6184	ppb	06:30:41
1	Sb 206.836†	159.3	12.7	3.6336	µg/L	3.6336	ppb	06:30:41
1	Se 196.026†	-21.2	1.5	0.6924	µg/L	0.6924	ppb	06:30:41
1	SiO2†	1029.0	15.0	2.4809	µg/L	2.4809	ppb	06:30:41
1	Si 251.611†	10.4	19.2	1.0431	µg/L	1.0431	ppb	06:30:41
1	Sn 189.927†	33.9	-11.9	-1.4803	µg/L	-1.4803	ppb	06:30:41
1	Ti 334.940†	-650.3	38.9	0.1549	µg/L	0.1549	ppb	06:30:21
1	Tl 190.801†	-85.6	-11.6	-2.4631	µg/L	-2.4631	ppb	06:30:41
1	U 367.007†	907.6	69.3	24.34	µg/L	24.34	ppb	06:30:21
1	V 292.402†	-152.0	-27.7	-0.3373	µg/L	-0.3373	ppb	06:30:41
1	Zn 213.857†	990.0	141.4	1.0816	µg/L	1.0816	ppb	06:30:41
2	Sc RADIAL	21262.6	21262.6	96.3	%			06:29:50
2	Al 396.153Radial†	-94.5	-4.1	-1.3200	µg/L	-1.3200	ppb	06:29:50
2	Ca 317.933Radial†	356.9	74.3	15.906	µg/L	15.906	ppb	06:29:50
2	Fe 238.204 Radial†	54.5	21.6	4.2007	µg/L	4.2007	ppb	06:29:50
2	K 766.490 Radial†	442.0	37.4	33.956	µg/L	33.956	ppb	06:29:30
2	Mg 279.077 IEC†	48.6	-5.6	-9.2169	µg/L	-9.2169	ppb	06:29:50
2	Na 589.592 Radial†	111.5	-11.8	-18.200	µg/L	-18.200	ppb	06:29:50
2	Sr 421.552†	257.0	6.4	0.0374	µg/L	0.0374	ppb	06:29:30
2	Sc 361.383	346709.6	346709.6	94.676	%			06:30:46
2	Y 371.029	340321.0	340321.0	94.570	%			06:30:46
2	Ag 328.068†	-603.0	46.8	0.4503	µg/L	0.4503	ppb	06:30:46
2	As 188.979†	-18.6	-6.9	-3.0226	µg/L	-3.0226	ppb	06:31:07
2	B 249.677†	450.6	302.7	10.076	µg/L	10.076	ppb	06:31:07
2	Ba 233.527†	-20.3	-6.0	-0.0502	µg/L	-0.0502	ppb	06:31:07
2	Be 313.107†	-3435.6	-54.9	-0.0351	µg/L	-0.0351	ppb	06:30:46
2	Cd 226.502†	-307.1	-1.2	-0.0131	µg/L	-0.0131	ppb	06:31:07
2	Co 228.616†	-194.9	16.6	0.3810	µg/L	0.3810	ppb	06:31:07
2	Cr 267.716†	118.7	3.4	0.0353	µg/L	0.0353	ppb	06:31:07
2	Cu 324.752†	1995.2	187.3	1.4011	µg/L	1.4011	ppb	06:30:46
2	Mn 257.610†	462.7	31.9	0.0504	µg/L	0.0504	ppb	06:31:07
2	Mo 202.031†	26.5	-4.9	-0.2800	µg/L	-0.2800	ppb	06:31:07
2	Ni 231.604†	-188.6	4.7	0.1300	µg/L	0.1300	ppb	06:31:07
2	P 214.914†	90.4	-36.2	-24.127	µg/L	-24.127	ppb	06:31:07

2	Pb 220.353†	-68.6	-8.9	-1.1353	µg/L	-1.1353	ppb	06:31:07
2	S 181.975 Axial†	103.0	16.4	20.178	µg/L	20.178	ppb	06:31:07
2	Sb 206.836†	147.6	1.3	0.3655	µg/L	0.3655	ppb	06:31:07
2	Se 196.026†	-6.1	17.3	8.1673	µg/L	8.1673	ppb	06:31:07
2	SiO2†	1046.9	40.6	6.8687	µg/L	6.8687	ppb	06:31:07
2	Si 251.611†	0.8	9.0	0.5046	µg/L	0.5046	ppb	06:31:07
2	Sn 189.927†	48.0	3.1	0.3890	µg/L	0.3890	ppb	06:31:07
2	Ti 334.940†	-612.8	74.2	0.2976	µg/L	0.2976	ppb	06:30:46
2	Tl 190.801†	-79.8	-5.9	-1.2489	µg/L	-1.2489	ppb	06:31:07
2	U 367.007†	948.4	118.3	41.58	µg/L	41.58	ppb	06:30:46
2	V 292.402†	-133.9	-9.6	-0.1023	µg/L	-0.1023	ppb	06:31:07
2	Zn 213.857†	979.0	136.2	1.0357	µg/L	1.0357	ppb	06:31:07
3	Sc RADIAL	21352.5	21352.5	96.7	%			06:30:15
3	Al 396.153Radial†	-92.1	-1.3	-0.4292	µg/L	-0.4292	ppb	06:30:15
3	Ca 317.933Radial†	373.0	89.4	19.146	µg/L	19.146	ppb	06:30:15
3	Fe 238.204 Radial†	52.3	19.0	3.7022	µg/L	3.7022	ppb	06:30:15
3	K 766.490 Radial†	468.7	63.0	57.290	µg/L	57.290	ppb	06:29:55
3	Mg 279.077 IEC†	62.0	8.0	13.140	µg/L	13.140	ppb	06:30:15
3	Na 589.592 Radial†	86.8	-37.8	-58.204	µg/L	-58.204	ppb	06:30:15
3	Sr 421.552†	285.9	35.2	0.2065	µg/L	0.2065	ppb	06:29:55
3	Sc 361.383	348140.8	348140.8	95.067	%			06:31:12
3	Y 371.029	341945.2	341945.2	95.021	%			06:31:12
3	Ag 328.068†	-645.7	4.5	0.0314	µg/L	0.0314	ppb	06:31:12
3	As 188.979†	-28.3	-17.0	-7.4702	µg/L	-7.4702	ppb	06:31:32
3	B 249.677†	446.6	296.5	9.8686	µg/L	9.8686	ppb	06:31:32
3	Ba 233.527†	0.4	15.9	0.1341	µg/L	0.1341	ppb	06:31:32
3	Be 313.107†	-3453.8	-59.1	-0.0430	µg/L	-0.0430	ppb	06:31:12
3	Cd 226.502†	-266.2	43.1	0.4466	µg/L	0.4466	ppb	06:31:32
3	Co 228.616†	-184.3	28.6	0.6586	µg/L	0.6586	ppb	06:31:32
3	Cr 267.716†	132.6	17.6	0.3311	µg/L	0.3311	ppb	06:31:32
3	Cu 324.752†	1997.2	180.7	1.3411	µg/L	1.3411	ppb	06:31:12
3	Mn 257.610†	482.9	51.1	0.0805	µg/L	0.0805	ppb	06:31:32
3	Mo 202.031†	37.6	6.6	0.3732	µg/L	0.3732	ppb	06:31:32
3	Ni 231.604†	-212.2	-19.2	-0.5323	µg/L	-0.5323	ppb	06:31:32
3	P 214.914†	117.9	-7.7	-5.1620	µg/L	-5.1620	ppb	06:31:32
3	Pb 220.353†	-50.4	10.5	1.2785	µg/L	1.2785	ppb	06:31:32
3	S 181.975 Axial†	97.7	10.4	12.782	µg/L	12.782	ppb	06:31:32
3	Sb 206.836†	159.7	13.4	3.8442	µg/L	3.8442	ppb	06:31:32
3	Se 196.026†	-30.9	-8.7	-4.1293	µg/L	-4.1293	ppb	06:31:32
3	SiO2†	1036.2	24.7	4.1630	µg/L	4.1630	ppb	06:31:32
3	Si 251.611†	2.1	10.4	0.5680	µg/L	0.5680	ppb	06:31:32
3	Sn 189.927†	42.0	-3.4	-0.4200	µg/L	-0.4200	ppb	06:31:32
3	Ti 334.940†	-602.8	87.5	0.3623	µg/L	0.3623	ppb	06:31:12
3	Tl 190.801†	-88.6	-14.9	-3.1683	µg/L	-3.1683	ppb	06:31:32
3	U 367.007†	903.4	66.8	23.48	µg/L	23.48	ppb	06:31:12
3	V 292.402†	-156.6	-32.9	-0.4113	µg/L	-0.4113	ppb	06:31:32
3	Zn 213.857†	986.7	140.0	1.0681	µg/L	1.0681	ppb	06:31:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	347898.7	95.001	%	0.2972				0.31%
Sc RADIAL	21322.8	96.6	%	0.24				0.24%
Y 371.029	341785.4	94.977	%	0.3866				0.41%
Ag 328.068†	37.0	0.3576	µg/L	0.29121	0.3576	ppb	0.29121	81.42%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-4.4	-1.4300	µg/L	1.06005	-1.4300	ppb	1.06005	74.13%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-5.0424	µg/L	2.25167	-5.0424	ppb	2.25167	44.65%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	305.7	10.175	µg/L	0.3665	10.175	ppb	0.3665	3.60%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	2.5	0.0213	µg/L	0.09883	0.0213	ppb	0.09883	463.37%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-77.6	-0.0569	µg/L	0.03104	-0.0569	ppb	0.03104	54.59%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	81.1	17.360	µg/L	1.6451	17.360	ppb	1.6451	9.48%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	14.3	0.1472	µg/L	0.25954	0.1472	ppb	0.25954	176.32%
QC value within limits for Cd 226.502 Recovery = Not calculated								

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Co 228.616†                16.9      0.3890 µg/L       0.26575      0.3890 ppb        0.26575  68.32%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                12.3      0.2217 µg/L       0.16221      0.2217 ppb        0.16221  73.16%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               192.4      1.4306 µg/L       0.10736      1.4306 ppb        0.10736   7.50%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         21.9      4.2718 µg/L       0.60826      4.2718 ppb        0.60826  14.24%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          23.6      21.476 µg/L       43.4208      21.476 ppb        43.4208 202.18%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             5.9      9.5938 µg/L      17.31220      9.5938 ppb       17.31220 180.45%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                30.2      0.0478 µg/L       0.03415      0.0478 ppb        0.03415  71.51%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 6.4      0.3626 µg/L       0.63733      0.3626 ppb        0.63733 175.76%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -25.2     -38.684 µg/L       20.0192     -38.684 ppb        20.0192  51.75%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -19.3     -0.5345 µg/L       0.66562     -0.5345 ppb        0.66562 124.52%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -17.9     -11.959 µg/L       10.5618     -11.959 ppb        10.5618  88.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 0.6      0.0529 µg/L       1.20734      0.0529 ppb        1.20734 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            8.5      10.447 µg/L       11.0843      10.447 ppb        11.0843 106.10%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 9.1      2.6144 µg/L       1.95050      2.6144 ppb        1.95050  74.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.3      1.5768 µg/L       6.19579      1.5768 ppb        6.19579 392.93%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      26.8      4.5042 µg/L       2.21372      4.5042 ppb        2.21372  49.15%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                12.9      0.7052 µg/L       0.29431      0.7052 ppb        0.29431  41.73%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -4.1     -0.5038 µg/L       0.93747     -0.5038 ppb        0.93747 186.10%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -18.5     -0.1088 µg/L       0.40851     -0.1088 ppb        0.40851 375.45%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                66.9      0.2716 µg/L       0.10610      0.2716 ppb        0.10610  39.06%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -10.8     -2.2934 µg/L       0.97088     -2.2934 ppb        0.97088  42.33%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 367.007†                 84.8       29.80 µg/L        10.213       29.80 ppb         10.213  34.27%
   QC value within limits for U 367.007  Recovery = Not calculated
V 292.402†                -23.4     -0.2836 µg/L       0.16133     -0.2836 ppb        0.16133  56.88%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               139.2      1.0618 µg/L       0.02362      1.0618 ppb        0.02362   2.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Analysis Begun

Start Time: 7/23/2018 07:29:09
Logged In Analyst: Optima3
Spectrometer: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 7/23/2018 07:25:32
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\072318.sif
Batch ID:
Results Data Set: 072318
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 7
Date Collected: 7/23/2018 07:29:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	23235.0	23235.0	105	%			07:30:26
1	Al 396.153Radial†	16113.3	15406.4	4932.7	µg/L	4932.7	ppb	07:30:26
1	Ca 317.933Radial†	25269.9	23717.5	5079.2	µg/L	5079.2	ppb	07:30:26
1	Fe 238.204 Radial†	26995.0	25618.2	4986.1	µg/L	4986.1	ppb	07:30:26
1	K 766.490 Radial†	5977.9	5259.1	4778.9	µg/L	4778.9	ppb	07:30:26
1	Mg 279.077 IEC†	3400.9	3175.8	5189.9	µg/L	5189.9	ppb	07:30:26
1	Na 589.592 Radial†	6712.5	6251.3	9606.3	µg/L	9606.3	ppb	07:30:26
1	Sr 421.552†	85081.3	80591.9	473.82	µg/L	473.82	ppb	07:30:21
1	Sc 361.383	385408.7	385408.7	105.24	%			07:30:53
1	Y 371.029	376838.5	376838.5	104.72	%			07:30:53
1	Ag 328.068†	48553.7	46818.1	475.45	µg/L	475.45	ppb	07:30:53
1	As 188.979†	1176.3	1130.5	501.29	µg/L	501.29	ppb	07:31:13
1	B 249.677†	15488.7	14543.7	500.96	µg/L	500.96	ppb	07:30:53
1	Ba 233.527†	59899.8	56930.7	479.06	µg/L	479.06	ppb	07:30:53
1	Be 313.107†	606931.7	580264.5	482.41	µg/L	482.41	ppb	07:30:53
1	Cd 226.502†	49567.9	47421.2	491.65	µg/L	491.65	ppb	07:30:53
1	Co 228.616†	21789.2	20925.9	482.24	µg/L	482.24	ppb	07:31:13
1	Cr 267.716†	25395.1	24007.8	477.94	µg/L	477.94	ppb	07:31:13
1	Cu 324.752†	69470.9	64089.3	470.79	µg/L	470.79	ppb	07:30:53
1	Mn 257.610†	321726.7	305239.4	479.70	µg/L	479.70	ppb	07:30:53
1	Mo 202.031†	8875.7	8400.5	476.61	µg/L	476.61	ppb	07:31:13
1	Ni 231.604†	18420.4	17706.5	489.51	µg/L	489.51	ppb	07:31:13
1	P 214.914†	3968.5	3639.0	2408.7	µg/L	2408.7	ppb	07:31:13
1	Pb 220.353†	4145.8	4002.7	495.13	µg/L	495.13	ppb	07:31:13
1	S 181.975 Axial†	964.3	823.9	1009.9	µg/L	1009.9	ppb	07:31:13
1	Sb 206.836†	1910.8	1661.0	472.40	µg/L	472.40	ppb	07:31:13
1	Se 196.026†	1093.8	1063.0	504.66	µg/L	504.66	ppb	07:31:13
1	SiO2†	33097.8	30383.4	5111.8	µg/L	5111.8	ppb	07:30:53
1	Si 251.611†	45474.5	43216.9	2381.7	µg/L	2381.7	ppb	07:30:53
1	Sn 189.927†	4168.5	3913.3	487.87	µg/L	487.87	ppb	07:31:13
1	Ti 334.940†	114907.2	109903.4	467.86	µg/L	467.86	ppb	07:30:53
1	Tl 190.801†	2302.4	2266.0	486.06	µg/L	486.06	ppb	07:31:13
1	U 367.007†	2386.9	1384.5	465.0	µg/L	465.0	ppb	07:30:53
1	V 292.402†	38157.3	36388.0	481.02	µg/L	481.02	ppb	07:30:53
1	Zn 213.857†	68031.1	63743.5	482.22	µg/L	482.22	ppb	07:30:53
2	Sc RADIAL	23424.7	23424.7	106	%			07:30:36
2	Al 396.153Radial†	16213.7	15377.0	4923.2	µg/L	4923.2	ppb	07:30:36
2	Ca 317.933Radial†	25543.6	23781.0	5092.8	µg/L	5092.8	ppb	07:30:36
2	Fe 238.204 Radial†	27296.1	25694.2	5000.9	µg/L	5000.9	ppb	07:30:36
2	K 766.490 Radial†	5978.8	5214.0	4738.0	µg/L	4738.0	ppb	07:30:36
2	Mg 279.077 IEC†	3439.8	3186.3	5207.2	µg/L	5207.2	ppb	07:30:36
2	Na 589.592 Radial†	6743.1	6228.4	9571.2	µg/L	9571.2	ppb	07:30:36
2	Sr 421.552†	85116.0	79969.7	470.16	µg/L	470.16	ppb	07:30:31
2	Sc 361.383	383603.3	383603.3	104.75	%			07:31:19
2	Y 371.029	375294.9	375294.9	104.29	%			07:31:19
2	Ag 328.068†	48516.6	46999.9	477.30	µg/L	477.30	ppb	07:31:19

2	As 188.979†	1186.5	1145.5	507.92 µg/L	507.92 ppb		07:31:40
2	B 249.677†	15493.9	14618.0	503.48 µg/L	503.48 ppb		07:31:19
2	Ba 233.527†	59650.1	56960.2	479.31 µg/L	479.31 ppb		07:31:19
2	Be 313.107†	604584.3	580737.7	482.80 µg/L	482.80 ppb		07:31:19
2	Cd 226.502†	49363.4	47447.7	491.92 µg/L	491.92 ppb		07:31:19
2	Co 228.616†	21781.1	21015.6	484.31 µg/L	484.31 ppb		07:31:40
2	Cr 267.716†	25383.9	24110.7	480.01 µg/L	480.01 ppb		07:31:40
2	Cu 324.752†	69188.2	64130.1	471.07 µg/L	471.07 ppb		07:31:19
2	Mn 257.610†	320286.1	305302.9	479.80 µg/L	479.80 ppb		07:31:19
2	Mo 202.031†	8875.3	8439.8	478.84 µg/L	478.84 ppb		07:31:40
2	Ni 231.604†	18412.0	17780.8	491.57 µg/L	491.57 ppb		07:31:40
2	P 214.914†	3967.0	3655.4	2419.5 µg/L	2419.5 ppb		07:31:40
2	Pb 220.353†	4111.7	3988.7	493.41 µg/L	493.41 ppb		07:31:40
2	S 181.975 Axial†	957.0	821.2	1006.6 µg/L	1006.6 ppb		07:31:40
2	Sb 206.836†	1896.4	1655.8	470.88 µg/L	470.88 ppb		07:31:40
2	Se 196.026†	1075.5	1050.5	498.75 µg/L	498.75 ppb		07:31:40
2	SiO2†	32900.2	30342.8	5104.8 µg/L	5104.8 ppb		07:31:19
2	Si 251.611†	45167.8	43127.4	2376.7 µg/L	2376.7 ppb		07:31:19
2	Sn 189.927†	4151.8	3916.0	488.21 µg/L	488.21 ppb		07:31:40
2	Ti 334.940†	114597.1	110121.1	468.80 µg/L	468.80 ppb		07:31:19
2	Tl 190.801†	2290.0	2264.4	485.73 µg/L	485.73 ppb		07:31:40
2	U 367.007†	2309.0	1320.8	442.5 µg/L	442.5 ppb		07:31:19
2	V 292.402†	38049.7	36455.8	481.92 µg/L	481.92 ppb		07:31:19
2	Zn 213.857†	67664.7	63698.0	481.86 µg/L	481.86 ppb		07:31:19
3	Sc RADIAL	23400.5	23400.5	106 %			07:30:46
3	Al 396.153Radial†	16161.4	15343.5	4912.5 µg/L	4912.5 ppb		07:30:46
3	Ca 317.933Radial†	25426.4	23695.4	5074.5 µg/L	5074.5 ppb		07:30:46
3	Fe 238.204 Radial†	27181.6	25612.8	4985.1 µg/L	4985.1 ppb		07:30:46
3	K 766.490 Radial†	6016.2	5255.1	4775.3 µg/L	4775.3 ppb		07:30:46
3	Mg 279.077 IEC†	3421.9	3172.7	5185.0 µg/L	5185.0 ppb		07:30:46
3	Na 589.592 Radial†	6758.1	6249.2	9603.1 µg/L	9603.1 ppb		07:30:46
3	Sr 421.552†	85236.1	80166.3	471.32 µg/L	471.32 ppb		07:30:41
3	Sc 361.383	384308.2	384308.2	104.94 %			07:31:45
3	Y 371.029	375664.1	375664.1	104.39 %			07:31:45
3	Ag 328.068†	48569.2	46965.0	476.93 µg/L	476.93 ppb		07:31:45
3	As 188.979†	1167.4	1125.2	498.97 µg/L	498.97 ppb		07:32:06
3	B 249.677†	15531.6	14626.8	503.72 µg/L	503.72 ppb		07:31:45
3	Ba 233.527†	59792.4	56991.4	479.57 µg/L	479.57 ppb		07:31:45
3	Be 313.107†	605156.3	580224.2	482.38 µg/L	482.38 ppb		07:31:45
3	Cd 226.502†	49404.5	47400.4	491.43 µg/L	491.43 ppb		07:31:45
3	Co 228.616†	21693.6	20894.1	481.50 µg/L	481.50 ppb		07:32:06
3	Cr 267.716†	25275.6	23963.1	477.04 µg/L	477.04 ppb		07:32:06
3	Cu 324.752†	69539.8	64344.0	472.66 µg/L	472.66 ppb		07:31:45
3	Mn 257.610†	321531.7	305929.0	480.79 µg/L	480.79 ppb		07:31:45
3	Mo 202.031†	8852.4	8402.5	476.72 µg/L	476.72 ppb		07:32:06
3	Ni 231.604†	18277.6	17620.6	487.14 µg/L	487.14 ppb		07:32:06
3	P 214.914†	3934.3	3617.3	2394.2 µg/L	2394.2 ppb		07:32:06
3	Pb 220.353†	4077.0	3948.5	488.42 µg/L	488.42 ppb		07:32:06
3	S 181.975 Axial†	958.4	820.9	1006.2 µg/L	1006.2 ppb		07:32:06
3	Sb 206.836†	1911.9	1667.2	474.19 µg/L	474.19 ppb		07:32:06
3	Se 196.026†	1073.9	1047.1	497.14 µg/L	497.14 ppb		07:32:06
3	SiO2†	33024.5	30403.6	5115.2 µg/L	5115.2 ppb		07:31:45
3	Si 251.611†	45334.4	43207.1	2381.2 µg/L	2381.2 ppb		07:31:45
3	Sn 189.927†	4138.0	3895.5	485.67 µg/L	485.67 ppb		07:32:06
3	Ti 334.940†	115080.7	110381.3	469.90 µg/L	469.90 ppb		07:31:45
3	Tl 190.801†	2279.7	2250.6	482.79 µg/L	482.79 ppb		07:32:06
3	U 367.007†	2396.4	1400.0	470.4 µg/L	470.4 ppb		07:31:45
3	V 292.402†	38072.7	36411.1	481.32 µg/L	481.32 ppb		07:31:45
3	Zn 213.857†	67696.1	63609.5	481.21 µg/L	481.21 ppb		07:31:45

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	384440.0	104.98	%	0.248				0.24%
Sc RADIAL	23353.4	106	%	0.47				0.44%
Y 371.029	375932.5	104.47	%	0.224				0.21%
Ag 328.068†	46927.6	476.56	µg/L	0.983	476.56	ppb	0.983	0.21%
QC value within limits for Ag 328.068 Recovery = 95.31%								
Al 396.153Radial†	15375.6	4922.8	µg/L	10.12	4922.8	ppb	10.12	0.21%
QC value within limits for Al 396.153Radial Recovery = 98.46%								

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As 188.979†             1133.7      502.73 µg/L         4.644      502.73 ppb          4.644   0.92%
   QC value within limits for As 188.979  Recovery = 100.55%
B 249.677†             14596.2      502.72 µg/L         1.529      502.72 ppb          1.529   0.30%
   QC value within limits for B 249.677  Recovery = 100.54%
Ba 233.527†            56960.8      479.32 µg/L         0.255      479.32 ppb          0.255   0.05%
   QC value within limits for Ba 233.527  Recovery = 95.86%
Be 313.107†           580408.8      482.53 µg/L         0.234      482.53 ppb          0.234   0.05%
   QC value within limits for Be 313.107  Recovery = 96.51%
Ca 317.933Radial†      23731.3      5082.2 µg/L          9.52      5082.2 ppb           9.52   0.19%
   QC value within limits for Ca 317.933Radial  Recovery = 101.64%
Cd 226.502†            47423.1      491.67 µg/L         0.246      491.67 ppb          0.246   0.05%
   QC value within limits for Cd 226.502  Recovery = 98.33%
Co 228.616†            20945.2      482.68 µg/L         1.454      482.68 ppb          1.454   0.30%
   QC value within limits for Co 228.616  Recovery = 96.54%
Cr 267.716†            24027.2      478.33 µg/L         1.520      478.33 ppb          1.520   0.32%
   QC value within limits for Cr 267.716  Recovery = 95.67%
Cu 324.752†            64187.8      471.51 µg/L         1.009      471.51 ppb          1.009   0.21%
   QC value within limits for Cu 324.752  Recovery = 94.30%
Fe 238.204 Radial†     25641.8      4990.7 µg/L          8.86      4990.7 ppb           8.86   0.18%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.81%
K 766.490 Radial†       5242.7      4764.1 µg/L         22.69      4764.1 ppb          22.69   0.48%
   QC value within limits for K 766.490 Radial  Recovery = 95.28%
Mg 279.077 IEC†         3178.3      5194.0 µg/L         11.67      5194.0 ppb          11.67   0.22%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.88%
Mn 257.610†           305490.5      480.10 µg/L         0.598      480.10 ppb          0.598   0.12%
   QC value within limits for Mn 257.610  Recovery = 96.02%
Mo 202.031†             8414.3      477.39 µg/L         1.256      477.39 ppb          1.256   0.26%
   QC value within limits for Mo 202.031  Recovery = 95.48%
Na 589.592 Radial†      6243.0      9593.5 µg/L         19.42      9593.5 ppb          19.42   0.20%
   QC value within limits for Na 589.592 Radial  Recovery = 95.94%
Ni 231.604†            17702.7      489.41 µg/L         2.217      489.41 ppb          2.217   0.45%
   QC value within limits for Ni 231.604  Recovery = 97.88%
P 214.914†              3637.2      2407.4 µg/L         12.72      2407.4 ppb          12.72   0.53%
   QC value within limits for P 214.914  Recovery = 96.30%
Pb 220.353†             3980.0      492.32 µg/L         3.489      492.32 ppb          3.489   0.71%
   QC value within limits for Pb 220.353  Recovery = 98.46%
S 181.975 Axial†         822.0      1007.5 µg/L          2.03      1007.5 ppb           2.03   0.20%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             1661.3      472.49 µg/L         1.660      472.49 ppb          1.660   0.35%
   QC value within limits for Sb 206.836  Recovery = 94.50%
Se 196.026†             1053.6      500.18 µg/L         3.958      500.18 ppb          3.958   0.79%
   QC value within limits for Se 196.026  Recovery = 100.04%
SiO2†                  30376.6      5110.6 µg/L          5.29      5110.6 ppb           5.29   0.10%
   QC value within limits for SiO2  Recovery = 95.57%
Si 251.611†            43183.8      2379.9 µg/L          2.74      2379.9 ppb           2.74   0.11%
   QC value within limits for Si 251.611  Recovery = 95.20%
Sn 189.927†             3908.2      487.25 µg/L         1.376      487.25 ppb          1.376   0.28%
   QC value within limits for Sn 189.927  Recovery = 97.45%
Sr 421.552†            80242.6      471.77 µg/L         1.870      471.77 ppb          1.870   0.40%
   QC value within limits for Sr 421.552  Recovery = 94.35%
Ti 334.940†           110135.3      468.85 µg/L         1.018      468.85 ppb          1.018   0.22%
   QC value within limits for Ti 334.940  Recovery = 93.77%
Tl 190.801†             2260.3      484.86 µg/L         1.800      484.86 ppb          1.800   0.37%
   QC value within limits for Tl 190.801  Recovery = 96.97%
U 367.007†              1368.4       459.3 µg/L         14.81       459.3 ppb          14.81   3.22%
   QC value within limits for U 367.007  Recovery = 91.86%
V 292.402†             36418.3      481.42 µg/L         0.457      481.42 ppb          0.457   0.09%
   QC value within limits for V 292.402  Recovery = 96.28%
Zn 213.857†            63683.7      481.76 µg/L         0.511      481.76 ppb          0.511   0.11%
   QC value within limits for Zn 213.857  Recovery = 96.35%
All analyte(s) passed QC.
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Sequence No.: 2 | **Autosampler Location: 8**
Sample ID: CCB | **Date Collected: 7/23/2018 07:32:14**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	23239.5	23239.5	105	%			07:33:05
1	Al 396.153Radial†	-109.4	-10.0	-3.2110	µg/L	-3.2110	ppb	07:33:05
1	Ca 317.933Radial†	429.1	111.4	23.851	µg/L	23.851	ppb	07:33:05
1	Fe 238.204 Radial†	46.3	8.9	1.7374	µg/L	1.7374	ppb	07:33:05
1	K 766.490 Radial†	552.0	102.8	93.390	µg/L	93.390	ppb	07:32:45
1	Mg 279.077 IEC†	59.4	0.4	0.5907	µg/L	0.5907	ppb	07:33:05
1	Na 589.592 Radial†	109.7	-23.3	-35.903	µg/L	-35.903	ppb	07:33:05
1	Sr 421.552†	295.6	20.3	0.1190	µg/L	0.1190	ppb	07:32:45
1	Sc 361.383	385292.3	385292.3	105.21	%			07:34:01
1	Y 371.029	380057.7	380057.7	105.61	%			07:34:01
1	Ag 328.068†	-733.3	-13.3	-0.1376	µg/L	-0.1376	ppb	07:34:01
1	As 188.979†	-20.5	-6.7	-2.9358	µg/L	-2.9358	ppb	07:34:22
1	B 249.677†	279.0	91.9	3.0602	µg/L	3.0602	ppb	07:34:22
1	Ba 233.527†	-15.4	0.9	0.0076	µg/L	0.0076	ppb	07:34:22
1	Be 313.107†	-3463.7	281.8	0.2355	µg/L	0.2355	ppb	07:34:01
1	Cd 226.502†	-289.2	48.2	0.4999	µg/L	0.4999	ppb	07:34:22
1	Co 228.616†	-205.9	26.7	0.6149	µg/L	0.6149	ppb	07:34:22
1	Cr 267.716†	140.8	11.9	0.2331	µg/L	0.2331	ppb	07:34:22
1	Cu 324.752†	2053.5	31.7	0.2353	µg/L	0.2353	ppb	07:34:01
1	Mn 257.610†	446.3	-32.6	-0.0511	µg/L	-0.0511	ppb	07:34:22
1	Mo 202.031†	32.0	-2.6	-0.1461	µg/L	-0.1461	ppb	07:34:22
1	Ni 231.604†	-246.3	-30.1	-0.8337	µg/L	-0.8337	ppb	07:34:22
1	P 214.914†	94.9	-41.5	-27.599	µg/L	-27.599	ppb	07:34:22
1	Pb 220.353†	-97.6	-29.2	-3.6155	µg/L	-3.6155	ppb	07:34:22
1	S 181.975 Axial†	181.3	80.0	98.331	µg/L	98.331	ppb	07:34:22
1	Sb 206.836†	163.8	1.1	0.3094	µg/L	0.3094	ppb	07:34:22
1	Se 196.026†	-15.1	9.4	4.4401	µg/L	4.4401	ppb	07:34:22
1	SiO2†	1126.4	5.4	0.9192	µg/L	0.9192	ppb	07:34:22
1	Si 251.611†	46.8	52.7	2.9151	µg/L	2.9151	ppb	07:34:22
1	Sn 189.927†	44.8	-4.9	-0.6077	µg/L	-0.6077	ppb	07:34:22
1	Ti 334.940†	-705.4	51.1	0.2166	µg/L	0.2166	ppb	07:34:01
1	Tl 190.801†	-91.2	-8.4	-1.7944	µg/L	-1.7944	ppb	07:34:22
1	U 367.007†	941.5	11.4	3.975	µg/L	3.975	ppb	07:34:01
1	V 292.402†	-184.8	-43.7	-0.5696	µg/L	-0.5696	ppb	07:34:22
1	Zn 213.857†	1131.0	177.1	1.3537	µg/L	1.3537	ppb	07:34:22
2	Sc RADIAL	23224.0	23224.0	105	%			07:33:30
2	Al 396.153Radial†	-120.6	-20.7	-6.6277	µg/L	-6.6277	ppb	07:33:30
2	Ca 317.933Radial†	409.8	93.3	19.984	µg/L	19.984	ppb	07:33:30
2	Fe 238.204 Radial†	34.1	-2.6	-0.5122	µg/L	-0.5122	ppb	07:33:30
2	K 766.490 Radial†	384.4	-56.2	-51.056	µg/L	-51.056	ppb	07:33:10
2	Mg 279.077 IEC†	68.8	9.4	15.328	µg/L	15.328	ppb	07:33:30
2	Na 589.592 Radial†	111.0	-22.1	-33.972	µg/L	-33.972	ppb	07:33:30
2	Sr 421.552†	282.1	7.7	0.0450	µg/L	0.0450	ppb	07:33:10
2	Sc 361.383	385226.0	385226.0	105.19	%			07:34:27
2	Y 371.029	379613.8	379613.8	105.49	%			07:34:27
2	Ag 328.068†	-768.5	-46.9	-0.4812	µg/L	-0.4812	ppb	07:34:27
2	As 188.979†	-14.1	-0.6	-0.2741	µg/L	-0.2741	ppb	07:34:47
2	B 249.677†	264.5	78.2	2.5948	µg/L	2.5948	ppb	07:34:47
2	Ba 233.527†	-14.2	2.0	0.0171	µg/L	0.0171	ppb	07:34:47
2	Be 313.107†	-3491.6	254.7	0.2143	µg/L	0.2143	ppb	07:34:27
2	Cd 226.502†	-295.9	41.8	0.4334	µg/L	0.4334	ppb	07:34:47
2	Co 228.616†	-203.1	29.3	0.6741	µg/L	0.6741	ppb	07:34:47
2	Cr 267.716†	118.4	-9.4	-0.1951	µg/L	-0.1951	ppb	07:34:47
2	Cu 324.752†	2093.9	70.4	0.5229	µg/L	0.5229	ppb	07:34:27
2	Mn 257.610†	441.8	-36.9	-0.0580	µg/L	-0.0580	ppb	07:34:47
2	Mo 202.031†	28.4	-5.9	-0.3366	µg/L	-0.3366	ppb	07:34:47
2	Ni 231.604†	-238.2	-22.5	-0.6229	µg/L	-0.6229	ppb	07:34:47
2	P 214.914†	97.1	-39.4	-26.207	µg/L	-26.207	ppb	07:34:47

2	Pb 220.353†	-79.0	-11.6	-1.4418	µg/L	-1.4418	ppb	07:34:47
2	S 181.975 Axial†	171.8	71.0	87.220	µg/L	87.220	ppb	07:34:47
2	Sb 206.836†	157.5	-4.9	-1.3894	µg/L	-1.3894	ppb	07:34:47
2	Se 196.026†	-15.4	9.2	4.3324	µg/L	4.3324	ppb	07:34:47
2	SiO2†	1133.7	12.5	2.1237	µg/L	2.1237	ppb	07:34:47
2	Si 251.611†	13.5	21.1	1.1701	µg/L	1.1701	ppb	07:34:47
2	Sn 189.927†	55.4	5.1	0.6416	µg/L	0.6416	ppb	07:34:47
2	Ti 334.940†	-557.5	191.6	0.8123	µg/L	0.8123	ppb	07:34:27
2	Tl 190.801†	-91.3	-8.4	-1.8015	µg/L	-1.8015	ppb	07:34:47
2	U 367.007†	959.2	28.3	9.957	µg/L	9.957	ppb	07:34:27
2	V 292.402†	-159.2	-19.5	-0.2520	µg/L	-0.2520	ppb	07:34:47
2	Zn 213.857†	1107.1	154.6	1.1814	µg/L	1.1814	ppb	07:34:47
3	Sc RADIAL	23130.1	23130.1	105	%			07:33:55
3	Al 396.153Radial†	-129.4	-29.6	-9.5350	µg/L	-9.5350	ppb	07:33:55
3	Ca 317.933Radial†	422.9	107.4	22.996	µg/L	22.996	ppb	07:33:55
3	Fe 238.204 Radial†	36.2	-0.5	-0.0882	µg/L	-0.0882	ppb	07:33:55
3	K 766.490 Radial†	544.3	98.0	89.024	µg/L	89.024	ppb	07:33:35
3	Mg 279.077 IEC†	62.1	3.2	5.3073	µg/L	5.3073	ppb	07:33:55
3	Na 589.592 Radial†	115.4	-17.4	-26.764	µg/L	-26.764	ppb	07:33:55
3	Sr 421.552†	348.5	72.2	0.4241	µg/L	0.4241	ppb	07:33:35
3	Sc 361.383	384285.6	384285.6	104.94	%			07:34:52
3	Y 371.029	378657.7	378657.7	105.22	%			07:34:52
3	Ag 328.068†	-725.3	-7.5	-0.0829	µg/L	-0.0829	ppb	07:34:52
3	As 188.979†	-18.7	-5.0	-2.2082	µg/L	-2.2082	ppb	07:35:12
3	B 249.677†	258.5	73.2	2.4298	µg/L	2.4298	ppb	07:35:12
3	Ba 233.527†	6.1	21.4	0.1798	µg/L	0.1798	ppb	07:35:12
3	Be 313.107†	-3575.4	166.7	0.1415	µg/L	0.1415	ppb	07:34:52
3	Cd 226.502†	-305.0	32.4	0.3368	µg/L	0.3368	ppb	07:35:12
3	Co 228.616†	-216.6	16.1	0.3704	µg/L	0.3704	ppb	07:35:12
3	Cr 267.716†	135.3	7.0	0.1316	µg/L	0.1316	ppb	07:35:12
3	Cu 324.752†	1995.6	-18.4	-0.1289	µg/L	-0.1289	ppb	07:34:52
3	Mn 257.610†	432.9	-44.4	-0.0697	µg/L	-0.0697	ppb	07:35:12
3	Mo 202.031†	42.2	7.3	0.4140	µg/L	0.4140	ppb	07:35:12
3	Ni 231.604†	-205.9	7.7	0.2139	µg/L	0.2139	ppb	07:35:12
3	P 214.914†	105.8	-30.8	-20.526	µg/L	-20.526	ppb	07:35:12
3	Pb 220.353†	-88.5	-20.9	-2.5861	µg/L	-2.5861	ppb	07:35:12
3	S 181.975 Axial†	156.7	57.0	70.044	µg/L	70.044	ppb	07:35:12
3	Sb 206.836†	146.1	-15.4	-4.4110	µg/L	-4.4110	ppb	07:35:12
3	Se 196.026†	-14.7	9.7	4.6065	µg/L	4.6065	ppb	07:35:12
3	SiO2†	1102.9	-14.2	-2.4234	µg/L	-2.4234	ppb	07:35:12
3	Si 251.611†	39.7	46.0	2.5390	µg/L	2.5390	ppb	07:35:12
3	Sn 189.927†	40.7	-8.7	-1.0808	µg/L	-1.0808	ppb	07:35:12
3	Ti 334.940†	-728.7	27.1	0.1115	µg/L	0.1115	ppb	07:34:52
3	Tl 190.801†	-88.0	-5.5	-1.1822	µg/L	-1.1822	ppb	07:35:12
3	U 367.007†	960.0	31.4	11.03	µg/L	11.03	ppb	07:34:52
3	V 292.402†	-149.4	-10.5	-0.1265	µg/L	-0.1265	ppb	07:35:12
3	Zn 213.857†	1131.8	180.7	1.3759	µg/L	1.3759	ppb	07:35:12

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	384934.6	105.11	%	0.154				0.15%
Sc RADIAL	23197.9	105	%	0.27				0.26%
Y 371.029	379443.1	105.44	%	0.199				0.19%
Ag 328.068†	-22.6	-0.2339	µg/L	0.21589	-0.2339	ppb	0.21589	92.31%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-20.1	-6.4579	µg/L	3.16541	-6.4579	ppb	3.16541	49.02%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.1	-1.8060	µg/L	1.37568	-1.8060	ppb	1.37568	76.17%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	81.1	2.6949	µg/L	0.32694	2.6949	ppb	0.32694	12.13%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.1	0.0682	µg/L	0.09681	0.0682	ppb	0.09681	141.96%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	234.4	0.1971	µg/L	0.04927	0.1971	ppb	0.04927	25.00%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	104.0	22.277	µg/L	2.0315	22.277	ppb	2.0315	9.12%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	40.8	0.4234	µg/L	0.08202	0.4234	ppb	0.08202	19.37%
QC value within limits for Cd 226.502 Recovery = Not calculated								

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Co 228.616†                24.0      0.5531 µg/L       0.16098      0.5531 ppb        0.16098  29.10%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 3.2      0.0566 µg/L       0.22376      0.0566 ppb        0.22376 395.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                27.9      0.2097 µg/L       0.32664      0.2097 ppb        0.32664 155.73%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.9      0.3790 µg/L       1.19537      0.3790 ppb        1.19537 315.42%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          48.2      43.786 µg/L       82.1645      43.786 ppb        82.1645 187.65%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             4.3      7.0753 µg/L       7.52592      7.0753 ppb        7.52592 106.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -38.0     -0.0596 µg/L       0.00938     -0.0596 ppb        0.00938  15.74%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.4     -0.0229 µg/L       0.39020     -0.0229 ppb        0.39020 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -20.9     -32.213 µg/L        4.8167     -32.213 ppb         4.8167  14.95%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -15.0     -0.4142 µg/L       0.55408     -0.4142 ppb        0.55408 133.77%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -37.2     -24.777 µg/L        3.7466     -24.777 ppb         3.7466  15.12%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -20.6     -2.5478 µg/L       1.08736     -2.5478 ppb        1.08736  42.68%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           69.3      85.198 µg/L       14.2519      85.198 ppb        14.2519  16.73%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -6.4     -1.8304 µg/L       2.39090     -1.8304 ppb        2.39090 130.62%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 9.4      4.4597 µg/L       0.13807      4.4597 ppb        0.13807   3.10%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                       1.2      0.2065 µg/L       2.35582      0.2065 ppb        2.35582 >999.9%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                39.9      2.2081 µg/L       0.91835      2.2081 ppb        0.91835  41.59%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -2.8     -0.3490 µg/L       0.88988     -0.3490 ppb        0.88988 255.01%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                33.4      0.1960 µg/L       0.20095      0.1960 ppb        0.20095 102.52%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                89.9      0.3801 µg/L       0.37795      0.3801 ppb        0.37795  99.43%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -7.5     -1.5927 µg/L       0.35554     -1.5927 ppb        0.35554  22.32%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 367.007†                 23.7       8.320 µg/L        3.8003       8.320 ppb         3.8003  45.68%
   QC value within limits for U 367.007  Recovery = Not calculated
V 292.402†                -24.6     -0.3160 µg/L       0.22838     -0.3160 ppb        0.22838  72.27%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               170.8      1.3037 µg/L       0.10647      1.3037 ppb        0.10647   8.17%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 3 | **Autosampler Location: 301**
Sample ID: 1204070940|1782974|1| | **Date Collected: 7/23/2018 07:35:21**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 1204070940|1782974|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	23225.6	23225.6	105	%			07:36:13
1	Al 396.153Radial†	-152.9	-51.4	-16.562	µg/L	-16.562	ppb	07:36:13
1	Ca 317.933Radial†	362.5	48.3	10.347	µg/L	10.347	ppb	07:36:13
1	Fe 238.204 Radial†	55.8	18.0	3.4982	µg/L	3.4982	ppb	07:36:13
1	K 766.490 Radial†	530.9	83.1	75.484	µg/L	75.484	ppb	07:35:53
1	Mg 279.077 IEC†	57.7	-1.2	-1.9216	µg/L	-1.9216	ppb	07:36:13
1	Na 589.592 Radial†	107.2	-25.6	-39.447	µg/L	-39.447	ppb	07:36:13
1	Sr 421.552†	299.1	23.8	0.1401	µg/L	0.1401	ppb	07:35:53
1	Sc 361.383	383715.7	383715.7	104.78	%			07:37:10
1	Y 371.029	377774.3	377774.3	104.98	%			07:37:10
1	Ag 328.068†	-679.3	35.4	0.3608	µg/L	0.3608	ppb	07:37:10
1	As 188.979†	-22.1	-8.3	-3.6353	µg/L	-3.6353	ppb	07:37:30
1	B 249.677†	246.1	61.7	2.0617	µg/L	2.0617	ppb	07:37:30
1	Ba 233.527†	7.7	22.8	0.1922	µg/L	0.1922	ppb	07:37:30
1	Be 313.107†	-3492.9	240.4	0.1989	µg/L	0.1989	ppb	07:37:10
1	Cd 226.502†	-291.1	45.2	0.4689	µg/L	0.4689	ppb	07:37:30
1	Co 228.616†	-209.8	22.2	0.5108	µg/L	0.5108	ppb	07:37:30
1	Cr 267.716†	120.5	-6.9	-0.1345	µg/L	-0.1345	ppb	07:37:30
1	Cu 324.752†	1995.3	-15.8	-0.1187	µg/L	-0.1187	ppb	07:37:10
1	Mn 257.610†	541.1	59.5	0.0937	µg/L	0.0937	ppb	07:37:30
1	Mo 202.031†	43.0	8.0	0.4565	µg/L	0.4565	ppb	07:37:30
1	Ni 231.604†	-233.3	-18.7	-0.5172	µg/L	-0.5172	ppb	07:37:30
1	P 214.914†	93.1	-42.9	-28.545	µg/L	-28.545	ppb	07:37:30
1	Pb 220.353†	-63.5	2.9	0.3594	µg/L	0.3594	ppb	07:37:30
1	S 181.975 Axial†	148.4	49.3	60.583	µg/L	60.583	ppb	07:37:30
1	Sb 206.836†	152.8	-8.7	-2.4943	µg/L	-2.4943	ppb	07:37:30
1	Se 196.026†	-25.1	-0.2	-0.1046	µg/L	-0.1046	ppb	07:37:30
1	SiO2†	1173.7	54.9	9.2597	µg/L	9.2597	ppb	07:37:30
1	Si 251.611†	113.0	116.1	6.4107	µg/L	6.4107	ppb	07:37:30
1	Sn 189.927†	42.2	-7.3	-0.9010	µg/L	-0.9010	ppb	07:37:30
1	Ti 334.940†	-690.2	62.8	0.2698	µg/L	0.2698	ppb	07:37:10
1	Tl 190.801†	-86.9	-4.6	-0.9909	µg/L	-0.9909	ppb	07:37:30
1	U 367.007†	914.5	-10.7	-3.792	µg/L	-3.792	ppb	07:37:10
1	V 292.402†	-132.7	5.2	0.0704	µg/L	0.0704	ppb	07:37:30
1	Zn 213.857†	1374.6	414.0	3.1572	µg/L	3.1572	ppb	07:37:30
2	Sc RADIAL	23239.7	23239.7	105	%			07:36:38
2	Al 396.153Radial†	-133.4	-32.7	-10.530	µg/L	-10.530	ppb	07:36:38
2	Ca 317.933Radial†	363.9	49.4	10.580	µg/L	10.580	ppb	07:36:38
2	Fe 238.204 Radial†	67.5	29.1	5.6554	µg/L	5.6554	ppb	07:36:38
2	K 766.490 Radial†	502.2	55.4	50.381	µg/L	50.381	ppb	07:36:18
2	Mg 279.077 IEC†	64.2	4.9	8.0683	µg/L	8.0683	ppb	07:36:38
2	Na 589.592 Radial†	102.2	-30.5	-46.928	µg/L	-46.928	ppb	07:36:38
2	Sr 421.552†	244.3	-28.4	-0.1674	µg/L	-0.1674	ppb	07:36:18
2	Sc 361.383	389287.7	389287.7	106.30	%			07:37:35
2	Y 371.029	382755.2	382755.2	106.36	%			07:37:35
2	Ag 328.068†	-632.3	88.8	0.8970	µg/L	0.8970	ppb	07:37:35
2	As 188.979†	-10.9	2.6	1.1222	µg/L	1.1222	ppb	07:37:55
2	B 249.677†	256.0	67.6	2.2672	µg/L	2.2672	ppb	07:37:55
2	Ba 233.527†	-8.3	7.7	0.0645	µg/L	0.0645	ppb	07:37:55
2	Be 313.107†	-3587.4	199.2	0.1669	µg/L	0.1669	ppb	07:37:35
2	Cd 226.502†	-322.0	20.2	0.2094	µg/L	0.2094	ppb	07:37:55
2	Co 228.616†	-213.1	22.0	0.5063	µg/L	0.5063	ppb	07:37:55
2	Cr 267.716†	120.6	-8.5	-0.1741	µg/L	-0.1741	ppb	07:37:55
2	Cu 324.752†	2097.0	52.6	0.3896	µg/L	0.3896	ppb	07:37:35
2	Mn 257.610†	514.4	27.0	0.0428	µg/L	0.0428	ppb	07:37:55
2	Mo 202.031†	35.0	-0.1	-0.0029	µg/L	-0.0029	ppb	07:37:55
2	Ni 231.604†	-200.5	15.4	0.4244	µg/L	0.4244	ppb	07:37:55
2	P 214.914†	102.9	-34.9	-23.229	µg/L	-23.229	ppb	07:37:55

2	Pb 220.353†	-81.4	-13.1	-1.6216	µg/L	-1.6216	ppb	07:37:55
2	S 181.975 Axial†	138.0	37.5	46.029	µg/L	46.029	ppb	07:37:55
2	Sb 206.836†	159.4	-4.6	-1.3226	µg/L	-1.3226	ppb	07:37:55
2	Se 196.026†	-16.5	8.2	3.8950	µg/L	3.8950	ppb	07:37:55
2	SiO2†	1143.1	10.0	1.6935	µg/L	1.6935	ppb	07:37:55
2	Si 251.611†	99.7	102.0	5.6420	µg/L	5.6420	ppb	07:37:55
2	Sn 189.927†	50.9	0.4	0.0466	µg/L	0.0466	ppb	07:37:55
2	Ti 334.940†	-681.8	80.1	0.3392	µg/L	0.3392	ppb	07:37:35
2	Tl 190.801†	-86.6	-3.1	-0.6629	µg/L	-0.6629	ppb	07:37:55
2	U 367.007†	955.7	15.6	5.447	µg/L	5.447	ppb	07:37:35
2	V 292.402†	-149.4	-8.6	-0.1090	µg/L	-0.1090	ppb	07:37:55
2	Zn 213.857†	1389.6	409.4	3.1157	µg/L	3.1157	ppb	07:37:55
3	Sc RADIAL	23331.4	23331.4	106	%			07:37:03
3	Al 396.153Radial†	-159.2	-56.7	-18.250	µg/L	-18.250	ppb	07:37:03
3	Ca 317.933Radial†	356.1	40.6	8.7009	µg/L	8.7009	ppb	07:37:03
3	Fe 238.204 Radial†	70.3	31.5	6.1324	µg/L	6.1324	ppb	07:37:03
3	K 766.490 Radial†	485.2	37.5	34.071	µg/L	34.071	ppb	07:36:43
3	Mg 279.077 IEC†	55.6	-3.4	-5.6287	µg/L	-5.6287	ppb	07:37:03
3	Na 589.592 Radial†	111.3	-22.3	-34.224	µg/L	-34.224	ppb	07:37:03
3	Sr 421.552†	320.9	43.2	0.2539	µg/L	0.2539	ppb	07:36:43
3	Sc 361.383	386343.4	386343.4	105.50	%			07:38:01
3	Y 371.029	379879.6	379879.6	105.56	%			07:38:01
3	Ag 328.068†	-689.4	30.3	0.2909	µg/L	0.2909	ppb	07:38:01
3	As 188.979†	-19.2	-5.4	-2.3611	µg/L	-2.3611	ppb	07:38:21
3	B 249.677†	229.4	44.2	1.4913	µg/L	1.4913	ppb	07:38:21
3	Ba 233.527†	-4.6	11.2	0.0938	µg/L	0.0938	ppb	07:38:21
3	Be 313.107†	-3499.3	257.0	0.2203	µg/L	0.2203	ppb	07:38:01
3	Cd 226.502†	-292.9	45.5	0.4711	µg/L	0.4711	ppb	07:38:21
3	Co 228.616†	-206.5	26.7	0.6148	µg/L	0.6148	ppb	07:38:21
3	Cr 267.716†	133.8	4.9	0.0754	µg/L	0.0754	ppb	07:38:21
3	Cu 324.752†	2036.2	9.9	0.0894	µg/L	0.0894	ppb	07:38:01
3	Mn 257.610†	514.4	30.8	0.0487	µg/L	0.0487	ppb	07:38:21
3	Mo 202.031†	44.9	9.6	0.5465	µg/L	0.5465	ppb	07:38:21
3	Ni 231.604†	-239.1	-22.7	-0.6278	µg/L	-0.6278	ppb	07:38:21
3	P 214.914†	82.6	-53.4	-35.559	µg/L	-35.559	ppb	07:38:21
3	Pb 220.353†	-72.8	-5.5	-0.6999	µg/L	-0.6999	ppb	07:38:21
3	S 181.975 Axial†	141.3	41.6	51.183	µg/L	51.183	ppb	07:38:21
3	Sb 206.836†	159.2	-3.7	-1.0660	µg/L	-1.0660	ppb	07:38:21
3	Se 196.026†	-11.5	12.9	6.0911	µg/L	6.0911	ppb	07:38:21
3	SiO2†	1168.6	42.4	7.1406	µg/L	7.1406	ppb	07:38:21
3	Si 251.611†	121.7	123.5	6.8223	µg/L	6.8223	ppb	07:38:21
3	Sn 189.927†	41.7	-8.0	-0.9920	µg/L	-0.9920	ppb	07:38:21
3	Ti 334.940†	-695.5	62.2	0.2530	µg/L	0.2530	ppb	07:38:01
3	Tl 190.801†	-86.5	-3.7	-0.7720	µg/L	-0.7720	ppb	07:38:21
3	U 367.007†	1012.7	76.5	26.87	µg/L	26.87	ppb	07:38:01
3	V 292.402†	-176.3	-35.2	-0.4384	µg/L	-0.4384	ppb	07:38:21
3	Zn 213.857†	1374.2	404.8	3.0867	µg/L	3.0867	ppb	07:38:21

Mean Data: 1204070940|1782974|1|

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	386449.0	105.53	%	0.761				0.72%
Sc RADIAL	23265.6	105	%	0.26				0.25%
Y 371.029	380136.4	105.63	%	0.695				0.66%
Ag 328.068†	51.5	0.5163	µg/L	0.33163	0.5163	ppb	0.33163	64.24%
Al 396.153Radial†	-46.9	-15.114	µg/L	4.0583	-15.114	ppb	4.0583	26.85%
As 188.979†	-3.7	-1.6247	µg/L	2.46276	-1.6247	ppb	2.46276	151.58%
B 249.677†	57.8	1.9401	µg/L	0.40200	1.9401	ppb	0.40200	20.72%
Ba 233.527†	13.9	0.1169	µg/L	0.06690	0.1169	ppb	0.06690	57.24%
Be 313.107†	232.2	0.1954	µg/L	0.02686	0.1954	ppb	0.02686	13.74%
Ca 317.933Radial†	46.1	9.8760	µg/L	1.02431	9.8760	ppb	1.02431	10.37%
Cd 226.502†	37.0	0.3831	µg/L	0.15045	0.3831	ppb	0.15045	39.27%
Co 228.616†	23.6	0.5440	µg/L	0.06140	0.5440	ppb	0.06140	11.29%
Cr 267.716†	-3.5	-0.0778	µg/L	0.13407	-0.0778	ppb	0.13407	172.43%
Cu 324.752†	15.5	0.1201	µg/L	0.25554	0.1201	ppb	0.25554	212.82%
Fe 238.204 Radial†	26.2	5.0953	µg/L	1.40356	5.0953	ppb	1.40356	27.55%
K 766.490 Radial†	58.7	53.312	µg/L	20.8615	53.312	ppb	20.8615	39.13%
Mg 279.077 IEC†	0.1	0.1727	µg/L	7.08457	0.1727	ppb	7.08457	>999.9%
Mn 257.610†	39.1	0.0618	µg/L	0.02785	0.0618	ppb	0.02785	45.10%
Mo 202.031†	5.9	0.3334	µg/L	0.29467	0.3334	ppb	0.29467	88.40%

Na 589.592 Radial†	-26.1	-40.200	µg/L	6.3851	-40.200	ppb	6.3851	15.88%
Ni 231.604†	-8.7	-0.2402	µg/L	0.57823	-0.2402	ppb	0.57823	240.71%
P 214.914†	-43.7	-29.111	µg/L	6.1846	-29.111	ppb	6.1846	21.24%
Pb 220.353†	-5.2	-0.6540	µg/L	0.99131	-0.6540	ppb	0.99131	151.57%
S 181.975 Axial†	42.8	52.598	µg/L	7.3798	52.598	ppb	7.3798	14.03%
Sb 206.836†	-5.7	-1.6276	µg/L	0.76148	-1.6276	ppb	0.76148	46.78%
Se 196.026†	7.0	3.2938	µg/L	3.14128	3.2938	ppb	3.14128	95.37%
SiO2†	35.8	6.0313	µg/L	3.90315	6.0313	ppb	3.90315	64.72%
Si 251.611†	113.9	6.2917	µg/L	0.59910	6.2917	ppb	0.59910	9.52%
Sn 189.927†	-5.0	-0.6155	µg/L	0.57516	-0.6155	ppb	0.57516	93.45%
Sr 421.552†	12.9	0.0755	µg/L	0.21790	0.0755	ppb	0.21790	288.51%
Ti 334.940†	68.4	0.2873	µg/L	0.04572	0.2873	ppb	0.04572	15.91%
Tl 190.801†	-3.8	-0.8086	µg/L	0.16703	-0.8086	ppb	0.16703	20.66%
U 367.007†	27.1	9.507	µg/L	15.7271	9.507	ppb	15.7271	165.43%
V 292.402†	-12.9	-0.1590	µg/L	0.25806	-0.1590	ppb	0.25806	162.32%
Zn 213.857†	409.4	3.1199	µg/L	0.03540	3.1199	ppb	0.03540	1.13%

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Sequence No.: 4 | **Autosampler Location: 302**
Sample ID: 1204070941|1782974|1| | **Date Collected: 7/23/2018 07:38:29**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 1204070941|1782974|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	23411.5	23411.5	106	%			07:39:05
1	Al 396.153Radial†	15210.2	14439.2	4622.6	µg/L	4622.6	ppb	07:39:05
1	Ca 317.933Radial†	23923.2	22266.4	4768.5	µg/L	4768.5	ppb	07:39:05
1	Fe 238.204 Radial†	25784.8	24283.4	4726.3	µg/L	4726.3	ppb	07:39:05
1	K 766.490 Radial†	5672.8	4928.5	4478.5	µg/L	4478.5	ppb	07:39:05
1	Mg 279.077 IEC†	3222.6	2983.3	4875.4	µg/L	4875.4	ppb	07:39:05
1	Na 589.592 Radial†	3257.1	2944.3	4521.3	µg/L	4521.3	ppb	07:39:05
1	Sr 421.552†	79959.0	75151.5	441.83	µg/L	441.83	ppb	07:39:00
1	Sc 361.383	383874.4	383874.4	104.82	%			07:39:32
1	Y 371.029	375845.9	375845.9	104.44	%			07:39:32
1	Ag 328.068†	8667.0	8951.7	91.938	µg/L	91.938	ppb	07:39:32
1	As 188.979†	1081.8	1044.8	463.42	µg/L	463.42	ppb	07:39:52
1	B 249.677†	14653.3	13805.7	475.52	µg/L	475.52	ppb	07:39:32
1	Ba 233.527†	56216.9	53644.9	451.41	µg/L	451.41	ppb	07:39:32
1	Be 313.107†	581268.0	558087.0	463.96	µg/L	463.96	ppb	07:39:32
1	Cd 226.502†	46146.3	44345.3	459.75	µg/L	459.75	ppb	07:39:32
1	Co 228.616†	20488.6	19768.0	455.55	µg/L	455.55	ppb	07:39:52
1	Cr 267.716†	23736.0	22521.5	448.35	µg/L	448.35	ppb	07:39:52
1	Cu 324.752†	65507.9	60572.6	444.95	µg/L	444.95	ppb	07:39:32
1	Mn 257.610†	302125.4	287762.1	452.24	µg/L	452.24	ppb	07:39:32
1	Mo 202.031†	8465.1	8042.5	456.29	µg/L	456.29	ppb	07:39:52
1	Ni 231.604†	17196.3	16608.7	459.16	µg/L	459.16	ppb	07:39:52
1	P 214.914†	834.3	664.2	429.65	µg/L	429.65	ppb	07:39:52
1	Pb 220.353†	3823.6	3711.2	459.07	µg/L	459.07	ppb	07:39:52
1	S 181.975 Axial†	4051.2	3772.4	4633.4	µg/L	4633.4	ppb	07:39:52
1	Sb 206.836†	1820.1	1581.7	450.02	µg/L	450.02	ppb	07:39:52
1	Se 196.026†	1027.5	1004.0	476.62	µg/L	476.62	ppb	07:39:52
1	SiO2†	53163.6	49651.3	8369.2	µg/L	8369.2	ppb	07:39:32
1	Si 251.611†	74025.8	70626.7	3897.9	µg/L	3897.9	ppb	07:39:32
1	Sn 189.927†	3948.3	3719.0	463.67	µg/L	463.67	ppb	07:39:52
1	Ti 334.940†	109733.2	105403.9	448.71	µg/L	448.71	ppb	07:39:32
1	Tl 190.801†	2177.1	2155.2	462.31	µg/L	462.31	ppb	07:39:52
1	U 367.007†	2275.1	1286.9	431.8	µg/L	431.8	ppb	07:39:32
1	V 292.402†	35649.8	34140.7	451.39	µg/L	451.39	ppb	07:39:32
1	Zn 213.857†	62781.7	58994.1	446.24	µg/L	446.24	ppb	07:39:32
2	Sc RADIAL	23569.4	23569.4	107	%			07:39:15
2	Al 396.153Radial†	15321.7	14447.5	4625.6	µg/L	4625.6	ppb	07:39:15
2	Ca 317.933Radial†	24018.7	22204.7	4755.3	µg/L	4755.3	ppb	07:39:15
2	Fe 238.204 Radial†	25986.3	24309.2	4731.4	µg/L	4731.4	ppb	07:39:15
2	K 766.490 Radial†	5826.2	5036.4	4576.6	µg/L	4576.6	ppb	07:39:15
2	Mg 279.077 IEC†	3235.0	2974.5	4861.1	µg/L	4861.1	ppb	07:39:15
2	Na 589.592 Radial†	3255.7	2922.4	4487.7	µg/L	4487.7	ppb	07:39:15
2	Sr 421.552†	81433.0	76026.9	446.98	µg/L	446.98	ppb	07:39:10
2	Sc 361.383	389049.5	389049.5	106.24	%			07:39:58
2	Y 371.029	380435.9	380435.9	105.72	%			07:39:58
2	Ag 328.068†	8932.0	9091.2	93.349	µg/L	93.349	ppb	07:39:58
2	As 188.979†	1084.3	1033.4	458.39	µg/L	458.39	ppb	07:40:18
2	B 249.677†	14804.8	13762.2	474.12	µg/L	474.12	ppb	07:39:58
2	Ba 233.527†	56941.5	53613.6	451.15	µg/L	451.15	ppb	07:39:58
2	Be 313.107†	588362.1	557388.4	463.38	µg/L	463.38	ppb	07:39:58
2	Cd 226.502†	46678.5	44260.7	458.87	µg/L	458.87	ppb	07:39:58
2	Co 228.616†	20488.4	19507.8	449.55	µg/L	449.55	ppb	07:40:18
2	Cr 267.716†	23687.7	22174.8	441.44	µg/L	441.44	ppb	07:40:18
2	Cu 324.752†	66332.6	60517.5	444.55	µg/L	444.55	ppb	07:39:58
2	Mn 257.610†	305944.1	287522.8	451.86	µg/L	451.86	ppb	07:39:58
2	Mo 202.031†	8468.1	7937.9	450.36	µg/L	450.36	ppb	07:40:18
2	Ni 231.604†	17109.7	16309.0	450.88	µg/L	450.88	ppb	07:40:18
2	P 214.914†	834.6	653.9	422.83	µg/L	422.83	ppb	07:40:18

2	Pb 220.353†	3822.1	3661.2	452.90 µg/L	452.90 ppb		07:40:18
2	S 181.975 Axial†	4046.5	3716.5	4564.7 µg/L	4564.7 ppb		07:40:18
2	Sb 206.836†	1810.9	1550.0	441.00 µg/L	441.00 ppb		07:40:18
2	Se 196.026†	1029.1	992.4	471.16 µg/L	471.16 ppb		07:40:18
2	SiO2†	53806.6	49581.9	8357.7 µg/L	8357.7 ppb		07:39:58
2	Si 251.611†	75086.1	70685.4	3901.2 µg/L	3901.2 ppb		07:39:58
2	Sn 189.927†	3927.9	3649.7	455.06 µg/L	455.06 ppb		07:40:18
2	Ti 334.940†	110951.8	105158.5	447.67 µg/L	447.67 ppb		07:39:58
2	Tl 190.801†	2184.8	2134.9	457.97 µg/L	457.97 ppb		07:40:18
2	U 367.007†	2309.5	1290.4	433.0 µg/L	433.0 ppb		07:39:58
2	V 292.402†	36075.5	34089.1	450.66 µg/L	450.66 ppb		07:39:58
2	Zn 213.857†	63575.1	58944.2	445.90 µg/L	445.90 ppb		07:39:58
3	Sc RADIAL	23725.4	23725.4	107 %			07:39:25
3	Al 396.153Radial†	15275.2	14310.0	4581.3 µg/L	4581.3 ppb		07:39:25
3	Ca 317.933Radial†	23993.5	22033.3	4718.6 µg/L	4718.6 ppb		07:39:25
3	Fe 238.204 Radial†	25851.7	24023.9	4675.8 µg/L	4675.8 ppb		07:39:25
3	K 766.490 Radial†	5675.9	4860.6	4416.9 µg/L	4416.9 ppb		07:39:25
3	Mg 279.077 IEC†	3236.0	2955.5	4830.0 µg/L	4830.0 ppb		07:39:25
3	Na 589.592 Radial†	3225.1	2873.8	4413.1 µg/L	4413.1 ppb		07:39:25
3	Sr 421.552†	81080.1	75197.0	442.10 µg/L	442.10 ppb		07:39:20
3	Sc 361.383	387721.0	387721.0	105.88 %			07:40:24
3	Y 371.029	379413.7	379413.7	105.43 %			07:40:24
3	Ag 328.068†	8803.9	8999.0	92.417 µg/L	92.417 ppb		07:40:24
3	As 188.979†	1078.2	1031.2	457.39 µg/L	457.39 ppb		07:40:44
3	B 249.677†	14783.3	13789.7	474.81 µg/L	474.81 ppb		07:40:24
3	Ba 233.527†	56663.0	53534.2	450.48 µg/L	450.48 ppb		07:40:24
3	Be 313.107†	585948.6	557006.5	463.06 µg/L	463.06 ppb		07:40:24
3	Cd 226.502†	46476.7	44220.6	458.46 µg/L	458.46 ppb		07:40:24
3	Co 228.616†	20502.3	19587.0	451.37 µg/L	451.37 ppb		07:40:44
3	Cr 267.716†	23732.8	22293.9	443.83 µg/L	443.83 ppb		07:40:44
3	Cu 324.752†	66122.8	60533.3	444.65 µg/L	444.65 ppb		07:40:24
3	Mn 257.610†	305149.3	287758.8	452.23 µg/L	452.23 ppb		07:40:24
3	Mo 202.031†	8446.0	7944.3	450.72 µg/L	450.72 ppb		07:40:44
3	Ni 231.604†	17159.9	16411.6	453.71 µg/L	453.71 ppb		07:40:44
3	P 214.914†	805.5	629.1	406.39 µg/L	406.39 ppb		07:40:44
3	Pb 220.353†	3851.7	3701.5	457.89 µg/L	457.89 ppb		07:40:44
3	S 181.975 Axial†	4042.8	3726.2	4576.6 µg/L	4576.6 ppb		07:40:44
3	Sb 206.836†	1818.6	1563.1	444.71 µg/L	444.71 ppb		07:40:44
3	Se 196.026†	1041.2	1007.2	478.11 µg/L	478.11 ppb		07:40:44
3	SiO2†	53627.4	49586.2	8358.4 µg/L	8358.4 ppb		07:40:24
3	Si 251.611†	74794.7	70652.3	3899.4 µg/L	3899.4 ppb		07:40:24
3	Sn 189.927†	3940.2	3674.0	458.07 µg/L	458.07 ppb		07:40:44
3	Ti 334.940†	110641.7	105223.4	447.95 µg/L	447.95 ppb		07:40:24
3	Tl 190.801†	2180.8	2138.1	458.64 µg/L	458.64 ppb		07:40:44
3	U 367.007†	2245.1	1237.1	414.5 µg/L	414.5 ppb		07:40:24
3	V 292.402†	35872.3	34013.5	449.66 µg/L	449.66 ppb		07:40:24
3	Zn 213.857†	63312.0	58900.8	445.57 µg/L	445.57 ppb		07:40:24

Mean Data: 1204070941|1782974|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	386881.6	105.65	%	0.734				0.69%
Sc RADIAL	23568.8	107	%	0.71				0.67%
Y 371.029	378565.2	105.20	%	0.670				0.64%
Ag 328.068†	9014.0	92.568	µg/L	0.7176	92.568	ppb	0.7176	0.78%
Al 396.153Radial†	14398.9	4609.8	µg/L	24.75	4609.8	ppb	24.75	0.54%
As 188.979†	1036.5	459.73	µg/L	3.233	459.73	ppb	3.233	0.70%
B 249.677†	13785.9	474.81	µg/L	0.700	474.81	ppb	0.700	0.15%
Ba 233.527†	53597.5	451.01	µg/L	0.480	451.01	ppb	0.480	0.11%
Be 313.107†	557494.0	463.47	µg/L	0.458	463.47	ppb	0.458	0.10%
Ca 317.933Radial†	22168.1	4747.4	µg/L	25.87	4747.4	ppb	25.87	0.54%
Cd 226.502†	44275.6	459.03	µg/L	0.660	459.03	ppb	0.660	0.14%
Co 228.616†	19620.9	452.16	µg/L	3.077	452.16	ppb	3.077	0.68%
Cr 267.716†	22330.1	444.54	µg/L	3.508	444.54	ppb	3.508	0.79%
Cu 324.752†	60541.1	444.71	µg/L	0.207	444.71	ppb	0.207	0.05%
Fe 238.204 Radial†	24205.5	4711.2	µg/L	30.71	4711.2	ppb	30.71	0.65%
K 766.490 Radial†	4941.8	4490.7	µg/L	80.54	4490.7	ppb	80.54	1.79%
Mg 279.077 IEC†	2971.1	4855.5	µg/L	23.21	4855.5	ppb	23.21	0.48%
Mn 257.610†	287681.2	452.11	µg/L	0.214	452.11	ppb	0.214	0.05%
Mo 202.031†	7974.9	452.46	µg/L	3.324	452.46	ppb	3.324	0.73%

Na 589.592 Radial†	2913.5	4474.0	µg/L	55.39	4474.0	ppb	55.39	1.24%
Ni 231.604†	16443.1	454.58	µg/L	4.211	454.58	ppb	4.211	0.93%
P 214.914†	649.0	419.62	µg/L	11.956	419.62	ppb	11.956	2.85%
Pb 220.353†	3691.3	456.62	µg/L	3.277	456.62	ppb	3.277	0.72%
S 181.975 Axial†	3738.3	4591.6	µg/L	36.67	4591.6	ppb	36.67	0.80%
Sb 206.836†	1565.0	445.24	µg/L	4.537	445.24	ppb	4.537	1.02%
Se 196.026†	1001.2	475.30	µg/L	3.661	475.30	ppb	3.661	0.77%
SiO2†	49606.5	8361.8	µg/L	6.42	8361.8	ppb	6.42	0.08%
Si 251.611†	70654.8	3899.5	µg/L	1.67	3899.5	ppb	1.67	0.04%
Sn 189.927†	3680.9	458.93	µg/L	4.368	458.93	ppb	4.368	0.95%
Sr 421.552†	75458.5	443.64	µg/L	2.898	443.64	ppb	2.898	0.65%
Ti 334.940†	105261.9	448.11	µg/L	0.540	448.11	ppb	0.540	0.12%
Tl 190.801†	2142.7	459.64	µg/L	2.339	459.64	ppb	2.339	0.51%
U 367.007†	1271.4	426.4	µg/L	10.36	426.4	ppb	10.36	2.43%
V 292.402†	34081.1	450.57	µg/L	0.872	450.57	ppb	0.872	0.19%
Zn 213.857†	58946.4	445.90	µg/L	0.338	445.90	ppb	0.338	0.08%

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Sequence No.: 5 | **Autosampler Location: 303**
Sample ID: 454715001|1782974|1| | **Date Collected: 7/23/2018 07:40:53**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 454715001|1782974|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24614.7	24614.7	111	%			07:41:29
1	Al 396.153Radial†	280597.2	251798.4	80981	µg/L	80981	ppb	07:41:24
1	Ca 317.933Radial†	989609.3	887414.0	190040	µg/L	190040	ppb	07:41:24
1	Fe 238.204 Radial†	1348375.2	1209499.4	235410	µg/L	235410	ppb	07:41:24
1	K 766.490 Radial†	13651.9	11824.5	10724	µg/L	10724	ppb	07:41:29
1	Mg 279.077 IEC†	60379.7	54106.4	88423	µg/L	88423	ppb	07:41:29
1	Na 589.592 Radial†	816.0	604.4	621.45	µg/L	621.45	ppb	07:41:29
1	Sr 421.552†	158587.7	141997.6	831.64	µg/L	831.64	ppb	07:41:29
1	Sc 361.383	390406.0	390406.0	106.61	%			07:41:58
1	Y 371.029	408463.2	408463.2	113.51	%			07:41:58
1	Ag 328.068†	-3733.7	-2818.6	6.2164	µg/L	6.2164	ppb	07:41:58
1	As 188.979†	170.2	172.4	88.564	µg/L	88.564	ppb	07:42:19
1	B 249.677†	-26213.4	-24761.7	93.633	µg/L	93.633	ppb	07:41:58
1	Ba 233.527†	61759.9	57947.0	481.94	µg/L	481.94	ppb	07:41:58
1	Be 313.107†	195.1	3756.9	5.6631	µg/L	5.6631	ppb	07:42:19
1	Cd 226.502†	2322.3	2501.4	0.1838	µg/L	0.1838	ppb	07:42:19
1	Co 228.616†	5635.3	5508.4	124.38	µg/L	124.38	ppb	07:42:19
1	Cr 267.716†	7449.5	6865.8	139.29	µg/L	139.29	ppb	07:42:19
1	Cu 324.752†	43149.0	38554.1	297.65	µg/L	297.65	ppb	07:41:58
1	Mn 257.610†	2622468.8	2459448.2	3877.7	µg/L	3877.7	ppb	07:41:58
1	Mo 202.031†	75.4	37.8	6.5680	µg/L	6.5680	ppb	07:42:19
1	Ni 231.604†	10670.3	10212.8	286.97	µg/L	286.97	ppb	07:42:19
1	P 214.914†	7147.8	6573.0	4176.4	µg/L	4176.4	ppb	07:42:19
1	Pb 220.353†	1320.6	1302.3	171.49	µg/L	171.49	ppb	07:42:19
1	S 181.975 Axial†	59119.4	55362.3	67955	µg/L	67955	ppb	07:41:58
1	Sb 206.836†	205.3	38.0	-23.425	µg/L	-23.425	ppb	07:42:19
1	Se 196.026†	-256.5	-216.8	2.2004	µg/L	2.2004	ppb	07:42:19
1	SiO2†	112325.1	104297.0	17573	µg/L	17573	ppb	07:41:58
1	Si 251.611†	158284.9	148481.2	8193.8	µg/L	8193.8	ppb	07:41:58
1	Sn 189.927†	35.6	-14.2	4.4280	µg/L	4.4280	ppb	07:42:19
1	Ti 334.940†	238836.7	224753.0	965.35	µg/L	965.35	ppb	07:41:58
1	Tl 190.801†	-146.5	-59.1	11.232	µg/L	11.232	ppb	07:42:19
1	U 367.007†	3789.7	2671.3	-71.30	µg/L	-71.30	ppb	07:41:58
1	V 292.402†	9540.6	9081.0	166.77	µg/L	166.77	ppb	07:42:19
1	Zn 213.857†	69168.6	63983.0	460.28	µg/L	460.28	ppb	07:41:58
2	Sc RADIAL	24706.6	24706.6	112	%			07:41:40
2	Al 396.153Radial†	284617.4	254454.3	81836	µg/L	81836	ppb	07:41:34
2	Ca 317.933Radial†	999368.6	892831.5	191210	µg/L	191210	ppb	07:41:34
2	Fe 238.204 Radial†	1362148.4	1217306.2	236930	µg/L	236930	ppb	07:41:34
2	K 766.490 Radial†	13690.5	11813.4	10713	µg/L	10713	ppb	07:41:40
2	Mg 279.077 IEC†	60215.7	53758.3	87854	µg/L	87854	ppb	07:41:40
2	Na 589.592 Radial†	805.2	592.0	600.34	µg/L	600.34	ppb	07:41:40
2	Sr 421.552†	158661.3	141533.8	828.90	µg/L	828.90	ppb	07:41:40
2	Sc 361.383	394829.1	394829.1	107.82	%			07:42:26
2	Y 371.029	413106.2	413106.2	114.80	%			07:42:26
2	Ag 328.068†	-3849.8	-2887.0	5.7542	µg/L	5.7542	ppb	07:42:26
2	As 188.979†	177.4	177.4	90.834	µg/L	90.834	ppb	07:42:46
2	B 249.677†	-26015.1	-24302.3	114.82	µg/L	114.82	ppb	07:42:26
2	Ba 233.527†	62501.4	57985.8	482.23	µg/L	482.23	ppb	07:42:26
2	Be 313.107†	241.5	3798.0	5.7092	µg/L	5.7092	ppb	07:42:46
2	Cd 226.502†	2337.3	2491.0	-0.0912	µg/L	-0.0912	ppb	07:42:46
2	Co 228.616†	5685.1	5495.4	124.07	µg/L	124.07	ppb	07:42:46
2	Cr 267.716†	7518.8	6851.8	139.03	µg/L	139.03	ppb	07:42:46
2	Cu 324.752†	43759.3	38666.7	298.56	µg/L	298.56	ppb	07:42:26
2	Mn 257.610†	2654307.5	2461421.9	3880.9	µg/L	3880.9	ppb	07:42:26
2	Mo 202.031†	107.9	67.1	8.2607	µg/L	8.2607	ppb	07:42:46
2	Ni 231.604†	10730.3	10156.3	285.44	µg/L	285.44	ppb	07:42:46
2	P 214.914†	7215.8	6561.0	4167.2	µg/L	4167.2	ppb	07:42:46

2	Pb 220.353†	1359.1	1324.1	174.30	µg/L	174.30	ppb	07:42:46
2	S 181.975 Axial†	59759.3	55334.6	67921	µg/L	67921	ppb	07:42:26
2	Sb 206.836†	199.4	30.4	-25.785	µg/L	-25.785	ppb	07:42:46
2	Se 196.026†	-248.0	-206.2	7.8940	µg/L	7.8940	ppb	07:42:46
2	SiO2†	113893.1	104570.9	17619	µg/L	17619	ppb	07:42:26
2	Si 251.611†	160367.3	148749.4	8208.5	µg/L	8208.5	ppb	07:42:26
2	Sn 189.927†	48.7	-2.4	5.9125	µg/L	5.9125	ppb	07:42:46
2	Ti 334.940†	241240.0	224472.4	964.21	µg/L	964.21	ppb	07:42:26
2	Tl 190.801†	-153.7	-64.2	10.264	µg/L	10.264	ppb	07:42:46
2	U 367.007†	3809.7	2650.0	-85.25	µg/L	-85.25	ppb	07:42:26
2	V 292.402†	9644.6	9077.3	167.04	µg/L	167.04	ppb	07:42:46
2	Zn 213.857†	69907.4	63941.5	459.82	µg/L	459.82	ppb	07:42:26
3	Sc RADIAL	24835.7	24835.7	112	%			07:41:50
3	Al 396.153Radial†	287289.2	255508.0	82175	µg/L	82175	ppb	07:41:45
3	Ca 317.933Radial†	1010978.2	898512.3	192420	µg/L	192420	ppb	07:41:45
3	Fe 238.204 Radial†	1376256.3	1223523.5	238140	µg/L	238140	ppb	07:41:45
3	K 766.490 Radial†	13743.2	11796.7	10698	µg/L	10698	ppb	07:41:50
3	Mg 279.077 IEC†	60490.6	53723.0	87796	µg/L	87796	ppb	07:41:50
3	Na 589.592 Radial†	806.8	589.7	595.23	µg/L	595.23	ppb	07:41:50
3	Sr 421.552†	159448.8	141497.2	828.66	µg/L	828.66	ppb	07:41:50
3	Sc 361.383	397098.5	397098.5	108.44	%			07:42:53
3	Y 371.029	415439.0	415439.0	115.44	%			07:42:53
3	Ag 328.068†	-3802.6	-2823.1	6.5634	µg/L	6.5634	ppb	07:42:53
3	As 188.979†	158.6	159.1	82.852	µg/L	82.852	ppb	07:43:13
3	B 249.677†	-26331.6	-24456.2	114.43	µg/L	114.43	ppb	07:42:53
3	Ba 233.527†	62791.9	57922.3	481.67	µg/L	481.67	ppb	07:42:53
3	Be 313.107†	204.3	3762.4	5.7007	µg/L	5.7007	ppb	07:43:13
3	Cd 226.502†	2345.8	2486.4	-0.2719	µg/L	-0.2719	ppb	07:43:13
3	Co 228.616†	5681.3	5461.8	123.29	µg/L	123.29	ppb	07:43:13
3	Cr 267.716†	7514.5	6808.0	138.16	µg/L	138.16	ppb	07:43:13
3	Cu 324.752†	43751.0	38427.2	296.89	µg/L	296.89	ppb	07:42:53
3	Mn 257.610†	2662643.6	2455039.4	3870.9	µg/L	3870.9	ppb	07:42:53
3	Mo 202.031†	68.6	30.3	6.1977	µg/L	6.1977	ppb	07:43:13
3	Ni 231.604†	10715.1	10085.4	283.51	µg/L	283.51	ppb	07:43:13
3	P 214.914†	7180.5	6490.2	4119.1	µg/L	4119.1	ppb	07:43:13
3	Pb 220.353†	1347.0	1305.7	172.06	µg/L	172.06	ppb	07:43:13
3	S 181.975 Axial†	60199.6	55423.8	68030	µg/L	68030	ppb	07:42:53
3	Sb 206.836†	185.3	16.3	-29.993	µg/L	-29.993	ppb	07:43:13
3	Se 196.026†	-249.4	-206.2	8.4424	µg/L	8.4424	ppb	07:43:13
3	SiO2†	114200.3	104250.5	17564	µg/L	17564	ppb	07:42:53
3	Si 251.611†	160916.3	148405.6	8189.5	µg/L	8189.5	ppb	07:42:53
3	Sn 189.927†	26.8	-22.8	3.3871	µg/L	3.3871	ppb	07:43:13
3	Ti 334.940†	242276.8	224149.8	962.88	µg/L	962.88	ppb	07:42:53
3	Tl 190.801†	-148.0	-58.2	11.671	µg/L	11.671	ppb	07:43:13
3	U 367.007†	3915.6	2727.5	-63.35	µg/L	-63.35	ppb	07:42:53
3	V 292.402†	9591.1	8976.8	165.97	µg/L	165.97	ppb	07:43:13
3	Zn 213.857†	70340.0	63969.9	459.92	µg/L	459.92	ppb	07:42:53

Mean Data: 454715001|1782974|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	394111.2	107.62	%	0.929				0.86%
Sc RADIAL	24719.0	112	%	0.50				0.45%
Y 371.029	412336.1	114.58	%	0.987				0.86%
Ag 328.068†	-2842.9	6.1780	µg/L	0.40593	6.1780	ppb	0.40593	6.57%
Al 396.153Radial†	253920.3	81664	µg/L	614.79	81664	ppb	614.79	0.75%
As 188.979†	169.6	87.416	µg/L	4.1128	87.416	ppb	4.1128	4.70%
B 249.677†	-24506.7	107.63	µg/L	12.121	107.63	ppb	12.121	11.26%
Ba 233.527†	57951.7	481.95	µg/L	0.282	481.95	ppb	0.282	0.06%
Be 313.107†	3772.4	5.6910	µg/L	0.02454	5.6910	ppb	0.02454	0.43%
Ca 317.933Radial†	892919.2	191220	µg/L	1188.50	191220	ppb	1188.50	0.62%
Cd 226.502†	2492.9	-0.0598	µg/L	0.22947	-0.0598	ppb	0.22947	383.93%
Co 228.616†	5488.5	123.91	µg/L	0.558	123.91	ppb	0.558	0.45%
Cr 267.716†	6841.9	138.83	µg/L	0.592	138.83	ppb	0.592	0.43%
Cu 324.752†	38549.4	297.70	µg/L	0.835	297.70	ppb	0.835	0.28%
Fe 238.204 Radial†	1216776.4	236820	µg/L	1367.69	236820	ppb	1367.69	0.58%
K 766.490 Radial†	11811.5	10712	µg/L	12.85	10712	ppb	12.85	0.12%
Mg 279.077 IEC†	53862.6	88024	µg/L	346.30	88024	ppb	346.30	0.39%
Mn 257.610†	2458636.5	3876.5	µg/L	5.08	3876.5	ppb	5.08	0.13%
Mo 202.031†	45.1	7.0088	µg/L	1.09988	7.0088	ppb	1.09988	15.69%

Na 589.592 Radial†	595.4	605.68	µg/L	13.900	605.68	ppb	13.900	2.30%
Ni 231.604†	10151.5	285.31	µg/L	1.738	285.31	ppb	1.738	0.61%
P 214.914†	6541.4	4154.2	µg/L	30.78	4154.2	ppb	30.78	0.74%
Pb 220.353†	1310.7	172.62	µg/L	1.485	172.62	ppb	1.485	0.86%
S 181.975 Axial†	55373.6	67969	µg/L	55.88	67969	ppb	55.88	0.08%
Concentration greater than upper limit for S 181.975 Axial.								
Sb 206.836†	28.2	-26.401	µg/L	3.3274	-26.401	ppb	3.3274	12.60%
Concentration less than lower limit for Sb 206.836.								
Se 196.026†	-209.8	6.1789	µg/L	3.45641	6.1789	ppb	3.45641	55.94%
SiO2†	104372.8	17585	µg/L	29.24	17585	ppb	29.24	0.17%
Si 251.611†	148545.4	8197.3	µg/L	9.99	8197.3	ppb	9.99	0.12%
Sn 189.927†	-13.1	4.5758	µg/L	1.26918	4.5758	ppb	1.26918	27.74%
Sr 421.552†	141676.2	829.73	µg/L	1.659	829.73	ppb	1.659	0.20%
Ti 334.940†	224458.4	964.15	µg/L	1.235	964.15	ppb	1.235	0.13%
Tl 190.801†	-60.5	11.056	µg/L	0.7200	11.056	ppb	0.7200	6.51%
U 367.007†	2682.9	-73.30	µg/L	11.089	-73.30	ppb	11.089	15.13%
Concentration less than lower limit for U 367.007.								
V 292.402†	9045.0	166.60	µg/L	0.555	166.60	ppb	0.555	0.33%
Zn 213.857†	63964.8	460.00	µg/L	0.243	460.00	ppb	0.243	0.05%

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Sequence No.: 6 | **Autosampler Location: 304**
Sample ID: 1204070942|1782974|1| | **Date Collected: 7/23/2018 07:43:21**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 1204070942|1782974|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24818.8	24818.8	112	%			07:43:57
1	Al 396.153Radial†	386351.4	343813.0	110550	µg/L	110550	ppb	07:43:52
1	Ca 317.933Radial†	1289696.1	1147086.8	245660	µg/L	245660	ppb	07:43:52
1	Fe 238.204 Radial†	1509447.7	1342851.0	261360	µg/L	261360	ppb	07:43:52
1	K 766.490 Radial†	28972.5	25353.8	23023	µg/L	23023	ppb	07:43:57
1	Mg 279.077 IEC†	70478.9	62645.7	102380	µg/L	102380	ppb	07:43:57
1	Na 589.592 Radial†	4158.2	3571.8	5150.5	µg/L	5150.5	ppb	07:43:57
1	Sr 421.552†	290938.2	258573.8	1516.2	µg/L	1516.2	ppb	07:43:52
1	Sc 361.383	391689.8	391689.8	106.96	%			07:44:27
1	Y 371.029	417058.7	417058.7	115.89	%			07:44:27
1	Ag 328.068†	5084.2	5437.1	94.349	µg/L	94.349	ppb	07:44:27
1	As 188.979†	1232.4	1165.0	530.02	µg/L	530.02	ppb	07:44:47
1	B 249.677†	-13809.4	-13084.2	581.36	µg/L	581.36	ppb	07:44:27
1	Ba 233.527†	161722.8	151216.1	1266.3	µg/L	1266.3	ppb	07:44:27
1	Be 313.107†	563489.5	530401.0	444.12	µg/L	444.12	ppb	07:44:27
1	Cd 226.502†	45704.3	43053.7	418.14	µg/L	418.14	ppb	07:44:27
1	Co 228.616†	24033.5	22692.2	519.44	µg/L	519.44	ppb	07:44:47
1	Cr 267.716†	31785.9	29595.9	592.02	µg/L	592.02	ppb	07:44:27
1	Cu 324.752†	113341.3	104046.8	780.02	µg/L	780.02	ppb	07:44:27
1	Mn 257.610†	3273690.1	3060236.7	4822.9	µg/L	4822.9	ppb	07:44:27
1	Mo 202.031†	8145.8	7582.9	435.05	µg/L	435.05	ppb	07:44:47
1	Ni 231.604†	25563.7	24104.4	671.44	µg/L	671.44	ppb	07:44:47
1	P 214.914†	8350.3	7675.3	4883.7	µg/L	4883.7	ppb	07:44:47
1	Pb 220.353†	4418.1	4194.2	532.48	µg/L	532.48	ppb	07:44:47
1	S 181.975 Axial†	62230.5	58089.3	71294	µg/L	71294	ppb	07:44:27
1	Sb 206.836†	1529.9	1275.8	325.22	µg/L	325.22	ppb	07:44:47
1	Se 196.026†	685.3	664.5	430.29	µg/L	430.29	ppb	07:44:47
1	SiO2†	191026.7	177532.7	29924	µg/L	29924	ppb	07:44:27
1	Si 251.611†	270622.2	253022.9	13966	µg/L	13966	ppb	07:44:27
1	Sn 189.927†	3669.5	3383.2	429.85	µg/L	429.85	ppb	07:44:47
1	Ti 334.940†	483860.0	453100.1	1939.9	µg/L	1939.9	ppb	07:44:27
1	Tl 190.801†	1688.0	1656.5	382.95	µg/L	382.95	ppb	07:44:47
1	U 367.007†	5266.5	4040.4	279.3	µg/L	279.3	ppb	07:44:27
1	V 292.402†	50228.3	47092.2	672.49	µg/L	672.49	ppb	07:44:27
1	Zn 213.857†	138148.3	128262.1	945.21	µg/L	945.21	ppb	07:44:27
2	Sc RADIAL	25116.3	25116.3	114	%			07:44:08
2	Al 396.153Radial†	394688.0	347070.0	111600	µg/L	111600	ppb	07:44:03
2	Ca 317.933Radial†	1313947.9	1154814.3	247310	µg/L	247310	ppb	07:44:03
2	Fe 238.204 Radial†	1538102.7	1352133.3	263170	µg/L	263170	ppb	07:44:03
2	K 766.490 Radial†	29485.3	25499.3	23155	µg/L	23155	ppb	07:44:08
2	Mg 279.077 IEC†	71188.3	62526.6	102180	µg/L	102180	ppb	07:44:08
2	Na 589.592 Radial†	4226.7	3588.2	5173.4	µg/L	5173.4	ppb	07:44:08
2	Sr 421.552†	297255.4	261061.0	1530.8	µg/L	1530.8	ppb	07:44:03
2	Sc 361.383	396792.6	396792.6	108.35	%			07:44:55
2	Y 371.029	422016.6	422016.6	117.27	%			07:44:55
2	Ag 328.068†	5234.1	5514.3	95.396	µg/L	95.396	ppb	07:44:55
2	As 188.979†	1236.9	1154.3	525.40	µg/L	525.40	ppb	07:45:15
2	B 249.677†	-13877.0	-12980.4	591.86	µg/L	591.86	ppb	07:44:55
2	Ba 233.527†	163841.8	151227.3	1266.4	µg/L	1266.4	ppb	07:44:55
2	Be 313.107†	570034.1	529666.0	443.53	µg/L	443.53	ppb	07:44:55
2	Cd 226.502†	46229.3	42988.7	417.27	µg/L	417.27	ppb	07:44:55
2	Co 228.616†	24146.1	22507.1	515.17	µg/L	515.17	ppb	07:45:15
2	Cr 267.716†	32140.7	29541.2	590.97	µg/L	590.97	ppb	07:44:55
2	Cu 324.752†	114624.1	103868.0	778.81	µg/L	778.81	ppb	07:44:55
2	Mn 257.610†	3311589.8	3055853.6	4816.1	µg/L	4816.1	ppb	07:44:55
2	Mo 202.031†	8160.4	7498.4	430.29	µg/L	430.29	ppb	07:45:15
2	Ni 231.604†	25661.0	23886.9	665.47	µg/L	665.47	ppb	07:45:15
2	P 214.914†	8400.9	7621.6	4846.5	µg/L	4846.5	ppb	07:45:15

2	Pb 220.353†	4453.3	4173.6	530.06 µg/L	530.06 ppb		07:45:15
2	S 181.975 Axial†	63096.2	58140.0	71356 µg/L	71356 ppb		07:44:55
2	Sb 206.836†	1546.8	1273.0	324.12 µg/L	324.12 ppb		07:45:15
2	Se 196.026†	708.4	677.6	437.29 µg/L	437.29 ppb		07:45:15
2	SiO2†	192446.5	176546.2	29758 µg/L	29758 ppb		07:44:55
2	Si 251.611†	273087.2	252044.0	13912 µg/L	13912 ppb		07:44:55
2	Sn 189.927†	3696.7	3364.2	427.48 µg/L	427.48 ppb		07:45:15
2	Ti 334.940†	488712.2	451760.5	1934.3 µg/L	1934.3 ppb		07:44:55
2	Tl 190.801†	1690.9	1638.9	379.34 µg/L	379.34 ppb		07:45:15
2	U 367.007†	5330.1	4035.7	269.8 µg/L	269.8 ppb		07:44:55
2	V 292.402†	50648.8	46876.3	669.99 µg/L	669.99 ppb		07:44:55
2	Zn 213.857†	139697.2	128030.5	943.29 µg/L	943.29 ppb		07:44:55
3	Sc RADIAL	24861.3	24861.3	113 %			07:44:18
3	Al 396.153Radial†	396250.3	352016.4	113190 µg/L	113190 ppb		07:44:13
3	Ca 317.933Radial†	1315817.9	1168323.2	250200 µg/L	250200 ppb		07:44:13
3	Fe 238.204 Radial†	1539942.0	1367636.2	266190 µg/L	266190 ppb		07:44:13
3	K 766.490 Radial†	29098.8	25421.9	23085 µg/L	23085 ppb		07:44:18
3	Mg 279.077 IEC†	70357.8	62430.9	102030 µg/L	102030 ppb		07:44:18
3	Na 589.592 Radial†	4123.3	3534.4	5086.7 µg/L	5086.7 ppb		07:44:18
3	Sr 421.552†	298138.5	264525.7	1551.1 µg/L	1551.1 ppb		07:44:13
3	Sc 361.383	395818.4	395818.4	108.09 %			07:45:23
3	Y 371.029	421458.2	421458.2	117.12 %			07:45:23
3	Ag 328.068†	5403.2	5682.6	97.557 µg/L	97.557 ppb		07:45:23
3	As 188.979†	1252.8	1171.9	533.30 µg/L	533.30 ppb		07:45:43
3	B 249.677†	-13713.5	-12860.8	607.58 µg/L	607.58 ppb		07:45:23
3	Ba 233.527†	163340.9	151136.1	1265.6 µg/L	1265.6 ppb		07:45:23
3	Be 313.107†	568794.6	529814.1	443.69 µg/L	443.69 ppb		07:45:23
3	Cd 226.502†	46061.6	42938.5	416.42 µg/L	416.42 ppb		07:45:23
3	Co 228.616†	24197.8	22609.8	517.52 µg/L	517.52 ppb		07:45:43
3	Cr 267.716†	32059.8	29539.3	590.98 µg/L	590.98 ppb		07:45:23
3	Cu 324.752†	114304.2	103832.4	778.73 µg/L	778.73 ppb		07:45:23
3	Mn 257.610†	3305048.4	3057324.0	4818.6 µg/L	4818.6 ppb		07:45:23
3	Mo 202.031†	8206.5	7559.5	433.81 µg/L	433.81 ppb		07:45:43
3	Ni 231.604†	25742.8	24020.8	669.23 µg/L	669.23 ppb		07:45:43
3	P 214.914†	8412.8	7651.7	4864.1 µg/L	4864.1 ppb		07:45:43
3	Pb 220.353†	4439.7	4171.1	529.96 µg/L	529.96 ppb		07:45:43
3	S 181.975 Axial†	62743.3	57956.8	71130 µg/L	71130 ppb		07:45:23
3	Sb 206.836†	1574.8	1302.4	332.18 µg/L	332.18 ppb		07:45:43
3	Se 196.026†	684.6	657.2	428.98 µg/L	428.98 ppb		07:45:43
3	SiO2†	192000.9	176571.1	29761 µg/L	29761 ppb		07:45:23
3	Si 251.611†	272328.1	251962.0	13907 µg/L	13907 ppb		07:45:23
3	Sn 189.927†	3680.8	3357.9	426.75 µg/L	426.75 ppb		07:45:43
3	Ti 334.940†	488431.6	452611.1	1938.1 µg/L	1938.1 ppb		07:45:23
3	Tl 190.801†	1693.4	1645.1	380.93 µg/L	380.93 ppb		07:45:43
3	U 367.007†	5302.9	4022.7	252.0 µg/L	252.0 ppb		07:45:23
3	V 292.402†	50725.9	47062.7	673.07 µg/L	673.07 ppb		07:45:23
3	Zn 213.857†	139318.1	127997.1	942.71 µg/L	942.71 ppb		07:45:23

Mean Data: 1204070942|1782974|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	394766.9	107.80	%	0.740				0.69%
Sc RADIAL	24932.1	113	%	0.73				0.65%
Y 371.029	420177.8	116.76	%	0.755				0.65%
Ag 328.068†	5544.7	95.767	µg/L	1.6361	95.767	ppb	1.6361	1.71%
Al 396.153Radial†	347633.1	111780	µg/L	1328.48	111780	ppb	1328.48	1.19%
As 188.979†	1163.8	529.57	µg/L	3.969	529.57	ppb	3.969	0.75%
B 249.677†	-12975.1	593.60	µg/L	13.201	593.60	ppb	13.201	2.22%
Ba 233.527†	151193.2	1266.1	µg/L	0.47	1266.1	ppb	0.47	0.04%
Be 313.107†	529960.4	443.78	µg/L	0.307	443.78	ppb	0.307	0.07%
Ca 317.933Radial†	1156741.4	247720	µg/L	2301.87	247720	ppb	2301.87	0.93%
Cd 226.502†	42993.7	417.27	µg/L	0.862	417.27	ppb	0.862	0.21%
Co 228.616†	22603.1	517.37	µg/L	2.138	517.37	ppb	2.138	0.41%
Cr 267.716†	29558.8	591.32	µg/L	0.608	591.32	ppb	0.608	0.10%
Cu 324.752†	103915.7	779.19	µg/L	0.721	779.19	ppb	0.721	0.09%
Fe 238.204 Radial†	1354206.8	263570	µg/L	2437.18	263570	ppb	2437.18	0.92%
K 766.490 Radial†	25425.0	23088	µg/L	66.08	23088	ppb	66.08	0.29%
Mg 279.077 IEC†	62534.4	102200	µg/L	175.89	102200	ppb	175.89	0.17%
Mn 257.610†	3057804.8	4819.2	µg/L	3.42	4819.2	ppb	3.42	0.07%
Mo 202.031†	7547.0	433.05	µg/L	2.470	433.05	ppb	2.470	0.57%

Na 589.592 Radial†	3564.8	5136.9 µg/L	44.90	5136.9 ppb	44.90	0.87%
Ni 231.604†	24004.0	668.71 µg/L	3.022	668.71 ppb	3.022	0.45%
P 214.914†	7649.5	4864.8 µg/L	18.57	4864.8 ppb	18.57	0.38%
Pb 220.353†	4179.6	530.83 µg/L	1.428	530.83 ppb	1.428	0.27%
S 181.975 Axial†	58062.0	71260 µg/L	116.90	71260 ppb	116.90	0.16%
Concentration greater than upper limit for S 181.975 Axial.						
Sb 206.836†	1283.7	327.17 µg/L	4.375	327.17 ppb	4.375	1.34%
Se 196.026†	666.4	432.19 µg/L	4.466	432.19 ppb	4.466	1.03%
SiO2†	176883.3	29814 µg/L	95.41	29814 ppb	95.41	0.32%
Si 251.611†	252343.0	13928 µg/L	32.76	13928 ppb	32.76	0.24%
Sn 189.927†	3368.4	428.02 µg/L	1.620	428.02 ppb	1.620	0.38%
Sr 421.552†	261386.9	1532.7 µg/L	17.54	1532.7 ppb	17.54	1.14%
Ti 334.940†	452490.6	1937.4 µg/L	2.87	1937.4 ppb	2.87	0.15%
Tl 190.801†	1646.8	381.07 µg/L	1.811	381.07 ppb	1.811	0.48%
U 367.007†	4032.9	267.1 µg/L	13.86	267.1 ppb	13.86	5.19%
V 292.402†	47010.4	671.85 µg/L	1.634	671.85 ppb	1.634	0.24%
Zn 213.857†	128096.6	943.74 µg/L	1.312	943.74 ppb	1.312	0.14%

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Sequence No.: 7 | **Autosampler Location: 305**
Sample ID: 1204070943|1782974|1| | **Date Collected: 7/23/2018 07:45:51**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 1204070943|1782974|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24841.6	24841.6	113	%			07:46:27
1	Al 396.153Radial†	359993.9	320069.3	102920	µg/L	102920	ppb	07:46:22
1	Ca 317.933Radial†	1030567.1	915708.1	196100	µg/L	196100	ppb	07:46:22
1	Fe 238.204 Radial†	1394425.3	1239379.3	241220	µg/L	241220	ppb	07:46:22
1	K 766.490 Radial†	27705.9	24204.3	21974	µg/L	21974	ppb	07:46:27
1	Mg 279.077 IEC†	65487.9	58151.9	95034	µg/L	95034	ppb	07:46:27
1	Na 589.592 Radial†	4069.6	3489.6	5050.5	µg/L	5050.5	ppb	07:46:27
1	Sr 421.552†	239468.6	212587.6	1246.6	µg/L	1246.6	ppb	07:46:22
1	Sc 361.383	397479.3	397479.3	108.54	%			07:46:57
1	Y 371.029	421188.3	421188.3	117.04	%			07:46:57
1	Ag 328.068†	5736.1	5968.5	96.738	µg/L	96.738	ppb	07:46:57
1	As 188.979†	1258.5	1172.3	532.12	µg/L	532.12	ppb	07:47:17
1	B 249.677†	-11700.0	-10952.6	573.74	µg/L	573.74	ppb	07:46:57
1	Ba 233.527†	156519.0	144219.4	1208.0	µg/L	1208.0	ppb	07:46:57
1	Be 313.107†	586225.7	543674.7	454.53	µg/L	454.53	ppb	07:46:57
1	Cd 226.502†	47580.6	44160.0	431.83	µg/L	431.83	ppb	07:46:57
1	Co 228.616†	24444.6	22743.7	520.93	µg/L	520.93	ppb	07:47:17
1	Cr 267.716†	31429.9	28835.1	576.67	µg/L	576.67	ppb	07:46:57
1	Cu 324.752†	104907.8	94733.4	710.39	µg/L	710.39	ppb	07:46:57
1	Mn 257.610†	3081032.1	2838156.2	4472.8	µg/L	4472.8	ppb	07:46:57
1	Mo 202.031†	8268.9	7585.4	434.81	µg/L	434.81	ppb	07:47:17
1	Ni 231.604†	25125.1	23352.2	650.25	µg/L	650.25	ppb	07:47:17
1	P 214.914†	7835.1	7086.9	4509.3	µg/L	4509.3	ppb	07:47:17
1	Pb 220.353†	4519.1	4227.1	534.90	µg/L	534.90	ppb	07:47:17
1	S 181.975 Axial†	61276.5	56362.9	69179	µg/L	69179	ppb	07:46:57
1	Sb 206.836†	1647.9	1363.6	353.32	µg/L	353.32	ppb	07:47:17
1	Se 196.026†	722.2	689.1	432.98	µg/L	432.98	ppb	07:47:17
1	SiO2†	100623.1	91640.8	15413	µg/L	15413	ppb	07:46:57
1	Si 251.611†	141607.2	130473.6	7190.5	µg/L	7190.5	ppb	07:46:57
1	Sn 189.927†	3689.4	3351.6	425.64	µg/L	425.64	ppb	07:47:17
1	Ti 334.940†	457055.6	421815.5	1804.5	µg/L	1804.5	ppb	07:46:57
1	Tl 190.801†	1799.6	1736.3	397.81	µg/L	397.81	ppb	07:47:17
1	U 367.007†	5054.3	3773.1	290.5	µg/L	290.5	ppb	07:46:57
1	V 292.402†	48972.9	45251.5	644.35	µg/L	644.35	ppb	07:46:57
1	Zn 213.857†	143080.1	130924.5	967.72	µg/L	967.72	ppb	07:46:57
2	Sc RADIAL	24988.1	24988.1	113	%			07:46:38
2	Al 396.153Radial†	368973.9	326128.2	104870	µg/L	104870	ppb	07:46:33
2	Ca 317.933Radial†	1056226.6	933010.9	199810	µg/L	199810	ppb	07:46:33
2	Fe 238.204 Radial†	1427653.3	1261473.8	245520	µg/L	245520	ppb	07:46:33
2	K 766.490 Radial†	27989.4	24310.4	22070	µg/L	22070	ppb	07:46:38
2	Mg 279.077 IEC†	65810.9	58096.0	94943	µg/L	94943	ppb	07:46:38
2	Na 589.592 Radial†	4115.3	3508.8	5074.3	µg/L	5074.3	ppb	07:46:38
2	Sr 421.552†	245387.2	216569.5	1270.0	µg/L	1270.0	ppb	07:46:33
2	Sc 361.383	395198.9	395198.9	107.92	%			07:47:25
2	Y 371.029	418584.3	418584.3	116.32	%			07:47:25
2	Ag 328.068†	5825.1	6081.4	98.516	µg/L	98.516	ppb	07:47:25
2	As 188.979†	1278.9	1197.9	543.61	µg/L	543.61	ppb	07:47:45
2	B 249.677†	-11477.5	-10808.6	595.27	µg/L	595.27	ppb	07:47:25
2	Ba 233.527†	155603.6	144203.3	1207.7	µg/L	1207.7	ppb	07:47:25
2	Be 313.107†	582174.2	543037.0	454.04	µg/L	454.04	ppb	07:47:25
2	Cd 226.502†	47208.0	44067.7	430.41	µg/L	430.41	ppb	07:47:25
2	Co 228.616†	24432.1	22862.1	523.65	µg/L	523.65	ppb	07:47:45
2	Cr 267.716†	31243.1	28829.0	576.62	µg/L	576.62	ppb	07:47:25
2	Cu 324.752†	104497.2	94910.7	711.95	µg/L	711.95	ppb	07:47:25
2	Mn 257.610†	3062551.3	2837410.8	4471.9	µg/L	4471.9	ppb	07:47:25
2	Mo 202.031†	8265.8	7626.4	437.22	µg/L	437.22	ppb	07:47:45
2	Ni 231.604†	25186.0	23542.2	655.58	µg/L	655.58	ppb	07:47:45
2	P 214.914†	7831.2	7125.0	4531.2	µg/L	4531.2	ppb	07:47:45

2	Pb 220.353†	4560.9	4289.8	542.90 µg/L	542.90 ppb		07:47:45
2	S 181.975 Axial†	61005.1	56437.1	69269 µg/L	69269 ppb		07:47:25
2	Sb 206.836†	1660.6	1384.2	358.65 µg/L	358.65 ppb		07:47:45
2	Se 196.026†	722.9	693.6	437.02 µg/L	437.02 ppb		07:47:45
2	SiO2†	99661.8	91284.9	15351 µg/L	15351 ppb		07:47:25
2	Si 251.611†	140269.5	129986.8	7163.2 µg/L	7163.2 ppb		07:47:25
2	Sn 189.927†	3705.4	3386.0	429.96 µg/L	429.96 ppb		07:47:45
2	Ti 334.940†	453603.2	421046.2	1801.4 µg/L	1801.4 ppb		07:47:25
2	Tl 190.801†	1799.4	1745.7	400.20 µg/L	400.20 ppb		07:47:45
2	U 367.007†	5050.0	3796.0	280.0 µg/L	280.0 ppb		07:47:25
2	V 292.402†	48622.8	45187.5	644.42 µg/L	644.42 ppb		07:47:25
2	Zn 213.857†	142183.3	130854.2	966.70 µg/L	966.70 ppb		07:47:25
3	Sc RADIAL	24802.4	24802.4	112 %			07:46:48
3	Al 396.153Radial†	367196.0	326986.7	105140 µg/L	105140 ppb		07:46:43
3	Ca 317.933Radial†	1045336.2	930304.2	199230 µg/L	199230 ppb		07:46:43
3	Fe 238.204 Radial†	1413579.2	1258390.3	244920 µg/L	244920 ppb		07:46:43
3	K 766.490 Radial†	27875.1	24393.9	22146 µg/L	22146 ppb		07:46:48
3	Mg 279.077 IEC†	65278.7	58057.7	94880 µg/L	94880 ppb		07:46:48
3	Na 589.592 Radial†	4067.4	3493.4	5051.5 µg/L	5051.5 ppb		07:46:48
3	Sr 421.552†	243946.2	216910.2	1272.0 µg/L	1272.0 ppb		07:46:43
3	Sc 361.383	395382.1	395382.1	107.97 %			07:47:53
3	Y 371.029	418334.8	418334.8	116.25 %			07:47:53
3	Ag 328.068†	5780.7	6037.8	97.967 µg/L	97.967 ppb		07:47:53
3	As 188.979†	1266.9	1186.2	538.43 µg/L	538.43 ppb		07:48:13
3	B 249.677†	-11558.6	-10878.9	590.60 µg/L	590.60 ppb		07:47:53
3	Ba 233.527†	156136.4	144629.9	1211.3 µg/L	1211.3 ppb		07:47:53
3	Be 313.107†	584214.4	544676.8	455.41 µg/L	455.41 ppb		07:47:53
3	Cd 226.502†	47401.5	44226.6	432.12 µg/L	432.12 ppb		07:47:53
3	Co 228.616†	24356.2	22781.2	521.78 µg/L	521.78 ppb		07:48:13
3	Cr 267.716†	31312.0	28879.4	577.57 µg/L	577.57 ppb		07:47:53
3	Cu 324.752†	104778.3	95126.2	713.52 µg/L	713.52 ppb		07:47:53
3	Mn 257.610†	3072473.3	2845286.1	4484.2 µg/L	4484.2 ppb		07:47:53
3	Mo 202.031†	8251.5	7609.6	436.25 µg/L	436.25 ppb		07:48:13
3	Ni 231.604†	25035.8	23392.3	651.43 µg/L	651.43 ppb		07:48:13
3	P 214.914†	7808.9	7101.0	4515.8 µg/L	4515.8 ppb		07:48:13
3	Pb 220.353†	4508.6	4239.5	536.65 µg/L	536.65 ppb		07:48:13
3	S 181.975 Axial†	60974.4	56382.5	69202 µg/L	69202 ppb		07:47:53
3	Sb 206.836†	1671.2	1393.3	361.33 µg/L	361.33 ppb		07:48:13
3	Se 196.026†	727.7	697.8	438.74 µg/L	438.74 ppb		07:48:13
3	SiO2†	99503.1	91095.1	15320 µg/L	15320 ppb		07:47:53
3	Si 251.611†	139991.4	129669.1	7145.7 µg/L	7145.7 ppb		07:47:53
3	Sn 189.927†	3699.9	3379.4	429.15 µg/L	429.15 ppb		07:48:13
3	Ti 334.940†	455291.3	422415.1	1807.2 µg/L	1807.2 ppb		07:47:53
3	Tl 190.801†	1799.0	1744.5	399.94 µg/L	399.94 ppb		07:48:13
3	U 367.007†	5184.4	3918.4	325.6 µg/L	325.6 ppb		07:47:53
3	V 292.402†	48946.8	45466.7	647.96 µg/L	647.96 ppb		07:47:53
3	Zn 213.857†	142526.4	131110.9	968.75 µg/L	968.75 ppb		07:47:53

Mean Data: 1204070943|1782974|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	396020.1	108.14	%	0.346				0.32%
Sc RADIAL	24877.4	113	%	0.44				0.39%
Y 371.029	419369.2	116.54	%	0.439				0.38%
Ag 328.068†	6029.2	97.740	µg/L	0.9105	97.740	ppb	0.9105	0.93%
Al 396.153Radial†	324394.7	104310	µg/L	1212.58	104310	ppb	1212.58	1.16%
As 188.979†	1185.5	538.05	µg/L	5.750	538.05	ppb	5.750	1.07%
B 249.677†	-10880.1	586.53	µg/L	11.327	586.53	ppb	11.327	1.93%
Ba 233.527†	144350.9	1209.0	µg/L	2.02	1209.0	ppb	2.02	0.17%
Be 313.107†	543796.2	454.66	µg/L	0.693	454.66	ppb	0.693	0.15%
Ca 317.933Radial†	926341.0	198380	µg/L	1993.22	198380	ppb	1993.22	1.00%
Cd 226.502†	44151.4	431.45	µg/L	0.917	431.45	ppb	0.917	0.21%
Co 228.616†	22795.7	522.12	µg/L	1.392	522.12	ppb	1.392	0.27%
Cr 267.716†	28847.8	576.95	µg/L	0.535	576.95	ppb	0.535	0.09%
Cu 324.752†	94923.4	711.95	µg/L	1.567	711.95	ppb	1.567	0.22%
Fe 238.204 Radial†	1253081.1	243890	µg/L	2328.93	243890	ppb	2328.93	0.95%
K 766.490 Radial†	24302.9	22063	µg/L	86.18	22063	ppb	86.18	0.39%
Mg 279.077 IEC†	58101.9	94952	µg/L	77.39	94952	ppb	77.39	0.08%
Mn 257.610†	2840284.4	4476.3	µg/L	6.88	4476.3	ppb	6.88	0.15%
Mo 202.031†	7607.1	436.09	µg/L	1.212	436.09	ppb	1.212	0.28%

Na 589.592 Radial†	3497.3	5058.8 µg/L	13.47	5058.8 ppb	13.47	0.27%
Ni 231.604†	23428.9	652.42 µg/L	2.803	652.42 ppb	2.803	0.43%
P 214.914†	7104.3	4518.8 µg/L	11.24	4518.8 ppb	11.24	0.25%
Pb 220.353†	4252.1	538.15 µg/L	4.204	538.15 ppb	4.204	0.78%
S 181.975 Axial†	56394.2	69217 µg/L	46.65	69217 ppb	46.65	0.07%
Concentration greater than upper limit for S 181.975 Axial.						
Sb 206.836†	1380.4	357.76 µg/L	4.076	357.76 ppb	4.076	1.14%
Se 196.026†	693.5	436.25 µg/L	2.957	436.25 ppb	2.957	0.68%
SiO2†	91340.2	15361 µg/L	47.33	15361 ppb	47.33	0.31%
Si 251.611†	130043.2	7166.4 µg/L	22.57	7166.4 ppb	22.57	0.31%
Sn 189.927†	3372.3	428.25 µg/L	2.298	428.25 ppb	2.298	0.54%
Sr 421.552†	215355.8	1262.9 µg/L	14.10	1262.9 ppb	14.10	1.12%
Ti 334.940†	421758.9	1804.3 µg/L	2.89	1804.3 ppb	2.89	0.16%
Tl 190.801†	1742.2	399.32 µg/L	1.308	399.32 ppb	1.308	0.33%
U 367.007†	3829.2	298.7 µg/L	23.92	298.7 ppb	23.92	8.01%
V 292.402†	45301.9	645.58 µg/L	2.063	645.58 ppb	2.063	0.32%
Zn 213.857†	130963.2	967.73 µg/L	1.022	967.73 ppb	1.022	0.11%

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Sequence No.: 8 | **Autosampler Location: 306**
Sample ID: 1204070944|1782974|5| | **Date Collected: 7/23/2018 07:48:21**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 1204070944|1782974|5|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24766.3	24766.3	112	%			07:48:57
1	Al 396.153Radial†	64195.7	57326.9	18437	µg/L	18437	ppb	07:48:52
1	Ca 317.933Radial†	222360.7	197946.9	42391	µg/L	42391	ppb	07:48:52
1	Fe 238.204 Radial†	301339.2	268620.6	52282	µg/L	52282	ppb	07:48:52
1	K 766.490 Radial†	3444.3	2649.1	2402.5	µg/L	2402.5	ppb	07:48:57
1	Mg 279.077 IEC†	13529.9	12006.4	19621	µg/L	19621	ppb	07:48:57
1	Na 589.592 Radial†	316.4	154.5	169.16	µg/L	169.16	ppb	07:48:57
1	Sr 421.552†	35328.0	31235.8	182.93	µg/L	182.93	ppb	07:48:57
1	Sc 361.383	397086.2	397086.2	108.43	%			07:49:24
1	Y 371.029	395655.1	395655.1	109.95	%			07:49:24
1	Ag 328.068†	-1299.9	-515.2	2.4901	µg/L	2.4901	ppb	07:49:44
1	As 188.979†	19.5	30.7	16.356	µg/L	16.356	ppb	07:49:44
1	B 249.677†	-5695.0	-5425.3	23.253	µg/L	23.253	ppb	07:49:24
1	Ba 233.527†	13713.2	12662.3	105.29	µg/L	105.29	ppb	07:49:44
1	Be 313.107†	-2574.4	1199.8	1.5688	µg/L	1.5688	ppb	07:49:44
1	Cd 226.502†	300.8	600.5	0.5090	µg/L	0.5090	ppb	07:49:44
1	Co 228.616†	1119.0	1254.4	28.345	µg/L	28.345	ppb	07:49:44
1	Cr 267.716†	1787.5	1526.6	30.948	µg/L	30.948	ppb	07:49:44
1	Cu 324.752†	10856.2	8091.8	62.662	µg/L	62.662	ppb	07:49:24
1	Mn 257.610†	599155.5	552102.9	870.43	µg/L	870.43	ppb	07:49:24
1	Mo 202.031†	50.7	13.8	1.7655	µg/L	1.7655	ppb	07:49:44
1	Ni 231.604†	2293.5	2319.1	65.143	µg/L	65.143	ppb	07:49:44
1	P 214.914†	1650.1	1390.1	881.30	µg/L	881.30	ppb	07:49:44
1	Pb 220.353†	263.7	306.7	40.271	µg/L	40.271	ppb	07:49:44
1	S 181.975 Axial†	13026.6	11921.2	14632	µg/L	14632	ppb	07:49:44
1	Sb 206.836†	167.9	0.3	-7.5325	µg/L	-7.5325	ppb	07:49:44
1	Se 196.026†	-62.2	-33.6	7.3642	µg/L	7.3642	ppb	07:49:44
1	SiO2†	29303.6	25959.4	4375.3	µg/L	4375.3	ppb	07:49:24
1	Si 251.611†	40018.1	36914.1	2037.5	µg/L	2037.5	ppb	07:49:24
1	Sn 189.927†	69.6	16.7	3.4297	µg/L	3.4297	ppb	07:49:44
1	Ti 334.940†	52224.3	48884.4	210.00	µg/L	210.00	ppb	07:49:24
1	Tl 190.801†	-105.3	-18.8	1.2723	µg/L	1.2723	ppb	07:49:44
1	U 367.007†	1667.0	653.9	5.388	µg/L	5.388	ppb	07:49:24
1	V 292.402†	2021.3	1995.9	36.784	µg/L	36.784	ppb	07:49:44
1	Zn 213.857†	16709.0	14511.7	104.52	µg/L	104.52	ppb	07:49:44
2	Sc RADIAL	24574.8	24574.8	111	%			07:49:07
2	Al 396.153Radial†	63947.1	57549.6	18509	µg/L	18509	ppb	07:49:02
2	Ca 317.933Radial†	220684.9	197985.9	42400	µg/L	42400	ppb	07:49:02
2	Fe 238.204 Radial†	299563.4	269118.4	52379	µg/L	52379	ppb	07:49:02
2	K 766.490 Radial†	3376.1	2611.7	2368.6	µg/L	2368.6	ppb	07:49:07
2	Mg 279.077 IEC†	13395.4	11979.5	19577	µg/L	19577	ppb	07:49:07
2	Na 589.592 Radial†	297.3	139.5	145.99	µg/L	145.99	ppb	07:49:07
2	Sr 421.552†	34882.5	31080.9	182.02	µg/L	182.02	ppb	07:49:07
2	Sc 361.383	392460.1	392460.1	107.17	%			07:49:49
2	Y 371.029	391538.9	391538.9	108.80	%			07:49:49
2	Ag 328.068†	-1299.0	-528.4	2.3581	µg/L	2.3581	ppb	07:50:09
2	As 188.979†	19.3	30.8	16.380	µg/L	16.380	ppb	07:50:09
2	B 249.677†	-5524.1	-5327.8	26.874	µg/L	26.874	ppb	07:49:49
2	Ba 233.527†	13730.2	12827.2	106.68	µg/L	106.68	ppb	07:50:09
2	Be 313.107†	-2591.1	1156.2	1.5380	µg/L	1.5380	ppb	07:50:09
2	Cd 226.502†	319.7	621.4	0.7147	µg/L	0.7147	ppb	07:50:09
2	Co 228.616†	1117.1	1264.8	28.585	µg/L	28.585	ppb	07:50:09
2	Cr 267.716†	1798.8	1556.5	31.526	µg/L	31.526	ppb	07:50:09
2	Cu 324.752†	10690.6	8055.3	62.414	µg/L	62.414	ppb	07:49:49
2	Mn 257.610†	594354.4	554136.3	873.63	µg/L	873.63	ppb	07:49:49
2	Mo 202.031†	45.8	9.7	1.5374	µg/L	1.5374	ppb	07:50:09
2	Ni 231.604†	2282.7	2333.9	65.554	µg/L	65.554	ppb	07:50:09
2	P 214.914†	1668.9	1425.5	904.80	µg/L	904.80	ppb	07:50:09

2	Pb 220.353†	257.6	303.9	39.922 µg/L	39.922 ppb		07:50:09
2	S 181.975 Axial†	13019.4	12056.1	14798 µg/L	14798 ppb		07:50:09
2	Sb 206.836†	169.1	3.2	-6.7279 µg/L	-6.7279 ppb		07:50:09
2	Se 196.026†	-64.4	-36.3	6.1397 µg/L	6.1397 ppb		07:50:09
2	SiO2†	29107.9	26095.4	4398.3 µg/L	4398.3 ppb		07:49:49
2	Si 251.611†	39829.6	37173.3	2051.9 µg/L	2051.9 ppb		07:49:49
2	Sn 189.927†	51.0	0.0	1.3614 µg/L	1.3614 ppb		07:50:09
2	Ti 334.940†	51554.6	48827.2	209.75 µg/L	209.75 ppb		07:49:49
2	Tl 190.801†	-92.9	-8.3	3.5325 µg/L	3.5325 ppb		07:50:09
2	U 367.007†	1712.0	714.0	26.16 µg/L	26.16 ppb		07:49:49
2	V 292.402†	2009.8	2007.2	36.962 µg/L	36.962 ppb		07:50:09
2	Zn 213.857†	16664.8	14652.1	105.57 µg/L	105.57 ppb		07:50:09
3	Sc RADIAL	24797.6	24797.6	112 %			07:49:17
3	Al 396.153Radial†	63746.8	56855.1	18285 µg/L	18285 ppb		07:49:12
3	Ca 317.933Radial†	219815.9	195431.0	41853 µg/L	41853 ppb		07:49:12
3	Fe 238.204 Radial†	298331.0	265603.3	51695 µg/L	51695 ppb		07:49:12
3	K 766.490 Radial†	3335.5	2548.4	2311.0 µg/L	2311.0 ppb		07:49:17
3	Mg 279.077 IEC†	13552.8	12011.5	19630 µg/L	19630 ppb		07:49:17
3	Na 589.592 Radial†	296.7	136.6	142.37 µg/L	142.37 ppb		07:49:17
3	Sr 421.552†	35447.8	31302.7	183.33 µg/L	183.33 ppb		07:49:17
3	Sc 361.383	395527.4	395527.4	108.01 %			07:50:14
3	Y 371.029	394247.1	394247.1	109.56 %			07:50:14
3	Ag 328.068†	-1313.2	-532.2	2.2061 µg/L	2.2061 ppb		07:50:35
3	As 188.979†	17.3	28.8	15.472 µg/L	15.472 ppb		07:50:35
3	B 249.677†	-5644.3	-5399.0	21.838 µg/L	21.838 ppb		07:50:14
3	Ba 233.527†	13750.3	12746.5	106.01 µg/L	106.01 ppb		07:50:35
3	Be 313.107†	-2638.8	1130.7	1.5154 µg/L	1.5154 ppb		07:50:35
3	Cd 226.502†	289.4	591.0	0.4754 µg/L	0.4754 ppb		07:50:35
3	Co 228.616†	1133.1	1271.5	28.743 µg/L	28.743 ppb		07:50:35
3	Cr 267.716†	1806.1	1550.3	31.377 µg/L	31.377 ppb		07:50:35
3	Cu 324.752†	10756.9	8039.3	62.268 µg/L	62.268 ppb		07:50:14
3	Mn 257.610†	597100.1	552377.6	870.82 µg/L	870.82 ppb		07:50:14
3	Mo 202.031†	52.2	15.4	1.8458 µg/L	1.8458 ppb		07:50:35
3	Ni 231.604†	2350.0	2379.7	66.807 µg/L	66.807 ppb		07:50:35
3	P 214.914†	1663.1	1408.1	893.77 µg/L	893.77 ppb		07:50:35
3	Pb 220.353†	250.9	295.8	38.867 µg/L	38.867 ppb		07:50:35
3	S 181.975 Axial†	13033.6	11975.1	14699 µg/L	14699 ppb		07:50:35
3	Sb 206.836†	162.2	-4.4	-8.8142 µg/L	-8.8142 ppb		07:50:35
3	Se 196.026†	-74.3	-45.0	1.7038 µg/L	1.7038 ppb		07:50:35
3	SiO2†	29204.8	25974.5	4378.0 µg/L	4378.0 ppb		07:50:14
3	Si 251.611†	39941.3	36988.5	2041.7 µg/L	2041.7 ppb		07:50:14
3	Sn 189.927†	68.3	15.7	3.2990 µg/L	3.2990 ppb		07:50:35
3	Ti 334.940†	52068.1	48929.6	210.15 µg/L	210.15 ppb		07:50:14
3	Tl 190.801†	-106.5	-20.3	0.9235 µg/L	0.9235 ppb		07:50:35
3	U 367.007†	1789.1	773.0	49.85 µg/L	49.85 ppb		07:50:14
3	V 292.402†	2005.8	1989.0	36.599 µg/L	36.599 ppb		07:50:35
3	Zn 213.857†	16698.8	14563.0	104.96 µg/L	104.96 ppb		07:50:35

Mean Data: 1204070944|1782974|5|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	395024.6	107.87	%	0.643				0.60%
Sc RADIAL	24712.9	112	%	0.55				0.49%
Y 371.029	393813.7	109.43	%	0.581				0.53%
Ag 328.068†	-525.3	2.3514	µg/L	0.14211	2.3514	ppb	0.14211	6.04%
Al 396.153Radial†	57243.9	18410	µg/L	114.06	18410	ppb	114.06	0.62%
As 188.979†	30.1	16.069	µg/L	0.5175	16.069	ppb	0.5175	3.22%
B 249.677†	-5384.1	23.988	µg/L	2.5971	23.988	ppb	2.5971	10.83%
Ba 233.527†	12745.3	105.99	µg/L	0.693	105.99	ppb	0.693	0.65%
Be 313.107†	1162.2	1.5407	µg/L	0.02680	1.5407	ppb	0.02680	1.74%
Ca 317.933Radial†	197121.3	42215	µg/L	313.51	42215	ppb	313.51	0.74%
Cd 226.502†	604.3	0.5664	µg/L	0.12952	0.5664	ppb	0.12952	22.87%
Co 228.616†	1263.6	28.558	µg/L	0.2003	28.558	ppb	0.2003	0.70%
Cr 267.716†	1544.5	31.284	µg/L	0.3003	31.284	ppb	0.3003	0.96%
Cu 324.752†	8062.1	62.448	µg/L	0.1996	62.448	ppb	0.1996	0.32%
Fe 238.204 Radial†	267780.8	52119	µg/L	370.21	52119	ppb	370.21	0.71%
K 766.490 Radial†	2603.1	2360.7	µg/L	46.25	2360.7	ppb	46.25	1.96%
Mg 279.077 IEC†	11999.1	19609	µg/L	28.14	19609	ppb	28.14	0.14%
Mn 257.610†	552872.3	871.63	µg/L	1.745	871.63	ppb	1.745	0.20%
Mo 202.031†	13.0	1.7162	µg/L	0.16001	1.7162	ppb	0.16001	9.32%

Na 589.592 Radial†	143.5	152.50	µg/L	14.534	152.50	ppb	14.534	9.53%
Ni 231.604†	2344.3	65.835	µg/L	0.8668	65.835	ppb	0.8668	1.32%
P 214.914†	1407.9	893.29	µg/L	11.754	893.29	ppb	11.754	1.32%
Pb 220.353†	302.1	39.687	µg/L	0.7309	39.687	ppb	0.7309	1.84%
S 181.975 Axial†	11984.1	14710	µg/L	83.40	14710	ppb	83.40	0.57%
Sb 206.836†	-0.3	-7.6915	µg/L	1.05220	-7.6915	ppb	1.05220	13.68%
Se 196.026†	-38.3	5.0692	µg/L	2.97820	5.0692	ppb	2.97820	58.75%
SiO2†	26009.8	4383.9	µg/L	12.56	4383.9	ppb	12.56	0.29%
Si 251.611†	37025.3	2043.7	µg/L	7.37	2043.7	ppb	7.37	0.36%
Sn 189.927†	10.8	2.6967	µg/L	1.15824	2.6967	ppb	1.15824	42.95%
Sr 421.552†	31206.5	182.76	µg/L	0.673	182.76	ppb	0.673	0.37%
Ti 334.940†	48880.4	209.97	µg/L	0.203	209.97	ppb	0.203	0.10%
Tl 190.801†	-15.8	1.9094	µg/L	1.41641	1.9094	ppb	1.41641	74.18%
U 367.007†	713.7	27.13	µg/L	22.248	27.13	ppb	22.248	82.00%
V 292.402†	1997.4	36.781	µg/L	0.1816	36.781	ppb	0.1816	0.49%
Zn 213.857†	14575.6	105.02	µg/L	0.531	105.02	ppb	0.531	0.51%

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Sequence No.: 9 | **Autosampler Location: 307**
Sample ID: 454715002|1782974|1| | **Date Collected: 7/23/2018 07:50:43**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 454715002|1782974|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25280.9	25280.9	114	%			07:51:19
1	Al 396.153Radial†	297382.6	259825.4	83563	µg/L	83563	ppb	07:51:14
1	Ca 317.933Radial†	1076502.0	939911.2	201290	µg/L	201290	ppb	07:51:14
1	Fe 238.204 Radial†	1384638.0	1209295.9	235370	µg/L	235370	ppb	07:51:14
1	K 766.490 Radial†	15581.8	13187.3	11964	µg/L	11964	ppb	07:51:19
1	Mg 279.077 IEC†	63905.7	55758.6	91123	µg/L	91123	ppb	07:51:19
1	Na 589.592 Radial†	1000.3	746.1	839.27	µg/L	839.27	ppb	07:51:19
1	Sr 421.552†	181878.5	158590.6	929.02	µg/L	929.02	ppb	07:51:19
1	Sc 361.383	403087.8	403087.8	110.07	%			07:51:48
1	Y 371.029	422301.9	422301.9	117.35	%			07:51:48
1	Ag 328.068†	-3909.3	-2867.9	5.7270	µg/L	5.7270	ppb	07:51:48
1	As 188.979†	133.2	133.8	71.591	µg/L	71.591	ppb	07:52:09
1	B 249.677†	-26579.5	-24320.7	108.22	µg/L	108.22	ppb	07:51:48
1	Ba 233.527†	78142.2	71007.7	591.88	µg/L	591.88	ppb	07:51:48
1	Be 313.107†	563.4	4085.8	6.0710	µg/L	6.0710	ppb	07:52:09
1	Cd 226.502†	2378.2	2483.7	-0.0498	µg/L	-0.0498	ppb	07:52:09
1	Co 228.616†	4827.2	4607.9	103.25	µg/L	103.25	ppb	07:52:09
1	Cr 267.716†	7585.0	6769.1	137.27	µg/L	137.27	ppb	07:52:09
1	Cu 324.752†	41114.0	35432.0	274.73	µg/L	274.73	ppb	07:51:48
1	Mn 257.610†	2878815.3	2614946.5	4121.9	µg/L	4121.9	ppb	07:51:48
1	Mo 202.031†	99.7	57.6	7.6940	µg/L	7.6940	ppb	07:52:09
1	Ni 231.604†	9420.2	8762.2	246.87	µg/L	246.87	ppb	07:52:09
1	P 214.914†	7328.7	6526.5	4146.3	µg/L	4146.3	ppb	07:52:09
1	Pb 220.353†	786.8	778.4	107.19	µg/L	107.19	ppb	07:52:09
1	S 181.975 Axial†	57709.1	52336.4	64236	µg/L	64236	ppb	07:51:48
1	Sb 206.836†	216.4	42.0	-21.982	µg/L	-21.982	ppb	07:52:09
1	Se 196.026†	-236.4	-191.0	14.408	µg/L	14.408	ppb	07:52:09
1	SiO2†	74866.1	66950.6	11261	µg/L	11261	ppb	07:51:48
1	Si 251.611†	104669.7	95100.7	5241.8	µg/L	5241.8	ppb	07:51:48
1	Sn 189.927†	30.6	-19.7	4.4120	µg/L	4.4120	ppb	07:52:09
1	Ti 334.940†	305846.3	278582.9	1195.1	µg/L	1195.1	ppb	07:51:48
1	Tl 190.801†	-159.3	-66.4	10.334	µg/L	10.334	ppb	07:52:09
1	U 367.007†	3916.1	2674.3	-76.39	µg/L	-76.39	ppb	07:51:48
1	V 292.402†	10565.2	9730.4	175.11	µg/L	175.11	ppb	07:52:09
1	Zn 213.857†	74214.2	66525.7	480.03	µg/L	480.03	ppb	07:51:48
2	Sc RADIAL	25320.4	25320.4	115	%			07:51:30
2	Al 396.153Radial†	301965.3	263416.3	84718	µg/L	84718	ppb	07:51:25
2	Ca 317.933Radial†	1085510.9	946300.2	202660	µg/L	202660	ppb	07:51:25
2	Fe 238.204 Radial†	1396187.1	1217480.1	236960	µg/L	236960	ppb	07:51:25
2	K 766.490 Radial†	15705.7	13274.2	12043	µg/L	12043	ppb	07:51:30
2	Mg 279.077 IEC†	63583.8	55390.9	90522	µg/L	90522	ppb	07:51:30
2	Na 589.592 Radial†	1014.6	757.2	854.27	µg/L	854.27	ppb	07:51:30
2	Sr 421.552†	182143.2	158573.6	928.89	µg/L	928.89	ppb	07:51:30
2	Sc 361.383	400245.0	400245.0	109.30	%			07:52:16
2	Y 371.029	419352.4	419352.4	116.53	%			07:52:16
2	Ag 328.068†	-3866.3	-2853.8	6.1224	µg/L	6.1224	ppb	07:52:16
2	As 188.979†	137.3	138.4	73.710	µg/L	73.710	ppb	07:52:36
2	B 249.677†	-26547.6	-24463.0	109.69	µg/L	109.69	ppb	07:52:16
2	Ba 233.527†	77360.8	70797.0	590.06	µg/L	590.06	ppb	07:52:16
2	Be 313.107†	677.4	4193.7	6.1717	µg/L	6.1717	ppb	07:52:36
2	Cd 226.502†	2392.9	2512.5	0.0755	µg/L	0.0755	ppb	07:52:36
2	Co 228.616†	4837.4	4648.4	104.18	µg/L	104.18	ppb	07:52:36
2	Cr 267.716†	7590.4	6822.9	138.38	µg/L	138.38	ppb	07:52:36
2	Cu 324.752†	40922.2	35521.7	275.47	µg/L	275.47	ppb	07:52:16
2	Mn 257.610†	2852960.1	2609866.2	4114.0	µg/L	4114.0	ppb	07:52:16
2	Mo 202.031†	92.3	51.5	7.3772	µg/L	7.3772	ppb	07:52:36
2	Ni 231.604†	9434.7	8836.3	248.95	µg/L	248.95	ppb	07:52:36
2	P 214.914†	7339.2	6583.4	4183.0	µg/L	4183.0	ppb	07:52:36

2	Pb 220.353†	757.1	756.2	104.60	µg/L	104.60	ppb	07:52:36
2	S 181.975 Axial†	56973.5	52035.7	63866	µg/L	63866	ppb	07:52:16
2	Sb 206.836†	201.1	29.4	-25.814	µg/L	-25.814	ppb	07:52:36
2	Se 196.026†	-241.7	-197.4	12.100	µg/L	12.100	ppb	07:52:36
2	SiO2†	74007.8	66648.4	11210	µg/L	11210	ppb	07:52:16
2	Si 251.611†	103688.5	94878.3	5229.4	µg/L	5229.4	ppb	07:52:16
2	Sn 189.927†	55.3	3.0	7.2564	µg/L	7.2564	ppb	07:52:36
2	Ti 334.940†	303181.5	278118.2	1193.2	µg/L	1193.2	ppb	07:52:16
2	Tl 190.801†	-158.3	-66.5	10.439	µg/L	10.439	ppb	07:52:36
2	U 367.007†	3817.8	2609.7	-106.0	µg/L	-106.0	ppb	07:52:16
2	V 292.402†	10600.3	9830.7	176.73	µg/L	176.73	ppb	07:52:36
2	Zn 213.857†	73627.3	66467.6	479.42	µg/L	479.42	ppb	07:52:16
3	Sc RADIAL	25494.9	25494.9	115	%			07:51:40
3	Al 396.153Radial†	305271.4	264478.0	85059	µg/L	85059	ppb	07:51:35
3	Ca 317.933Radial†	1095071.4	948103.5	203040	µg/L	203040	ppb	07:51:35
3	Fe 238.204 Radial†	1406160.7	1217787.5	237020	µg/L	237020	ppb	07:51:35
3	K 766.490 Radial†	15733.0	13204.1	11980	µg/L	11980	ppb	07:51:40
3	Mg 279.077 IEC†	64223.3	55565.3	90807	µg/L	90807	ppb	07:51:40
3	Na 589.592 Radial†	1017.1	753.3	848.20	µg/L	848.20	ppb	07:51:40
3	Sr 421.552†	183557.1	158711.4	929.70	µg/L	929.70	ppb	07:51:40
3	Sc 361.383	401640.2	401640.2	109.68	%			07:52:43
3	Y 371.029	420910.2	420910.2	116.96	%			07:52:43
3	Ag 328.068†	-3920.6	-2891.0	5.7399	µg/L	5.7399	ppb	07:52:43
3	As 188.979†	138.3	138.9	73.938	µg/L	73.938	ppb	07:53:03
3	B 249.677†	-26644.7	-24467.1	109.78	µg/L	109.78	ppb	07:52:43
3	Ba 233.527†	78102.2	71227.1	593.68	µg/L	593.68	ppb	07:52:43
3	Be 313.107†	625.8	4144.5	6.1429	µg/L	6.1429	ppb	07:53:03
3	Cd 226.502†	2413.7	2523.9	0.1865	µg/L	0.1865	ppb	07:53:03
3	Co 228.616†	4880.9	4672.6	104.73	µg/L	104.73	ppb	07:53:03
3	Cr 267.716†	7662.0	6864.1	139.18	µg/L	139.18	ppb	07:53:03
3	Cu 324.752†	41143.2	35593.2	276.01	µg/L	276.01	ppb	07:52:43
3	Mn 257.610†	2874872.8	2620778.0	4131.1	µg/L	4131.1	ppb	07:52:43
3	Mo 202.031†	94.0	52.7	7.4475	µg/L	7.4475	ppb	07:53:03
3	Ni 231.604†	9475.8	8843.8	249.16	µg/L	249.16	ppb	07:53:03
3	P 214.914†	7391.4	6607.6	4199.1	µg/L	4199.1	ppb	07:53:03
3	Pb 220.353†	790.7	784.5	108.11	µg/L	108.11	ppb	07:53:03
3	S 181.975 Axial†	57311.9	52163.2	64023	µg/L	64023	ppb	07:52:43
3	Sb 206.836†	197.7	25.7	-26.910	µg/L	-26.910	ppb	07:53:03
3	Se 196.026†	-249.1	-203.3	9.3105	µg/L	9.3105	ppb	07:53:03
3	SiO2†	74542.6	66900.7	11252	µg/L	11252	ppb	07:52:43
3	Si 251.611†	104533.4	95319.1	5253.7	µg/L	5253.7	ppb	07:52:43
3	Sn 189.927†	44.6	-6.8	6.0406	µg/L	6.0406	ppb	07:53:03
3	Ti 334.940†	305398.8	279176.3	1197.7	µg/L	1197.7	ppb	07:52:43
3	Tl 190.801†	-158.5	-66.2	10.533	µg/L	10.533	ppb	07:53:03
3	U 367.007†	3923.5	2693.9	-76.84	µg/L	-76.84	ppb	07:52:43
3	V 292.402†	10729.4	9914.6	177.86	µg/L	177.86	ppb	07:53:03
3	Zn 213.857†	74090.9	66656.3	480.85	µg/L	480.85	ppb	07:52:43

Mean Data: 454715002|1782974|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	401657.7	109.68	%	0.388				0.35%
Sc RADIAL	25365.4	115	%	0.52				0.45%
Y 371.029	420854.8	116.95	%	0.410				0.35%
Ag 328.068†	-2870.9	5.8631	µg/L	0.22464	5.8631	ppb	0.22464	3.83%
Al 396.153Radial†	262573.2	84447	µg/L	784.17	84447	ppb	784.17	0.93%
As 188.979†	137.0	73.080	µg/L	1.2944	73.080	ppb	1.2944	1.77%
B 249.677†	-24416.9	109.23	µg/L	0.878	109.23	ppb	0.878	0.80%
Ba 233.527†	71010.6	591.87	µg/L	1.809	591.87	ppb	1.809	0.31%
Be 313.107†	4141.3	6.1285	µg/L	0.05187	6.1285	ppb	0.05187	0.85%
Ca 317.933Radial†	944771.6	202330	µg/L	921.88	202330	ppb	921.88	0.46%
Cd 226.502†	2506.7	0.0707	µg/L	0.11826	0.0707	ppb	0.11826	167.24%
Co 228.616†	4643.0	104.05	µg/L	0.748	104.05	ppb	0.748	0.72%
Cr 267.716†	6818.7	138.28	µg/L	0.956	138.28	ppb	0.956	0.69%
Cu 324.752†	35515.6	275.40	µg/L	0.646	275.40	ppb	0.646	0.23%
Fe 238.204 Radial†	1214854.5	236450	µg/L	937.41	236450	ppb	937.41	0.40%
K 766.490 Radial†	13221.9	11996	µg/L	41.81	11996	ppb	41.81	0.35%
Mg 279.077 IEC†	55571.6	90817	µg/L	300.64	90817	ppb	300.64	0.33%
Mn 257.610†	2615196.9	4122.3	µg/L	8.58	4122.3	ppb	8.58	0.21%
Mo 202.031†	53.9	7.5062	µg/L	0.16635	7.5062	ppb	0.16635	2.22%

Na 589.592 Radial†	752.2	847.25	µg/L	7.549	847.25	ppb	7.549	0.89%
Ni 231.604†	8814.1	248.33	µg/L	1.264	248.33	ppb	1.264	0.51%
P 214.914†	6572.5	4176.1	µg/L	27.07	4176.1	ppb	27.07	0.65%
Pb 220.353†	773.0	106.63	µg/L	1.817	106.63	ppb	1.817	1.70%
S 181.975 Axial†	52178.5	64042	µg/L	185.78	64042	ppb	185.78	0.29%
Concentration greater than upper limit for S 181.975 Axial.								
Sb 206.836†	32.4	-24.902	µg/L	2.5873	-24.902	ppb	2.5873	10.39%
Concentration less than lower limit for Sb 206.836.								
Se 196.026†	-197.2	11.939	µg/L	2.5523	11.939	ppb	2.5523	21.38%
SiO2†	66833.2	11241	µg/L	27.51	11241	ppb	27.51	0.24%
Si 251.611†	95099.3	5241.6	µg/L	12.19	5241.6	ppb	12.19	0.23%
Sn 189.927†	-7.8	5.9030	µg/L	1.42719	5.9030	ppb	1.42719	24.18%
Sr 421.552†	158625.2	929.20	µg/L	0.432	929.20	ppb	0.432	0.05%
Ti 334.940†	278625.8	1195.3	µg/L	2.26	1195.3	ppb	2.26	0.19%
Tl 190.801†	-66.3	10.435	µg/L	0.0995	10.435	ppb	0.0995	0.95%
U 367.007†	2659.3	-86.42	µg/L	16.980	-86.42	ppb	16.980	19.65%
Concentration less than lower limit for U 367.007.								
V 292.402†	9825.2	176.57	µg/L	1.380	176.57	ppb	1.380	0.78%
Zn 213.857†	66549.9	480.10	µg/L	0.717	480.10	ppb	0.717	0.15%

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Sequence No.: 10 **Autosampler Location: 308**
Sample ID: 454715003|1782974|1| **Date Collected: 7/23/2018 07:53:11**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454715003|1782974|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25247.0	25247.0	114	%			07:53:47
1	Al 396.153Radial†	277489.8	242777.0	78080	µg/L	78080	ppb	07:53:42
1	Ca 317.933Radial†	991763.9	867066.4	185690	µg/L	185690	ppb	07:53:42
1	Fe 238.204 Radial†	1315738.3	1150664.7	223960	µg/L	223960	ppb	07:53:42
1	K 766.490 Radial†	13686.4	11548.0	10474	µg/L	10474	ppb	07:53:47
1	Mg 279.077 IEC†	61745.0	53944.0	88157	µg/L	88157	ppb	07:53:47
1	Na 589.592 Radial†	989.4	737.7	841.39	µg/L	841.39	ppb	07:53:47
1	Sr 421.552†	154360.0	134737.5	789.03	µg/L	789.03	ppb	07:53:47
1	Sc 361.383	402276.5	402276.5	109.85	%			07:54:16
1	Y 371.029	423409.2	423409.2	117.66	%			07:54:16
1	Ag 328.068†	-3647.5	-2636.7	6.3926	µg/L	6.3926	ppb	07:54:16
1	As 188.979†	116.0	118.4	64.216	µg/L	64.216	ppb	07:54:37
1	B 249.677†	-24985.6	-22918.4	110.40	µg/L	110.40	ppb	07:54:16
1	Ba 233.527†	65214.5	59382.4	494.31	µg/L	494.31	ppb	07:54:16
1	Be 313.107†	624.0	4141.9	5.9113	µg/L	5.9113	ppb	07:54:37
1	Cd 226.502†	2203.1	2328.7	-0.3832	µg/L	-0.3832	ppb	07:54:37
1	Co 228.616†	4436.0	4260.7	95.637	µg/L	95.637	ppb	07:54:37
1	Cr 267.716†	7094.4	6336.3	128.39	µg/L	128.39	ppb	07:54:37
1	Cu 324.752†	38107.4	32770.3	254.46	µg/L	254.46	ppb	07:54:16
1	Mn 257.610†	2950111.8	2685124.3	4231.4	µg/L	4231.4	ppb	07:54:16
1	Mo 202.031†	80.1	39.9	6.4760	µg/L	6.4760	ppb	07:54:37
1	Ni 231.604†	8941.9	8344.1	235.09	µg/L	235.09	ppb	07:54:37
1	P 214.914†	7008.5	6248.4	3970.6	µg/L	3970.6	ppb	07:54:37
1	Pb 220.353†	770.5	765.0	104.77	µg/L	104.77	ppb	07:54:37
1	S 181.975 Axial†	48952.4	44470.6	54574	µg/L	54574	ppb	07:54:16
1	Sb 206.836†	201.0	28.3	-24.348	µg/L	-24.348	ppb	07:54:37
1	Se 196.026†	-218.7	-175.4	16.716	µg/L	16.716	ppb	07:54:37
1	SiO2†	66427.8	59406.1	9988.6	µg/L	9988.6	ppb	07:54:16
1	Si 251.611†	92877.1	84557.2	4659.6	µg/L	4659.6	ppb	07:54:16
1	Sn 189.927†	40.2	-10.9	4.6906	µg/L	4.6906	ppb	07:54:37
1	Ti 334.940†	251758.5	229905.4	987.13	µg/L	987.13	ppb	07:54:16
1	Tl 190.801†	-151.4	-59.5	10.186	µg/L	10.186	ppb	07:54:37
1	U 367.007†	3689.6	2475.3	-93.81	µg/L	-93.81	ppb	07:54:16
1	V 292.402†	9857.0	9105.0	164.68	µg/L	164.68	ppb	07:54:37
1	Zn 213.857†	71504.2	64194.7	463.45	µg/L	463.45	ppb	07:54:16
2	Sc RADIAL	25531.8	25531.8	116	%			07:53:58
2	Al 396.153Radial†	279744.5	242019.1	77836	µg/L	77836	ppb	07:53:52
2	Ca 317.933Radial†	995325.0	860468.1	184270	µg/L	184270	ppb	07:53:52
2	Fe 238.204 Radial†	1319995.8	1141507.0	222170	µg/L	222170	ppb	07:53:52
2	K 766.490 Radial†	13864.8	11568.7	10493	µg/L	10493	ppb	07:53:58
2	Mg 279.077 IEC†	62272.5	53797.7	87918	µg/L	87918	ppb	07:53:58
2	Na 589.592 Radial†	1021.5	755.8	871.57	µg/L	871.57	ppb	07:53:58
2	Sr 421.552†	156079.6	134718.3	788.94	µg/L	788.94	ppb	07:53:58
2	Sc 361.383	401609.4	401609.4	109.67	%			07:54:44
2	Y 371.029	422244.5	422244.5	117.34	%			07:54:44
2	Ag 328.068†	-3803.2	-2784.3	4.6249	µg/L	4.6249	ppb	07:54:44
2	As 188.979†	122.3	124.3	66.723	µg/L	66.723	ppb	07:55:04
2	B 249.677†	-25001.0	-22970.3	101.73	µg/L	101.73	ppb	07:54:44
2	Ba 233.527†	64946.3	59236.5	493.12	µg/L	493.12	ppb	07:54:44
2	Be 313.107†	647.0	4163.9	5.9163	µg/L	5.9163	ppb	07:55:04
2	Cd 226.502†	2200.2	2329.4	-0.1808	µg/L	-0.1808	ppb	07:55:04
2	Co 228.616†	4460.1	4289.3	96.308	µg/L	96.308	ppb	07:55:04
2	Cr 267.716†	7115.8	6366.5	128.95	µg/L	128.95	ppb	07:55:04
2	Cu 324.752†	37908.7	32646.7	253.46	µg/L	253.46	ppb	07:54:44
2	Mn 257.610†	2938092.2	2678625.4	4221.0	µg/L	4221.0	ppb	07:54:44
2	Mo 202.031†	82.6	42.4	6.5829	µg/L	6.5829	ppb	07:55:04
2	Ni 231.604†	8930.2	8346.9	235.13	µg/L	235.13	ppb	07:55:04
2	P 214.914†	7016.4	6266.2	3984.0	µg/L	3984.0	ppb	07:55:04

2	Pb 220.353†	760.2	756.7	103.68	µg/L	103.68	ppb	07:55:04
2	S 181.975 Axial†	48533.1	44162.3	54195	µg/L	54195	ppb	07:54:44
2	Sb 206.836†	196.1	24.2	-25.286	µg/L	-25.286	ppb	07:55:04
2	Se 196.026†	-234.5	-190.0	8.9836	µg/L	8.9836	ppb	07:55:04
2	SiO2†	65998.1	59114.7	9939.8	µg/L	9939.8	ppb	07:54:44
2	Si 251.611†	92107.6	83996.0	4628.7	µg/L	4628.7	ppb	07:54:44
2	Sn 189.927†	58.5	5.8	6.7471	µg/L	6.7471	ppb	07:55:04
2	Ti 334.940†	250846.0	229454.0	985.13	µg/L	985.13	ppb	07:54:44
2	Tl 190.801†	-131.9	-41.9	13.793	µg/L	13.793	ppb	07:55:04
2	U 367.007†	3727.8	2515.7	-71.94	µg/L	-71.94	ppb	07:54:44
2	V 292.402†	9846.1	9110.0	164.39	µg/L	164.39	ppb	07:55:04
2	Zn 213.857†	71205.6	64030.6	462.39	µg/L	462.39	ppb	07:54:44
3	Sc RADIAL	25517.8	25517.8	116	%			07:54:08
3	Al 396.153Radial†	280091.8	242453.2	77976	µg/L	77976	ppb	07:54:03
3	Ca 317.933Radial†	992909.6	858853.2	183930	µg/L	183930	ppb	07:54:03
3	Fe 238.204 Radial†	1315850.8	1138550.7	221600	µg/L	221600	ppb	07:54:03
3	K 766.490 Radial†	13822.5	11538.7	10466	µg/L	10466	ppb	07:54:08
3	Mg 279.077 IEC†	62108.9	53685.8	87735	µg/L	87735	ppb	07:54:08
3	Na 589.592 Radial†	989.8	728.9	830.92	µg/L	830.92	ppb	07:54:08
3	Sr 421.552†	156071.4	134785.7	789.34	µg/L	789.34	ppb	07:54:08
3	Sc 361.383	408138.1	408138.1	111.45	%			07:55:11
3	Y 371.029	428701.4	428701.4	119.13	%			07:55:11
3	Ag 328.068†	-3729.4	-2662.6	5.7667	µg/L	5.7667	ppb	07:55:11
3	As 188.979†	122.2	122.5	65.867	µg/L	65.867	ppb	07:55:31
3	B 249.677†	-25233.5	-22814.2	104.68	µg/L	104.68	ppb	07:55:11
3	Ba 233.527†	65781.2	59038.3	491.47	µg/L	491.47	ppb	07:55:11
3	Be 313.107†	660.9	4166.9	5.9153	µg/L	5.9153	ppb	07:55:31
3	Cd 226.502†	2195.6	2293.1	-0.4946	µg/L	-0.4946	ppb	07:55:31
3	Co 228.616†	4458.7	4223.1	94.784	µg/L	94.784	ppb	07:55:31
3	Cr 267.716†	7163.2	6305.3	127.72	µg/L	127.72	ppb	07:55:31
3	Cu 324.752†	38389.4	32525.1	252.53	µg/L	252.53	ppb	07:55:11
3	Mn 257.610†	2978386.0	2671924.3	4210.5	µg/L	4210.5	ppb	07:55:11
3	Mo 202.031†	65.0	25.4	5.6048	µg/L	5.6048	ppb	07:55:31
3	Ni 231.604†	8989.4	8269.8	232.99	µg/L	232.99	ppb	07:55:31
3	P 214.914†	7097.0	6236.1	3964.5	µg/L	3964.5	ppb	07:55:31
3	Pb 220.353†	779.8	763.2	104.48	µg/L	104.48	ppb	07:55:31
3	S 181.975 Axial†	49352.5	44189.6	54229	µg/L	54229	ppb	07:55:11
3	Sb 206.836†	196.9	22.1	-25.823	µg/L	-25.823	ppb	07:55:31
3	Se 196.026†	-225.5	-178.6	14.156	µg/L	14.156	ppb	07:55:31
3	SiO2†	66930.5	58988.7	9918.7	µg/L	9918.7	ppb	07:55:11
3	Si 251.611†	93541.8	83939.4	4625.6	µg/L	4625.6	ppb	07:55:11
3	Sn 189.927†	31.1	-19.6	3.5647	µg/L	3.5647	ppb	07:55:31
3	Ti 334.940†	254407.2	228990.4	983.14	µg/L	983.14	ppb	07:55:11
3	Tl 190.801†	-157.8	-63.3	9.1751	µg/L	9.1751	ppb	07:55:31
3	U 367.007†	3800.6	2526.7	-65.68	µg/L	-65.68	ppb	07:55:11
3	V 292.402†	9902.6	9017.1	163.06	µg/L	163.06	ppb	07:55:31
3	Zn 213.857†	72203.0	63886.9	461.37	µg/L	461.37	ppb	07:55:11

Mean Data: 454715003|1782974|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	404008.0	110.32	%	0.981				0.89%
Sc RADIAL	25432.2	115	%	0.73				0.63%
Y 371.029	424785.0	118.04	%	0.956				0.81%
Ag 328.068†	-2694.5	5.5947	µg/L	0.89632	5.5947	ppb	0.89632	16.02%
Al 396.153Radial†	242416.4	77964	µg/L	122.32	77964	ppb	122.32	0.16%
As 188.979†	121.7	65.602	µg/L	1.2744	65.602	ppb	1.2744	1.94%
B 249.677†	-22901.0	105.60	µg/L	4.408	105.60	ppb	4.408	4.17%
Ba 233.527†	59219.0	492.97	µg/L	1.426	492.97	ppb	1.426	0.29%
Be 313.107†	4157.6	5.9143	µg/L	0.00263	5.9143	ppb	0.00263	0.04%
Ca 317.933Radial†	862129.3	184630	µg/L	931.86	184630	ppb	931.86	0.50%
Cd 226.502†	2317.1	-0.3529	µg/L	0.15904	-0.3529	ppb	0.15904	45.07%
Co 228.616†	4257.7	95.576	µg/L	0.7635	95.576	ppb	0.7635	0.80%
Cr 267.716†	6336.1	128.35	µg/L	0.616	128.35	ppb	0.616	0.48%
Cu 324.752†	32647.4	253.49	µg/L	0.965	253.49	ppb	0.965	0.38%
Fe 238.204 Radial†	1143574.1	222580	µg/L	1229.30	222580	ppb	1229.30	0.55%
K 766.490 Radial†	11551.8	10478	µg/L	13.94	10478	ppb	13.94	0.13%
Mg 279.077 IEC†	53809.1	87937	µg/L	211.58	87937	ppb	211.58	0.24%
Mn 257.610†	2678558.0	4221.0	µg/L	10.44	4221.0	ppb	10.44	0.25%
Mo 202.031†	35.9	6.2212	µg/L	0.53653	6.2212	ppb	0.53653	8.62%

Na 589.592 Radial†	740.8	847.96	µg/L	21.104	847.96	ppb	21.104	2.49%
Ni 231.604†	8320.3	234.40	µg/L	1.225	234.40	ppb	1.225	0.52%
P 214.914†	6250.2	3973.0	µg/L	9.95	3973.0	ppb	9.95	0.25%
Pb 220.353†	761.6	104.31	µg/L	0.563	104.31	ppb	0.563	0.54%
S 181.975 Axial†	44274.2	54333	µg/L	209.36	54333	ppb	209.36	0.39%
Concentration greater than upper limit for S 181.975 Axial.								
Sb 206.836†	24.9	-25.153	µg/L	0.7465	-25.153	ppb	0.7465	2.97%
Concentration less than lower limit for Sb 206.836.								
Se 196.026†	-181.3	13.285	µg/L	3.9390	13.285	ppb	3.9390	29.65%
SiO2†	59169.8	9949.0	µg/L	35.88	9949.0	ppb	35.88	0.36%
Si 251.611†	84164.2	4637.9	µg/L	18.79	4637.9	ppb	18.79	0.41%
Sn 189.927†	-8.2	5.0008	µg/L	1.61376	5.0008	ppb	1.61376	32.27%
Sr 421.552†	134747.1	789.10	µg/L	0.212	789.10	ppb	0.212	0.03%
Ti 334.940†	229449.9	985.13	µg/L	1.993	985.13	ppb	1.993	0.20%
Tl 190.801†	-54.9	11.051	µg/L	2.4276	11.051	ppb	2.4276	21.97%
U 367.007†	2505.9	-77.15	µg/L	14.770	-77.15	ppb	14.770	19.15%
Concentration less than lower limit for U 367.007.								
V 292.402†	9077.3	164.04	µg/L	0.867	164.04	ppb	0.867	0.53%
Zn 213.857†	64037.4	462.41	µg/L	1.040	462.41	ppb	1.040	0.22%

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Sequence No.: 11 | **Autosampler Location: 7**
Sample ID: CCV | **Date Collected: 7/23/2018 07:55:39**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25466.0	25466.0	115	%			07:56:18
1	Al 396.153Radial†	17295.2	15089.6	4831.4	µg/L	4831.4	ppb	07:56:18
1	Ca 317.933Radial†	26953.7	23073.6	4941.4	µg/L	4941.4	ppb	07:56:18
1	Fe 238.204 Radial†	28933.7	25051.7	4875.9	µg/L	4875.9	ppb	07:56:18
1	K 766.490 Radial†	6414.2	5139.7	4670.5	µg/L	4670.5	ppb	07:56:18
1	Mg 279.077 IEC†	3613.1	3076.7	5028.0	µg/L	5028.0	ppb	07:56:18
1	Na 589.592 Radial†	7145.4	6067.8	9324.2	µg/L	9324.2	ppb	07:56:18
1	Sr 421.552†	91726.0	79269.9	466.05	µg/L	466.05	ppb	07:56:13
1	Sc 361.383	412262.1	412262.1	112.58	%			07:56:45
1	Y 371.029	402676.8	402676.8	111.90	%			07:56:45
1	Ag 328.068†	51293.4	46246.7	469.66	µg/L	469.66	ppb	07:56:45
1	As 188.979†	1226.2	1102.0	488.67	µg/L	488.67	ppb	07:57:05
1	B 249.677†	16258.3	14268.8	491.44	µg/L	491.44	ppb	07:56:45
1	Ba 233.527†	62894.2	55883.3	470.25	µg/L	470.25	ppb	07:56:45
1	Be 313.107†	636078.6	568591.4	472.70	µg/L	472.70	ppb	07:56:45
1	Cd 226.502†	51531.4	46097.5	477.92	µg/L	477.92	ppb	07:56:45
1	Co 228.616†	22633.2	20327.1	468.43	µg/L	468.43	ppb	07:57:05
1	Cr 267.716†	26398.9	23327.7	464.42	µg/L	464.42	ppb	07:57:05
1	Cu 324.752†	73433.5	63309.6	465.04	µg/L	465.04	ppb	07:56:45
1	Mn 257.610†	337690.9	299508.0	470.69	µg/L	470.69	ppb	07:56:45
1	Mo 202.031†	9256.0	8189.0	464.61	µg/L	464.61	ppb	07:57:05
1	Ni 231.604†	19184.8	17245.5	476.77	µg/L	476.77	ppb	07:57:05
1	P 214.914†	4103.0	3512.9	2325.0	µg/L	2325.0	ppb	07:57:05
1	Pb 220.353†	4241.5	3831.1	473.94	µg/L	473.94	ppb	07:57:05
1	S 181.975 Axial†	964.5	764.5	936.85	µg/L	936.85	ppb	07:57:05
1	Sb 206.836†	1969.0	1594.5	453.46	µg/L	453.46	ppb	07:57:05
1	Se 196.026†	1110.1	1009.9	479.49	µg/L	479.49	ppb	07:57:05
1	SiO2†	34656.7	29719.7	5000.2	µg/L	5000.2	ppb	07:56:45
1	Si 251.611†	47936.0	42588.9	2347.2	µg/L	2347.2	ppb	07:56:45
1	Sn 189.927†	4312.5	3783.2	471.69	µg/L	471.69	ppb	07:57:05
1	Ti 334.940†	121874.1	108980.2	463.95	µg/L	463.95	ppb	07:56:45
1	Tl 190.801†	2403.4	2213.2	474.75	µg/L	474.75	ppb	07:57:05
1	U 367.007†	2409.0	1256.4	420.4	µg/L	420.4	ppb	07:56:45
1	V 292.402†	40157.1	35802.8	473.20	µg/L	473.20	ppb	07:56:45
1	Zn 213.857†	70653.7	61862.6	467.97	µg/L	467.97	ppb	07:56:45
2	Sc RADIAL	25391.9	25391.9	115	%			07:56:28
2	Al 396.153Radial†	17303.5	15140.7	4847.7	µg/L	4847.7	ppb	07:56:28
2	Ca 317.933Radial†	26858.4	23059.0	4938.2	µg/L	4938.2	ppb	07:56:28
2	Fe 238.204 Radial†	28895.5	25091.8	4883.7	µg/L	4883.7	ppb	07:56:28
2	K 766.490 Radial†	6382.2	5128.1	4659.9	µg/L	4659.9	ppb	07:56:28
2	Mg 279.077 IEC†	3596.7	3071.6	5019.7	µg/L	5019.7	ppb	07:56:28
2	Na 589.592 Radial†	7195.1	6129.1	9418.6	µg/L	9418.6	ppb	07:56:28
2	Sr 421.552†	91206.6	79050.4	464.76	µg/L	464.76	ppb	07:56:23
2	Sc 361.383	409809.6	409809.6	111.91	%			07:57:11
2	Y 371.029	400538.7	400538.7	111.30	%			07:57:11
2	Ag 328.068†	51008.6	46264.9	469.85	µg/L	469.85	ppb	07:57:11
2	As 188.979†	1225.1	1107.6	491.15	µg/L	491.15	ppb	07:57:31
2	B 249.677†	16256.8	14353.9	494.29	µg/L	494.29	ppb	07:57:11
2	Ba 233.527†	62617.5	55970.4	470.98	µg/L	470.98	ppb	07:57:11
2	Be 313.107†	634063.9	570172.3	474.01	µg/L	474.01	ppb	07:57:11
2	Cd 226.502†	51278.3	46145.3	478.42	µg/L	478.42	ppb	07:57:11
2	Co 228.616†	22660.6	20471.9	471.77	µg/L	471.77	ppb	07:57:31
2	Cr 267.716†	26391.5	23461.5	467.09	µg/L	467.09	ppb	07:57:31
2	Cu 324.752†	73027.6	63337.2	465.23	µg/L	465.23	ppb	07:57:11
2	Mn 257.610†	336490.7	300230.7	471.83	µg/L	471.83	ppb	07:57:11
2	Mo 202.031†	9267.0	8248.0	467.96	µg/L	467.96	ppb	07:57:31
2	Ni 231.604†	19170.5	17334.7	479.24	µg/L	479.24	ppb	07:57:31
2	P 214.914†	4104.6	3536.2	2340.4	µg/L	2340.4	ppb	07:57:31

2	Pb 220.353†	4242.4	3854.6	476.84 µg/L	476.84 ppb	07:57:31
2	S 181.975 Axial†	978.2	781.8	958.15 µg/L	958.15 ppb	07:57:31
2	Sb 206.836†	1964.1	1600.6	455.19 µg/L	455.19 ppb	07:57:31
2	Se 196.026†	1109.7	1015.3	482.07 µg/L	482.07 ppb	07:57:31
2	SiO2†	34641.8	29890.6	5028.9 µg/L	5028.9 ppb	07:57:11
2	Si 251.611†	47757.8	42684.5	2352.4 µg/L	2352.4 ppb	07:57:11
2	Sn 189.927†	4316.2	3809.4	474.96 µg/L	474.96 ppb	07:57:31
2	Ti 334.940†	121343.2	109153.6	464.69 µg/L	464.69 ppb	07:57:11
2	Tl 190.801†	2388.3	2212.5	474.60 µg/L	474.60 ppb	07:57:31
2	U 367.007†	2370.1	1234.4	412.7 µg/L	412.7 ppb	07:57:11
2	V 292.402†	40001.1	35876.8	474.20 µg/L	474.20 ppb	07:57:11
2	Zn 213.857†	70544.7	62140.8	470.08 µg/L	470.08 ppb	07:57:11
3	Sc RADIAL	25167.5	25167.5	114 %		07:56:38
3	Al 396.153Radial†	17270.2	15245.5	4881.4 µg/L	4881.4 ppb	07:56:38
3	Ca 317.933Radial†	26690.2	23119.6	4951.2 µg/L	4951.2 ppb	07:56:38
3	Fe 238.204 Radial†	28618.5	25072.7	4880.0 µg/L	4880.0 ppb	07:56:38
3	K 766.490 Radial†	6335.2	5136.4	4667.4 µg/L	4667.4 ppb	07:56:38
3	Mg 279.077 IEC†	3550.8	3059.1	4999.3 µg/L	4999.3 ppb	07:56:38
3	Na 589.592 Radial†	7185.8	6176.8	9491.8 µg/L	9491.8 ppb	07:56:38
3	Sr 421.552†	91538.4	80048.6	470.63 µg/L	470.63 ppb	07:56:33
3	Sc 361.383	406911.5	406911.5	111.12 %		07:57:37
3	Y 371.029	396895.1	396895.1	110.29 %		07:57:37
3	Ag 328.068†	50651.1	46267.8	469.87 µg/L	469.87 ppb	07:57:37
3	As 188.979†	1233.4	1122.8	497.85 µg/L	497.85 ppb	07:57:57
3	B 249.677†	16121.1	14335.2	493.65 µg/L	493.65 ppb	07:57:37
3	Ba 233.527†	62238.0	56027.4	471.46 µg/L	471.46 ppb	07:57:37
3	Be 313.107†	628474.5	569177.6	473.19 µg/L	473.19 ppb	07:57:37
3	Cd 226.502†	50915.5	46145.2	478.42 µg/L	478.42 ppb	07:57:37
3	Co 228.616†	22580.0	20543.6	473.42 µg/L	473.42 ppb	07:57:57
3	Cr 267.716†	26280.2	23529.3	468.43 µg/L	468.43 ppb	07:57:57
3	Cu 324.752†	72488.3	63316.6	465.09 µg/L	465.09 ppb	07:57:37
3	Mn 257.610†	333660.5	299825.2	471.19 µg/L	471.19 ppb	07:57:37
3	Mo 202.031†	9218.9	8263.7	468.85 µg/L	468.85 ppb	07:57:57
3	Ni 231.604†	19116.8	17408.4	481.27 µg/L	481.27 ppb	07:57:57
3	P 214.914†	4080.5	3540.6	2343.4 µg/L	2343.4 ppb	07:57:57
3	Pb 220.353†	4218.1	3859.7	477.47 µg/L	477.47 ppb	07:57:57
3	S 181.975 Axial†	965.1	776.2	951.27 µg/L	951.27 ppb	07:57:57
3	Sb 206.836†	1957.3	1606.9	456.99 µg/L	456.99 ppb	07:57:57
3	Se 196.026†	1110.2	1022.9	485.65 µg/L	485.65 ppb	07:57:57
3	SiO2†	34353.1	29851.2	5022.2 µg/L	5022.2 ppb	07:57:37
3	Si 251.611†	47338.4	42611.0	2348.4 µg/L	2348.4 ppb	07:57:37
3	Sn 189.927†	4318.3	3838.8	478.60 µg/L	478.60 ppb	07:57:57
3	Ti 334.940†	120328.2	109012.4	464.08 µg/L	464.08 ppb	07:57:37
3	Tl 190.801†	2381.5	2221.6	476.54 µg/L	476.54 ppb	07:57:57
3	U 367.007†	2405.1	1281.1	429.1 µg/L	429.1 ppb	07:57:37
3	V 292.402†	39689.3	35850.8	473.88 µg/L	473.88 ppb	07:57:37
3	Zn 213.857†	70047.1	62141.9	470.07 µg/L	470.07 ppb	07:57:37

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	409661.1	111.87	%	0.731				0.65%
Sc RADIAL	25341.8	115	%	0.70				0.61%
Y 371.029	400036.9	111.16	%	0.812				0.73%
Ag 328.068†	46259.8	469.79	µg/L	0.116	469.79	ppb	0.116	0.02%
QC value within limits for Ag 328.068 Recovery = 93.96%								
Al 396.153Radial†	15158.6	4853.5	µg/L	25.47	4853.5	ppb	25.47	0.52%
QC value within limits for Al 396.153Radial Recovery = 97.07%								
As 188.979†	1110.8	492.55	µg/L	4.750	492.55	ppb	4.750	0.96%
QC value within limits for As 188.979 Recovery = 98.51%								
B 249.677†	14319.3	493.13	µg/L	1.493	493.13	ppb	1.493	0.30%
QC value within limits for B 249.677 Recovery = 98.63%								
Ba 233.527†	55960.3	470.90	µg/L	0.611	470.90	ppb	0.611	0.13%
QC value within limits for Ba 233.527 Recovery = 94.18%								
Be 313.107†	569313.8	473.30	µg/L	0.663	473.30	ppb	0.663	0.14%
QC value within limits for Be 313.107 Recovery = 94.66%								
Ca 317.933Radial†	23084.1	4943.6	µg/L	6.78	4943.6	ppb	6.78	0.14%
QC value within limits for Ca 317.933Radial Recovery = 98.87%								
Cd 226.502†	46129.3	478.25	µg/L	0.286	478.25	ppb	0.286	0.06%
QC value within limits for Cd 226.502 Recovery = 95.65%								

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Co 228.616†            20447.5      471.20 µg/L         2.545      471.20 ppb          2.545   0.54%
   QC value within limits for Co 228.616  Recovery = 94.24%
Cr 267.716†            23439.5      466.65 µg/L         2.040      466.65 ppb          2.040   0.44%
   QC value within limits for Cr 267.716  Recovery = 93.33%
Cu 324.752†            63321.1      465.12 µg/L         0.101      465.12 ppb          0.101   0.02%
   QC value within limits for Cu 324.752  Recovery = 93.02%
Fe 238.204 Radial†     25072.1      4879.8 µg/L          3.90      4879.8 ppb           3.90   0.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.60%
K 766.490 Radial†       5134.7      4666.0 µg/L          5.45      4666.0 ppb           5.45   0.12%
   QC value within limits for K 766.490 Radial  Recovery = 93.32%
Mg 279.077 IEC†         3069.1      5015.7 µg/L         14.78      5015.7 ppb          14.78   0.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.31%
Mn 257.610†           299854.6      471.24 µg/L         0.569      471.24 ppb          0.569   0.12%
   QC value within limits for Mn 257.610  Recovery = 94.25%
Mo 202.031†             8233.6      467.14 µg/L         2.236      467.14 ppb          2.236   0.48%
   QC value within limits for Mo 202.031  Recovery = 93.43%
Na 589.592 Radial†      6124.5      9411.6 µg/L         84.02      9411.6 ppb          84.02   0.89%
   QC value within limits for Na 589.592 Radial  Recovery = 94.12%
Ni 231.604†            17329.5      479.09 µg/L         2.254      479.09 ppb          2.254   0.47%
   QC value within limits for Ni 231.604  Recovery = 95.82%
P 214.914†              3529.9      2336.3 µg/L          9.87      2336.3 ppb           9.87   0.42%
   QC value within limits for P 214.914  Recovery = 93.45%
Pb 220.353†             3848.5      476.08 µg/L         1.883      476.08 ppb          1.883   0.40%
   QC value within limits for Pb 220.353  Recovery = 95.22%
S 181.975 Axial†         774.2      948.76 µg/L        10.869      948.76 ppb         10.869   1.15%
   QC value within limits for S 181.975 Axial  Recovery = 94.88%
Sb 206.836†             1600.6      455.21 µg/L         1.766      455.21 ppb          1.766   0.39%
   QC value within limits for Sb 206.836  Recovery = 91.04%
Se 196.026†             1016.0      482.40 µg/L         3.097      482.40 ppb          3.097   0.64%
   QC value within limits for Se 196.026  Recovery = 96.48%
SiO2†                  29820.5      5017.1 µg/L         15.03      5017.1 ppb          15.03   0.30%
   QC value within limits for SiO2  Recovery = 93.82%
Si 251.611†            42628.2      2349.3 µg/L          2.75      2349.3 ppb           2.75   0.12%
   QC value within limits for Si 251.611  Recovery = 93.97%
Sn 189.927†             3810.4      475.08 µg/L         3.455      475.08 ppb          3.455   0.73%
   QC value within limits for Sn 189.927  Recovery = 95.02%
Sr 421.552†            79456.3      467.14 µg/L         3.084      467.14 ppb          3.084   0.66%
   QC value within limits for Sr 421.552  Recovery = 93.43%
Ti 334.940†           109048.7      464.24 µg/L         0.395      464.24 ppb          0.395   0.09%
   QC value within limits for Ti 334.940  Recovery = 92.85%
Tl 190.801†             2215.7      475.30 µg/L         1.082      475.30 ppb          1.082   0.23%
   QC value within limits for Tl 190.801  Recovery = 95.06%
U 367.007†              1257.3       420.7 µg/L          8.21       420.7 ppb           8.21   1.95%
   QC value less than the lower limit for U 367.007  Recovery = 84.14%
V 292.402†             35843.5      473.76 µg/L         0.509      473.76 ppb          0.509   0.11%
   QC value within limits for V 292.402  Recovery = 94.75%
Zn 213.857†            62048.4      469.37 µg/L         1.215      469.37 ppb          1.215   0.26%
   QC value within limits for Zn 213.857  Recovery = 93.87%
QC Failed.  Continue with analysis.
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Sequence No.: 12 | **Autosampler Location: 8**
Sample ID: CCB | **Date Collected: 7/23/2018 07:58:06**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24888.5	24888.5	113	%			07:58:57
1	Al 396.153Radial†	-84.2	19.3	6.2262	µg/L	6.2262	ppb	07:58:57
1	Ca 317.933Radial†	460.8	112.5	24.092	µg/L	24.092	ppb	07:58:57
1	Fe 238.204 Radial†	35.9	-3.2	-0.6294	µg/L	-0.6294	ppb	07:58:57
1	K 766.490 Radial†	534.9	52.8	48.032	µg/L	48.032	ppb	07:58:37
1	Mg 279.077 IEC†	74.0	9.6	15.704	µg/L	15.704	ppb	07:58:57
1	Na 589.592 Radial†	118.5	-22.5	-34.543	µg/L	-34.543	ppb	07:58:57
1	Sr 421.552†	261.2	-28.8	-0.1697	µg/L	-0.1697	ppb	07:58:37
1	Sc 361.383	409296.1	409296.1	111.77	%			07:59:53
1	Y 371.029	403762.2	403762.2	112.20	%			07:59:53
1	Ag 328.068†	-802.0	-33.9	-0.3585	µg/L	-0.3585	ppb	07:59:53
1	As 188.979†	-23.1	-7.9	-3.4788	µg/L	-3.4788	ppb	08:00:14
1	B 249.677†	234.7	36.8	1.2157	µg/L	1.2157	ppb	08:00:14
1	Ba 233.527†	-4.9	11.2	0.0939	µg/L	0.0939	ppb	08:00:14
1	Be 313.107†	-3594.2	358.1	0.3043	µg/L	0.3043	ppb	07:59:53
1	Cd 226.502†	-320.4	36.4	0.3785	µg/L	0.3785	ppb	08:00:14
1	Co 228.616†	-200.0	43.5	1.0011	µg/L	1.0011	ppb	08:00:14
1	Cr 267.716†	119.7	-14.9	-0.3167	µg/L	-0.3167	ppb	08:00:14
1	Cu 324.752†	2062.7	-74.6	-0.5307	µg/L	-0.5307	ppb	07:59:53
1	Mn 257.610†	504.4	-5.5	-0.0087	µg/L	-0.0087	ppb	08:00:14
1	Mo 202.031†	24.9	-10.7	-0.6065	µg/L	-0.6065	ppb	08:00:14
1	Ni 231.604†	-176.9	45.6	1.2615	µg/L	1.2615	ppb	08:00:14
1	P 214.914†	107.7	-35.3	-23.480	µg/L	-23.480	ppb	08:00:14
1	Pb 220.353†	-65.5	5.0	0.5936	µg/L	0.5936	ppb	08:00:14
1	S 181.975 Axial†	133.5	27.1	33.280	µg/L	33.280	ppb	08:00:14
1	Sb 206.836†	161.4	-10.2	-2.9334	µg/L	-2.9334	ppb	08:00:14
1	Se 196.026†	-27.9	-1.2	-0.5857	µg/L	-0.5857	ppb	08:00:14
1	SiO2†	1253.4	56.2	9.5294	µg/L	9.5294	ppb	08:00:14
1	Si 251.611†	210.9	196.9	10.897	µg/L	10.897	ppb	08:00:14
1	Sn 189.927†	31.9	-19.0	-2.3553	µg/L	-2.3553	ppb	08:00:14
1	Ti 334.940†	-727.8	70.3	0.2885	µg/L	0.2885	ppb	07:59:53
1	Tl 190.801†	-81.2	5.7	1.2306	µg/L	1.2306	ppb	08:00:14
1	U 367.007†	1071.6	75.3	26.49	µg/L	26.49	ppb	07:59:53
1	V 292.402†	-148.3	-0.8	-0.0015	µg/L	-0.0015	ppb	08:00:14
1	Zn 213.857†	1193.4	169.9	1.2884	µg/L	1.2884	ppb	08:00:14
2	Sc RADIAL	24806.2	24806.2	112	%			07:59:22
2	Al 396.153Radial†	-131.6	-23.2	-7.4488	µg/L	-7.4488	ppb	07:59:22
2	Ca 317.933Radial†	479.7	130.6	27.974	µg/L	27.974	ppb	07:59:22
2	Fe 238.204 Radial†	55.4	14.3	2.7806	µg/L	2.7806	ppb	07:59:22
2	K 766.490 Radial†	556.2	73.4	66.725	µg/L	66.725	ppb	07:59:02
2	Mg 279.077 IEC†	48.2	-13.1	-21.452	µg/L	-21.452	ppb	07:59:22
2	Na 589.592 Radial†	108.4	-31.1	-47.776	µg/L	-47.776	ppb	07:59:22
2	Sr 421.552†	338.8	41.1	0.2411	µg/L	0.2411	ppb	07:59:02
2	Sc 361.383	404818.5	404818.5	110.54	%			08:00:19
2	Y 371.029	399276.3	399276.3	110.95	%			08:00:19
2	Ag 328.068†	-658.8	87.7	0.8780	µg/L	0.8780	ppb	08:00:19
2	As 188.979†	-20.4	-5.7	-2.4967	µg/L	-2.4967	ppb	08:00:39
2	B 249.677†	228.0	33.1	1.1055	µg/L	1.1055	ppb	08:00:39
2	Ba 233.527†	-15.2	1.7	0.0145	µg/L	0.0145	ppb	08:00:39
2	Be 313.107†	-3560.4	353.1	0.2984	µg/L	0.2984	ppb	08:00:19
2	Cd 226.502†	-283.2	66.9	0.6935	µg/L	0.6935	ppb	08:00:39
2	Co 228.616†	-195.7	45.4	1.0444	µg/L	1.0444	ppb	08:00:39
2	Cr 267.716†	127.2	-6.9	-0.1521	µg/L	-0.1521	ppb	08:00:39
2	Cu 324.752†	1974.6	-133.9	-0.9708	µg/L	-0.9708	ppb	08:00:19
2	Mn 257.610†	495.8	-8.4	-0.0129	µg/L	-0.0129	ppb	08:00:39
2	Mo 202.031†	30.7	-5.2	-0.2940	µg/L	-0.2940	ppb	08:00:39
2	Ni 231.604†	-222.4	2.7	0.0748	µg/L	0.0748	ppb	08:00:39
2	P 214.914†	107.3	-34.7	-23.062	µg/L	-23.062	ppb	08:00:39

2	Pb 220.353†	-48.4	19.7	2.4245 µg/L	2.4245 ppb		08:00:39
2	S 181.975 Axial†	127.8	23.2	28.552 µg/L	28.552 ppb		08:00:39
2	Sb 206.836†	155.9	-13.6	-3.8837 µg/L	-3.8837 ppb		08:00:39
2	Se 196.026†	-12.8	12.2	5.7462 µg/L	5.7462 ppb		08:00:39
2	SiO2†	1248.6	64.3	10.875 µg/L	10.875 ppb		08:00:39
2	Si 251.611†	209.3	197.5	10.929 µg/L	10.929 ppb		08:00:39
2	Sn 189.927†	58.9	5.8	0.7223 µg/L	0.7223 ppb		08:00:39
2	Ti 334.940†	-652.1	131.6	0.5530 µg/L	0.5530 ppb		08:00:19
2	Tl 190.801†	-97.3	-9.7	-2.0594 µg/L	-2.0594 ppb		08:00:39
2	U 367.007†	1036.6	54.3	19.07 µg/L	19.07 ppb		08:00:19
2	V 292.402†	-143.0	2.5	0.0416 µg/L	0.0416 ppb		08:00:39
2	Zn 213.857†	1217.8	203.8	1.5537 µg/L	1.5537 ppb		08:00:39
3	Sc RADIAL	24765.7	24765.7	112 %			07:59:47
3	Al 396.153Radial†	-124.4	-16.9	-5.4558 µg/L	-5.4558 ppb		07:59:47
3	Ca 317.933Radial†	456.3	110.5	23.657 µg/L	23.657 ppb		07:59:47
3	Fe 238.204 Radial†	51.7	11.1	2.1561 µg/L	2.1561 ppb		07:59:47
3	K 766.490 Radial†	427.8	-40.3	-36.595 µg/L	-36.595 ppb		07:59:27
3	Mg 279.077 IEC†	64.7	1.6	2.5978 µg/L	2.5978 ppb		07:59:47
3	Na 589.592 Radial†	111.7	-28.0	-43.031 µg/L	-43.031 ppb		07:59:47
3	Sr 421.552†	225.6	-59.4	-0.3495 µg/L	-0.3495 ppb		07:59:27
3	Sc 361.383	407165.0	407165.0	111.18 %			08:00:44
3	Y 371.029	401357.4	401357.4	111.53 %			08:00:44
3	Ag 328.068†	-717.5	38.4	0.3837 µg/L	0.3837 ppb		08:00:44
3	As 188.979†	-13.1	1.0	0.4496 µg/L	0.4496 ppb		08:01:04
3	B 249.677†	263.9	64.1	2.1357 µg/L	2.1357 ppb		08:01:04
3	Ba 233.527†	9.2	23.8	0.2001 µg/L	0.2001 ppb		08:01:04
3	Be 313.107†	-3646.2	294.6	0.2471 µg/L	0.2471 ppb		08:00:44
3	Cd 226.502†	-312.3	42.2	0.4375 µg/L	0.4375 ppb		08:01:04
3	Co 228.616†	-200.5	42.1	0.9692 µg/L	0.9692 ppb		08:01:04
3	Cr 267.716†	132.3	-3.0	-0.0659 µg/L	-0.0659 ppb		08:01:04
3	Cu 324.752†	2101.6	-29.9	-0.2143 µg/L	-0.2143 ppb		08:00:44
3	Mn 257.610†	505.6	-2.1	-0.0031 µg/L	-0.0031 ppb		08:01:04
3	Mo 202.031†	40.8	3.7	0.2127 µg/L	0.2127 ppb		08:01:04
3	Ni 231.604†	-246.3	-17.6	-0.4866 µg/L	-0.4866 ppb		08:01:04
3	P 214.914†	130.2	-14.6	-9.7265 µg/L	-9.7265 ppb		08:01:04
3	Pb 220.353†	-80.9	-9.2	-1.1479 µg/L	-1.1479 ppb		08:01:04
3	S 181.975 Axial†	132.1	26.5	32.561 µg/L	32.561 ppb		08:01:04
3	Sb 206.836†	166.0	-5.3	-1.5199 µg/L	-1.5199 ppb		08:01:04
3	Se 196.026†	-21.1	4.8	2.2810 µg/L	2.2810 ppb		08:01:04
3	SiO2†	1251.1	60.0	10.132 µg/L	10.132 ppb		08:01:04
3	Si 251.611†	195.8	184.3	10.189 µg/L	10.189 ppb		08:01:04
3	Sn 189.927†	37.9	-13.5	-1.6707 µg/L	-1.6707 ppb		08:01:04
3	Ti 334.940†	-633.0	152.2	0.6452 µg/L	0.6452 ppb		08:00:44
3	Tl 190.801†	-81.9	4.7	1.0047 µg/L	1.0047 ppb		08:01:04
3	U 367.007†	1009.5	24.5	8.596 µg/L	8.596 ppb		08:00:44
3	V 292.402†	-167.5	-18.8	-0.2385 µg/L	-0.2385 ppb		08:01:04
3	Zn 213.857†	1229.3	207.8	1.5859 µg/L	1.5859 ppb		08:01:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	407093.2	111.17	%	0.612				0.55%
Sc RADIAL	24820.1	112	%	0.28				0.25%
Y 371.029	401465.3	111.56	%	0.624				0.56%
Ag 328.068†	30.8	0.3011	µg/L	0.62235	0.3011	ppb	0.62235	206.71%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-7.0	-2.2261	µg/L	7.38744	-2.2261	ppb	7.38744	331.85%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.2	-1.8419	µg/L	2.04440	-1.8419	ppb	2.04440	110.99%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	44.6	1.4856	µg/L	0.56567	1.4856	ppb	0.56567	38.08%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	12.2	0.1028	µg/L	0.09311	0.1028	ppb	0.09311	90.54%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	335.2	0.2833	µg/L	0.03144	0.2833	ppb	0.03144	11.10%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	117.9	25.241	µg/L	2.3771	25.241	ppb	2.3771	9.42%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	48.5	0.5032	µg/L	0.16748	0.5032	ppb	0.16748	33.28%
QC value within limits for Cd 226.502 Recovery = Not calculated								

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Co 228.616†                43.7      1.0049 µg/L       0.03774      1.0049 ppb        0.03774   3.76%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -8.2     -0.1782 µg/L       0.12740     -0.1782 ppb        0.12740  71.49%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -79.5     -0.5719 µg/L       0.37996     -0.5719 ppb        0.37996  66.43%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          7.4      1.4358 µg/L       1.81552      1.4358 ppb        1.81552 126.45%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          28.7      26.054 µg/L       55.0547      26.054 ppb        55.0547 211.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.6     -1.0501 µg/L      18.84483     -1.0501 ppb       18.84483 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -5.3     -0.0083 µg/L       0.00492     -0.0083 ppb        0.00492  59.54%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -4.0     -0.2293 µg/L       0.41342     -0.2293 ppb        0.41342 180.30%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -27.2     -41.783 µg/L        6.7040     -41.783 ppb         6.7040  16.04%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                10.3      0.2832 µg/L       0.89246      0.2832 ppb        0.89246 315.09%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -28.2     -18.756 µg/L        7.8228     -18.756 ppb         7.8228  41.71%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 5.1      0.6234 µg/L       1.78636      0.6234 ppb        1.78636 286.54%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           25.6      31.464 µg/L        2.5475      31.464 ppb         2.5475   8.10%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -9.7     -2.7790 µg/L       1.18946     -2.7790 ppb        1.18946  42.80%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.2      2.4805 µg/L       3.17064      2.4805 ppb        3.17064 127.82%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      60.2      10.179 µg/L        0.6739      10.179 ppb         0.6739   6.62%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               192.9      10.672 µg/L        0.4183      10.672 ppb         0.4183   3.92%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -8.9     -1.1012 µg/L       1.61589     -1.1012 ppb        1.61589 146.74%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -15.7     -0.0927 µg/L       0.30275     -0.0927 ppb        0.30275 326.54%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               118.1      0.4956 µg/L       0.18517      0.4956 ppb        0.18517  37.36%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 0.2      0.0586 µg/L       1.83777      0.0586 ppb        1.83777 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 367.007†                 51.4       18.05 µg/L         8.990       18.05 ppb          8.990  49.80%
   QC value within limits for U 367.007  Recovery = Not calculated
V 292.402†                 -5.7     -0.0661 µg/L       0.15082     -0.0661 ppb        0.15082 228.10%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               193.8      1.4760 µg/L       0.16329      1.4760 ppb        0.16329  11.06%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 26
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 5

Autosampler Location: 7
Date Collected: 7/23/2018 08:35:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25477.5	25477.5	115	%			08:36:10
1	Al 396.153Radial†	17696.8	15431.0	4940.6	µg/L	4940.6	ppb	08:36:10
1	Ca 317.933Radial†	27849.5	23839.5	5105.4	µg/L	5105.4	ppb	08:36:10
1	Fe 238.204 Radial†	29813.3	25802.7	5022.0	µg/L	5022.0	ppb	08:36:10
1	K 766.490 Radial†	6491.7	5204.4	4729.3	µg/L	4729.3	ppb	08:36:10
1	Mg 279.077 IEC†	3694.7	3145.9	5141.2	µg/L	5141.2	ppb	08:36:10
1	Na 589.592 Radial†	7286.1	6186.9	9507.3	µg/L	9507.3	ppb	08:36:10
1	Sr 421.552†	94138.2	81324.6	478.13	µg/L	478.13	ppb	08:36:05
1	Sc 361.383	417172.9	417172.9	113.92	%			08:36:38
1	Y 371.029	407198.9	407198.9	113.15	%			08:36:38
1	Ag 328.068†	52978.2	47189.4	479.24	µg/L	479.24	ppb	08:36:38
1	As 188.979†	1283.9	1139.8	505.40	µg/L	505.40	ppb	08:36:58
1	B 249.677†	16983.0	14734.9	507.46	µg/L	507.46	ppb	08:36:38
1	Ba 233.527†	65605.0	57605.3	484.74	µg/L	484.74	ppb	08:36:38
1	Be 313.107†	664874.5	587218.1	488.18	µg/L	488.18	ppb	08:36:38
1	Cd 226.502†	54352.0	48034.7	498.01	µg/L	498.01	ppb	08:36:38
1	Co 228.616†	23552.8	20897.7	481.58	µg/L	481.58	ppb	08:36:58
1	Cr 267.716†	27311.0	23852.3	474.88	µg/L	474.88	ppb	08:36:58
1	Cu 324.752†	75800.9	64619.9	474.66	µg/L	474.66	ppb	08:36:38
1	Mn 257.610†	351573.9	308163.9	484.30	µg/L	484.30	ppb	08:36:38
1	Mo 202.031†	9605.8	8399.3	476.54	µg/L	476.54	ppb	08:36:58
1	Ni 231.604†	19890.8	17664.6	488.36	µg/L	488.36	ppb	08:36:58
1	P 214.914†	4261.8	3609.4	2388.9	µg/L	2388.9	ppb	08:36:58
1	Pb 220.353†	4418.0	3941.8	487.63	µg/L	487.63	ppb	08:36:58
1	S 181.975 Axial†	1009.0	793.4	972.32	µg/L	972.32	ppb	08:36:58
1	Sb 206.836†	2042.8	1638.6	466.05	µg/L	466.05	ppb	08:36:58
1	Se 196.026†	1163.9	1045.5	496.37	µg/L	496.37	ppb	08:36:58
1	SiO2†	36061.5	30590.5	5146.8	µg/L	5146.8	ppb	08:36:38
1	Si 251.611†	49874.4	43789.2	2413.4	µg/L	2413.4	ppb	08:36:38
1	Sn 189.927†	4502.6	3904.9	486.86	µg/L	486.86	ppb	08:36:58
1	Ti 334.940†	126113.8	111427.5	474.38	µg/L	474.38	ppb	08:36:38
1	Tl 190.801†	2502.3	2274.9	487.97	µg/L	487.97	ppb	08:36:58
1	U 367.007†	2435.3	1254.3	419.0	µg/L	419.0	ppb	08:36:38
1	V 292.402†	41637.9	36682.8	484.84	µg/L	484.84	ppb	08:36:38
1	Zn 213.857†	74009.6	64069.7	484.70	µg/L	484.70	ppb	08:36:38
2	Sc RADIAL	25583.7	25583.7	116	%			08:36:21
2	Al 396.153Radial†	17860.1	15508.2	4965.2	µg/L	4965.2	ppb	08:36:21
2	Ca 317.933Radial†	28302.2	24130.0	5167.6	µg/L	5167.6	ppb	08:36:21
2	Fe 238.204 Radial†	30281.9	26099.9	5079.9	µg/L	5079.9	ppb	08:36:21
2	K 766.490 Radial†	6578.1	5255.6	4775.8	µg/L	4775.8	ppb	08:36:21
2	Mg 279.077 IEC†	3776.2	3203.0	5234.5	µg/L	5234.5	ppb	08:36:21
2	Na 589.592 Radial†	7380.9	6242.5	9592.7	µg/L	9592.7	ppb	08:36:21
2	Sr 421.552†	94620.5	81402.1	478.58	µg/L	478.58	ppb	08:36:15
2	Sc 361.383	411869.7	411869.7	112.47	%			08:37:04
2	Y 371.029	402148.9	402148.9	111.75	%			08:37:04
2	Ag 328.068†	52472.9	47338.8	480.75	µg/L	480.75	ppb	08:37:04
2	As 188.979†	1285.8	1156.0	512.57	µg/L	512.57	ppb	08:37:24
2	B 249.677†	16764.8	14732.9	507.59	µg/L	507.59	ppb	08:37:04
2	Ba 233.527†	64655.2	57502.3	483.87	µg/L	483.87	ppb	08:37:04
2	Be 313.107†	655253.1	586178.3	487.32	µg/L	487.32	ppb	08:37:04
2	Cd 226.502†	53337.6	47747.0	495.02	µg/L	495.02	ppb	08:37:04
2	Co 228.616†	23587.9	21195.1	488.44	µg/L	488.44	ppb	08:37:24
2	Cr 267.716†	27359.0	24203.8	481.86	µg/L	481.86	ppb	08:37:24
2	Cu 324.752†	74902.2	64677.6	475.09	µg/L	475.09	ppb	08:37:04
2	Mn 257.610†	346578.0	307695.6	483.57	µg/L	483.57	ppb	08:37:04
2	Mo 202.031†	9609.7	8511.3	482.89	µg/L	482.89	ppb	08:37:24
2	Ni 231.604†	19932.0	17926.0	495.58	µg/L	495.58	ppb	08:37:24
2	P 214.914†	4270.4	3665.2	2425.9	µg/L	2425.9	ppb	08:37:24

2	Pb 220.353†	4460.7	4029.7	498.49 µg/L	498.49 ppb		08:37:24
2	S 181.975 Axial†	1023.8	818.0	1002.5 µg/L	1002.5 ppb		08:37:24
2	Sb 206.836†	2069.1	1685.1	479.29 µg/L	479.29 ppb		08:37:24
2	Se 196.026†	1159.1	1054.4	500.62 µg/L	500.62 ppb		08:37:24
2	SiO2†	35670.9	30650.8	5156.6 µg/L	5156.6 ppb		08:37:04
2	Si 251.611†	49157.5	43715.6	2409.2 µg/L	2409.2 ppb		08:37:04
2	Sn 189.927†	4519.0	3970.5	495.00 µg/L	495.00 ppb		08:37:24
2	Ti 334.940†	124461.5	111383.9	474.18 µg/L	474.18 ppb		08:37:04
2	Tl 190.801†	2499.4	2300.6	493.48 µg/L	493.48 ppb		08:37:24
2	U 367.007†	2476.1	1318.1	441.2 µg/L	441.2 ppb		08:37:04
2	V 292.402†	41143.3	36713.6	485.33 µg/L	485.33 ppb		08:37:04
2	Zn 213.857†	72903.4	63922.7	483.54 µg/L	483.54 ppb		08:37:04
3	Sc RADIAL	25322.5	25322.5	115 %			08:36:31
3	Al 396.153Radial†	17727.9	15551.9	4979.1 µg/L	4979.1 ppb		08:36:31
3	Ca 317.933Radial†	27954.2	24078.4	5156.5 µg/L	5156.5 ppb		08:36:31
3	Fe 238.204 Radial†	29879.3	26018.4	5064.0 µg/L	5064.0 ppb		08:36:31
3	K 766.490 Radial†	6554.7	5293.8	4810.5 µg/L	4810.5 ppb		08:36:31
3	Mg 279.077 IEC†	3704.0	3173.7	5186.5 µg/L	5186.5 ppb		08:36:31
3	Na 589.592 Radial†	7338.1	6270.9	9636.3 µg/L	9636.3 ppb		08:36:31
3	Sr 421.552†	94535.2	82170.1	483.10 µg/L	483.10 ppb		08:36:26
3	Sc 361.383	409213.7	409213.7	111.74 %			08:37:30
3	Y 371.029	399373.2	399373.2	110.98 %			08:37:30
3	Ag 328.068†	52246.2	47438.8	481.76 µg/L	481.76 ppb		08:37:30
3	As 188.979†	1290.7	1167.8	517.79 µg/L	517.79 ppb		08:37:50
3	B 249.677†	16675.3	14749.5	508.06 µg/L	508.06 ppb		08:37:30
3	Ba 233.527†	64623.9	57847.5	486.78 µg/L	486.78 ppb		08:37:30
3	Be 313.107†	654793.0	589548.0	490.12 µg/L	490.12 ppb		08:37:30
3	Cd 226.502†	53378.1	48091.2	498.59 µg/L	498.59 ppb		08:37:30
3	Co 228.616†	23597.9	21340.1	491.78 µg/L	491.78 ppb		08:37:50
3	Cr 267.716†	27379.4	24379.9	485.36 µg/L	485.36 ppb		08:37:50
3	Cu 324.752†	74877.0	65087.3	478.10 µg/L	478.10 ppb		08:37:30
3	Mn 257.610†	347023.2	310094.1	487.33 µg/L	487.33 ppb		08:37:30
3	Mo 202.031†	9602.1	8559.9	485.65 µg/L	485.65 ppb		08:37:50
3	Ni 231.604†	19927.7	18037.2	498.66 µg/L	498.66 ppb		08:37:50
3	P 214.914†	4262.0	3682.4	2437.3 µg/L	2437.3 ppb		08:37:50
3	Pb 220.353†	4417.5	4016.7	496.89 µg/L	496.89 ppb		08:37:50
3	S 181.975 Axial†	1016.2	817.0	1001.4 µg/L	1001.4 ppb		08:37:50
3	Sb 206.836†	2037.2	1668.5	474.51 µg/L	474.51 ppb		08:37:50
3	Se 196.026†	1170.6	1071.3	508.61 µg/L	508.61 ppb		08:37:50
3	SiO2†	35622.4	30813.2	5184.0 µg/L	5184.0 ppb		08:37:30
3	Si 251.611†	49180.5	44019.8	2426.0 µg/L	2426.0 ppb		08:37:30
3	Sn 189.927†	4514.2	3992.2	497.72 µg/L	497.72 ppb		08:37:50
3	Ti 334.940†	124651.9	112272.5	477.96 µg/L	477.96 ppb		08:37:30
3	Tl 190.801†	2510.9	2325.3	498.78 µg/L	498.78 ppb		08:37:50
3	U 367.007†	2485.4	1340.7	449.2 µg/L	449.2 ppb		08:37:30
3	V 292.402†	41077.5	36892.1	487.69 µg/L	487.69 ppb		08:37:30
3	Zn 213.857†	72962.5	64396.3	487.13 µg/L	487.13 ppb		08:37:30

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	412752.1	112.71	%	1.107				0.98%
Sc RADIAL	25461.2	115	%	0.59				0.52%
Y 371.029	402907.0	111.96	%	1.103				0.98%
Ag 328.068†	47322.3	480.59	µg/L	1.268	480.59	ppb	1.268	0.26%
QC value within limits for Ag 328.068 Recovery = 96.12%								
Al 396.153Radial†	15497.0	4961.6	µg/L	19.48	4961.6	ppb	19.48	0.39%
QC value within limits for Al 396.153Radial Recovery = 99.23%								
As 188.979†	1154.5	511.92	µg/L	6.223	511.92	ppb	6.223	1.22%
QC value within limits for As 188.979 Recovery = 102.38%								
B 249.677†	14739.1	507.70	µg/L	0.320	507.70	ppb	0.320	0.06%
QC value within limits for B 249.677 Recovery = 101.54%								
Ba 233.527†	57651.7	485.13	µg/L	1.491	485.13	ppb	1.491	0.31%
QC value within limits for Ba 233.527 Recovery = 97.03%								
Be 313.107†	587648.1	488.54	µg/L	1.436	488.54	ppb	1.436	0.29%
QC value within limits for Be 313.107 Recovery = 97.71%								
Ca 317.933Radial†	24016.0	5143.2	µg/L	33.19	5143.2	ppb	33.19	0.65%
QC value within limits for Ca 317.933Radial Recovery = 102.86%								
Cd 226.502†	47957.6	497.21	µg/L	1.916	497.21	ppb	1.916	0.39%
QC value within limits for Cd 226.502 Recovery = 99.44%								

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Co 228.616†            21144.3      487.27 µg/L         5.201      487.27 ppb          5.201   1.07%
   QC value within limits for Co 228.616  Recovery = 97.45%
Cr 267.716†            24145.3      480.70 µg/L         5.338      480.70 ppb          5.338   1.11%
   QC value within limits for Cr 267.716  Recovery = 96.14%
Cu 324.752†            64794.9      475.95 µg/L         1.877      475.95 ppb          1.877   0.39%
   QC value within limits for Cu 324.752  Recovery = 95.19%
Fe 238.204 Radial†     25973.6      5055.3 µg/L         29.89      5055.3 ppb          29.89   0.59%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.11%
K 766.490 Radial†       5251.3      4771.8 µg/L         40.75      4771.8 ppb          40.75   0.85%
   QC value within limits for K 766.490 Radial  Recovery = 95.44%
Mg 279.077 IEC†         3174.2      5187.4 µg/L         46.66      5187.4 ppb          46.66   0.90%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.75%
Mn 257.610†           308651.2      485.07 µg/L         1.997      485.07 ppb          1.997   0.41%
   QC value within limits for Mn 257.610  Recovery = 97.01%
Mo 202.031†             8490.2      481.69 µg/L         4.674      481.69 ppb          4.674   0.97%
   QC value within limits for Mo 202.031  Recovery = 96.34%
Na 589.592 Radial†      6233.4      9578.8 µg/L         65.65      9578.8 ppb          65.65   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 95.79%
Ni 231.604†            17876.0      494.20 µg/L         5.288      494.20 ppb          5.288   1.07%
   QC value within limits for Ni 231.604  Recovery = 98.84%
P 214.914†              3652.3      2417.3 µg/L         25.30      2417.3 ppb          25.30   1.05%
   QC value within limits for P 214.914  Recovery = 96.69%
Pb 220.353†             3996.1      494.34 µg/L         5.861      494.34 ppb          5.861   1.19%
   QC value within limits for Pb 220.353  Recovery = 98.87%
S 181.975 Axial†         809.5      992.06 µg/L        17.104      992.06 ppb         17.104   1.72%
   QC value within limits for S 181.975 Axial  Recovery = 99.21%
Sb 206.836†             1664.0      473.28 µg/L         6.707      473.28 ppb          6.707   1.42%
   QC value within limits for Sb 206.836  Recovery = 94.66%
Se 196.026†             1057.1      501.87 µg/L         6.218      501.87 ppb          6.218   1.24%
   QC value within limits for Se 196.026  Recovery = 100.37%
SiO2†                  30684.8      5162.5 µg/L         19.28      5162.5 ppb          19.28   0.37%
   QC value within limits for SiO2  Recovery = 96.54%
Si 251.611†            43841.5      2416.2 µg/L          8.74      2416.2 ppb           8.74   0.36%
   QC value within limits for Si 251.611  Recovery = 96.65%
Sn 189.927†             3955.9      493.19 µg/L         5.649      493.19 ppb          5.649   1.15%
   QC value within limits for Sn 189.927  Recovery = 98.64%
Sr 421.552†            81632.2      479.94 µg/L         2.748      479.94 ppb          2.748   0.57%
   QC value within limits for Sr 421.552  Recovery = 95.99%
Ti 334.940†           111694.6      475.51 µg/L         2.127      475.51 ppb          2.127   0.45%
   QC value within limits for Ti 334.940  Recovery = 95.10%
Tl 190.801†             2300.3      493.41 µg/L         5.403      493.41 ppb          5.403   1.10%
   QC value within limits for Tl 190.801  Recovery = 98.68%
U 367.007†              1304.4       436.5 µg/L         15.65       436.5 ppb          15.65   3.58%
   QC value less than the lower limit for U 367.007  Recovery = 87.30%
V 292.402†             36762.8      485.95 µg/L         1.525      485.95 ppb          1.525   0.31%
   QC value within limits for V 292.402  Recovery = 97.19%
Zn 213.857†            64129.6      485.12 µg/L         1.833      485.12 ppb          1.833   0.38%
   QC value within limits for Zn 213.857  Recovery = 97.02%
QC Failed.  Continue with analysis.
```

==========

Sequence No.: 27 | **Autosampler Location: 8**
Sample ID: CCB | **Date Collected: 7/23/2018 08:37:59**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25003.0	25003.0	113	%			08:38:50
1	Al 396.153Radial†	-98.6	6.9	2.2145	µg/L	2.2145	ppb	08:38:50
1	Ca 317.933Radial†	561.7	199.7	42.766	µg/L	42.766	ppb	08:38:50
1	Fe 238.204 Radial†	105.7	58.2	11.337	µg/L	11.337	ppb	08:38:50
1	K 766.490 Radial†	516.4	34.3	31.201	µg/L	31.201	ppb	08:38:30
1	Mg 279.077 IEC†	59.0	-4.0	-6.4973	µg/L	-6.4973	ppb	08:38:50
1	Na 589.592 Radial†	95.2	-43.5	-66.942	µg/L	-66.942	ppb	08:38:50
1	Sr 421.552†	320.0	22.0	0.1289	µg/L	0.1289	ppb	08:38:30
1	Sc 361.383	409595.7	409595.7	111.85	%			08:39:47
1	Y 371.029	403737.5	403737.5	112.19	%			08:39:47
1	Ag 328.068†	-740.6	21.5	0.2193	µg/L	0.2193	ppb	08:39:47
1	As 188.979†	-25.2	-9.8	-4.2954	µg/L	-4.2954	ppb	08:40:07
1	B 249.677†	226.4	29.2	1.0093	µg/L	1.0093	ppb	08:40:07
1	Ba 233.527†	13.7	27.8	0.2337	µg/L	0.2337	ppb	08:40:07
1	Be 313.107†	-3759.5	212.7	0.1768	µg/L	0.1768	ppb	08:39:47
1	Cd 226.502†	-306.4	49.2	0.5093	µg/L	0.5093	ppb	08:40:07
1	Co 228.616†	-184.9	57.1	1.3156	µg/L	1.3156	ppb	08:40:07
1	Cr 267.716†	109.9	-23.7	-0.4713	µg/L	-0.4713	ppb	08:40:07
1	Cu 324.752†	2052.9	-84.7	-0.6222	µg/L	-0.6222	ppb	08:39:47
1	Mn 257.610†	1010.1	446.3	0.7016	µg/L	0.7016	ppb	08:40:07
1	Mo 202.031†	44.9	7.2	0.4084	µg/L	0.4084	ppb	08:40:07
1	Ni 231.604†	-216.2	10.6	0.2933	µg/L	0.2933	ppb	08:40:07
1	P 214.914†	92.5	-49.0	-32.601	µg/L	-32.601	ppb	08:40:07
1	Pb 220.353†	-83.6	-11.2	-1.3853	µg/L	-1.3853	ppb	08:40:07
1	S 181.975 Axial†	128.7	22.8	27.983	µg/L	27.983	ppb	08:40:07
1	Sb 206.836†	169.4	-3.1	-0.8852	µg/L	-0.8852	ppb	08:40:07
1	Se 196.026†	-11.4	13.5	6.4087	µg/L	6.4087	ppb	08:40:07
1	SiO2†	1287.2	85.6	14.442	µg/L	14.442	ppb	08:40:07
1	Si 251.611†	243.7	226.1	12.497	µg/L	12.497	ppb	08:40:07
1	Sn 189.927†	55.4	2.0	0.2482	µg/L	0.2482	ppb	08:40:07
1	Ti 334.940†	-700.1	95.6	0.4099	µg/L	0.4099	ppb	08:39:47
1	Tl 190.801†	-85.5	1.8	0.3945	µg/L	0.3945	ppb	08:40:07
1	U 367.007†	983.9	-3.8	-1.401	µg/L	-1.401	ppb	08:39:47
1	V 292.402†	-182.5	-31.3	-0.4040	µg/L	-0.4040	ppb	08:40:07
1	Zn 213.857†	1379.0	335.1	2.5510	µg/L	2.5510	ppb	08:40:07
2	Sc RADIAL	25044.1	25044.1	113	%			08:39:15
2	Al 396.153Radial†	-124.3	-15.6	-5.0181	µg/L	-5.0181	ppb	08:39:15
2	Ca 317.933Radial†	517.9	160.3	34.328	µg/L	34.328	ppb	08:39:15
2	Fe 238.204 Radial†	77.1	33.0	6.4131	µg/L	6.4131	ppb	08:39:15
2	K 766.490 Radial†	517.5	34.6	31.416	µg/L	31.416	ppb	08:38:55
2	Mg 279.077 IEC†	66.9	2.9	4.7716	µg/L	4.7716	ppb	08:39:15
2	Na 589.592 Radial†	104.5	-35.4	-54.507	µg/L	-54.507	ppb	08:39:15
2	Sr 421.552†	372.9	68.3	0.4009	µg/L	0.4009	ppb	08:38:55
2	Sc 361.383	410006.4	410006.4	111.96	%			08:40:12
2	Y 371.029	403408.8	403408.8	112.10	%			08:40:12
2	Ag 328.068†	-711.8	47.9	0.4736	µg/L	0.4736	ppb	08:40:12
2	As 188.979†	-9.7	4.2	1.8261	µg/L	1.8261	ppb	08:40:32
2	B 249.677†	245.6	46.2	1.5557	µg/L	1.5557	ppb	08:40:32
2	Ba 233.527†	-11.6	5.1	0.0430	µg/L	0.0430	ppb	08:40:32
2	Be 313.107†	-3635.1	327.2	0.2771	µg/L	0.2771	ppb	08:40:12
2	Cd 226.502†	-304.4	51.2	0.5306	µg/L	0.5306	ppb	08:40:32
2	Co 228.616†	-203.2	40.9	0.9423	µg/L	0.9423	ppb	08:40:32
2	Cr 267.716†	95.2	-36.9	-0.7506	µg/L	-0.7506	ppb	08:40:32
2	Cu 324.752†	2099.7	-44.7	-0.3154	µg/L	-0.3154	ppb	08:40:12
2	Mn 257.610†	504.2	-6.5	-0.0098	µg/L	-0.0098	ppb	08:40:32
2	Mo 202.031†	34.7	-1.9	-0.1087	µg/L	-0.1087	ppb	08:40:32
2	Ni 231.604†	-223.8	4.0	0.1109	µg/L	0.1109	ppb	08:40:32
2	P 214.914†	98.2	-44.0	-29.288	µg/L	-29.288	ppb	08:40:32

2	Pb 220.353†	-89.4	-16.3	-2.0346	µg/L	-2.0346	ppb	08:40:32
2	S 181.975 Axial†	118.0	13.1	16.086	µg/L	16.086	ppb	08:40:32
2	Sb 206.836†	145.8	-24.3	-6.9588	µg/L	-6.9588	ppb	08:40:32
2	Se 196.026†	-15.6	9.8	4.6579	µg/L	4.6579	ppb	08:40:32
2	SiO2†	1280.2	78.2	13.214	µg/L	13.214	ppb	08:40:32
2	Si 251.611†	216.0	201.1	11.122	µg/L	11.122	ppb	08:40:32
2	Sn 189.927†	47.2	-5.3	-0.6607	µg/L	-0.6607	ppb	08:40:32
2	Ti 334.940†	-735.5	64.6	0.2676	µg/L	0.2676	ppb	08:40:12
2	Tl 190.801†	-96.2	-7.6	-1.6273	µg/L	-1.6273	ppb	08:40:32
2	U 367.007†	1053.8	57.7	20.27	µg/L	20.27	ppb	08:40:12
2	V 292.402†	-165.2	-15.7	-0.1933	µg/L	-0.1933	ppb	08:40:32
2	Zn 213.857†	1332.5	292.3	2.2263	µg/L	2.2263	ppb	08:40:32
3	Sc RADIAL	24981.2	24981.2	113	%			08:39:40
3	Al 396.153Radial†	-106.6	-0.2	-0.0627	µg/L	-0.0627	ppb	08:39:40
3	Ca 317.933Radial†	508.8	153.4	32.843	µg/L	32.843	ppb	08:39:40
3	Fe 238.204 Radial†	63.2	20.8	4.0519	µg/L	4.0519	ppb	08:39:40
3	K 766.490 Radial†	453.0	-21.2	-19.297	µg/L	-19.297	ppb	08:39:20
3	Mg 279.077 IEC†	72.2	7.7	12.648	µg/L	12.648	ppb	08:39:40
3	Na 589.592 Radial†	127.0	-15.3	-23.534	µg/L	-23.534	ppb	08:39:40
3	Sr 421.552†	309.6	13.1	0.0766	µg/L	0.0766	ppb	08:39:20
3	Sc 361.383	407948.5	407948.5	111.40	%			08:40:37
3	Y 371.029	401879.9	401879.9	111.68	%			08:40:37
3	Ag 328.068†	-644.6	105.1	1.0557	µg/L	1.0557	ppb	08:40:37
3	As 188.979†	-10.5	3.3	1.4647	µg/L	1.4647	ppb	08:40:57
3	B 249.677†	266.4	65.9	2.2041	µg/L	2.2041	ppb	08:40:57
3	Ba 233.527†	10.8	25.2	0.2120	µg/L	0.2120	ppb	08:40:57
3	Be 313.107†	-3514.0	419.5	0.3525	µg/L	0.3525	ppb	08:40:37
3	Cd 226.502†	-298.3	55.3	0.5738	µg/L	0.5738	ppb	08:40:57
3	Co 228.616†	-208.7	35.0	0.8069	µg/L	0.8069	ppb	08:40:57
3	Cr 267.716†	125.7	-9.1	-0.1929	µg/L	-0.1929	ppb	08:40:57
3	Cu 324.752†	2057.0	-73.6	-0.5308	µg/L	-0.5308	ppb	08:40:37
3	Mn 257.610†	588.0	71.0	0.1117	µg/L	0.1117	ppb	08:40:57
3	Mo 202.031†	30.8	-5.3	-0.2999	µg/L	-0.2999	ppb	08:40:57
3	Ni 231.604†	-208.4	16.8	0.4653	µg/L	0.4653	ppb	08:40:57
3	P 214.914†	107.8	-35.0	-23.258	µg/L	-23.258	ppb	08:40:57
3	Pb 220.353†	-81.2	-9.3	-1.1629	µg/L	-1.1629	ppb	08:40:57
3	S 181.975 Axial†	124.3	19.2	23.635	µg/L	23.635	ppb	08:40:57
3	Sb 206.836†	161.3	-9.8	-2.8005	µg/L	-2.8005	ppb	08:40:57
3	Se 196.026†	-21.4	4.5	2.1454	µg/L	2.1454	ppb	08:40:57
3	SiO2†	1256.0	62.2	10.533	µg/L	10.533	ppb	08:40:57
3	Si 251.611†	215.0	201.2	11.131	µg/L	11.131	ppb	08:40:57
3	Sn 189.927†	37.3	-14.1	-1.7477	µg/L	-1.7477	ppb	08:40:57
3	Ti 334.940†	-735.1	61.7	0.2572	µg/L	0.2572	ppb	08:40:37
3	Tl 190.801†	-102.5	-13.7	-2.9302	µg/L	-2.9302	ppb	08:40:57
3	U 367.007†	1031.3	42.3	14.85	µg/L	14.85	ppb	08:40:37
3	V 292.402†	-152.6	-5.1	-0.0601	µg/L	-0.0601	ppb	08:40:57
3	Zn 213.857†	1332.1	297.9	2.2675	µg/L	2.2675	ppb	08:40:57

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	409183.5	111.74	%	0.297				0.27%
Sc RADIAL	25009.4	113	%	0.14				0.13%
Y 371.029	403008.7	111.99	%	0.275				0.25%
Ag 328.068†	58.1	0.5829	µg/L	0.42874	0.5829	ppb	0.42874	73.56%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-3.0	-0.9554	µg/L	3.69801	-0.9554	ppb	3.69801	387.05%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.8	-0.3349	µg/L	3.43465	-0.3349	ppb	3.43465	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	47.1	1.5897	µg/L	0.59811	1.5897	ppb	0.59811	37.62%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.4	0.1629	µg/L	0.10443	0.1629	ppb	0.10443	64.10%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	319.8	0.2688	µg/L	0.08816	0.2688	ppb	0.08816	32.80%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	171.1	36.646	µg/L	5.3523	36.646	ppb	5.3523	14.61%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	51.9	0.5379	µg/L	0.03286	0.5379	ppb	0.03286	6.11%
QC value within limits for Cd 226.502 Recovery = Not calculated								

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Co 228.616†                44.3      1.0216 µg/L       0.26345      1.0216 ppb        0.26345  25.79%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -23.2     -0.4716 µg/L       0.27888     -0.4716 ppb        0.27888  59.14%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -67.7     -0.4895 µg/L       0.15750     -0.4895 ppb        0.15750  32.18%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         37.3      7.2674 µg/L       3.71706      7.2674 ppb        3.71706  51.15%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          15.9      14.440 µg/L       29.2173      14.440 ppb        29.2173 202.34%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             2.2      3.6409 µg/L       9.62279      3.6409 ppb        9.62279 264.30%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               170.3      0.2678 µg/L       0.38053      0.2678 ppb        0.38053 142.07%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.0     -0.0001 µg/L       0.36643     -0.0001 ppb        0.36643 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -31.4     -48.327 µg/L       22.3540     -48.327 ppb        22.3540  46.26%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                10.5      0.2899 µg/L       0.17724      0.2899 ppb        0.17724  61.15%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -42.6     -28.382 µg/L        4.7369     -28.382 ppb         4.7369  16.69%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -12.3     -1.5276 µg/L       0.45294     -1.5276 ppb        0.45294  29.65%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           18.4      22.568 µg/L        6.0199      22.568 ppb         6.0199  26.67%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -12.4     -3.5482 µg/L       3.10509     -3.5482 ppb        3.10509  87.51%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 9.3      4.4040 µg/L       2.14297      4.4040 ppb        2.14297  48.66%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      75.3      12.730 µg/L        1.9992      12.730 ppb         1.9992  15.71%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               209.5      11.584 µg/L        0.7910      11.584 ppb         0.7910   6.83%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -5.8     -0.7201 µg/L       0.99930     -0.7201 ppb        0.99930 138.77%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                34.5      0.2021 µg/L       0.17411      0.2021 ppb        0.17411  86.15%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                74.0      0.3116 µg/L       0.08531      0.3116 ppb        0.08531  27.38%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -6.5     -1.3877 µg/L       1.67526     -1.3877 ppb        1.67526 120.72%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 367.007†                 32.1       11.24 µg/L        11.275       11.24 ppb         11.275 100.34%
   QC value within limits for U 367.007  Recovery = Not calculated
V 292.402†                -17.3     -0.2192 µg/L       0.17340     -0.2192 ppb        0.17340  79.12%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               308.4      2.3483 µg/L       0.17677      2.3483 ppb        0.17677   7.53%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Analysis Begun

Start Time: 7/23/2018 08:41:20
Logged In Analyst: Optima3
Spectrometer: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 7/23/2018 07:25:32
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\072318.sif
Batch ID:
Results Data Set: 072318
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: 454715001|1782974|10|
Analyst: HSC
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 303
Date Collected: 7/23/2018 08:41:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 454715001|1782974|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25774.0	25774.0	117	%			08:42:18
1	Al 396.153Radial†	33654.9	28925.6	9302.8	µg/L	9302.8	ppb	08:42:18
1	Ca 317.933Radial†	117681.8	100519.7	21527	µg/L	21527	ppb	08:42:18
1	Fe 238.204 Radial†	162718.5	139363.2	27125	µg/L	27125	ppb	08:42:13
1	K 766.490 Radial†	1993.7	1286.3	1166.4	µg/L	1166.4	ppb	08:42:18
1	Mg 279.077 IEC†	7347.8	6238.6	10195	µg/L	10195	ppb	08:42:18
1	Na 589.592 Radial†	163.2	12.2	-16.681	µg/L	-16.681	ppb	08:42:18
1	Sr 421.552†	18394.2	15497.5	90.751	µg/L	90.751	ppb	08:42:18
1	Sc 361.383	410249.0	410249.0	112.03	%			08:42:45
1	Y 371.029	404691.0	404691.0	112.46	%			08:42:45
1	Ag 328.068†	-991.0	-200.9	1.9531	µg/L	1.9531	ppb	08:43:05
1	As 188.979†	1.4	14.1	7.6534	µg/L	7.6534	ppb	08:43:05
1	B 249.677†	-2886.1	-2749.5	14.230	µg/L	14.230	ppb	08:43:05
1	Ba 233.527†	7346.5	6573.3	54.660	µg/L	54.660	ppb	08:43:05
1	Be 313.107†	-3214.5	704.6	0.8805	µg/L	0.8805	ppb	08:43:05
1	Cd 226.502†	20.5	341.4	0.5744	µg/L	0.5744	ppb	08:43:05
1	Co 228.616†	510.0	677.6	15.330	µg/L	15.330	ppb	08:43:05
1	Cr 267.716†	1040.8	807.1	16.344	µg/L	16.344	ppb	08:43:05
1	Cu 324.752†	6339.1	3738.4	29.145	µg/L	29.145	ppb	08:43:05
1	Mn 257.610†	321898.6	286883.2	452.29	µg/L	452.29	ppb	08:42:45
1	Mo 202.031†	49.0	10.8	1.1230	µg/L	1.1230	ppb	08:43:05
1	Ni 231.604†	1124.4	1207.6	33.919	µg/L	33.919	ppb	08:43:05
1	P 214.914†	930.0	698.5	442.08	µg/L	442.08	ppb	08:43:05
1	Pb 220.353†	80.8	135.6	17.948	µg/L	17.948	ppb	08:43:05
1	S 181.975 Axial†	6970.4	6129.7	7523.7	µg/L	7523.7	ppb	08:43:05
1	Sb 206.836†	184.6	10.2	-1.0417	µg/L	-1.0417	ppb	08:43:05
1	Se 196.026†	-54.6	-25.0	0.2545	µg/L	0.2545	ppb	08:43:05
1	SiO2†	13924.4	11364.3	1914.4	µg/L	1914.4	ppb	08:43:05
1	Si 251.611†	18359.1	16396.3	904.73	µg/L	904.73	ppb	08:43:05
1	Sn 189.927†	61.8	7.6	1.6489	µg/L	1.6489	ppb	08:43:05
1	Ti 334.940†	26961.0	24788.0	106.48	µg/L	106.48	ppb	08:42:45
1	Tl 190.801†	-98.1	-9.2	0.7775	µg/L	0.7775	ppb	08:43:05
1	U 367.007†	1420.3	384.4	18.94	µg/L	18.94	ppb	08:42:45
1	V 292.402†	952.7	982.3	18.401	µg/L	18.401	ppb	08:43:05
1	Zn 213.857†	9245.0	7354.6	52.897	µg/L	52.897	ppb	08:43:05
2	Sc RADIAL	25760.8	25760.8	117	%			08:42:28
2	Al 396.153Radial†	33490.6	28799.4	9262.3	µg/L	9262.3	ppb	08:42:28
2	Ca 317.933Radial†	117411.8	100339.7	21488	µg/L	21488	ppb	08:42:28
2	Fe 238.204 Radial†	163002.2	139677.5	27186	µg/L	27186	ppb	08:42:23
2	K 766.490 Radial†	2005.1	1297.0	1176.0	µg/L	1176.0	ppb	08:42:28
2	Mg 279.077 IEC†	7322.7	6220.4	10166	µg/L	10166	ppb	08:42:28
2	Na 589.592 Radial†	190.6	35.8	19.455	µg/L	19.455	ppb	08:42:28
2	Sr 421.552†	18425.0	15531.9	90.954	µg/L	90.954	ppb	08:42:28
2	Sc 361.383	408409.3	408409.3	111.52	%			08:43:10
2	Y 371.029	402464.7	402464.7	111.84	%			08:43:10
2	Ag 328.068†	-994.0	-207.6	1.8856	µg/L	1.8856	ppb	08:43:30

2	As 188.979†	-11.5	2.5	2.5880	µg/L	2.5880	ppb	08:43:30
2	B 249.677†	-2894.4	-2768.5	13.836	µg/L	13.836	ppb	08:43:30
2	Ba 233.527†	7320.3	6579.4	54.709	µg/L	54.709	ppb	08:43:30
2	Be 313.107†	-3156.5	743.6	0.9164	µg/L	0.9164	ppb	08:43:30
2	Cd 226.502†	26.6	346.9	0.6252	µg/L	0.6252	ppb	08:43:30
2	Co 228.616†	500.4	671.1	15.178	µg/L	15.178	ppb	08:43:30
2	Cr 267.716†	997.0	772.0	15.633	µg/L	15.633	ppb	08:43:30
2	Cu 324.752†	6321.4	3748.1	29.230	µg/L	29.230	ppb	08:43:30
2	Mn 257.610†	320080.3	286547.1	451.77	µg/L	451.77	ppb	08:43:10
2	Mo 202.031†	41.1	3.9	0.7346	µg/L	0.7346	ppb	08:43:30
2	Ni 231.604†	1161.3	1245.3	34.962	µg/L	34.962	ppb	08:43:30
2	P 214.914†	912.8	686.8	434.26	µg/L	434.26	ppb	08:43:30
2	Pb 220.353†	119.3	170.5	22.241	µg/L	22.241	ppb	08:43:30
2	S 181.975 Axial†	6928.4	6120.1	7511.8	µg/L	7511.8	ppb	08:43:30
2	Sb 206.836†	174.4	1.8	-3.4452	µg/L	-3.4452	ppb	08:43:30
2	Se 196.026†	-33.3	-6.1	9.2261	µg/L	9.2261	ppb	08:43:30
2	SiO2†	13887.4	11387.1	1918.3	µg/L	1918.3	ppb	08:43:30
2	Si 251.611†	18390.4	16498.2	910.37	µg/L	910.37	ppb	08:43:30
2	Sn 189.927†	60.5	6.7	1.5373	µg/L	1.5373	ppb	08:43:30
2	Ti 334.940†	26849.5	24796.5	106.51	µg/L	106.51	ppb	08:43:10
2	Tl 190.801†	-101.7	-12.9	0.0009	µg/L	0.0009	ppb	08:43:30
2	U 367.007†	1466.2	431.2	35.19	µg/L	35.19	ppb	08:43:10
2	V 292.402†	981.7	1012.1	18.809	µg/L	18.809	ppb	08:43:30
2	Zn 213.857†	9198.4	7350.1	52.850	µg/L	52.850	ppb	08:43:30
3	Sc RADIAL	25719.9	25719.9	116	%			08:42:38
3	Al 396.153Radial†	33641.9	28975.1	9318.7	µg/L	9318.7	ppb	08:42:38
3	Ca 317.933Radial†	117450.4	100533.1	21530	µg/L	21530	ppb	08:42:38
3	Fe 238.204 Radial†	162614.5	139567.0	27164	µg/L	27164	ppb	08:42:33
3	K 766.490 Radial†	2047.7	1336.2	1211.7	µg/L	1211.7	ppb	08:42:38
3	Mg 279.077 IEC†	7334.2	6240.2	10198	µg/L	10198	ppb	08:42:38
3	Na 589.592 Radial†	169.5	17.9	-8.0127	µg/L	-8.0127	ppb	08:42:38
3	Sr 421.552†	18494.4	15616.6	91.451	µg/L	91.451	ppb	08:42:38
3	Sc 361.383	411032.3	411032.3	112.24	%			08:43:35
3	Y 371.029	404757.9	404757.9	112.48	%			08:43:35
3	Ag 328.068†	-983.0	-192.1	2.0390	µg/L	2.0390	ppb	08:43:56
3	As 188.979†	-2.6	10.5	6.0773	µg/L	6.0773	ppb	08:43:56
3	B 249.677†	-2892.6	-2750.3	14.358	µg/L	14.358	ppb	08:43:56
3	Ba 233.527†	7296.8	6516.5	54.181	µg/L	54.181	ppb	08:43:56
3	Be 313.107†	-3179.6	741.1	0.9148	µg/L	0.9148	ppb	08:43:56
3	Cd 226.502†	13.3	334.9	0.5023	µg/L	0.5023	ppb	08:43:56
3	Co 228.616†	499.4	667.4	15.094	µg/L	15.094	ppb	08:43:56
3	Cr 267.716†	996.6	765.9	15.511	µg/L	15.511	ppb	08:43:56
3	Cu 324.752†	6303.1	3695.6	28.843	µg/L	28.843	ppb	08:43:56
3	Mn 257.610†	322531.0	286899.0	452.32	µg/L	452.32	ppb	08:43:35
3	Mo 202.031†	48.1	9.9	1.0722	µg/L	1.0722	ppb	08:43:56
3	Ni 231.604†	1114.7	1197.1	33.629	µg/L	33.629	ppb	08:43:56
3	P 214.914†	916.6	685.0	433.08	µg/L	433.08	ppb	08:43:56
3	Pb 220.353†	97.6	150.5	19.770	µg/L	19.770	ppb	08:43:56
3	S 181.975 Axial†	6895.6	6051.2	7427.2	µg/L	7427.2	ppb	08:43:56
3	Sb 206.836†	174.8	1.2	-3.6098	µg/L	-3.6098	ppb	08:43:56
3	Se 196.026†	-40.5	-12.3	6.2758	µg/L	6.2758	ppb	08:43:56
3	SiO2†	13835.7	11261.6	1897.0	µg/L	1897.0	ppb	08:43:56
3	Si 251.611†	18240.0	16258.9	897.13	µg/L	897.13	ppb	08:43:56
3	Sn 189.927†	48.6	-4.3	0.1710	µg/L	0.1710	ppb	08:43:56
3	Ti 334.940†	26861.7	24653.7	105.90	µg/L	105.90	ppb	08:43:35
3	Tl 190.801†	-95.1	-6.4	1.3825	µg/L	1.3825	ppb	08:43:56
3	U 367.007†	1475.6	431.2	35.25	µg/L	35.25	ppb	08:43:35
3	V 292.402†	968.3	994.6	18.579	µg/L	18.579	ppb	08:43:56
3	Zn 213.857†	9197.2	7296.3	52.449	µg/L	52.449	ppb	08:43:56

Mean Data: 454715001|1782974|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	409896.8	111.93	%	0.368				0.33%
Sc RADIAL	25751.6	117	%	0.13				0.11%
Y 371.029	403971.2	112.26	%	0.363				0.32%
Ag 328.068†	-200.2	1.9592	µg/L	0.07689	1.9592	ppb	0.07689	3.92%
Al 396.153Radial†	28900.0	9294.6	µg/L	29.12	9294.6	ppb	29.12	0.31%
As 188.979†	9.0	5.4395	µg/L	2.59220	5.4395	ppb	2.59220	47.65%
B 249.677†	-2756.1	14.141	µg/L	0.2720	14.141	ppb	0.2720	1.92%

Ba 233.527†	6556.4	54.517	µg/L	0.2920	54.517	ppb	0.2920	0.54%
Be 313.107†	729.8	0.9039	µg/L	0.02027	0.9039	ppb	0.02027	2.24%
Ca 317.933Radial†	100464.2	21515	µg/L	23.12	21515	ppb	23.12	0.11%
Cd 226.502†	341.1	0.5673	µg/L	0.06172	0.5673	ppb	0.06172	10.88%
Co 228.616†	672.0	15.201	µg/L	0.1193	15.201	ppb	0.1193	0.79%
Cr 267.716†	781.7	15.830	µg/L	0.4500	15.830	ppb	0.4500	2.84%
Cu 324.752†	3727.4	29.072	µg/L	0.2034	29.072	ppb	0.2034	0.70%
Fe 238.204 Radial†	139535.9	27158	µg/L	31.03	27158	ppb	31.03	0.11%
K 766.490 Radial†	1306.5	1184.7	µg/L	23.89	1184.7	ppb	23.89	2.02%
Mg 279.077 IEC†	6233.1	10186	µg/L	18.04	10186	ppb	18.04	0.18%
Mn 257.610†	286776.4	452.12	µg/L	0.311	452.12	ppb	0.311	0.07%
Mo 202.031†	8.2	0.9766	µg/L	0.21112	0.9766	ppb	0.21112	21.62%
Na 589.592 Radial†	22.0	-1.7463	µg/L	18.86544	-1.7463	ppb	18.86544	>999.9%
Ni 231.604†	1216.7	34.170	µg/L	0.7011	34.170	ppb	0.7011	2.05%
P 214.914†	690.1	436.47	µg/L	4.895	436.47	ppb	4.895	1.12%
Pb 220.353†	152.2	19.986	µg/L	2.1543	19.986	ppb	2.1543	10.78%
S 181.975 Axial†	6100.4	7487.6	µg/L	52.60	7487.6	ppb	52.60	0.70%
Sb 206.836†	4.4	-2.6989	µg/L	1.43751	-2.6989	ppb	1.43751	53.26%
Se 196.026†	-14.4	5.2521	µg/L	4.57254	5.2521	ppb	4.57254	87.06%
SiO2†	11337.6	1909.9	µg/L	11.30	1909.9	ppb	11.30	0.59%
Si 251.611†	16384.5	904.08	µg/L	6.641	904.08	ppb	6.641	0.73%
Sn 189.927†	3.4	1.1191	µg/L	0.82297	1.1191	ppb	0.82297	73.54%
Sr 421.552†	15548.7	91.052	µg/L	0.3605	91.052	ppb	0.3605	0.40%
Ti 334.940†	24746.1	106.30	µg/L	0.342	106.30	ppb	0.342	0.32%
Tl 190.801†	-9.5	0.7203	µg/L	0.69256	0.7203	ppb	0.69256	96.15%
U 367.007†	415.6	29.79	µg/L	9.401	29.79	ppb	9.401	31.56%
V 292.402†	996.3	18.596	µg/L	0.2044	18.596	ppb	0.2044	1.10%
Zn 213.857†	7333.7	52.732	µg/L	0.2458	52.732	ppb	0.2458	0.47%

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Sequence No.: 2 | **Autosampler Location: 304**
Sample ID: 1204070942|1782974|10| | **Date Collected: 7/23/2018 08:44:04**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 1204070942|1782974|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25833.0	25833.0	117	%			08:44:40
1	Al 396.153Radial†	46228.7	39606.9	12736	µg/L	12736	ppb	08:44:40
1	Ca 317.933Radial†	151325.1	129045.2	27636	µg/L	27636	ppb	08:44:40
1	Fe 238.204 Radial†	180362.1	154125.2	29998	µg/L	29998	ppb	08:44:35
1	K 766.490 Radial†	3667.1	2712.7	2463.1	µg/L	2463.1	ppb	08:44:40
1	Mg 279.077 IEC†	8531.8	7236.3	11826	µg/L	11826	ppb	08:44:40
1	Na 589.592 Radial†	557.3	348.8	497.10	µg/L	497.10	ppb	08:44:40
1	Sr 421.552†	34781.9	29468.5	172.80	µg/L	172.80	ppb	08:44:40
1	Sc 361.383	407223.1	407223.1	111.20	%			08:45:07
1	Y 371.029	402029.7	402029.7	111.72	%			08:45:07
1	Ag 328.068†	-24.4	661.7	11.192	µg/L	11.192	ppb	08:45:27
1	As 188.979†	119.9	120.7	55.088	µg/L	55.088	ppb	08:45:27
1	B 249.677†	-1492.5	-1515.4	66.259	µg/L	66.259	ppb	08:45:27
1	Ba 233.527†	18879.3	16993.2	142.29	µg/L	142.29	ppb	08:45:27
1	Be 313.107†	61901.1	59240.0	49.612	µg/L	49.612	ppb	08:45:07
1	Cd 226.502†	5295.5	5085.2	49.487	µg/L	49.487	ppb	08:45:27
1	Co 228.616†	2791.5	2732.7	62.588	µg/L	62.588	ppb	08:45:27
1	Cr 267.716†	3928.4	3410.8	68.206	µg/L	68.206	ppb	08:45:27
1	Cu 324.752†	14198.6	10848.3	81.511	µg/L	81.511	ppb	08:45:07
1	Mn 257.610†	396413.3	356027.4	561.07	µg/L	561.07	ppb	08:45:07
1	Mo 202.031†	979.4	847.8	48.655	µg/L	48.655	ppb	08:45:27
1	Ni 231.604†	3026.2	2925.3	81.454	µg/L	81.454	ppb	08:45:27
1	P 214.914†	1043.4	806.6	511.18	µg/L	511.18	ppb	08:45:27
1	Pb 220.353†	468.8	485.1	61.555	µg/L	61.555	ppb	08:45:27
1	S 181.975 Axial†	7217.7	6398.4	7852.4	µg/L	7852.4	ppb	08:45:27
1	Sb 206.836†	328.1	140.5	35.594	µg/L	35.594	ppb	08:45:27
1	Se 196.026†	75.8	91.9	56.798	µg/L	56.798	ppb	08:45:27
1	SiO2†	22307.7	18995.5	3201.3	µg/L	3201.3	ppb	08:45:27
1	Si 251.611†	30953.6	27844.0	1536.8	µg/L	1536.8	ppb	08:45:07
1	Sn 189.927†	500.9	402.9	51.119	µg/L	51.119	ppb	08:45:27
1	Ti 334.940†	54392.9	49635.7	212.53	µg/L	212.53	ppb	08:45:07
1	Tl 190.801†	124.2	190.0	43.914	µg/L	43.914	ppb	08:45:27
1	U 367.007†	1563.3	522.4	53.00	µg/L	53.00	ppb	08:45:07
1	V 292.402†	5561.6	5133.3	73.644	µg/L	73.644	ppb	08:45:27
1	Zn 213.857†	17191.6	14562.1	107.25	µg/L	107.25	ppb	08:45:27
2	Sc RADIAL	25446.3	25446.3	115	%			08:44:50
2	Al 396.153Radial†	45856.8	39884.7	12825	µg/L	12825	ppb	08:44:50
2	Ca 317.933Radial†	149759.8	129652.7	27766	µg/L	27766	ppb	08:44:50
2	Fe 238.204 Radial†	179918.4	156083.1	30379	µg/L	30379	ppb	08:44:45
2	K 766.490 Radial†	3658.3	2752.7	2499.4	µg/L	2499.4	ppb	08:44:50
2	Mg 279.077 IEC†	8397.5	7230.6	11817	µg/L	11817	ppb	08:44:50
2	Na 589.592 Radial†	578.8	374.6	536.33	µg/L	536.33	ppb	08:44:50
2	Sr 421.552†	34459.8	29640.9	173.81	µg/L	173.81	ppb	08:44:50
2	Sc 361.383	411232.3	411232.3	112.30	%			08:45:32
2	Y 371.029	405696.7	405696.7	112.74	%			08:45:32
2	Ag 328.068†	-39.6	648.4	11.101	µg/L	11.101	ppb	08:45:52
2	As 188.979†	116.8	116.8	53.405	µg/L	53.405	ppb	08:45:52
2	B 249.677†	-1487.4	-1497.8	68.334	µg/L	68.334	ppb	08:45:52
2	Ba 233.527†	18791.6	16749.6	140.23	µg/L	140.23	ppb	08:45:52
2	Be 313.107†	62917.6	59602.5	49.919	µg/L	49.919	ppb	08:45:32
2	Cd 226.502†	5264.5	5011.1	48.676	µg/L	48.676	ppb	08:45:52
2	Co 228.616†	2762.6	2682.5	61.425	µg/L	61.425	ppb	08:45:52
2	Cr 267.716†	3863.0	3318.1	66.347	µg/L	66.347	ppb	08:45:52
2	Cu 324.752†	14346.5	10855.5	81.599	µg/L	81.599	ppb	08:45:32
2	Mn 257.610†	402568.7	358033.3	564.24	µg/L	564.24	ppb	08:45:32
2	Mo 202.031†	977.3	837.3	48.069	µg/L	48.069	ppb	08:45:52
2	Ni 231.604†	3033.8	2905.5	80.914	µg/L	80.914	ppb	08:45:52
2	P 214.914†	1051.8	804.9	509.72	µg/L	509.72	ppb	08:45:52

2	Pb 220.353†	469.8	481.9	61.157 µg/L	61.157 ppb		08:45:52
2	S 181.975 Axial†	7167.9	6290.8	7720.0 µg/L	7720.0 ppb		08:45:52
2	Sb 206.836†	316.8	127.5	31.853 µg/L	31.853 ppb		08:45:52
2	Se 196.026†	69.4	85.6	53.966 µg/L	53.966 ppb		08:45:52
2	SiO2†	22164.2	18672.1	3146.6 µg/L	3146.6 ppb		08:45:52
2	Si 251.611†	31357.4	27932.2	1541.7 µg/L	1541.7 ppb		08:45:32
2	Sn 189.927†	497.8	395.7	50.243 µg/L	50.243 ppb		08:45:52
2	Ti 334.940†	55399.9	50055.5	214.32 µg/L	214.32 ppb		08:45:32
2	Tl 190.801†	116.4	182.0	42.233 µg/L	42.233 ppb		08:45:52
2	U 367.007†	1639.3	576.4	70.46 µg/L	70.46 ppb		08:45:32
2	V 292.402†	5536.0	5061.7	72.789 µg/L	72.789 ppb		08:45:52
2	Zn 213.857†	17097.3	14327.4	105.42 µg/L	105.42 ppb		08:45:52
3	Sc RADIAL	25490.6	25490.6	115 %			08:45:00
3	Al 396.153Radial†	45867.0	39824.2	12806 µg/L	12806 ppb		08:45:00
3	Ca 317.933Radial†	149661.4	129341.2	27699 µg/L	27699 ppb		08:45:00
3	Fe 238.204 Radial†	180447.0	156269.1	30415 µg/L	30415 ppb		08:44:55
3	K 766.490 Radial†	3813.1	2881.2	2616.2 µg/L	2616.2 ppb		08:45:00
3	Mg 279.077 IEC†	8417.1	7234.9	11824 µg/L	11824 ppb		08:45:00
3	Na 589.592 Radial†	558.9	356.6	508.49 µg/L	508.49 ppb		08:45:00
3	Sr 421.552†	34485.3	29610.9	173.63 µg/L	173.63 ppb		08:45:00
3	Sc 361.383	407896.3	407896.3	111.38 %			08:45:57
3	Y 371.029	402850.6	402850.6	111.95 %			08:45:57
3	Ag 328.068†	-33.3	653.8	11.158 µg/L	11.158 ppb		08:46:18
3	As 188.979†	118.0	118.8	54.275 µg/L	54.275 ppb		08:46:18
3	B 249.677†	-1497.1	-1517.3	67.823 µg/L	67.823 ppb		08:46:18
3	Ba 233.527†	18841.0	16930.8	141.76 µg/L	141.76 ppb		08:46:18
3	Be 313.107†	62594.0	59770.2	50.060 µg/L	50.060 ppb		08:45:57
3	Cd 226.502†	5299.8	5081.2	49.399 µg/L	49.399 ppb		08:46:18
3	Co 228.616†	2771.5	2710.6	62.075 µg/L	62.075 ppb		08:46:18
3	Cr 267.716†	3897.3	3377.0	67.515 µg/L	67.515 ppb		08:46:18
3	Cu 324.752†	14366.1	10977.6	82.502 µg/L	82.502 ppb		08:45:57
3	Mn 257.610†	400582.4	359182.0	566.05 µg/L	566.05 ppb		08:45:57
3	Mo 202.031†	982.5	849.2	48.740 µg/L	48.740 ppb		08:46:18
3	Ni 231.604†	2999.6	2897.0	80.679 µg/L	80.679 ppb		08:46:18
3	P 214.914†	1052.8	813.5	515.40 µg/L	515.40 ppb		08:46:18
3	Pb 220.353†	486.5	500.3	63.423 µg/L	63.423 ppb		08:46:18
3	S 181.975 Axial†	7215.1	6385.3	7836.2 µg/L	7836.2 ppb		08:46:18
3	Sb 206.836†	317.6	130.5	32.698 µg/L	32.698 ppb		08:46:18
3	Se 196.026†	89.6	104.2	62.758 µg/L	62.758 ppb		08:46:18
3	SiO2†	22160.9	18830.6	3173.3 µg/L	3173.3 ppb		08:46:18
3	Si 251.611†	31090.6	27921.0	1541.0 µg/L	1541.0 ppb		08:45:57
3	Sn 189.927†	500.4	401.8	50.992 µg/L	50.992 ppb		08:46:18
3	Ti 334.940†	54884.6	49996.4	214.06 µg/L	214.06 ppb		08:45:57
3	Tl 190.801†	134.5	199.1	45.901 µg/L	45.901 ppb		08:46:18
3	U 367.007†	1654.0	601.5	79.19 µg/L	79.19 ppb		08:45:57
3	V 292.402†	5573.9	5136.0	73.780 µg/L	73.780 ppb		08:46:18
3	Zn 213.857†	17174.2	14521.0	106.90 µg/L	106.90 ppb		08:46:18

Mean Data: 1204070942|1782974|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	408783.9	111.63	%	0.586				0.53%
Sc RADIAL	25590.0	116	%	0.96				0.83%
Y 371.029	403525.7	112.13	%	0.535				0.48%
Ag 328.068†	654.7	11.150	µg/L	0.0456	11.150	ppb	0.0456	0.41%
Al 396.153Radial†	39771.9	12789	µg/L	46.99	12789	ppb	46.99	0.37%
As 188.979†	118.7	54.256	µg/L	0.8414	54.256	ppb	0.8414	1.55%
B 249.677†	-1510.2	67.472	µg/L	1.0811	67.472	ppb	1.0811	1.60%
Ba 233.527†	16891.2	141.43	µg/L	1.069	141.43	ppb	1.069	0.76%
Be 313.107†	59537.5	49.864	µg/L	0.2291	49.864	ppb	0.2291	0.46%
Ca 317.933Radial†	129346.3	27700	µg/L	65.05	27700	ppb	65.05	0.23%
Cd 226.502†	5059.2	49.187	µg/L	0.4450	49.187	ppb	0.4450	0.90%
Co 228.616†	2708.6	62.029	µg/L	0.5832	62.029	ppb	0.5832	0.94%
Cr 267.716†	3368.6	67.356	µg/L	0.9393	67.356	ppb	0.9393	1.39%
Cu 324.752†	10893.8	81.871	µg/L	0.5486	81.871	ppb	0.5486	0.67%
Fe 238.204 Radial†	155492.4	30264	µg/L	231.18	30264	ppb	231.18	0.76%
K 766.490 Radial†	2782.2	2526.2	µg/L	79.99	2526.2	ppb	79.99	3.17%
Mg 279.077 IEC†	7233.9	11822	µg/L	4.84	11822	ppb	4.84	0.04%
Mn 257.610†	357747.6	563.78	µg/L	2.522	563.78	ppb	2.522	0.45%
Mo 202.031†	844.8	48.488	µg/L	0.3655	48.488	ppb	0.3655	0.75%

Na 589.592 Radial†	360.0	513.98	µg/L	20.183	513.98	ppb	20.183	3.93%
Ni 231.604†	2909.3	81.016	µg/L	0.3973	81.016	ppb	0.3973	0.49%
P 214.914†	808.3	512.10	µg/L	2.954	512.10	ppb	2.954	0.58%
Pb 220.353†	489.1	62.045	µg/L	1.2100	62.045	ppb	1.2100	1.95%
S 181.975 Axial†	6358.2	7802.9	µg/L	72.21	7802.9	ppb	72.21	0.93%
Sb 206.836†	132.8	33.382	µg/L	1.9621	33.382	ppb	1.9621	5.88%
Se 196.026†	93.9	57.841	µg/L	4.4877	57.841	ppb	4.4877	7.76%
SiO2†	18832.7	3173.7	µg/L	27.36	3173.7	ppb	27.36	0.86%
Si 251.611†	27899.1	1539.8	µg/L	2.64	1539.8	ppb	2.64	0.17%
Sn 189.927†	400.1	50.785	µg/L	0.4731	50.785	ppb	0.4731	0.93%
Sr 421.552†	29573.4	173.41	µg/L	0.541	173.41	ppb	0.541	0.31%
Ti 334.940†	49895.8	213.64	µg/L	0.965	213.64	ppb	0.965	0.45%
Tl 190.801†	190.4	44.016	µg/L	1.8361	44.016	ppb	1.8361	4.17%
U 367.007†	566.8	67.55	µg/L	13.333	67.55	ppb	13.333	19.74%
V 292.402†	5110.3	73.404	µg/L	0.5369	73.404	ppb	0.5369	0.73%
Zn 213.857†	14470.2	106.52	µg/L	0.968	106.52	ppb	0.968	0.91%

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Sequence No.: 3 | **Autosampler Location: 305**
Sample ID: 1204070943|1782974|10| | **Date Collected: 7/23/2018 08:46:26**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 1204070943|1782974|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25429.8	25429.8	115	%			08:47:02
1	Al 396.153Radial†	42563.4	37050.8	11914	µg/L	11914	ppb	08:47:02
1	Ca 317.933Radial†	119856.4	103772.2	22223	µg/L	22223	ppb	08:47:02
1	Fe 238.204 Radial†	165437.1	143610.1	27951	µg/L	27951	ppb	08:46:57
1	K 766.490 Radial†	3646.5	2744.5	2491.4	µg/L	2491.4	ppb	08:47:02
1	Mg 279.077 IEC†	7777.5	6696.9	10944	µg/L	10944	ppb	08:47:02
1	Na 589.592 Radial†	551.3	351.1	503.32	µg/L	503.32	ppb	08:47:02
1	Sr 421.552†	28230.4	24251.3	142.21	µg/L	142.21	ppb	08:47:02
1	Sc 361.383	406893.0	406893.0	111.11	%			08:47:29
1	Y 371.029	401585.7	401585.7	111.59	%			08:47:29
1	Ag 328.068†	40.2	719.8	11.473	µg/L	11.473	ppb	08:47:49
1	As 188.979†	126.1	126.3	57.454	µg/L	57.454	ppb	08:47:49
1	B 249.677†	-1254.3	-1302.0	65.377	µg/L	65.377	ppb	08:47:49
1	Ba 233.527†	17908.4	16133.1	135.10	µg/L	135.10	ppb	08:47:49
1	Be 313.107†	63965.5	61143.1	51.127	µg/L	51.127	ppb	08:47:29
1	Cd 226.502†	5408.7	5191.0	50.809	µg/L	50.809	ppb	08:47:49
1	Co 228.616†	2792.1	2735.3	62.678	µg/L	62.678	ppb	08:47:49
1	Cr 267.716†	3783.3	3283.0	65.636	µg/L	65.636	ppb	08:47:49
1	Cu 324.752†	13284.1	10035.6	75.419	µg/L	75.419	ppb	08:47:29
1	Mn 257.610†	370135.3	332666.2	524.25	µg/L	524.25	ppb	08:47:29
1	Mo 202.031†	979.0	848.1	48.636	µg/L	48.636	ppb	08:47:49
1	Ni 231.604†	2898.9	2813.0	78.306	µg/L	78.306	ppb	08:47:49
1	P 214.914†	968.8	740.2	468.73	µg/L	468.73	ppb	08:47:49
1	Pb 220.353†	488.9	503.5	63.651	µg/L	63.651	ppb	08:47:49
1	S 181.975 Axial†	6938.6	6152.4	7550.9	µg/L	7550.9	ppb	08:47:49
1	Sb 206.836†	339.2	150.6	38.824	µg/L	38.824	ppb	08:47:49
1	Se 196.026†	76.6	92.7	56.234	µg/L	56.234	ppb	08:47:49
1	SiO2†	12010.0	9743.8	1638.1	µg/L	1638.1	ppb	08:47:49
1	Si 251.611†	15685.3	14125.1	778.28	µg/L	778.28	ppb	08:47:49
1	Sn 189.927†	491.9	395.2	50.141	µg/L	50.141	ppb	08:47:49
1	Ti 334.940†	50999.2	46621.0	199.45	µg/L	199.45	ppb	08:47:29
1	Tl 190.801†	132.0	197.1	45.208	µg/L	45.208	ppb	08:47:49
1	U 367.007†	1542.7	505.0	57.79	µg/L	57.79	ppb	08:47:29
1	V 292.402†	5303.1	4904.6	70.242	µg/L	70.242	ppb	08:47:49
1	Zn 213.857†	17474.8	14829.5	109.52	µg/L	109.52	ppb	08:47:49
2	Sc RADIAL	25223.8	25223.8	114	%			08:47:12
2	Al 396.153Radial†	42923.0	37667.5	12112	µg/L	12112	ppb	08:47:12
2	Ca 317.933Radial†	121095.6	105707.1	22638	µg/L	22638	ppb	08:47:12
2	Fe 238.204 Radial†	167127.8	146263.7	28468	µg/L	28468	ppb	08:47:07
2	K 766.490 Radial†	3550.8	2686.6	2438.8	µg/L	2438.8	ppb	08:47:12
2	Mg 279.077 IEC†	7847.2	6813.1	11134	µg/L	11134	ppb	08:47:12
2	Na 589.592 Radial†	523.2	330.4	470.82	µg/L	470.82	ppb	08:47:12
2	Sr 421.552†	28606.9	24781.1	145.32	µg/L	145.32	ppb	08:47:12
2	Sc 361.383	406994.5	406994.5	111.14	%			08:47:54
2	Y 371.029	401599.5	401599.5	111.60	%			08:47:54
2	Ag 328.068†	0.6	684.2	11.194	µg/L	11.194	ppb	08:48:14
2	As 188.979†	129.5	129.3	58.801	µg/L	58.801	ppb	08:48:14
2	B 249.677†	-1204.6	-1257.1	68.882	µg/L	68.882	ppb	08:48:14
2	Ba 233.527†	17938.4	16156.1	135.29	µg/L	135.29	ppb	08:48:14
2	Be 313.107†	64208.4	61347.4	51.299	µg/L	51.299	ppb	08:47:54
2	Cd 226.502†	5389.8	5172.8	50.563	µg/L	50.563	ppb	08:48:14
2	Co 228.616†	2806.0	2747.2	62.948	µg/L	62.948	ppb	08:48:14
2	Cr 267.716†	3788.3	3286.7	65.726	µg/L	65.726	ppb	08:48:14
2	Cu 324.752†	13232.7	9986.4	75.084	µg/L	75.084	ppb	08:47:54
2	Mn 257.610†	371986.9	334249.2	526.76	µg/L	526.76	ppb	08:47:54
2	Mo 202.031†	975.1	844.4	48.434	µg/L	48.434	ppb	08:48:14
2	Ni 231.604†	2913.2	2825.2	78.654	µg/L	78.654	ppb	08:48:14
2	P 214.914†	958.3	730.6	461.89	µg/L	461.89	ppb	08:48:14

2	Pb 220.353†	471.8	488.0	61.762 µg/L	61.762 ppb		08:48:14
2	S 181.975 Axial†	6939.2	6151.4	7549.4 µg/L	7549.4 ppb		08:48:14
2	Sb 206.836†	331.5	143.7	36.756 µg/L	36.756 ppb		08:48:14
2	Se 196.026†	78.0	93.9	57.052 µg/L	57.052 ppb		08:48:14
2	SiO2†	11983.1	9716.9	1633.5 µg/L	1633.5 ppb		08:48:14
2	Si 251.611†	15642.1	14082.6	775.90 µg/L	775.90 ppb		08:48:14
2	Sn 189.927†	491.9	395.1	50.134 µg/L	50.134 ppb		08:48:14
2	Ti 334.940†	51363.7	46937.5	200.82 µg/L	200.82 ppb		08:47:54
2	Tl 190.801†	137.6	202.2	46.331 µg/L	46.331 ppb		08:48:14
2	U 367.007†	1519.3	483.6	48.03 µg/L	48.03 ppb		08:47:54
2	V 292.402†	5323.9	4922.2	70.569 µg/L	70.569 ppb		08:48:14
2	Zn 213.857†	17512.5	14859.5	109.69 µg/L	109.69 ppb		08:48:14
3	Sc RADIAL	25437.6	25437.6	115 %			08:47:22
3	Al 396.153Radial†	42923.6	37352.1	12011 µg/L	12011 ppb		08:47:22
3	Ca 317.933Radial†	121093.1	104813.8	22446 µg/L	22446 ppb		08:47:22
3	Fe 238.204 Radial†	166875.3	144814.5	28186 µg/L	28186 ppb		08:47:17
3	K 766.490 Radial†	3592.3	2696.5	2447.8 µg/L	2447.8 ppb		08:47:22
3	Mg 279.077 IEC†	7851.7	6759.3	11046 µg/L	11046 ppb		08:47:22
3	Na 589.592 Radial†	527.7	330.5	471.30 µg/L	471.30 ppb		08:47:22
3	Sr 421.552†	28524.2	24498.8	143.67 µg/L	143.67 ppb		08:47:22
3	Sc 361.383	405181.6	405181.6	110.64 %			08:48:19
3	Y 371.029	399887.8	399887.8	111.12 %			08:48:19
3	Ag 328.068†	-22.5	663.4	10.938 µg/L	10.938 ppb		08:48:40
3	As 188.979†	135.3	135.1	61.341 µg/L	61.341 ppb		08:48:40
3	B 249.677†	-1197.1	-1255.2	67.846 µg/L	67.846 ppb		08:48:40
3	Ba 233.527†	18040.6	16320.7	136.68 µg/L	136.68 ppb		08:48:40
3	Be 313.107†	64308.8	61696.5	51.589 µg/L	51.589 ppb		08:48:19
3	Cd 226.502†	5428.2	5229.1	51.179 µg/L	51.179 ppb		08:48:40
3	Co 228.616†	2809.1	2761.3	63.276 µg/L	63.276 ppb		08:48:40
3	Cr 267.716†	3803.4	3315.6	66.288 µg/L	66.288 ppb		08:48:40
3	Cu 324.752†	13238.0	10044.5	75.496 µg/L	75.496 ppb		08:48:19
3	Mn 257.610†	372629.1	336327.2	530.01 µg/L	530.01 ppb		08:48:19
3	Mo 202.031†	990.1	861.9	49.422 µg/L	49.422 ppb		08:48:40
3	Ni 231.604†	2935.0	2856.6	79.518 µg/L	79.518 ppb		08:48:40
3	P 214.914†	978.2	752.4	476.62 µg/L	476.62 ppb		08:48:40
3	Pb 220.353†	497.9	513.5	64.901 µg/L	64.901 ppb		08:48:40
3	S 181.975 Axial†	6944.8	6184.4	7590.0 µg/L	7590.0 ppb		08:48:40
3	Sb 206.836†	357.5	168.5	43.911 µg/L	43.911 ppb		08:48:40
3	Se 196.026†	66.5	83.8	52.165 µg/L	52.165 ppb		08:48:40
3	SiO2†	12027.7	9805.4	1648.5 µg/L	1648.5 ppb		08:48:40
3	Si 251.611†	15689.4	14188.4	781.75 µg/L	781.75 ppb		08:48:40
3	Sn 189.927†	501.0	405.3	51.401 µg/L	51.401 ppb		08:48:40
3	Ti 334.940†	51155.2	46955.9	200.89 µg/L	200.89 ppb		08:48:19
3	Tl 190.801†	134.9	200.2	45.891 µg/L	45.891 ppb		08:48:40
3	U 367.007†	1530.5	499.8	54.92 µg/L	54.92 ppb		08:48:19
3	V 292.402†	5315.3	4935.9	70.704 µg/L	70.704 ppb		08:48:40
3	Zn 213.857†	17548.6	14962.6	110.50 µg/L	110.50 ppb		08:48:40

Mean Data: 1204070943|1782974|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	406356.4	110.96	%	0.278				0.25%
Sc RADIAL	25363.7	115	%	0.55				0.48%
Y 371.029	401024.3	111.44	%	0.274				0.25%
Ag 328.068†	689.1	11.202	µg/L	0.2676	11.202	ppb	0.2676	2.39%
Al 396.153Radial†	37356.8	12012	µg/L	99.18	12012	ppb	99.18	0.83%
As 188.979†	130.2	59.199	µg/L	1.9736	59.199	ppb	1.9736	3.33%
B 249.677†	-1271.4	67.368	µg/L	1.8008	67.368	ppb	1.8008	2.67%
Ba 233.527†	16203.3	135.69	µg/L	0.861	135.69	ppb	0.861	0.63%
Be 313.107†	61395.6	51.338	µg/L	0.2335	51.338	ppb	0.2335	0.45%
Ca 317.933Radial†	104764.4	22436	µg/L	207.40	22436	ppb	207.40	0.92%
Cd 226.502†	5197.6	50.850	µg/L	0.3099	50.850	ppb	0.3099	0.61%
Co 228.616†	2748.0	62.968	µg/L	0.2995	62.968	ppb	0.2995	0.48%
Cr 267.716†	3295.1	65.883	µg/L	0.3533	65.883	ppb	0.3533	0.54%
Cu 324.752†	10022.2	75.333	µg/L	0.2193	75.333	ppb	0.2193	0.29%
Fe 238.204 Radial†	144896.1	28201	µg/L	258.60	28201	ppb	258.60	0.92%
K 766.490 Radial†	2709.2	2459.3	µg/L	28.15	2459.3	ppb	28.15	1.14%
Mg 279.077 IEC†	6756.4	11042	µg/L	94.99	11042	ppb	94.99	0.86%
Mn 257.610†	334414.2	527.01	µg/L	2.890	527.01	ppb	2.890	0.55%
Mo 202.031†	851.5	48.831	µg/L	0.5217	48.831	ppb	0.5217	1.07%

Na 589.592 Radial†	337.3	481.81	µg/L	18.628	481.81	ppb	18.628	3.87%
Ni 231.604†	2831.6	78.826	µg/L	0.6240	78.826	ppb	0.6240	0.79%
P 214.914†	741.1	469.08	µg/L	7.367	469.08	ppb	7.367	1.57%
Pb 220.353†	501.7	63.438	µg/L	1.5802	63.438	ppb	1.5802	2.49%
S 181.975 Axial†	6162.7	7563.4	µg/L	23.05	7563.4	ppb	23.05	0.30%
Sb 206.836†	154.3	39.830	µg/L	3.6820	39.830	ppb	3.6820	9.24%
Se 196.026†	90.1	55.150	µg/L	2.6177	55.150	ppb	2.6177	4.75%
SiO2†	9755.4	1640.0	µg/L	7.67	1640.0	ppb	7.67	0.47%
Si 251.611†	14132.0	778.64	µg/L	2.944	778.64	ppb	2.944	0.38%
Sn 189.927†	398.5	50.559	µg/L	0.7293	50.559	ppb	0.7293	1.44%
Sr 421.552†	24510.4	143.73	µg/L	1.555	143.73	ppb	1.555	1.08%
Ti 334.940†	46838.2	200.39	µg/L	0.811	200.39	ppb	0.811	0.40%
Tl 190.801†	199.8	45.810	µg/L	0.5663	45.810	ppb	0.5663	1.24%
U 367.007†	496.1	53.58	µg/L	5.014	53.58	ppb	5.014	9.36%
V 292.402†	4920.9	70.505	µg/L	0.2376	70.505	ppb	0.2376	0.34%
Zn 213.857†	14883.9	109.90	µg/L	0.525	109.90	ppb	0.525	0.48%

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Sequence No.: 4 | **Autosampler Location: 306**
Sample ID: 1204070944|1782974|50| | **Date Collected: 7/23/2018 08:48:48**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 1204070944|1782974|50|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25286.0	25286.0	115	%			08:49:19
1	Al 396.153Radial†	6722.1	5963.8	1918.0	µg/L	1918.0	ppb	08:49:19
1	Ca 317.933Radial†	24183.6	20821.1	4459.0	µg/L	4459.0	ppb	08:49:19
1	Fe 238.204 Radial†	32832.2	28634.6	5573.2	µg/L	5573.2	ppb	08:49:19
1	K 766.490 Radial†	796.9	274.2	248.68	µg/L	248.68	ppb	08:49:19
1	Mg 279.077 IEC†	1535.8	1285.0	2100.0	µg/L	2100.0	ppb	08:49:19
1	Na 589.592 Radial†	100.7	-39.6	-68.226	µg/L	-68.226	ppb	08:49:19
1	Sr 421.552†	3943.3	3182.9	18.638	µg/L	18.638	ppb	08:49:19
1	Sc 361.383	406573.9	406573.9	111.02	%			08:49:35
1	Y 371.029	400917.8	400917.8	111.41	%			08:49:35
1	Ag 328.068†	-755.0	3.6	0.8365	µg/L	0.8365	ppb	08:49:55
1	As 188.979†	-7.7	5.9	2.8942	µg/L	2.8942	ppb	08:49:55
1	B 249.677†	-417.2	-549.0	3.4516	µg/L	3.4516	ppb	08:49:55
1	Ba 233.527†	1484.5	1352.6	11.247	µg/L	11.247	ppb	08:49:55
1	Be 313.107†	-3527.2	397.0	0.3994	µg/L	0.3994	ppb	08:49:55
1	Cd 226.502†	-231.0	115.0	0.5836	µg/L	0.5836	ppb	08:49:55
1	Co 228.616†	-53.6	174.1	3.9567	µg/L	3.9567	ppb	08:49:55
1	Cr 267.716†	331.6	176.8	3.5495	µg/L	3.5495	ppb	08:49:55
1	Cu 324.752†	2816.8	617.0	4.8996	µg/L	4.8996	ppb	08:49:55
1	Mn 257.610†	65661.6	58685.2	92.523	µg/L	92.523	ppb	08:49:35
1	Mo 202.031†	53.8	15.5	0.9840	µg/L	0.9840	ppb	08:49:55
1	Ni 231.604†	43.6	243.2	6.8334	µg/L	6.8334	ppb	08:49:55
1	P 214.914†	243.5	87.6	53.659	µg/L	53.659	ppb	08:49:55
1	Pb 220.353†	-64.2	5.7	0.9219	µg/L	0.9219	ppb	08:49:55
1	S 181.975 Axial†	1444.3	1208.5	1483.3	µg/L	1483.3	ppb	08:49:55
1	Sb 206.836†	162.8	-8.0	-3.0991	µg/L	-3.0991	ppb	08:49:55
1	Se 196.026†	-21.4	4.5	4.5981	µg/L	4.5981	ppb	08:49:55
1	SiO2†	3801.9	2359.2	397.40	µg/L	397.40	ppb	08:49:55
1	Si 251.611†	3836.2	3463.5	191.11	µg/L	191.11	ppb	08:49:55
1	Sn 189.927†	42.6	-9.1	-0.9920	µg/L	-0.9920	ppb	08:49:55
1	Ti 334.940†	4680.9	4937.7	21.202	µg/L	21.202	ppb	08:49:55
1	Tl 190.801†	-93.3	-5.7	-0.6516	µg/L	-0.6516	ppb	08:49:55
1	U 367.007†	1176.4	176.1	38.03	µg/L	38.03	ppb	08:49:35
1	V 292.402†	94.3	216.8	4.0040	µg/L	4.0040	ppb	08:49:55
1	Zn 213.857†	2746.5	1576.0	11.364	µg/L	11.364	ppb	08:49:55
2	Sc RADIAL	25250.4	25250.4	114	%			08:49:24
2	Al 396.153Radial†	6666.8	5923.7	1905.1	µg/L	1905.1	ppb	08:49:24
2	Ca 317.933Radial†	23874.0	20580.2	4407.4	µg/L	4407.4	ppb	08:49:24
2	Fe 238.204 Radial†	32432.4	28325.4	5513.0	µg/L	5513.0	ppb	08:49:24
2	K 766.490 Radial†	792.1	271.0	245.76	µg/L	245.76	ppb	08:49:24
2	Mg 279.077 IEC†	1514.9	1268.6	2073.2	µg/L	2073.2	ppb	08:49:24
2	Na 589.592 Radial†	144.6	-1.1	-8.9514	µg/L	-8.9514	ppb	08:49:24
2	Sr 421.552†	3936.9	3182.1	18.634	µg/L	18.634	ppb	08:49:24
2	Sc 361.383	406555.1	406555.1	111.02	%			08:50:00
2	Y 371.029	400176.9	400176.9	111.20	%			08:50:00
2	Ag 328.068†	-770.6	-10.4	0.6951	µg/L	0.6951	ppb	08:50:21
2	As 188.979†	-19.5	-4.8	-1.8042	µg/L	-1.8042	ppb	08:50:21
2	B 249.677†	-409.5	-542.0	3.4476	µg/L	3.4476	ppb	08:50:21
2	Ba 233.527†	1453.8	1325.0	11.017	µg/L	11.017	ppb	08:50:21
2	Be 313.107†	-3482.9	436.7	0.4270	µg/L	0.4270	ppb	08:50:21
2	Cd 226.502†	-235.1	111.3	0.5520	µg/L	0.5520	ppb	08:50:21
2	Co 228.616†	-60.7	167.8	3.8090	µg/L	3.8090	ppb	08:50:21
2	Cr 267.716†	334.5	179.4	3.6137	µg/L	3.6137	ppb	08:50:21
2	Cu 324.752†	2814.2	614.8	4.8685	µg/L	4.8685	ppb	08:50:21
2	Mn 257.610†	66194.7	59168.2	93.277	µg/L	93.277	ppb	08:50:00
2	Mo 202.031†	31.9	-4.3	-0.1381	µg/L	-0.1381	ppb	08:50:21
2	Ni 231.604†	56.9	255.2	7.1624	µg/L	7.1624	ppb	08:50:21
2	P 214.914†	240.5	84.9	51.924	µg/L	51.924	ppb	08:50:21

2	Pb 220.353†	-54.8	14.2	1.9835 µg/L	1.9835 ppb		08:50:21
2	S 181.975 Axial†	1443.5	1207.9	1482.5 µg/L	1482.5 ppb		08:50:21
2	Sb 206.836†	157.7	-12.5	-4.4080 µg/L	-4.4080 ppb		08:50:21
2	Se 196.026†	-13.8	11.3	7.7961 µg/L	7.7961 ppb		08:50:21
2	SiO2†	3775.6	2335.6	393.49 µg/L	393.49 ppb		08:50:21
2	Si 251.611†	3777.7	3411.0	188.23 µg/L	188.23 ppb		08:50:21
2	Sn 189.927†	47.8	-4.4	-0.4121 µg/L	-0.4121 ppb		08:50:21
2	Ti 334.940†	4602.2	4867.0	20.907 µg/L	20.907 ppb		08:50:21
2	Tl 190.801†	-87.7	-0.7	0.4210 µg/L	0.4210 ppb		08:50:21
2	U 367.007†	1115.5	121.3	19.01 µg/L	19.01 ppb		08:50:00
2	V 292.402†	22.6	152.2	3.1275 µg/L	3.1275 ppb		08:50:21
2	Zn 213.857†	2752.0	1581.0	11.407 µg/L	11.407 ppb		08:50:21
3	Sc RADIAL	25293.4	25293.4	115 %			08:49:29
3	Al 396.153Radial†	6694.0	5937.6	1909.6 µg/L	1909.6 ppb		08:49:29
3	Ca 317.933Radial†	24055.2	20702.9	4433.6 µg/L	4433.6 ppb		08:49:29
3	Fe 238.204 Radial†	32639.3	28457.8	5538.8 µg/L	5538.8 ppb		08:49:29
3	K 766.490 Radial†	812.5	287.6	260.86 µg/L	260.86 ppb		08:49:29
3	Mg 279.077 IEC†	1522.0	1272.6	2079.7 µg/L	2079.7 ppb		08:49:29
3	Na 589.592 Radial†	106.8	-34.4	-60.120 µg/L	-60.120 ppb		08:49:29
3	Sr 421.552†	4038.2	3264.7	19.119 µg/L	19.119 ppb		08:49:29
3	Sc 361.383	410005.2	410005.2	111.96 %			08:50:26
3	Y 371.029	403999.7	403999.7	112.27 %			08:50:26
3	Ag 328.068†	-710.8	48.8	1.2945 µg/L	1.2945 ppb		08:50:46
3	As 188.979†	-15.5	-1.0	-0.1561 µg/L	-0.1561 ppb		08:50:46
3	B 249.677†	-424.0	-551.9	3.2217 µg/L	3.2217 ppb		08:50:46
3	Ba 233.527†	1448.6	1309.3	10.884 µg/L	10.884 ppb		08:50:46
3	Be 313.107†	-3478.0	467.4	0.4547 µg/L	0.4547 ppb		08:50:46
3	Cd 226.502†	-250.1	99.7	0.4289 µg/L	0.4289 ppb		08:50:46
3	Co 228.616†	-72.5	157.7	3.5783 µg/L	3.5783 ppb		08:50:46
3	Cr 267.716†	260.8	111.0	2.2461 µg/L	2.2461 ppb		08:50:46
3	Cu 324.752†	2835.2	612.2	4.8561 µg/L	4.8561 ppb		08:50:46
3	Mn 257.610†	66320.8	58779.0	92.668 µg/L	92.668 ppb		08:50:26
3	Mo 202.031†	46.1	8.2	0.5689 µg/L	0.5689 ppb		08:50:46
3	Ni 231.604†	44.0	243.2	6.8330 µg/L	6.8330 ppb		08:50:46
3	P 214.914†	267.6	107.3	66.778 µg/L	66.778 ppb		08:50:46
3	Pb 220.353†	-58.1	11.6	1.6596 µg/L	1.6596 ppb		08:50:46
3	S 181.975 Axial†	1442.8	1196.3	1468.3 µg/L	1468.3 ppb		08:50:46
3	Sb 206.836†	163.5	-8.6	-3.2464 µg/L	-3.2464 ppb		08:50:46
3	Se 196.026†	-22.0	4.1	4.4072 µg/L	4.4072 ppb		08:50:46
3	SiO2†	3770.8	2302.7	387.88 µg/L	387.88 ppb		08:50:46
3	Si 251.611†	3784.9	3388.8	186.99 µg/L	186.99 ppb		08:50:46
3	Sn 189.927†	50.3	-2.6	-0.1862 µg/L	-0.1862 ppb		08:50:46
3	Ti 334.940†	4597.9	4828.3	20.740 µg/L	20.740 ppb		08:50:46
3	Tl 190.801†	-93.0	-4.7	-0.4446 µg/L	-0.4446 ppb		08:50:46
3	U 367.007†	1153.1	146.4	27.74 µg/L	27.74 ppb		08:50:26
3	V 292.402†	72.8	196.9	3.7253 µg/L	3.7253 ppb		08:50:46
3	Zn 213.857†	2739.9	1549.3	11.165 µg/L	11.165 ppb		08:50:46

Mean Data: 1204070944|1782974|50|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	407711.4	111.33	%	0.542				0.49%
Sc RADIAL	25276.6	114	%	0.10				0.09%
Y 371.029	401698.1	111.63	%	0.563				0.50%
Ag 328.068†	14.0	0.9420	µg/L	0.31335	0.9420	ppb	0.31335	33.26%
Al 396.153Radial†	5941.7	1910.9	µg/L	6.53	1910.9	ppb	6.53	0.34%
As 188.979†	0.0	0.3113	µg/L	2.38382	0.3113	ppb	2.38382	765.77%
B 249.677†	-547.6	3.3736	µg/L	0.13162	3.3736	ppb	0.13162	3.90%
Ba 233.527†	1329.0	11.050	µg/L	0.1837	11.050	ppb	0.1837	1.66%
Be 313.107†	433.7	0.4270	µg/L	0.02768	0.4270	ppb	0.02768	6.48%
Ca 317.933Radial†	20701.4	4433.3	µg/L	25.80	4433.3	ppb	25.80	0.58%
Cd 226.502†	108.7	0.5215	µg/L	0.08171	0.5215	ppb	0.08171	15.67%
Co 228.616†	166.5	3.7813	µg/L	0.19074	3.7813	ppb	0.19074	5.04%
Cr 267.716†	155.7	3.1364	µg/L	0.77171	3.1364	ppb	0.77171	24.60%
Cu 324.752†	614.7	4.8747	µg/L	0.02239	4.8747	ppb	0.02239	0.46%
Fe 238.204 Radial†	28472.6	5541.7	µg/L	30.20	5541.7	ppb	30.20	0.54%
K 766.490 Radial†	277.6	251.77	µg/L	8.008	251.77	ppb	8.008	3.18%
Mg 279.077 IEC†	1275.4	2084.3	µg/L	13.96	2084.3	ppb	13.96	0.67%
Mn 257.610†	58877.5	92.823	µg/L	0.4005	92.823	ppb	0.4005	0.43%
Mo 202.031†	6.5	0.4716	µg/L	0.56734	0.4716	ppb	0.56734	120.30%

Na 589.592 Radial†	-25.0	-45.766	µg/L	32.1389	-45.766	ppb	32.1389	70.22%
Ni 231.604†	247.2	6.9429	µg/L	0.19008	6.9429	ppb	0.19008	2.74%
P 214.914†	93.3	57.454	µg/L	8.1217	57.454	ppb	8.1217	14.14%
Pb 220.353†	10.5	1.5217	µg/L	0.54407	1.5217	ppb	0.54407	35.76%
S 181.975 Axial†	1204.2	1478.0	µg/L	8.47	1478.0	ppb	8.47	0.57%
Sb 206.836†	-9.7	-3.5845	µg/L	0.71695	-3.5845	ppb	0.71695	20.00%
Se 196.026†	6.6	5.6004	µg/L	1.90387	5.6004	ppb	1.90387	33.99%
SiO2†	2332.5	392.92	µg/L	4.784	392.92	ppb	4.784	1.22%
Si 251.611†	3421.1	188.78	µg/L	2.115	188.78	ppb	2.115	1.12%
Sn 189.927†	-5.4	-0.5301	µg/L	0.41566	-0.5301	ppb	0.41566	78.41%
Sr 421.552†	3209.9	18.797	µg/L	0.2790	18.797	ppb	0.2790	1.48%
Ti 334.940†	4877.7	20.950	µg/L	0.2339	20.950	ppb	0.2339	1.12%
Tl 190.801†	-3.7	-0.2251	µg/L	0.56900	-0.2251	ppb	0.56900	252.83%
U 367.007†	147.9	28.26	µg/L	9.521	28.26	ppb	9.521	33.69%
V 292.402†	188.6	3.6189	µg/L	0.44783	3.6189	ppb	0.44783	12.37%
Zn 213.857†	1568.8	11.312	µg/L	0.1294	11.312	ppb	0.1294	1.14%

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Sequence No.: 5 | **Autosampler Location: 307**
Sample ID: 454715002|1782974|10| | **Date Collected: 7/23/2018 08:50:54**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 454715002|1782974|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25442.0	25442.0	115	%			08:51:30
1	Al 396.153Radial†	34819.4	30312.4	9748.8	µg/L	9748.8	ppb	08:51:30
1	Ca 317.933Radial†	122465.9	105987.1	22698	µg/L	22698	ppb	08:51:30
1	Fe 238.204 Radial†	159914.1	138748.3	27005	µg/L	27005	ppb	08:51:25
1	K 766.490 Radial†	2188.8	1477.9	1340.7	µg/L	1340.7	ppb	08:51:30
1	Mg 279.077 IEC†	7452.2	6411.4	10478	µg/L	10478	ppb	08:51:30
1	Na 589.592 Radial†	198.7	44.8	33.620	µg/L	33.620	ppb	08:51:30
1	Sr 421.552†	20399.3	17443.2	102.17	µg/L	102.17	ppb	08:51:30
1	Sc 361.383	403809.4	403809.4	110.27	%			08:51:56
1	Y 371.029	398488.5	398488.5	110.73	%			08:51:56
1	Ag 328.068†	-1005.1	-227.8	1.6575	µg/L	1.6575	ppb	08:52:17
1	As 188.979†	1.4	14.0	7.6446	µg/L	7.6446	ppb	08:52:17
1	B 249.677†	-2842.5	-2751.0	13.724	µg/L	13.724	ppb	08:52:17
1	Ba 233.527†	8816.4	8010.9	66.763	µg/L	66.763	ppb	08:52:17
1	Be 313.107†	-3158.0	710.0	0.9022	µg/L	0.9022	ppb	08:52:17
1	Cd 226.502†	-7.0	316.7	0.3247	µg/L	0.3247	ppb	08:52:17
1	Co 228.616†	381.8	568.7	12.777	µg/L	12.777	ppb	08:52:17
1	Cr 267.716†	998.5	783.6	15.850	µg/L	15.850	ppb	08:52:17
1	Cu 324.752†	5917.6	3446.4	27.002	µg/L	27.002	ppb	08:52:17
1	Mn 257.610†	338366.2	306399.5	482.93	µg/L	482.93	ppb	08:51:56
1	Mo 202.031†	50.7	13.0	1.2474	µg/L	1.2474	ppb	08:52:17
1	Ni 231.604†	915.0	1033.7	29.109	µg/L	29.109	ppb	08:52:17
1	P 214.914†	886.2	672.0	424.68	µg/L	424.68	ppb	08:52:17
1	Pb 220.353†	-0.8	62.8	8.9996	µg/L	8.9996	ppb	08:52:17
1	S 181.975 Axial†	6355.5	5671.4	6960.3	µg/L	6960.3	ppb	08:52:17
1	Sb 206.836†	170.5	0.1	-3.8840	µg/L	-3.8840	ppb	08:52:17
1	Se 196.026†	-37.4	-10.2	7.1981	µg/L	7.1981	ppb	08:52:17
1	SiO2†	9328.7	7394.7	1243.5	µg/L	1243.5	ppb	08:52:17
1	Si 251.611†	11720.3	10637.1	586.24	µg/L	586.24	ppb	08:52:17
1	Sn 189.927†	65.6	12.0	2.2620	µg/L	2.2620	ppb	08:52:17
1	Ti 334.940†	33279.3	30901.8	132.56	µg/L	132.56	ppb	08:51:56
1	Tl 190.801†	-91.8	-4.9	1.7618	µg/L	1.7618	ppb	08:52:17
1	U 367.007†	1438.7	421.2	31.69	µg/L	31.69	ppb	08:51:56
1	V 292.402†	1037.9	1073.1	19.556	µg/L	19.556	ppb	08:52:17
1	Zn 213.857†	9294.8	7531.4	54.300	µg/L	54.300	ppb	08:52:17
2	Sc RADIAL	25078.7	25078.7	114	%			08:51:40
2	Al 396.153Radial†	34358.2	30344.2	9759.0	µg/L	9759.0	ppb	08:51:40
2	Ca 317.933Radial†	120885.5	106135.4	22730	µg/L	22730	ppb	08:51:40
2	Fe 238.204 Radial†	160365.7	141156.5	27474	µg/L	27474	ppb	08:51:35
2	K 766.490 Radial†	2145.8	1467.6	1331.2	µg/L	1331.2	ppb	08:51:40
2	Mg 279.077 IEC†	7315.6	6384.8	10434	µg/L	10434	ppb	08:51:40
2	Na 589.592 Radial†	164.1	16.9	-9.9769	µg/L	-9.9769	ppb	08:51:40
2	Sr 421.552†	20232.2	17552.7	102.81	µg/L	102.81	ppb	08:51:40
2	Sc 361.383	402234.0	402234.0	109.84	%			08:52:22
2	Y 371.029	397417.7	397417.7	110.44	%			08:52:22
2	Ag 328.068†	-1058.3	-279.8	1.1981	µg/L	1.1981	ppb	08:52:42
2	As 188.979†	-6.6	6.8	4.4633	µg/L	4.4633	ppb	08:52:42
2	B 249.677†	-2830.6	-2750.2	15.574	µg/L	15.574	ppb	08:52:42
2	Ba 233.527†	8751.7	7983.4	66.519	µg/L	66.519	ppb	08:52:42
2	Be 313.107†	-3182.7	676.3	0.8759	µg/L	0.8759	ppb	08:52:42
2	Cd 226.502†	11.0	333.1	0.4441	µg/L	0.4441	ppb	08:52:42
2	Co 228.616†	387.1	574.9	12.918	µg/L	12.918	ppb	08:52:42
2	Cr 267.716†	997.5	786.2	15.908	µg/L	15.908	ppb	08:52:42
2	Cu 324.752†	5935.7	3483.9	27.309	µg/L	27.309	ppb	08:52:42
2	Mn 257.610†	334201.0	303809.2	478.89	µg/L	478.89	ppb	08:52:22
2	Mo 202.031†	45.8	8.7	1.0123	µg/L	1.0123	ppb	08:52:42
2	Ni 231.604†	918.5	1040.2	29.297	µg/L	29.297	ppb	08:52:42
2	P 214.914†	906.4	693.5	438.57	µg/L	438.57	ppb	08:52:42

2	Pb 220.353†	24.9	86.2	11.889	µg/L	11.889	ppb	08:52:42
2	S 181.975 Axial†	6342.8	5682.4	6973.7	µg/L	6973.7	ppb	08:52:42
2	Sb 206.836†	162.1	-7.0	-5.9846	µg/L	-5.9846	ppb	08:52:42
2	Se 196.026†	-40.3	-12.9	6.1240	µg/L	6.1240	ppb	08:52:42
2	SiO2†	9278.0	7381.7	1241.2	µg/L	1241.2	ppb	08:52:42
2	Si 251.611†	11646.2	10611.2	584.78	µg/L	584.78	ppb	08:52:42
2	Sn 189.927†	44.4	-7.1	-0.1037	µg/L	-0.1037	ppb	08:52:42
2	Ti 334.940†	32887.3	30663.1	131.55	µg/L	131.55	ppb	08:52:22
2	Tl 190.801†	-100.6	-13.3	0.0200	µg/L	0.0200	ppb	08:52:42
2	U 367.007†	1449.8	436.5	35.24	µg/L	35.24	ppb	08:52:22
2	V 292.402†	1050.0	1087.8	19.845	µg/L	19.845	ppb	08:52:42
2	Zn 213.857†	9252.5	7525.9	54.206	µg/L	54.206	ppb	08:52:42
3	Sc RADIAL	25400.1	25400.1	115	%			08:51:50
3	Al 396.153Radial†	34500.1	30084.6	9675.6	µg/L	9675.6	ppb	08:51:50
3	Ca 317.933Radial†	121647.4	105450.7	22583	µg/L	22583	ppb	08:51:50
3	Fe 238.204 Radial†	160043.9	139089.8	27071	µg/L	27071	ppb	08:51:45
3	K 766.490 Radial†	2137.5	1436.5	1303.0	µg/L	1303.0	ppb	08:51:50
3	Mg 279.077 IEC†	7403.3	6379.6	10426	µg/L	10426	ppb	08:51:50
3	Na 589.592 Radial†	215.9	60.1	57.011	µg/L	57.011	ppb	08:51:50
3	Sr 421.552†	20381.4	17456.9	102.25	µg/L	102.25	ppb	08:51:50
3	Sc 361.383	407449.3	407449.3	111.26	%			08:52:47
3	Y 371.029	401833.7	401833.7	111.66	%			08:52:47
3	Ag 328.068†	-1038.2	-249.5	1.4544	µg/L	1.4544	ppb	08:53:07
3	As 188.979†	-1.3	11.6	6.5896	µg/L	6.5896	ppb	08:53:07
3	B 249.677†	-2874.6	-2756.8	13.789	µg/L	13.789	ppb	08:53:07
3	Ba 233.527†	8803.3	7927.7	66.061	µg/L	66.061	ppb	08:53:07
3	Be 313.107†	-3132.4	758.6	0.9384	µg/L	0.9384	ppb	08:53:07
3	Cd 226.502†	-5.4	318.3	0.3338	µg/L	0.3338	ppb	08:53:07
3	Co 228.616†	370.7	555.6	12.477	µg/L	12.477	ppb	08:53:07
3	Cr 267.716†	1025.1	799.4	16.177	µg/L	16.177	ppb	08:53:07
3	Cu 324.752†	5915.5	3396.5	26.633	µg/L	26.633	ppb	08:53:07
3	Mn 257.610†	337747.8	303102.4	477.76	µg/L	477.76	ppb	08:52:47
3	Mo 202.031†	39.6	2.7	0.6608	µg/L	0.6608	ppb	08:53:07
3	Ni 231.604†	917.0	1028.1	28.955	µg/L	28.955	ppb	08:53:07
3	P 214.914†	909.2	685.5	433.59	µg/L	433.59	ppb	08:53:07
3	Pb 220.353†	42.0	101.2	13.750	µg/L	13.750	ppb	08:53:07
3	S 181.975 Axial†	6371.2	5634.0	6914.4	µg/L	6914.4	ppb	08:53:07
3	Sb 206.836†	164.1	-7.1	-5.9753	µg/L	-5.9753	ppb	08:53:07
3	Se 196.026†	-51.5	-22.5	1.3917	µg/L	1.3917	ppb	08:53:07
3	SiO2†	9311.6	7303.8	1228.2	µg/L	1228.2	ppb	08:53:07
3	Si 251.611†	11746.3	10565.5	582.28	µg/L	582.28	ppb	08:53:07
3	Sn 189.927†	49.7	-2.8	0.4242	µg/L	0.4242	ppb	08:53:07
3	Ti 334.940†	33242.9	30599.5	131.28	µg/L	131.28	ppb	08:52:47
3	Tl 190.801†	-101.6	-13.0	0.0254	µg/L	0.0254	ppb	08:53:07
3	U 367.007†	1415.7	388.9	20.14	µg/L	20.14	ppb	08:52:47
3	V 292.402†	1019.9	1048.6	19.238	µg/L	19.238	ppb	08:53:07
3	Zn 213.857†	9289.1	7451.0	53.681	µg/L	53.681	ppb	08:53:07

Mean Data: 454715002|1782974|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	404497.6	110.46	%	0.730				0.66%
Sc RADIAL	25306.9	115	%	0.90				0.79%
Y 371.029	399246.6	110.94	%	0.640				0.58%
Ag 328.068†	-252.4	1.4367	µg/L	0.23022	1.4367	ppb	0.23022	16.02%
Al 396.153Radial†	30247.0	9727.8	µg/L	45.52	9727.8	ppb	45.52	0.47%
As 188.979†	10.8	6.2325	µg/L	1.62043	6.2325	ppb	1.62043	26.00%
B 249.677†	-2752.7	14.362	µg/L	1.0497	14.362	ppb	1.0497	7.31%
Ba 233.527†	7974.0	66.448	µg/L	0.3565	66.448	ppb	0.3565	0.54%
Be 313.107†	715.0	0.9055	µg/L	0.03140	0.9055	ppb	0.03140	3.47%
Ca 317.933Radial†	105857.7	22670	µg/L	77.14	22670	ppb	77.14	0.34%
Cd 226.502†	322.7	0.3675	µg/L	0.06647	0.3675	ppb	0.06647	18.08%
Co 228.616†	566.4	12.724	µg/L	0.2256	12.724	ppb	0.2256	1.77%
Cr 267.716†	789.7	15.978	µg/L	0.1745	15.978	ppb	0.1745	1.09%
Cu 324.752†	3442.3	26.981	µg/L	0.3383	26.981	ppb	0.3383	1.25%
Fe 238.204 Radial†	139664.9	27183	µg/L	253.61	27183	ppb	253.61	0.93%
K 766.490 Radial†	1460.7	1325.0	µg/L	19.61	1325.0	ppb	19.61	1.48%
Mg 279.077 IEC†	6391.9	10446	µg/L	27.88	10446	ppb	27.88	0.27%
Mn 257.610†	304437.0	479.86	µg/L	2.719	479.86	ppb	2.719	0.57%
Mo 202.031†	8.2	0.9735	µg/L	0.29521	0.9735	ppb	0.29521	30.32%

Na 589.592 Radial†	40.6	26.885	µg/L	33.9982	26.885	ppb	33.9982	126.46%
Ni 231.604†	1034.0	29.120	µg/L	0.1711	29.120	ppb	0.1711	0.59%
P 214.914†	683.6	432.28	µg/L	7.036	432.28	ppb	7.036	1.63%
Pb 220.353†	83.4	11.546	µg/L	2.3936	11.546	ppb	2.3936	20.73%
S 181.975 Axial†	5662.6	6949.5	µg/L	31.13	6949.5	ppb	31.13	0.45%
Sb 206.836†	-4.7	-5.2813	µg/L	1.21013	-5.2813	ppb	1.21013	22.91%
Se 196.026†	-15.2	4.9046	µg/L	3.08933	4.9046	ppb	3.08933	62.99%
SiO2†	7360.1	1237.7	µg/L	8.28	1237.7	ppb	8.28	0.67%
Si 251.611†	10604.6	584.44	µg/L	2.001	584.44	ppb	2.001	0.34%
Sn 189.927†	0.7	0.8608	µg/L	1.24182	0.8608	ppb	1.24182	144.26%
Sr 421.552†	17484.3	102.41	µg/L	0.350	102.41	ppb	0.350	0.34%
Ti 334.940†	30721.4	131.79	µg/L	0.679	131.79	ppb	0.679	0.52%
Tl 190.801†	-10.4	0.6024	µg/L	1.00407	0.6024	ppb	1.00407	166.68%
U 367.007†	415.5	29.03	µg/L	7.894	29.03	ppb	7.894	27.19%
V 292.402†	1069.8	19.546	µg/L	0.3037	19.546	ppb	0.3037	1.55%
Zn 213.857†	7502.8	54.062	µg/L	0.3337	54.062	ppb	0.3337	0.62%

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Sequence No.: 6 | **Autosampler Location: 308**
Sample ID: 454715003|1782974|10| | **Date Collected: 7/23/2018 08:53:16**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 454715003|1782974|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25029.6	25029.6	113	%			08:53:52
1	Al 396.153Radial†	31130.7	27556.2	8862.4	µg/L	8862.4	ppb	08:53:52
1	Ca 317.933Radial†	108935.1	95801.8	20517	µg/L	20517	ppb	08:53:52
1	Fe 238.204 Radial†	147571.2	130146.3	25331	µg/L	25331	ppb	08:53:47
1	K 766.490 Radial†	1900.4	1254.8	1137.9	µg/L	1137.9	ppb	08:53:52
1	Mg 279.077 IEC†	7043.6	6157.5	10063	µg/L	10063	ppb	08:53:52
1	Na 589.592 Radial†	201.0	49.8	43.386	µg/L	43.386	ppb	08:53:52
1	Sr 421.552†	17035.2	14767.3	86.475	µg/L	86.475	ppb	08:53:52
1	Sc 361.383	403107.5	403107.5	110.08	%			08:54:18
1	Y 371.029	397931.0	397931.0	110.58	%			08:54:18
1	Ag 328.068†	-1004.2	-228.6	1.4119	µg/L	1.4119	ppb	08:54:39
1	As 188.979†	-5.5	7.8	4.8211	µg/L	4.8211	ppb	08:54:39
1	B 249.677†	-2607.5	-2542.0	14.152	µg/L	14.152	ppb	08:54:39
1	Ba 233.527†	7257.2	6608.4	54.999	µg/L	54.999	ppb	08:54:39
1	Be 313.107†	-3103.4	754.6	0.9070	µg/L	0.9070	ppb	08:54:39
1	Cd 226.502†	-42.2	284.7	0.1792	µg/L	0.1792	ppb	08:54:39
1	Co 228.616†	326.0	518.5	11.669	µg/L	11.669	ppb	08:54:39
1	Cr 267.716†	951.7	742.6	15.013	µg/L	15.013	ppb	08:54:39
1	Cu 324.752†	5585.4	3154.0	24.741	µg/L	24.741	ppb	08:54:39
1	Mn 257.610†	341267.0	309569.0	487.80	µg/L	487.80	ppb	08:54:18
1	Mo 202.031†	48.9	11.4	1.1247	µg/L	1.1247	ppb	08:54:39
1	Ni 231.604†	841.8	968.7	27.278	µg/L	27.278	ppb	08:54:39
1	P 214.914†	854.1	644.2	407.51	µg/L	407.51	ppb	08:54:39
1	Pb 220.353†	-9.0	55.4	7.9733	µg/L	7.9733	ppb	08:54:39
1	S 181.975 Axial†	5353.0	4770.7	5854.0	µg/L	5854.0	ppb	08:54:39
1	Sb 206.836†	157.7	-11.4	-6.9401	µg/L	-6.9401	ppb	08:54:39
1	Se 196.026†	-43.3	-15.6	3.8857	µg/L	3.8857	ppb	08:54:39
1	SiO2†	8297.3	6472.5	1088.1	µg/L	1088.1	ppb	08:54:39
1	Si 251.611†	10293.7	9359.6	515.72	µg/L	515.72	ppb	08:54:39
1	Sn 189.927†	53.0	0.7	0.7580	µg/L	0.7580	ppb	08:54:39
1	Ti 334.940†	26799.4	25067.6	107.63	µg/L	107.63	ppb	08:54:18
1	Tl 190.801†	-94.6	-7.6	0.9556	µg/L	0.9556	ppb	08:54:39
1	U 367.007†	1361.7	353.6	15.55	µg/L	15.55	ppb	08:54:18
1	V 292.402†	931.2	977.8	17.969	µg/L	17.969	ppb	08:54:39
1	Zn 213.857†	8937.1	7221.1	52.112	µg/L	52.112	ppb	08:54:39
2	Sc RADIAL	25310.3	25310.3	115	%			08:54:02
2	Al 396.153Radial†	31503.5	27576.9	8869.1	µg/L	8869.1	ppb	08:54:02
2	Ca 317.933Radial†	109846.2	95531.0	20459	µg/L	20459	ppb	08:54:02
2	Fe 238.204 Radial†	148425.0	129447.6	25195	µg/L	25195	ppb	08:53:57
2	K 766.490 Radial†	1910.1	1244.6	1128.7	µg/L	1128.7	ppb	08:54:02
2	Mg 279.077 IEC†	7113.1	6149.2	10049	µg/L	10049	ppb	08:54:02
2	Na 589.592 Radial†	209.1	54.8	51.328	µg/L	51.328	ppb	08:54:02
2	Sr 421.552†	17116.3	14671.4	85.912	µg/L	85.912	ppb	08:54:02
2	Sc 361.383	400194.9	400194.9	109.28	%			08:54:44
2	Y 371.029	394836.0	394836.0	109.72	%			08:54:44
2	Ag 328.068†	-987.4	-219.8	1.4677	µg/L	1.4677	ppb	08:55:04
2	As 188.979†	-4.9	8.3	5.0057	µg/L	5.0057	ppb	08:55:04
2	B 249.677†	-2633.5	-2583.0	12.257	µg/L	12.257	ppb	08:55:04
2	Ba 233.527†	7289.8	6686.1	55.657	µg/L	55.657	ppb	08:55:04
2	Be 313.107†	-3162.7	679.9	0.8501	µg/L	0.8501	ppb	08:55:04
2	Cd 226.502†	-13.4	310.8	0.4647	µg/L	0.4647	ppb	08:55:04
2	Co 228.616†	333.3	527.4	11.872	µg/L	11.872	ppb	08:55:04
2	Cr 267.716†	946.0	743.7	15.013	µg/L	15.013	ppb	08:55:04
2	Cu 324.752†	5576.6	3182.8	24.959	µg/L	24.959	ppb	08:55:04
2	Mn 257.610†	340976.9	311559.9	490.92	µg/L	490.92	ppb	08:54:44
2	Mo 202.031†	44.0	7.3	0.8863	µg/L	0.8863	ppb	08:55:04
2	Ni 231.604†	841.1	973.6	27.412	µg/L	27.412	ppb	08:55:04
2	P 214.914†	840.5	637.4	403.15	µg/L	403.15	ppb	08:55:04

2	Pb 220.353†	-0.7	62.8	8.8782 µg/L	8.8782 ppb		08:55:04
2	S 181.975 Axial†	5370.6	4822.1	5917.3 µg/L	5917.3 ppb		08:55:04
2	Sb 206.836†	173.0	3.8	-2.5928 µg/L	-2.5928 ppb		08:55:04
2	Se 196.026†	-40.7	-13.4	4.8494 µg/L	4.8494 ppb		08:55:04
2	SiO2†	8324.1	6551.9	1101.5 µg/L	1101.5 ppb		08:55:04
2	Si 251.611†	10366.6	9494.3	523.18 µg/L	523.18 ppb		08:55:04
2	Sn 189.927†	42.8	-8.3	-0.3608 µg/L	-0.3608 ppb		08:55:04
2	Ti 334.940†	26790.6	25236.8	108.34 µg/L	108.34 ppb		08:54:44
2	Tl 190.801†	-88.9	-3.0	1.9423 µg/L	1.9423 ppb		08:55:04
2	U 367.007†	1426.1	421.5	39.99 µg/L	39.99 ppb		08:54:44
2	V 292.402†	971.1	1020.5	18.510 µg/L	18.510 ppb		08:55:04
2	Zn 213.857†	8972.6	7312.7	52.824 µg/L	52.824 ppb		08:55:04
3	Sc RADIAL	24934.3	24934.3	113 %			08:54:12
3	Al 396.153Radial†	31355.0	27859.8	8960.1 µg/L	8960.1 ppb		08:54:12
3	Ca 317.933Radial†	109478.2	96650.1	20698 µg/L	20698 ppb		08:54:12
3	Fe 238.204 Radial†	148558.6	131518.3	25598 µg/L	25598 ppb		08:54:07
3	K 766.490 Radial†	1925.0	1283.0	1163.5 µg/L	1163.5 ppb		08:54:12
3	Mg 279.077 IEC†	7087.7	6220.3	10166 µg/L	10166 ppb		08:54:12
3	Na 589.592 Radial†	177.4	29.5	11.920 µg/L	11.920 ppb		08:54:12
3	Sr 421.552†	17064.3	14850.5	86.961 µg/L	86.961 ppb		08:54:12
3	Sc 361.383	402679.6	402679.6	109.96 %			08:55:09
3	Y 371.029	397598.0	397598.0	110.49 %			08:55:09
3	Ag 328.068†	-940.4	-171.5	2.0349 µg/L	2.0349 ppb		08:55:29
3	As 188.979†	-4.1	9.0	5.3616 µg/L	5.3616 ppb		08:55:29
3	B 249.677†	-2643.1	-2576.9	14.034 µg/L	14.034 ppb		08:55:29
3	Ba 233.527†	7270.2	6627.2	55.151 µg/L	55.151 ppb		08:55:29
3	Be 313.107†	-3122.2	734.6	0.8904 µg/L	0.8904 ppb		08:55:29
3	Cd 226.502†	-4.1	319.4	0.5094 µg/L	0.5094 ppb		08:55:29
3	Co 228.616†	323.8	516.9	11.630 µg/L	11.630 ppb		08:55:29
3	Cr 267.716†	926.6	720.7	14.591 µg/L	14.591 ppb		08:55:29
3	Cu 324.752†	5554.4	3131.2	24.584 µg/L	24.584 ppb		08:55:29
3	Mn 257.610†	341321.9	309948.4	488.42 µg/L	488.42 ppb		08:55:09
3	Mo 202.031†	46.1	8.9	0.9878 µg/L	0.9878 ppb		08:55:29
3	Ni 231.604†	859.3	985.4	27.747 µg/L	27.747 ppb		08:55:29
3	P 214.914†	841.3	633.4	400.14 µg/L	400.14 ppb		08:55:29
3	Pb 220.353†	38.4	98.5	13.321 µg/L	13.321 ppb		08:55:29
3	S 181.975 Axial†	5386.2	4806.0	5897.4 µg/L	5897.4 ppb		08:55:29
3	Sb 206.836†	165.3	-4.3	-4.9482 µg/L	-4.9482 ppb		08:55:29
3	Se 196.026†	-36.2	-9.2	7.0572 µg/L	7.0572 ppb		08:55:29
3	SiO2†	8333.8	6513.7	1095.0 µg/L	1095.0 ppb		08:55:29
3	Si 251.611†	10330.4	9402.9	518.10 µg/L	518.10 ppb		08:55:29
3	Sn 189.927†	42.6	-8.8	-0.4160 µg/L	-0.4160 ppb		08:55:29
3	Ti 334.940†	26768.9	25065.8	107.63 µg/L	107.63 ppb		08:55:09
3	Tl 190.801†	-95.7	-8.7	0.7489 µg/L	0.7489 ppb		08:55:29
3	U 367.007†	1334.5	330.2	6.188 µg/L	6.188 ppb		08:55:09
3	V 292.402†	965.1	1009.5	18.431 µg/L	18.431 ppb		08:55:29
3	Zn 213.857†	8990.7	7278.5	52.518 µg/L	52.518 ppb		08:55:29

Mean Data: 454715003|1782974|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	401994.0	109.77	%	0.429				0.39%
Sc RADIAL	25091.4	114	%	0.89				0.78%
Y 371.029	396788.3	110.26	%	0.472				0.43%
Ag 328.068†	-206.7	1.6382	µg/L	0.34471	1.6382	ppb	0.34471	21.04%
Al 396.153Radial†	27664.3	8897.2	µg/L	54.56	8897.2	ppb	54.56	0.61%
As 188.979†	8.4	5.0628	µg/L	0.27477	5.0628	ppb	0.27477	5.43%
B 249.677†	-2567.3	13.481	µg/L	1.0615	13.481	ppb	1.0615	7.87%
Ba 233.527†	6640.6	55.269	µg/L	0.3444	55.269	ppb	0.3444	0.62%
Be 313.107†	723.0	0.8825	µg/L	0.02926	0.8825	ppb	0.02926	3.32%
Ca 317.933Radial†	95994.3	20558	µg/L	125.04	20558	ppb	125.04	0.61%
Cd 226.502†	305.0	0.3844	µg/L	0.17914	0.3844	ppb	0.17914	46.60%
Co 228.616†	520.9	11.724	µg/L	0.1299	11.724	ppb	0.1299	1.11%
Cr 267.716†	735.7	14.872	µg/L	0.2439	14.872	ppb	0.2439	1.64%
Cu 324.752†	3156.0	24.761	µg/L	0.1883	24.761	ppb	0.1883	0.76%
Fe 238.204 Radial†	130370.7	25374	µg/L	205.04	25374	ppb	205.04	0.81%
K 766.490 Radial†	1260.8	1143.4	µg/L	18.03	1143.4	ppb	18.03	1.58%
Mg 279.077 IEC†	6175.7	10093	µg/L	63.58	10093	ppb	63.58	0.63%
Mn 257.610†	310359.1	489.05	µg/L	1.652	489.05	ppb	1.652	0.34%
Mo 202.031†	9.2	0.9996	µg/L	0.11964	0.9996	ppb	0.11964	11.97%

Na 589.592 Radial†	44.7	35.545	µg/L	20.8415	35.545	ppb	20.8415	58.63%
Ni 231.604†	975.9	27.479	µg/L	0.2419	27.479	ppb	0.2419	0.88%
P 214.914†	638.3	403.60	µg/L	3.705	403.60	ppb	3.705	0.92%
Pb 220.353†	72.2	10.058	µg/L	2.8622	10.058	ppb	2.8622	28.46%
S 181.975 Axial†	4799.6	5889.6	µg/L	32.36	5889.6	ppb	32.36	0.55%
Sb 206.836†	-4.0	-4.8271	µg/L	2.17618	-4.8271	ppb	2.17618	45.08%
Se 196.026†	-12.7	5.2641	µg/L	1.62593	5.2641	ppb	1.62593	30.89%
SiO2†	6512.7	1094.9	µg/L	6.73	1094.9	ppb	6.73	0.61%
Si 251.611†	9418.9	519.00	µg/L	3.815	519.00	ppb	3.815	0.74%
Sn 189.927†	-5.5	-0.0063	µg/L	0.66241	-0.0063	ppb	0.66241	>999.9%
Sr 421.552†	14763.0	86.449	µg/L	0.5249	86.449	ppb	0.5249	0.61%
Ti 334.940†	25123.4	107.87	µg/L	0.407	107.87	ppb	0.407	0.38%
Tl 190.801†	-6.5	1.2156	µg/L	0.63772	1.2156	ppb	0.63772	52.46%
U 367.007†	368.4	20.58	µg/L	17.456	20.58	ppb	17.456	84.83%
V 292.402†	1002.6	18.303	µg/L	0.2920	18.303	ppb	0.2920	1.60%
Zn 213.857†	7270.8	52.485	µg/L	0.3570	52.485	ppb	0.3570	0.68%

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Sequence No.: 7 | **Autosampler Location: 7**
Sample ID: CCV | **Date Collected: 7/23/2018 08:55:38**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24633.8	24633.8	112	%			08:56:17
1	Al 396.153Radial†	17398.9	15689.2	5022.9	µg/L	5022.9	ppb	08:56:17
1	Ca 317.933Radial†	27624.0	24464.0	5239.1	µg/L	5239.1	ppb	08:56:17
1	Fe 238.204 Radial†	29610.8	26506.2	5159.0	µg/L	5159.0	ppb	08:56:17
1	K 766.490 Radial†	6446.2	5356.3	4867.3	µg/L	4867.3	ppb	08:56:17
1	Mg 279.077 IEC†	3747.9	3303.3	5398.3	µg/L	5398.3	ppb	08:56:17
1	Na 589.592 Radial†	7218.4	6342.5	9746.4	µg/L	9746.4	ppb	08:56:17
1	Sr 421.552†	93197.7	83276.0	489.60	µg/L	489.60	ppb	08:56:12
1	Sc 361.383	399336.5	399336.5	109.05	%			08:56:44
1	Y 371.029	390367.9	390367.9	108.48	%			08:56:44
1	Ag 328.068†	52004.0	48373.1	491.25	µg/L	491.25	ppb	08:56:44
1	As 188.979†	1280.4	1187.0	526.29	µg/L	526.29	ppb	08:57:04
1	B 249.677†	16550.2	15003.8	516.87	µg/L	516.87	ppb	08:56:44
1	Ba 233.527†	64228.9	58915.7	495.77	µg/L	495.77	ppb	08:56:44
1	Be 313.107†	650230.2	599857.3	498.69	µg/L	498.69	ppb	08:56:44
1	Cd 226.502†	53105.5	49022.7	508.25	µg/L	508.25	ppb	08:56:44
1	Co 228.616†	23293.4	21583.3	497.39	µg/L	497.39	ppb	08:57:04
1	Cr 267.716†	27081.2	24712.5	491.98	µg/L	491.98	ppb	08:57:04
1	Cu 324.752†	74138.6	66067.6	485.30	µg/L	485.30	ppb	08:56:44
1	Mn 257.610†	343722.9	314748.8	494.65	µg/L	494.65	ppb	08:56:44
1	Mo 202.031†	9528.3	8704.8	493.87	µg/L	493.87	ppb	08:57:04
1	Ni 231.604†	19737.1	18303.6	506.02	µg/L	506.02	ppb	08:57:04
1	P 214.914†	4237.5	3754.3	2484.9	µg/L	2484.9	ppb	08:57:04
1	Pb 220.353†	4387.5	4087.0	505.58	µg/L	505.58	ppb	08:57:04
1	S 181.975 Axial†	996.4	821.4	1006.7	µg/L	1006.7	ppb	08:57:04
1	Sb 206.836†	2043.9	1719.7	489.16	µg/L	489.16	ppb	08:57:04
1	Se 196.026†	1152.8	1081.0	513.20	µg/L	513.20	ppb	08:57:04
1	SiO2†	35173.4	31189.9	5247.2	µg/L	5247.2	ppb	08:56:44
1	Si 251.611†	48498.4	44482.9	2451.4	µg/L	2451.4	ppb	08:56:44
1	Sn 189.927†	4470.6	4052.1	505.19	µg/L	505.19	ppb	08:57:04
1	Ti 334.940†	123462.6	113941.0	485.06	µg/L	485.06	ppb	08:56:44
1	Tl 190.801†	2460.1	2334.3	500.73	µg/L	500.73	ppb	08:57:04
1	U 367.007†	2445.4	1359.1	455.3	µg/L	455.3	ppb	08:56:44
1	V 292.402†	40764.0	37513.9	495.91	µg/L	495.91	ppb	08:56:44
1	Zn 213.857†	72519.7	65605.2	496.28	µg/L	496.28	ppb	08:56:44
2	Sc RADIAL	24723.6	24723.6	112	%			08:56:27
2	Al 396.153Radial†	17590.6	15803.8	5059.7	µg/L	5059.7	ppb	08:56:27
2	Ca 317.933Radial†	28004.2	24713.6	5292.6	µg/L	5292.6	ppb	08:56:27
2	Fe 238.204 Radial†	30020.8	26776.0	5211.5	µg/L	5211.5	ppb	08:56:27
2	K 766.490 Radial†	6373.4	5270.3	4789.1	µg/L	4789.1	ppb	08:56:27
2	Mg 279.077 IEC†	3776.1	3316.3	5419.5	µg/L	5419.5	ppb	08:56:27
2	Na 589.592 Radial†	7295.2	6387.6	9815.7	µg/L	9815.7	ppb	08:56:27
2	Sr 421.552†	93379.4	83134.8	488.77	µg/L	488.77	ppb	08:56:22
2	Sc 361.383	401529.9	401529.9	109.65	%			08:57:10
2	Y 371.029	392274.3	392274.3	109.01	%			08:57:10
2	Ag 328.068†	52217.8	48307.6	490.61	µg/L	490.61	ppb	08:57:10
2	As 188.979†	1280.3	1180.5	523.44	µg/L	523.44	ppb	08:57:30
2	B 249.677†	16695.9	15053.8	518.73	µg/L	518.73	ppb	08:57:10
2	Ba 233.527†	64382.8	58734.2	494.24	µg/L	494.24	ppb	08:57:10
2	Be 313.107†	654636.2	600618.4	499.32	µg/L	499.32	ppb	08:57:10
2	Cd 226.502†	53554.0	49165.7	509.73	µg/L	509.73	ppb	08:57:10
2	Co 228.616†	23459.7	21618.2	498.19	µg/L	498.19	ppb	08:57:30
2	Cr 267.716†	27204.7	24689.5	491.55	µg/L	491.55	ppb	08:57:30
2	Cu 324.752†	74487.1	66014.0	484.90	µg/L	484.90	ppb	08:57:10
2	Mn 257.610†	345769.7	314893.7	494.88	µg/L	494.88	ppb	08:57:10
2	Mo 202.031†	9578.2	8702.6	493.75	µg/L	493.75	ppb	08:57:30
2	Ni 231.604†	19800.8	18262.8	504.89	µg/L	504.89	ppb	08:57:30
2	P 214.914†	4260.1	3753.6	2484.4	µg/L	2484.4	ppb	08:57:30

2	Pb 220.353†	4446.7	4119.0	509.55 µg/L	509.55 ppb	08:57:30
2	S 181.975 Axial†	999.2	819.0	1003.7 µg/L	1003.7 ppb	08:57:30
2	Sb 206.836†	2036.0	1702.3	484.17 µg/L	484.17 ppb	08:57:30
2	Se 196.026†	1158.8	1080.7	513.09 µg/L	513.09 ppb	08:57:30
2	SiO2†	35378.5	31200.8	5249.1 µg/L	5249.1 ppb	08:57:10
2	Si 251.611†	48908.2	44613.7	2458.7 µg/L	2458.7 ppb	08:57:10
2	Sn 189.927†	4492.8	4050.0	504.92 µg/L	504.92 ppb	08:57:30
2	Ti 334.940†	124035.1	113844.6	484.67 µg/L	484.67 ppb	08:57:10
2	Tl 190.801†	2485.3	2345.0	503.00 µg/L	503.00 ppb	08:57:30
2	U 367.007†	2379.6	1286.8	429.6 µg/L	429.6 ppb	08:57:10
2	V 292.402†	40962.8	37491.0	495.61 µg/L	495.61 ppb	08:57:10
2	Zn 213.857†	73008.5	65687.7	496.91 µg/L	496.91 ppb	08:57:10
3	Sc RADIAL	24814.9	24814.9	112 %		08:56:37
3	Al 396.153Radial†	17495.3	15661.2	5014.2 µg/L	5014.2 ppb	08:56:37
3	Ca 317.933Radial†	27757.2	24401.9	5225.8 µg/L	5225.8 ppb	08:56:37
3	Fe 238.204 Radial†	29824.4	26502.5	5158.2 µg/L	5158.2 ppb	08:56:37
3	K 766.490 Radial†	6536.7	5394.7	4902.2 µg/L	4902.2 ppb	08:56:37
3	Mg 279.077 IEC†	3689.7	3227.0	5273.7 µg/L	5273.7 ppb	08:56:37
3	Na 589.592 Radial†	7193.9	6273.5	9640.3 µg/L	9640.3 ppb	08:56:37
3	Sr 421.552†	93163.6	82635.9	485.84 µg/L	485.84 ppb	08:56:32
3	Sc 361.383	405832.7	405832.7	110.82 %		08:57:36
3	Y 371.029	396108.2	396108.2	110.07 %		08:57:36
3	Ag 328.068†	52450.8	48012.9	487.60 µg/L	487.60 ppb	08:57:36
3	As 188.979†	1274.1	1162.5	515.45 µg/L	515.45 ppb	08:57:56
3	B 249.677†	16848.7	15030.3	517.77 µg/L	517.77 ppb	08:57:36
3	Ba 233.527†	64832.0	58517.0	492.41 µg/L	492.41 ppb	08:57:36
3	Be 313.107†	657296.3	596688.6	496.06 µg/L	496.06 ppb	08:57:36
3	Cd 226.502†	53682.3	48763.6	505.56 µg/L	505.56 ppb	08:57:36
3	Co 228.616†	23360.3	21301.7	490.89 µg/L	490.89 ppb	08:57:56
3	Cr 267.716†	27089.5	24322.4	484.22 µg/L	484.22 ppb	08:57:56
3	Cu 324.752†	74863.3	65633.1	482.11 µg/L	482.11 ppb	08:57:36
3	Mn 257.610†	347012.8	312671.9	491.39 µg/L	491.39 ppb	08:57:36
3	Mo 202.031†	9558.1	8591.8	487.46 µg/L	487.46 ppb	08:57:56
3	Ni 231.604†	19749.4	18024.9	498.32 µg/L	498.32 ppb	08:57:56
3	P 214.914†	4254.4	3707.3	2453.7 µg/L	2453.7 ppb	08:57:56
3	Pb 220.353†	4398.1	4032.1	498.79 µg/L	498.79 ppb	08:57:56
3	S 181.975 Axial†	995.9	806.4	988.21 µg/L	988.21 ppb	08:57:56
3	Sb 206.836†	2048.1	1693.6	481.74 µg/L	481.74 ppb	08:57:56
3	Se 196.026†	1161.5	1071.9	508.92 µg/L	508.92 ppb	08:57:56
3	SiO2†	35589.0	31048.6	5223.7 µg/L	5223.7 ppb	08:57:36
3	Si 251.611†	48986.7	44211.6	2436.5 µg/L	2436.5 ppb	08:57:36
3	Sn 189.927†	4475.5	3990.9	497.57 µg/L	497.57 ppb	08:57:56
3	Ti 334.940†	124642.3	113193.2	481.89 µg/L	481.89 ppb	08:57:36
3	Tl 190.801†	2464.2	2301.9	493.80 µg/L	493.80 ppb	08:57:56
3	U 367.007†	2463.5	1339.5	448.4 µg/L	448.4 ppb	08:57:36
3	V 292.402†	41225.3	37331.7	493.46 µg/L	493.46 ppb	08:57:36
3	Zn 213.857†	73258.7	65207.5	493.30 µg/L	493.30 ppb	08:57:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	402233.0	109.84	%	0.902				0.82%
Sc RADIAL	24724.1	112	%	0.41				0.37%
Y 371.029	392916.8	109.19	%	0.812				0.74%
Ag 328.068†	48231.2	489.82	µg/L	1.947	489.82	ppb	1.947	0.40%
QC value within limits for Ag 328.068 Recovery = 97.96%								
Al 396.153Radial†	15718.1	5032.3	µg/L	24.19	5032.3	ppb	24.19	0.48%
QC value within limits for Al 396.153Radial Recovery = 100.65%								
As 188.979†	1176.7	521.73	µg/L	5.618	521.73	ppb	5.618	1.08%
QC value within limits for As 188.979 Recovery = 104.35%								
B 249.677†	15029.3	517.79	µg/L	0.932	517.79	ppb	0.932	0.18%
QC value within limits for B 249.677 Recovery = 103.56%								
Ba 233.527†	58722.3	494.14	µg/L	1.680	494.14	ppb	1.680	0.34%
QC value within limits for Ba 233.527 Recovery = 98.83%								
Be 313.107†	599054.8	498.02	µg/L	1.732	498.02	ppb	1.732	0.35%
QC value within limits for Be 313.107 Recovery = 99.60%								
Ca 317.933Radial†	24526.5	5252.5	µg/L	35.34	5252.5	ppb	35.34	0.67%
QC value within limits for Ca 317.933Radial Recovery = 105.05%								
Cd 226.502†	48984.0	507.85	µg/L	2.114	507.85	ppb	2.114	0.42%
QC value within limits for Cd 226.502 Recovery = 101.57%								

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Co 228.616†            21501.1      495.49 µg/L         4.002      495.49 ppb          4.002   0.81%
   QC value within limits for Co 228.616  Recovery = 99.10%
Cr 267.716†            24574.8      489.25 µg/L         4.363      489.25 ppb          4.363   0.89%
   QC value within limits for Cr 267.716  Recovery = 97.85%
Cu 324.752†            65904.9      484.11 µg/L         1.736      484.11 ppb          1.736   0.36%
   QC value within limits for Cu 324.752  Recovery = 96.82%
Fe 238.204 Radial†     26594.9      5176.2 µg/L         30.52      5176.2 ppb          30.52   0.59%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.52%
K 766.490 Radial†       5340.4      4852.9 µg/L         57.88      4852.9 ppb          57.88   1.19%
   QC value within limits for K 766.490 Radial  Recovery = 97.06%
Mg 279.077 IEC†         3282.2      5363.9 µg/L         78.80      5363.9 ppb          78.80   1.47%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.28%
Mn 257.610†           314104.8      493.64 µg/L         1.953      493.64 ppb          1.953   0.40%
   QC value within limits for Mn 257.610  Recovery = 98.73%
Mo 202.031†             8666.4      491.69 µg/L         3.665      491.69 ppb          3.665   0.75%
   QC value within limits for Mo 202.031  Recovery = 98.34%
Na 589.592 Radial†      6334.6      9734.1 µg/L         88.33      9734.1 ppb          88.33   0.91%
   QC value within limits for Na 589.592 Radial  Recovery = 97.34%
Ni 231.604†            18197.1      503.08 µg/L         4.160      503.08 ppb          4.160   0.83%
   QC value within limits for Ni 231.604  Recovery = 100.62%
P 214.914†              3738.4      2474.3 µg/L         17.86      2474.3 ppb          17.86   0.72%
   QC value within limits for P 214.914  Recovery = 98.97%
Pb 220.353†             4079.4      504.64 µg/L         5.441      504.64 ppb          5.441   1.08%
   QC value within limits for Pb 220.353  Recovery = 100.93%
S 181.975 Axial†         815.6      999.55 µg/L         9.930      999.55 ppb          9.930   0.99%
   QC value within limits for S 181.975 Axial  Recovery = 99.95%
Sb 206.836†             1705.2      485.02 µg/L         3.781      485.02 ppb          3.781   0.78%
   QC value within limits for Sb 206.836  Recovery = 97.00%
Se 196.026†             1077.8      511.74 µg/L         2.439      511.74 ppb          2.439   0.48%
   QC value within limits for Se 196.026  Recovery = 102.35%
SiO2†                  31146.5      5240.0 µg/L         14.17      5240.0 ppb          14.17   0.27%
   QC value within limits for SiO2  Recovery = 97.99%
Si 251.611†            44436.1      2448.9 µg/L         11.28      2448.9 ppb          11.28   0.46%
   QC value within limits for Si 251.611  Recovery = 97.96%
Sn 189.927†             4031.0      502.56 µg/L         4.322      502.56 ppb          4.322   0.86%
   QC value within limits for Sn 189.927  Recovery = 100.51%
Sr 421.552†            83015.6      488.07 µg/L         1.977      488.07 ppb          1.977   0.41%
   QC value within limits for Sr 421.552  Recovery = 97.61%
Ti 334.940†           113659.6      483.87 µg/L         1.733      483.87 ppb          1.733   0.36%
   QC value within limits for Ti 334.940  Recovery = 96.77%
Tl 190.801†             2327.1      499.18 µg/L         4.794      499.18 ppb          4.794   0.96%
   QC value within limits for Tl 190.801  Recovery = 99.84%
U 367.007†              1328.5       444.4 µg/L         13.28       444.4 ppb          13.28   2.99%
   QC value less than the lower limit for U 367.007  Recovery = 88.88%
V 292.402†             37445.5      494.99 µg/L         1.334      494.99 ppb          1.334   0.27%
   QC value within limits for V 292.402  Recovery = 99.00%
Zn 213.857†            65500.1      495.50 µg/L         1.931      495.50 ppb          1.931   0.39%
   QC value within limits for Zn 213.857  Recovery = 99.10%
QC Failed.  Continue with analysis.
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Sequence No.: 8 | **Autosampler Location: 8**
Sample ID: CCB | **Date Collected: 7/23/2018 08:58:05**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24402.2	24402.2	111	%			08:58:56
1	Al 396.153Radial†	-107.4	-3.2	-1.0285	µg/L	-1.0285	ppb	08:58:56
1	Ca 317.933Radial†	493.0	149.7	32.069	µg/L	32.069	ppb	08:58:56
1	Fe 238.204 Radial†	47.8	8.2	1.6027	µg/L	1.6027	ppb	08:58:56
1	K 766.490 Radial†	465.8	-0.2	-0.1980	µg/L	-0.1980	ppb	08:58:36
1	Mg 279.077 IEC†	68.4	5.8	9.5060	µg/L	9.5060	ppb	08:58:56
1	Na 589.592 Radial†	110.6	-27.5	-42.259	µg/L	-42.259	ppb	08:58:56
1	Sr 421.552†	339.9	47.0	0.2760	µg/L	0.2760	ppb	08:58:36
1	Sc 361.383	399119.8	399119.8	108.99	%			08:59:52
1	Y 371.029	393006.7	393006.7	109.21	%			08:59:52
1	Ag 328.068†	-731.1	12.9	0.1077	µg/L	0.1077	ppb	08:59:52
1	As 188.979†	-8.2	5.3	2.3309	µg/L	2.3309	ppb	09:00:12
1	B 249.677†	248.0	54.4	1.8096	µg/L	1.8096	ppb	09:00:12
1	Ba 233.527†	4.7	19.8	0.1668	µg/L	0.1668	ppb	09:00:12
1	Be 313.107†	-3576.5	292.3	0.2532	µg/L	0.2532	ppb	08:59:52
1	Cd 226.502†	-302.5	45.6	0.4726	µg/L	0.4726	ppb	09:00:12
1	Co 228.616†	-204.1	35.2	0.8087	µg/L	0.8087	ppb	09:00:12
1	Cr 267.716†	140.6	7.1	0.1099	µg/L	0.1099	ppb	09:00:12
1	Cu 324.752†	2051.1	-38.2	-0.2553	µg/L	-0.2553	ppb	08:59:52
1	Mn 257.610†	668.6	156.6	0.2460	µg/L	0.2460	ppb	09:00:12
1	Mo 202.031†	29.4	-5.9	-0.3371	µg/L	-0.3371	ppb	09:00:12
1	Ni 231.604†	-230.9	-7.9	-0.2181	µg/L	-0.2181	ppb	09:00:12
1	P 214.914†	97.0	-42.7	-28.423	µg/L	-28.423	ppb	09:00:12
1	Pb 220.353†	-97.1	-25.6	-3.1939	µg/L	-3.1939	ppb	09:00:12
1	S 181.975 Axial†	111.1	9.6	11.840	µg/L	11.840	ppb	09:00:12
1	Sb 206.836†	165.1	-3.1	-0.9027	µg/L	-0.9027	ppb	09:00:12
1	Se 196.026†	-13.5	11.4	5.3800	µg/L	5.3800	ppb	09:00:12
1	SiO2†	1191.2	27.7	4.6933	µg/L	4.6933	ppb	09:00:12
1	Si 251.611†	89.6	90.5	5.0083	µg/L	5.0083	ppb	09:00:12
1	Sn 189.927†	40.5	-10.4	-1.2892	µg/L	-1.2892	ppb	09:00:12
1	Ti 334.940†	-657.3	118.5	0.4875	µg/L	0.4875	ppb	08:59:52
1	Tl 190.801†	-96.1	-9.8	-2.0834	µg/L	-2.0834	ppb	09:00:12
1	U 367.007†	1086.7	113.6	39.93	µg/L	39.93	ppb	08:59:52
1	V 292.402†	-135.8	7.3	0.1158	µg/L	0.1158	ppb	09:00:12
1	Zn 213.857†	1318.9	312.3	2.3812	µg/L	2.3812	ppb	09:00:12
2	Sc RADIAL	24183.2	24183.2	110	%			08:59:21
2	Al 396.153Radial†	-73.6	26.8	8.5494	µg/L	8.5494	ppb	08:59:21
2	Ca 317.933Radial†	627.5	276.5	59.223	µg/L	59.223	ppb	08:59:21
2	Fe 238.204 Radial†	211.0	157.6	30.672	µg/L	30.672	ppb	08:59:21
2	K 766.490 Radial†	583.6	111.2	101.05	µg/L	101.05	ppb	08:59:01
2	Mg 279.077 IEC†	80.5	17.4	28.438	µg/L	28.438	ppb	08:59:21
2	Na 589.592 Radial†	115.1	-22.5	-34.680	µg/L	-34.680	ppb	08:59:21
2	Sr 421.552†	283.0	-2.1	-0.0135	µg/L	-0.0135	ppb	08:59:01
2	Sc 361.383	395818.5	395818.5	108.09	%			09:00:18
2	Y 371.029	390093.5	390093.5	108.40	%			09:00:18
2	Ag 328.068†	-622.3	108.0	1.0750	µg/L	1.0750	ppb	09:00:18
2	As 188.979†	-14.3	-0.4	-0.1844	µg/L	-0.1844	ppb	09:00:38
2	B 249.677†	231.9	41.4	1.4930	µg/L	1.4930	ppb	09:00:38
2	Ba 233.527†	9.5	24.3	0.2039	µg/L	0.2039	ppb	09:00:38
2	Be 313.107†	-3605.4	238.2	0.2084	µg/L	0.2084	ppb	09:00:18
2	Cd 226.502†	-294.2	50.9	0.5246	µg/L	0.5246	ppb	09:00:38
2	Co 228.616†	-220.8	18.1	0.4197	µg/L	0.4197	ppb	09:00:38
2	Cr 267.716†	135.2	3.2	0.0327	µg/L	0.0327	ppb	09:00:38
2	Cu 324.752†	1978.1	-90.0	-0.6357	µg/L	-0.6357	ppb	09:00:18
2	Mn 257.610†	471.0	-21.1	-0.0312	µg/L	-0.0312	ppb	09:00:38
2	Mo 202.031†	61.8	24.2	1.3742	µg/L	1.3742	ppb	09:00:38
2	Ni 231.604†	-213.2	6.7	0.1866	µg/L	0.1866	ppb	09:00:38
2	P 214.914†	89.6	-48.8	-32.484	µg/L	-32.484	ppb	09:00:38

2	Pb 220.353†	-77.3	-8.0	-1.0189	µg/L	-1.0189	ppb	09:00:38
2	S 181.975 Axial†	105.0	4.8	5.8595	µg/L	5.8595	ppb	09:00:38
2	Sb 206.836†	167.9	0.7	0.2169	µg/L	0.2169	ppb	09:00:38
2	Se 196.026†	-20.5	4.8	2.2986	µg/L	2.2986	ppb	09:00:38
2	SiO2†	1213.6	57.6	9.6596	µg/L	9.6596	ppb	09:00:38
2	Si 251.611†	100.4	101.1	5.5638	µg/L	5.5638	ppb	09:00:38
2	Sn 189.927†	36.4	-13.8	-1.7170	µg/L	-1.7170	ppb	09:00:38
2	Ti 334.940†	-738.2	38.6	0.1488	µg/L	0.1488	ppb	09:00:18
2	Tl 190.801†	-87.5	-2.6	-0.5398	µg/L	-0.5398	ppb	09:00:38
2	U 367.007†	1075.8	111.8	39.17	µg/L	39.17	ppb	09:00:18
2	V 292.402†	-149.4	-6.4	-0.0414	µg/L	-0.0414	ppb	09:00:38
2	Zn 213.857†	1308.1	312.4	2.3762	µg/L	2.3762	ppb	09:00:38
3	Sc RADIAL	24301.7	24301.7	110	%			08:59:46
3	Al 396.153Radial†	-88.7	13.4	4.2889	µg/L	4.2889	ppb	08:59:46
3	Ca 317.933Radial†	515.9	172.4	36.917	µg/L	36.917	ppb	08:59:46
3	Fe 238.204 Radial†	52.4	12.6	2.4466	µg/L	2.4466	ppb	08:59:46
3	K 766.490 Radial†	550.5	78.5	71.390	µg/L	71.390	ppb	08:59:26
3	Mg 279.077 IEC†	50.2	-10.5	-17.108	µg/L	-17.108	ppb	08:59:46
3	Na 589.592 Radial†	89.2	-46.5	-71.512	µg/L	-71.512	ppb	08:59:46
3	Sr 421.552†	223.6	-57.4	-0.3381	µg/L	-0.3381	ppb	08:59:26
3	Sc 361.383	397392.4	397392.4	108.52	%			09:00:43
3	Y 371.029	391223.2	391223.2	108.71	%			09:00:43
3	Ag 328.068†	-746.4	-4.1	-0.0508	µg/L	-0.0508	ppb	09:00:43
3	As 188.979†	-19.2	-4.9	-2.1373	µg/L	-2.1373	ppb	09:01:03
3	B 249.677†	205.3	16.0	0.5379	µg/L	0.5379	ppb	09:01:03
3	Ba 233.527†	-26.6	-9.0	-0.0760	µg/L	-0.0760	ppb	09:01:03
3	Be 313.107†	-3751.1	117.2	0.1016	µg/L	0.1016	ppb	09:00:43
3	Cd 226.502†	-296.2	50.2	0.5199	µg/L	0.5199	ppb	09:01:03
3	Co 228.616†	-189.6	47.7	1.0997	µg/L	1.0997	ppb	09:01:03
3	Cr 267.716†	134.5	2.0	0.0269	µg/L	0.0269	ppb	09:01:03
3	Cu 324.752†	2090.1	5.9	0.0526	µg/L	0.0526	ppb	09:00:43
3	Mn 257.610†	454.7	-37.9	-0.0592	µg/L	-0.0592	ppb	09:01:03
3	Mo 202.031†	45.8	9.3	0.5271	µg/L	0.5271	ppb	09:01:03
3	Ni 231.604†	-247.5	-24.1	-0.6678	µg/L	-0.6678	ppb	09:01:03
3	P 214.914†	114.2	-26.5	-17.620	µg/L	-17.620	ppb	09:01:03
3	Pb 220.353†	-65.0	3.6	0.4390	µg/L	0.4390	ppb	09:01:03
3	S 181.975 Axial†	105.7	5.1	6.2650	µg/L	6.2650	ppb	09:01:03
3	Sb 206.836†	169.4	1.5	0.4429	µg/L	0.4429	ppb	09:01:03
3	Se 196.026†	-21.8	3.6	1.7195	µg/L	1.7195	ppb	09:01:03
3	SiO2†	1203.5	43.8	7.3699	µg/L	7.3699	ppb	09:01:03
3	Si 251.611†	58.4	62.0	3.4216	µg/L	3.4216	ppb	09:01:03
3	Sn 189.927†	51.9	0.3	0.0417	µg/L	0.0417	ppb	09:01:03
3	Ti 334.940†	-689.1	86.5	0.3630	µg/L	0.3630	ppb	09:00:43
3	Tl 190.801†	-88.2	-2.9	-0.6217	µg/L	-0.6217	ppb	09:01:03
3	U 367.007†	1005.7	43.3	15.19	µg/L	15.19	ppb	09:00:43
3	V 292.402†	-171.8	-26.4	-0.3312	µg/L	-0.3312	ppb	09:01:03
3	Zn 213.857†	1301.9	301.9	2.3039	µg/L	2.3039	ppb	09:01:03

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	397443.5	108.53	%	0.451				0.42%
Sc RADIAL	24295.7	110	%	0.50				0.45%
Y 371.029	391441.1	108.78	%	0.408				0.38%
Ag 328.068†	38.9	0.3773	µg/L	0.60944	0.3773	ppb	0.60944	161.53%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	12.3	3.9366	µg/L	4.79866	3.9366	ppb	4.79866	121.90%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.0	0.0031	µg/L	2.23998	0.0031	ppb	2.23998	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	37.2	1.2802	µg/L	0.66206	1.2802	ppb	0.66206	51.72%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	11.7	0.0983	µg/L	0.15203	0.0983	ppb	0.15203	154.71%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	215.9	0.1877	µg/L	0.07786	0.1877	ppb	0.07786	41.48%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	199.6	42.736	µg/L	14.4822	42.736	ppb	14.4822	33.89%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	48.9	0.5057	µg/L	0.02876	0.5057	ppb	0.02876	5.69%
QC value within limits for Cd 226.502 Recovery = Not calculated								

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Co 228.616†                33.7      0.7760 µg/L       0.34117      0.7760 ppb        0.34117  43.96%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 4.1      0.0565 µg/L       0.04632      0.0565 ppb        0.04632  82.01%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -40.8     -0.2795 µg/L       0.34476     -0.2795 ppb        0.34476 123.36%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         59.5      11.574 µg/L       16.5450      11.574 ppb        16.5450 142.95%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          63.2      57.413 µg/L       52.0495      57.413 ppb        52.0495  90.66%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             4.2      6.9452 µg/L      22.88049      6.9452 ppb       22.88049 329.44%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                32.6      0.0519 µg/L       0.16872      0.0519 ppb        0.16872 325.38%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 9.2      0.5214 µg/L       0.85567      0.5214 ppb        0.85567 164.10%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -32.2     -49.484 µg/L       19.4502     -49.484 ppb        19.4502  39.31%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -8.4     -0.2331 µg/L       0.42739     -0.2331 ppb        0.42739 183.37%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -39.3     -26.176 µg/L        7.6827     -26.176 ppb         7.6827  29.35%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -10.0     -1.2580 µg/L       1.82819     -1.2580 ppb        1.82819 145.33%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            6.5      7.9882 µg/L       3.34199      7.9882 ppb        3.34199  41.84%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.3     -0.0810 µg/L       0.72059     -0.0810 ppb        0.72059 890.11%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 6.6      3.1327 µg/L       1.96763      3.1327 ppb        1.96763  62.81%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      43.0      7.2409 µg/L       2.48568      7.2409 ppb        2.48568  34.33%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                84.5      4.6646 µg/L       1.11172      4.6646 ppb        1.11172  23.83%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -8.0     -0.9881 µg/L       0.91716     -0.9881 ppb        0.91716  92.82%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                -4.2     -0.0252 µg/L       0.30722     -0.0252 ppb        0.30722 >999.9%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                81.2      0.3331 µg/L       0.17133      0.3331 ppb        0.17133  51.44%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -5.1     -1.0816 µg/L       0.86853     -1.0816 ppb        0.86853  80.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 367.007†                 89.6       31.43 µg/L        14.070       31.43 ppb         14.070  44.76%
   QC value within limits for U 367.007  Recovery = Not calculated
V 292.402†                 -8.5     -0.0856 µg/L       0.22675     -0.0856 ppb        0.22675 264.89%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               308.9      2.3538 µg/L       0.04329      2.3538 ppb        0.04329   1.84%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 22 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/23/2018 10:32:20**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24284.6	24284.6	110	%			10:32:57
1	Al 396.153Radial†	17015.0	15564.4	4983.3	µg/L	4983.3	ppb	10:32:57
1	Ca 317.933Radial†	26662.2	23945.5	5128.1	µg/L	5128.1	ppb	10:32:57
1	Fe 238.204 Radial†	28657.6	26021.1	5064.5	µg/L	5064.5	ppb	10:32:57
1	K 766.490 Radial†	6292.3	5299.4	4815.6	µg/L	4815.6	ppb	10:32:57
1	Mg 279.077 IEC†	3552.6	3174.0	5187.1	µg/L	5187.1	ppb	10:32:57
1	Na 589.592 Radial†	7068.1	6298.9	9679.4	µg/L	9679.4	ppb	10:32:57
1	Sr 421.552†	89791.6	81380.1	478.45	µg/L	478.45	ppb	10:32:52
1	Sc 361.383	392824.3	392824.3	107.27	%			10:33:24
1	Y 371.029	383549.1	383549.1	106.58	%			10:33:24
1	Ag 328.068†	50358.6	47629.8	483.69	µg/L	483.69	ppb	10:33:24
1	As 188.979†	1234.3	1163.5	515.86	µg/L	515.86	ppb	10:33:44
1	B 249.677†	15971.6	14716.1	506.97	µg/L	506.97	ppb	10:33:24
1	Ba 233.527†	62306.5	58100.0	488.90	µg/L	488.90	ppb	10:33:24
1	Be 313.107†	629531.0	590445.9	490.87	µg/L	490.87	ppb	10:33:24
1	Cd 226.502†	51172.5	48028.0	497.94	µg/L	497.94	ppb	10:33:24
1	Co 228.616†	22475.5	21174.9	487.97	µg/L	487.97	ppb	10:33:44
1	Cr 267.716†	26108.6	24217.5	482.11	µg/L	482.11	ppb	10:33:44
1	Cu 324.752†	72212.3	65398.9	480.40	µg/L	480.40	ppb	10:33:24
1	Mn 257.610†	333817.3	310739.9	488.35	µg/L	488.35	ppb	10:33:24
1	Mo 202.031†	9166.6	8512.5	482.96	µg/L	482.96	ppb	10:33:44
1	Ni 231.604†	18967.0	17885.7	494.47	µg/L	494.47	ppb	10:33:44
1	P 214.914†	4054.9	3648.4	2414.7	µg/L	2414.7	ppb	10:33:44
1	Pb 220.353†	4231.2	4008.0	495.79	µg/L	495.79	ppb	10:33:44
1	S 181.975 Axial†	952.4	795.5	974.91	µg/L	974.91	ppb	10:33:44
1	Sb 206.836†	1952.6	1665.7	473.73	µg/L	473.73	ppb	10:33:44
1	Se 196.026†	1122.2	1070.0	507.96	µg/L	507.96	ppb	10:33:44
1	SiO2†	34197.6	30815.1	5184.4	µg/L	5184.4	ppb	10:33:24
1	Si 251.611†	46960.3	43786.3	2413.1	µg/L	2413.1	ppb	10:33:24
1	Sn 189.927†	4282.5	3944.8	491.83	µg/L	491.83	ppb	10:33:44
1	Ti 334.940†	119980.7	112572.0	479.23	µg/L	479.23	ppb	10:33:24
1	Tl 190.801†	2381.7	2298.6	493.09	µg/L	493.09	ppb	10:33:44
1	U 367.007†	2437.8	1389.1	466.3	µg/L	466.3	ppb	10:33:24
1	V 292.402†	39531.4	36984.5	488.88	µg/L	488.88	ppb	10:33:24
1	Zn 213.857†	70166.7	64514.1	488.05	µg/L	488.05	ppb	10:33:24
2	Sc RADIAL	24150.4	24150.4	109	%			10:33:07
2	Al 396.153Radial†	16927.3	15570.2	4985.1	µg/L	4985.1	ppb	10:33:07
2	Ca 317.933Radial†	26580.0	24005.1	5140.8	µg/L	5140.8	ppb	10:33:07
2	Fe 238.204 Radial†	28498.9	26020.8	5064.5	µg/L	5064.5	ppb	10:33:07
2	K 766.490 Radial†	6362.2	5395.2	4902.6	µg/L	4902.6	ppb	10:33:07
2	Mg 279.077 IEC†	3533.0	3174.1	5187.2	µg/L	5187.2	ppb	10:33:07
2	Na 589.592 Radial†	7059.5	6326.8	9722.3	µg/L	9722.3	ppb	10:33:07
2	Sr 421.552†	90451.2	82436.8	484.67	µg/L	484.67	ppb	10:33:02
2	Sc 361.383	393610.6	393610.6	107.48	%			10:33:50
2	Y 371.029	384235.0	384235.0	106.77	%			10:33:50
2	Ag 328.068†	50327.3	47506.9	482.45	µg/L	482.45	ppb	10:33:50
2	As 188.979†	1214.0	1142.3	506.55	µg/L	506.55	ppb	10:34:11
2	B 249.677†	16067.8	14775.9	508.96	µg/L	508.96	ppb	10:33:50
2	Ba 233.527†	62003.6	57702.1	485.55	µg/L	485.55	ppb	10:33:50
2	Be 313.107†	627273.7	587173.2	488.15	µg/L	488.15	ppb	10:33:50
2	Cd 226.502†	50841.8	47625.0	493.76	µg/L	493.76	ppb	10:33:50
2	Co 228.616†	22502.4	21158.1	487.58	µg/L	487.58	ppb	10:34:11
2	Cr 267.716†	26167.3	24223.5	482.24	µg/L	482.24	ppb	10:34:11
2	Cu 324.752†	71920.3	64992.7	477.42	µg/L	477.42	ppb	10:33:50
2	Mn 257.610†	332564.4	308952.5	485.54	µg/L	485.54	ppb	10:33:50
2	Mo 202.031†	9189.6	8516.8	483.20	µg/L	483.20	ppb	10:34:11
2	Ni 231.604†	19046.3	17924.1	495.53	µg/L	495.53	ppb	10:34:11
2	P 214.914†	4058.6	3644.4	2412.0	µg/L	2412.0	ppb	10:34:11

2	Pb 220.353†	4222.2	3991.8	493.79 µg/L	493.79 ppb	10:34:11
2	S 181.975 Axial†	953.4	794.7	973.92 µg/L	973.92 ppb	10:34:11
2	Sb 206.836†	1967.1	1675.5	476.55 µg/L	476.55 ppb	10:34:11
2	Se 196.026†	1109.6	1056.1	501.43 µg/L	501.43 ppb	10:34:11
2	SiO2†	34041.2	30605.8	5149.0 µg/L	5149.0 ppb	10:33:50
2	Si 251.611†	46885.0	43628.8	2404.4 µg/L	2404.4 ppb	10:33:50
2	Sn 189.927†	4308.4	3960.9	493.82 µg/L	493.82 ppb	10:34:11
2	Ti 334.940†	119636.7	112028.5	476.92 µg/L	476.92 ppb	10:33:50
2	Tl 190.801†	2381.5	2294.0	492.08 µg/L	492.08 ppb	10:34:11
2	U 367.007†	2422.6	1370.4	459.7 µg/L	459.7 ppb	10:33:50
2	V 292.402†	39397.1	36785.9	486.29 µg/L	486.29 ppb	10:33:50
2	Zn 213.857†	69824.7	64065.3	484.62 µg/L	484.62 ppb	10:33:50
3	Sc RADIAL	24236.5	24236.5	110 %		10:33:17
3	Al 396.153Radial†	17005.8	15586.7	4990.4 µg/L	4990.4 ppb	10:33:17
3	Ca 317.933Radial†	26692.9	24021.6	5144.4 µg/L	5144.4 ppb	10:33:17
3	Fe 238.204 Radial†	28684.5	26097.2	5079.4 µg/L	5079.4 ppb	10:33:17
3	K 766.490 Radial†	6266.1	5286.9	4804.2 µg/L	4804.2 ppb	10:33:17
3	Mg 279.077 IEC†	3566.7	3193.3	5218.6 µg/L	5218.6 ppb	10:33:17
3	Na 589.592 Radial†	7079.1	6321.6	9714.4 µg/L	9714.4 ppb	10:33:17
3	Sr 421.552†	90104.5	81827.1	481.08 µg/L	481.08 ppb	10:33:12
3	Sc 361.383	393692.1	393692.1	107.51 %		10:34:17
3	Y 371.029	384289.0	384289.0	106.79 %		10:34:17
3	Ag 328.068†	50532.2	47687.8	484.27 µg/L	484.27 ppb	10:34:17
3	As 188.979†	1217.2	1145.0	507.76 µg/L	507.76 ppb	10:34:37
3	B 249.677†	16088.3	14791.8	509.55 µg/L	509.55 ppb	10:34:17
3	Ba 233.527†	62268.2	57936.2	487.52 µg/L	487.52 ppb	10:34:17
3	Be 313.107†	630078.1	589661.1	490.22 µg/L	490.22 ppb	10:34:17
3	Cd 226.502†	51263.5	48007.5	497.72 µg/L	497.72 ppb	10:34:17
3	Co 228.616†	22426.8	21083.4	485.86 µg/L	485.86 ppb	10:34:37
3	Cr 267.716†	26111.2	24166.2	481.08 µg/L	481.08 ppb	10:34:37
3	Cu 324.752†	72110.9	65156.2	478.63 µg/L	478.63 ppb	10:34:17
3	Mn 257.610†	333937.1	310165.4	487.44 µg/L	487.44 ppb	10:34:17
3	Mo 202.031†	9182.7	8508.7	482.74 µg/L	482.74 ppb	10:34:37
3	Ni 231.604†	18995.3	17873.0	494.12 µg/L	494.12 ppb	10:34:37
3	P 214.914†	4075.0	3658.8	2421.6 µg/L	2421.6 ppb	10:34:37
3	Pb 220.353†	4226.6	3995.0	494.17 µg/L	494.17 ppb	10:34:37
3	S 181.975 Axial†	946.6	788.2	965.87 µg/L	965.87 ppb	10:34:37
3	Sb 206.836†	1957.4	1666.1	473.87 µg/L	473.87 ppb	10:34:37
3	Se 196.026†	1125.8	1071.0	508.47 µg/L	508.47 ppb	10:34:37
3	SiO2†	34108.4	30661.7	5158.5 µg/L	5158.5 ppb	10:34:17
3	Si 251.611†	47178.9	43893.2	2419.0 µg/L	2419.0 ppb	10:34:17
3	Sn 189.927†	4283.5	3936.9	490.85 µg/L	490.85 ppb	10:34:37
3	Ti 334.940†	120074.2	112412.4	478.54 µg/L	478.54 ppb	10:34:17
3	Tl 190.801†	2371.9	2284.6	490.08 µg/L	490.08 ppb	10:34:37
3	U 367.007†	2477.1	1420.7	477.3 µg/L	477.3 ppb	10:34:17
3	V 292.402†	39588.7	36956.6	488.52 µg/L	488.52 ppb	10:34:17
3	Zn 213.857†	70354.7	64544.8	488.28 µg/L	488.28 ppb	10:34:17

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	393375.7	107.42	%	0.131				0.12%
Sc RADIAL	24223.9	110	%	0.31				0.28%
Y 371.029	384024.4	106.71	%	0.115				0.11%
Ag 328.068†	47608.2	483.47	µg/L	0.934	483.47	ppb	0.934	0.19%
QC value within limits for Ag 328.068 Recovery = 96.69%								
Al 396.153Radial†	15573.8	4986.3	µg/L	3.73	4986.3	ppb	3.73	0.07%
QC value within limits for Al 396.153Radial Recovery = 99.73%								
As 188.979†	1150.3	510.06	µg/L	5.060	510.06	ppb	5.060	0.99%
QC value within limits for As 188.979 Recovery = 102.01%								
B 249.677†	14761.3	508.49	µg/L	1.352	508.49	ppb	1.352	0.27%
QC value within limits for B 249.677 Recovery = 101.70%								
Ba 233.527†	57912.8	487.33	µg/L	1.683	487.33	ppb	1.683	0.35%
QC value within limits for Ba 233.527 Recovery = 97.47%								
Be 313.107†	589093.4	489.75	µg/L	1.421	489.75	ppb	1.421	0.29%
QC value within limits for Be 313.107 Recovery = 97.95%								
Ca 317.933Radial†	23990.7	5137.8	µg/L	8.57	5137.8	ppb	8.57	0.17%
QC value within limits for Ca 317.933Radial Recovery = 102.76%								
Cd 226.502†	47886.8	496.47	µg/L	2.354	496.47	ppb	2.354	0.47%
QC value within limits for Cd 226.502 Recovery = 99.29%								

Co 228.616†	21138.8	487.14 µg/L	1.122	487.14 ppb	1.122	0.23%
QC value within limits for Co 228.616 Recovery = 97.43%						
Cr 267.716†	24202.4	481.81 µg/L	0.633	481.81 ppb	0.633	0.13%
QC value within limits for Cr 267.716 Recovery = 96.36%						
Cu 324.752†	65182.6	478.82 µg/L	1.502	478.82 ppb	1.502	0.31%
QC value within limits for Cu 324.752 Recovery = 95.76%						
Fe 238.204 Radial†	26046.4	5069.5 µg/L	8.58	5069.5 ppb	8.58	0.17%
QC value within limits for Fe 238.204 Radial Recovery = 101.39%						
K 766.490 Radial†	5327.2	4840.8 µg/L	53.82	4840.8 ppb	53.82	1.11%
QC value within limits for K 766.490 Radial Recovery = 96.82%						
Mg 279.077 IEC†	3180.5	5197.6 µg/L	18.18	5197.6 ppb	18.18	0.35%
QC value within limits for Mg 279.077 IEC Recovery = 103.95%						
Mn 257.610†	309952.6	487.11 µg/L	1.433	487.11 ppb	1.433	0.29%
QC value within limits for Mn 257.610 Recovery = 97.42%						
Mo 202.031†	8512.6	482.97 µg/L	0.230	482.97 ppb	0.230	0.05%
QC value within limits for Mo 202.031 Recovery = 96.59%						
Na 589.592 Radial†	6315.8	9705.3 µg/L	22.81	9705.3 ppb	22.81	0.24%
QC value within limits for Na 589.592 Radial Recovery = 97.05%						
Ni 231.604†	17894.3	494.71 µg/L	0.735	494.71 ppb	0.735	0.15%
QC value within limits for Ni 231.604 Recovery = 98.94%						
P 214.914†	3650.5	2416.1 µg/L	4.95	2416.1 ppb	4.95	0.21%
QC value within limits for P 214.914 Recovery = 96.64%						
Pb 220.353†	3998.3	494.59 µg/L	1.063	494.59 ppb	1.063	0.21%
QC value within limits for Pb 220.353 Recovery = 98.92%						
S 181.975 Axial†	792.8	971.57 µg/L	4.960	971.57 ppb	4.960	0.51%
QC value within limits for S 181.975 Axial Recovery = 97.16%						
Sb 206.836†	1669.1	474.72 µg/L	1.586	474.72 ppb	1.586	0.33%
QC value within limits for Sb 206.836 Recovery = 94.94%						
Se 196.026†	1065.7	505.95 µg/L	3.929	505.95 ppb	3.929	0.78%
QC value within limits for Se 196.026 Recovery = 101.19%						
SiO2†	30694.2	5164.0 µg/L	18.31	5164.0 ppb	18.31	0.35%
QC value within limits for SiO2 Recovery = 96.57%						
Si 251.611†	43769.4	2412.2 µg/L	7.36	2412.2 ppb	7.36	0.31%
QC value within limits for Si 251.611 Recovery = 96.49%						
Sn 189.927†	3947.5	492.16 µg/L	1.516	492.16 ppb	1.516	0.31%
QC value within limits for Sn 189.927 Recovery = 98.43%						
Sr 421.552†	81881.3	481.40 µg/L	3.119	481.40 ppb	3.119	0.65%
QC value within limits for Sr 421.552 Recovery = 96.28%						
Ti 334.940†	112337.6	478.23 µg/L	1.187	478.23 ppb	1.187	0.25%
QC value within limits for Ti 334.940 Recovery = 95.65%						
Tl 190.801†	2292.4	491.75 µg/L	1.529	491.75 ppb	1.529	0.31%
QC value within limits for Tl 190.801 Recovery = 98.35%						
U 367.007†	1393.4	467.7 µg/L	8.90	467.7 ppb	8.90	1.90%
QC value within limits for U 367.007 Recovery = 93.55%						
V 292.402†	36909.0	487.89 µg/L	1.405	487.89 ppb	1.405	0.29%
QC value within limits for V 292.402 Recovery = 97.58%						
Zn 213.857†	64374.8	486.99 µg/L	2.048	486.99 ppb	2.048	0.42%
QC value within limits for Zn 213.857 Recovery = 97.40%						

All analyte(s) passed QC.

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Sequence No.: 23 | **Autosampler Location: 8**
Sample ID: CCB | **Date Collected: 7/23/2018 10:34:45**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24079.8	24079.8	109	%			10:35:36
1	Al 396.153Radial†	-128.2	-23.6	-7.5945	µg/L	-7.5945	ppb	10:35:36
1	Ca 317.933Radial†	510.9	172.1	36.864	µg/L	36.864	ppb	10:35:36
1	Fe 238.204 Radial†	24.4	-12.7	-2.4656	µg/L	-2.4656	ppb	10:35:36
1	K 766.490 Radial†	542.1	75.4	68.532	µg/L	68.532	ppb	10:35:16
1	Mg 279.077 IEC†	55.3	-5.3	-8.7092	µg/L	-8.7092	ppb	10:35:36
1	Na 589.592 Radial†	103.8	-32.4	-49.802	µg/L	-49.802	ppb	10:35:36
1	Sr 421.552†	301.7	16.2	0.0943	µg/L	0.0943	ppb	10:35:16
1	Sc 361.383	394173.7	394173.7	107.64	%			10:36:32
1	Y 371.029	388586.5	388586.5	107.98	%			10:36:32
1	Ag 328.068†	-624.0	104.0	1.0334	µg/L	1.0334	ppb	10:36:32
1	As 188.979†	-19.6	-5.4	-2.3729	µg/L	-2.3729	ppb	10:36:53
1	B 249.677†	222.3	33.4	1.0957	µg/L	1.0957	ppb	10:36:53
1	Ba 233.527†	-12.0	4.3	0.0365	µg/L	0.0365	ppb	10:36:53
1	Be 313.107†	-3574.9	252.6	0.2181	µg/L	0.2181	ppb	10:36:32
1	Cd 226.502†	-295.9	48.2	0.5007	µg/L	0.5007	ppb	10:36:53
1	Co 228.616†	-201.5	35.2	0.8101	µg/L	0.8101	ppb	10:36:53
1	Cr 267.716†	116.8	-13.4	-0.2921	µg/L	-0.2921	ppb	10:36:53
1	Cu 324.752†	2064.1	-2.5	0.0010	µg/L	0.0010	ppb	10:36:32
1	Mn 257.610†	408.7	-77.2	-0.1213	µg/L	-0.1213	ppb	10:36:53
1	Mo 202.031†	43.0	7.0	0.3961	µg/L	0.3961	ppb	10:36:53
1	Ni 231.604†	-222.3	-2.6	-0.0723	µg/L	-0.0723	ppb	10:36:53
1	P 214.914†	117.0	-23.0	-15.322	µg/L	-15.322	ppb	10:36:53
1	Pb 220.353†	-79.4	-10.2	-1.2878	µg/L	-1.2878	ppb	10:36:53
1	S 181.975 Axial†	96.8	-2.4	-2.9755	µg/L	-2.9755	ppb	10:36:53
1	Sb 206.836†	157.2	-8.6	-2.4488	µg/L	-2.4488	ppb	10:36:53
1	Se 196.026†	-9.1	15.3	7.2275	µg/L	7.2275	ppb	10:36:53
1	SiO2†	1158.9	11.5	1.9174	µg/L	1.9174	ppb	10:36:53
1	Si 251.611†	61.8	65.6	3.6229	µg/L	3.6229	ppb	10:36:53
1	Sn 189.927†	33.8	-16.1	-2.0035	µg/L	-2.0035	ppb	10:36:53
1	Ti 334.940†	-623.3	142.4	0.5936	µg/L	0.5936	ppb	10:36:32
1	Tl 190.801†	-82.0	2.1	0.4727	µg/L	0.4727	ppb	10:36:53
1	U 367.007†	1048.3	90.5	31.81	µg/L	31.81	ppb	10:36:32
1	V 292.402†	-175.7	-31.4	-0.3886	µg/L	-0.3886	ppb	10:36:53
1	Zn 213.857†	1437.6	437.8	3.3365	µg/L	3.3365	ppb	10:36:53
2	Sc RADIAL	23987.4	23987.4	109	%			10:36:01
2	Al 396.153Radial†	-106.4	-4.0	-1.2677	µg/L	-1.2677	ppb	10:36:01
2	Ca 317.933Radial†	513.3	176.2	37.728	µg/L	37.728	ppb	10:36:01
2	Fe 238.204 Radial†	30.8	-6.7	-1.3120	µg/L	-1.3120	ppb	10:36:01
2	K 766.490 Radial†	485.7	25.4	23.132	µg/L	23.132	ppb	10:35:41
2	Mg 279.077 IEC†	71.5	9.7	15.866	µg/L	15.866	ppb	10:36:01
2	Na 589.592 Radial†	94.4	-40.6	-62.506	µg/L	-62.506	ppb	10:36:01
2	Sr 421.552†	283.4	0.4	0.0015	µg/L	0.0015	ppb	10:35:41
2	Sc 361.383	396402.4	396402.4	108.25	%			10:36:58
2	Y 371.029	390393.7	390393.7	108.48	%			10:36:58
2	Ag 328.068†	-590.3	138.3	1.3792	µg/L	1.3792	ppb	10:36:58
2	As 188.979†	-16.1	-2.0	-0.8992	µg/L	-0.8992	ppb	10:37:18
2	B 249.677†	226.0	35.6	1.1735	µg/L	1.1735	ppb	10:37:18
2	Ba 233.527†	0.1	15.6	0.1315	µg/L	0.1315	ppb	10:37:18
2	Be 313.107†	-3458.1	379.2	0.3244	µg/L	0.3244	ppb	10:36:58
2	Cd 226.502†	-308.5	38.1	0.3959	µg/L	0.3959	ppb	10:37:18
2	Co 228.616†	-201.2	36.5	0.8412	µg/L	0.8412	ppb	10:37:18
2	Cr 267.716†	123.0	-8.3	-0.1933	µg/L	-0.1933	ppb	10:37:18
2	Cu 324.752†	2123.4	41.5	0.3271	µg/L	0.3271	ppb	10:36:58
2	Mn 257.610†	450.9	-40.3	-0.0634	µg/L	-0.0634	ppb	10:37:18
2	Mo 202.031†	33.2	-2.3	-0.1279	µg/L	-0.1279	ppb	10:37:18
2	Ni 231.604†	-219.3	1.3	0.0359	µg/L	0.0359	ppb	10:37:18
2	P 214.914†	114.1	-26.2	-17.469	µg/L	-17.469	ppb	10:37:18

2	Pb 220.353†	-84.6	-14.7	-1.8409 µg/L	-1.8409 ppb		10:37:18
2	S 181.975 Axial†	99.0	-0.9	-1.0695 µg/L	-1.0695 ppb		10:37:18
2	Sb 206.836†	162.8	-4.2	-1.1964 µg/L	-1.1964 ppb		10:37:18
2	Se 196.026†	-13.1	11.7	5.5209 µg/L	5.5209 ppb		10:37:18
2	SiO2†	1148.9	-3.9	-0.6497 µg/L	-0.6497 ppb		10:37:18
2	Si 251.611†	89.6	91.0	5.0346 µg/L	5.0346 ppb		10:37:18
2	Sn 189.927†	37.0	-13.3	-1.6528 µg/L	-1.6528 ppb		10:37:18
2	Ti 334.940†	-701.4	73.6	0.2984 µg/L	0.2984 ppb		10:36:58
2	Tl 190.801†	-74.7	9.3	2.0073 µg/L	2.0073 ppb		10:37:18
2	U 367.007†	1067.8	103.0	36.22 µg/L	36.22 ppb		10:36:58
2	V 292.402†	-160.6	-16.5	-0.1962 µg/L	-0.1962 ppb		10:37:18
2	Zn 213.857†	1438.2	430.8	3.2822 µg/L	3.2822 ppb		10:37:18
3	Sc RADIAL	24031.9	24031.9	109 %			10:36:26
3	Al 396.153Radial†	-134.8	-29.9	-9.5823 µg/L	-9.5823 ppb		10:36:26
3	Ca 317.933Radial†	514.0	175.9	37.677 µg/L	37.677 ppb		10:36:26
3	Fe 238.204 Radial†	50.0	10.9	2.1248 µg/L	2.1248 ppb		10:36:26
3	K 766.490 Radial†	576.1	107.7	97.870 µg/L	97.870 ppb		10:36:06
3	Mg 279.077 IEC†	61.3	0.3	0.4316 µg/L	0.4316 ppb		10:36:26
3	Na 589.592 Radial†	108.7	-27.7	-42.554 µg/L	-42.554 ppb		10:36:26
3	Sr 421.552†	275.6	-7.3	-0.0433 µg/L	-0.0433 ppb		10:36:06
3	Sc 361.383	391635.0	391635.0	106.94 %			10:37:23
3	Y 371.029	385931.3	385931.3	107.24 %			10:37:23
3	Ag 328.068†	-654.4	71.8	0.7157 µg/L	0.7157 ppb		10:37:23
3	As 188.979†	-22.0	-7.7	-3.4075 µg/L	-3.4075 ppb		10:37:43
3	B 249.677†	210.5	23.6	0.7918 µg/L	0.7918 ppb		10:37:43
3	Ba 233.527†	-8.3	7.8	0.0656 µg/L	0.0656 ppb		10:37:43
3	Be 313.107†	-3391.8	402.4	0.3391 µg/L	0.3391 ppb		10:37:23
3	Cd 226.502†	-310.3	33.0	0.3414 µg/L	0.3414 ppb		10:37:43
3	Co 228.616†	-223.5	13.4	0.3074 µg/L	0.3074 ppb		10:37:43
3	Cr 267.716†	118.0	-11.6	-0.2457 µg/L	-0.2457 ppb		10:37:43
3	Cu 324.752†	2065.8	11.5	0.0958 µg/L	0.0958 ppb		10:37:23
3	Mn 257.610†	437.5	-47.8	-0.0749 µg/L	-0.0749 ppb		10:37:43
3	Mo 202.031†	26.5	-8.2	-0.4626 µg/L	-0.4626 ppb		10:37:43
3	Ni 231.604†	-243.6	-23.8	-0.6589 µg/L	-0.6589 ppb		10:37:43
3	P 214.914†	103.3	-35.1	-23.381 µg/L	-23.381 ppb		10:37:43
3	Pb 220.353†	-73.8	-5.5	-0.6911 µg/L	-0.6911 ppb		10:37:43
3	S 181.975 Axial†	96.6	-2.0	-2.4645 µg/L	-2.4645 ppb		10:37:43
3	Sb 206.836†	140.9	-22.8	-6.5364 µg/L	-6.5364 ppb		10:37:43
3	Se 196.026†	-14.5	10.2	4.8299 µg/L	4.8299 ppb		10:37:43
3	SiO2†	1166.4	25.4	4.3124 µg/L	4.3124 ppb		10:37:43
3	Si 251.611†	69.1	72.8	4.0338 µg/L	4.0338 ppb		10:37:43
3	Sn 189.927†	42.1	-8.2	-1.0124 µg/L	-1.0124 ppb		10:37:43
3	Ti 334.940†	-656.5	107.7	0.4522 µg/L	0.4522 ppb		10:37:23
3	Tl 190.801†	-89.9	-5.8	-1.2288 µg/L	-1.2288 ppb		10:37:43
3	U 367.007†	998.9	50.6	17.75 µg/L	17.75 ppb		10:37:23
3	V 292.402†	-180.0	-36.4	-0.4692 µg/L	-0.4692 ppb		10:37:43
3	Zn 213.857†	1419.1	429.1	3.2731 µg/L	3.2731 ppb		10:37:43

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	394070.4	107.61	%	0.651				0.61%
Sc RADIAL	24033.0	109	%	0.21				0.19%
Y 371.029	388303.9	107.90	%	0.624				0.58%
Ag 328.068†	104.7	1.0428	µg/L	0.33180	1.0428	ppb	0.33180	31.82%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-19.1	-6.1482	µg/L	4.34188	-6.1482	ppb	4.34188	70.62%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-5.1	-2.2265	µg/L	1.26055	-2.2265	ppb	1.26055	56.61%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	30.8	1.0204	µg/L	0.20170	1.0204	ppb	0.20170	19.77%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	9.2	0.0778	µg/L	0.04867	0.0778	ppb	0.04867	62.52%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	344.8	0.2939	µg/L	0.06602	0.2939	ppb	0.06602	22.46%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	174.7	37.423	µg/L	0.4848	37.423	ppb	0.4848	1.30%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	39.8	0.4126	µg/L	0.08094	0.4126	ppb	0.08094	19.62%
QC value within limits for Cd 226.502 Recovery = Not calculated								

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Co 228.616†                28.4      0.6529 µg/L       0.29964      0.6529 ppb        0.29964  45.89%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -11.1     -0.2437 µg/L       0.04940     -0.2437 ppb        0.04940  20.27%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                16.8      0.1413 µg/L       0.16774      0.1413 ppb        0.16774 118.72%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -2.8     -0.5509 µg/L       2.38796     -0.5509 ppb        2.38796 433.45%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          69.5      63.178 µg/L       37.6553      63.178 ppb        37.6553  59.60%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.5      2.5295 µg/L      12.42128      2.5295 ppb       12.42128 491.05%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -55.1     -0.0865 µg/L       0.03067     -0.0865 ppb        0.03067  35.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -1.1     -0.0648 µg/L       0.43282     -0.0648 ppb        0.43282 667.65%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -33.6     -51.621 µg/L       10.0994     -51.621 ppb        10.0994  19.56%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -8.4     -0.2318 µg/L       0.37384     -0.2318 ppb        0.37384 161.29%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -28.1     -18.724 µg/L        4.1734     -18.724 ppb         4.1734  22.29%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -10.1     -1.2733 µg/L       0.57505     -1.2733 ppb        0.57505  45.16%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -1.8     -2.1698 µg/L       0.98659     -2.1698 ppb        0.98659  45.47%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -11.8     -3.3939 µg/L       2.79260     -3.3939 ppb        2.79260  82.28%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                12.4      5.8595 µg/L       1.23414      5.8595 ppb        1.23414  21.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      11.0      1.8600 µg/L       2.48159      1.8600 ppb        2.48159 133.42%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                76.5      4.2304 µg/L       0.72611      4.2304 ppb        0.72611  17.16%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -12.5     -1.5562 µg/L       0.50254     -1.5562 ppb        0.50254  32.29%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 3.1      0.0175 µg/L       0.07021      0.0175 ppb        0.07021 400.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               107.9      0.4481 µg/L       0.14764      0.4481 ppb        0.14764  32.95%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 1.9      0.4171 µg/L       1.61874      0.4171 ppb        1.61874 388.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 367.007†                 81.4       28.60 µg/L         9.647       28.60 ppb          9.647  33.73%
   QC value within limits for U 367.007  Recovery = Not calculated
V 292.402†                -28.1     -0.3513 µg/L       0.14027     -0.3513 ppb        0.14027  39.92%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               432.6      3.2973 µg/L       0.03432      3.2973 ppb        0.03432   1.04%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Analysis Begun

Start Time: 7/23/2018 10:38:44
Logged In Analyst: Optima3
Spectrometer: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 7/23/2018 07:25:32
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\072318.sif
Batch ID:
Results Data Set: 072318
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: 1204072646|1782974|1|
Analyst: HSC
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 149
Date Collected: 7/23/2018 10:38:58
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1204072646|1782974|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24787.4	24787.4	112	%			10:39:43
1	Al 396.153Radial†	347943.3	310035.5	99688	µg/L	99688	ppb	10:39:38
1	Ca 317.933Radial†	1107572.1	986308.7	211220	µg/L	211220	ppb	10:39:38
1	Fe 238.204 Radial†	1610530.8	1434596.3	279220	µg/L	279220	ppb	10:39:38
1	K 766.490 Radial†	20455.5	17799.7	16147	µg/L	16147	ppb	10:39:43
1	Mg 279.077 IEC†	71631.0	63751.5	104180	µg/L	104180	ppb	10:39:43
1	Na 589.592 Radial†	4274.0	3679.6	5293.0	µg/L	5293.0	ppb	10:39:43
1	Sr 421.552†	255869.0	227662.9	1335.0	µg/L	1335.0	ppb	10:39:38
1	Sc 361.383	395761.7	395761.7	108.07	%			10:40:13
1	Y 371.029	417864.5	417864.5	116.12	%			10:40:13
1	Ag 328.068†	5636.7	5899.4	101.67	µg/L	101.67	ppb	10:40:13
1	As 188.979†	1411.7	1319.1	599.20	µg/L	599.20	ppb	10:40:33
1	B 249.677†	-14092.6	-13213.3	646.38	µg/L	646.38	ppb	10:40:13
1	Ba 233.527†	127397.5	117898.6	985.48	µg/L	985.48	ppb	10:40:13
1	Be 313.107†	628353.2	585000.1	489.11	µg/L	489.11	ppb	10:40:13
1	Cd 226.502†	51491.4	47969.0	467.30	µg/L	467.30	ppb	10:40:13
1	Co 228.616†	27375.8	25553.7	586.11	µg/L	586.11	ppb	10:40:33
1	Cr 267.716†	35082.7	32340.7	647.09	µg/L	647.09	ppb	10:40:13
1	Cu 324.752†	121702.8	110693.6	829.89	µg/L	829.89	ppb	10:40:13
1	Mn 257.610†	3168428.7	2931345.4	4621.6	µg/L	4621.6	ppb	10:40:13
1	Mo 202.031†	9431.6	8694.3	498.43	µg/L	498.43	ppb	10:40:33
1	Ni 231.604†	29713.9	27698.8	771.16	µg/L	771.16	ppb	10:40:33
1	P 214.914†	8623.4	7847.6	4978.9	µg/L	4978.9	ppb	10:40:33
1	Pb 220.353†	5571.6	5219.0	657.47	µg/L	657.47	ppb	10:40:33
1	S 181.975 Axial†	72588.7	67075.3	82334	µg/L	82334	ppb	10:40:13
1	Sb 206.836†	2030.1	1723.9	450.37	µg/L	450.37	ppb	10:40:33
1	Se 196.026†	846.6	807.1	505.67	µg/L	505.67	ppb	10:40:33
1	SiO2†	287372.1	264845.2	44674	µg/L	44674	ppb	10:40:13
1	Si 251.611†	408482.2	377983.9	20874	µg/L	20874	ppb	10:40:13
1	Sn 189.927†	4250.6	3885.6	491.45	µg/L	491.45	ppb	10:40:33
1	Ti 334.940†	371562.1	344534.4	1476.0	µg/L	1476.0	ppb	10:40:13
1	Tl 190.801†	2246.8	2157.3	490.34	µg/L	490.34	ppb	10:40:33
1	U 367.007†	5581.3	4281.0	314.7	µg/L	314.7	ppb	10:40:13
1	V 292.402†	51899.1	48155.0	690.97	µg/L	690.97	ppb	10:40:13
1	Zn 213.857†	145912.4	134117.5	986.91	µg/L	986.91	ppb	10:40:13
2	Sc RADIAL	25153.6	25153.6	114	%			10:39:53
2	Al 396.153Radial†	350173.5	307479.9	98866	µg/L	98866	ppb	10:39:48
2	Ca 317.933Radial†	1105856.6	970436.3	207820	µg/L	207820	ppb	10:39:48
2	Fe 238.204 Radial†	1609666.5	1412947.2	275000	µg/L	275000	ppb	10:39:48
2	K 766.490 Radial†	20556.4	17622.9	15987	µg/L	15987	ppb	10:39:53
2	Mg 279.077 IEC†	72779.1	63830.2	104310	µg/L	104310	ppb	10:39:53
2	Na 589.592 Radial†	4371.1	3709.4	5344.3	µg/L	5344.3	ppb	10:39:53
2	Sr 421.552†	257260.8	225565.7	1322.7	µg/L	1322.7	ppb	10:39:48
2	Sc 361.383	396411.4	396411.4	108.25	%			10:40:40
2	Y 371.029	418661.0	418661.0	116.34	%			10:40:40
2	Ag 328.068†	5586.1	5844.1	100.45	µg/L	100.45	ppb	10:40:40

2	As 188.979†	1418.4	1323.2	600.77 µg/L	600.77 ppb		10:41:00
2	B 249.677†	-14055.4	-13157.6	631.81 µg/L	631.81 ppb		10:40:40
2	Ba 233.527†	127284.3	117600.9	983.08 µg/L	983.08 ppb		10:40:40
2	Be 313.107†	627414.7	583180.2	487.56 µg/L	487.56 ppb		10:40:40
2	Cd 226.502†	51359.7	47769.2	465.69 µg/L	465.69 ppb		10:40:40
2	Co 228.616†	27436.0	25567.8	586.46 µg/L	586.46 ppb		10:41:00
2	Cr 267.716†	34952.7	32167.4	643.55 µg/L	643.55 ppb		10:40:40
2	Cu 324.752†	121772.7	110573.6	828.78 µg/L	828.78 ppb		10:40:40
2	Mn 257.610†	3165722.9	2924040.7	4609.8 µg/L	4609.8 ppb		10:40:40
2	Mo 202.031†	9477.1	8722.0	499.92 µg/L	499.92 ppb		10:41:00
2	Ni 231.604†	29791.3	27725.2	771.81 µg/L	771.81 ppb		10:41:00
2	P 214.914†	8631.7	7842.2	4978.9 µg/L	4978.9 ppb		10:41:00
2	Pb 220.353†	5590.0	5227.5	658.35 µg/L	658.35 ppb		10:41:00
2	S 181.975 Axial†	72490.5	66874.4	82089 µg/L	82089 ppb		10:40:40
2	Sb 206.836†	2019.6	1711.1	447.38 µg/L	447.38 ppb		10:41:00
2	Se 196.026†	814.0	775.8	488.97 µg/L	488.97 ppb		10:41:00
2	SiO2†	287015.2	264079.6	44545 µg/L	44545 ppb		10:40:40
2	Si 251.611†	407998.2	376917.3	20816 µg/L	20816 ppb		10:40:40
2	Sn 189.927†	4247.0	3875.8	490.16 µg/L	490.16 ppb		10:41:00
2	Ti 334.940†	371367.3	343791.0	1472.6 µg/L	1472.6 ppb		10:40:40
2	Tl 190.801†	2244.6	2151.9	488.80 µg/L	488.80 ppb		10:41:00
2	U 367.007†	5703.1	4385.1	369.4 µg/L	369.4 ppb		10:40:40
2	V 292.402†	51769.4	47956.4	687.55 µg/L	687.55 ppb		10:40:40
2	Zn 213.857†	145578.6	133587.8	983.31 µg/L	983.31 ppb		10:40:40
3	Sc RADIAL	25269.5	25269.5	114 %			10:40:04
3	Al 396.153Radial†	354933.2	310229.7	99751 µg/L	99751 ppb		10:39:59
3	Ca 317.933Radial†	1122314.5	980366.4	209950 µg/L	209950 ppb		10:39:59
3	Fe 238.204 Radial†	1631841.0	1425844.9	277520 µg/L	277520 ppb		10:39:59
3	K 766.490 Radial†	20693.3	17659.8	16020 µg/L	16020 ppb		10:40:04
3	Mg 279.077 IEC†	72580.8	63364.0	103550 µg/L	103550 ppb		10:40:04
3	Na 589.592 Radial†	4371.7	3692.4	5314.8 µg/L	5314.8 ppb		10:40:04
3	Sr 421.552†	261051.4	227842.6	1336.1 µg/L	1336.1 ppb		10:39:59
3	Sc 361.383	398076.0	398076.0	108.70 %			10:41:08
3	Y 371.029	420547.2	420547.2	116.86 %			10:41:08
3	Ag 328.068†	5711.9	5938.3	101.80 µg/L	101.80 ppb		10:41:08
3	As 188.979†	1428.0	1326.5	602.35 µg/L	602.35 ppb		10:41:28
3	B 249.677†	-14030.9	-13080.7	644.16 µg/L	644.16 ppb		10:41:08
3	Ba 233.527†	127513.1	117319.7	980.65 µg/L	980.65 ppb		10:41:08
3	Be 313.107†	628617.1	581862.6	486.48 µg/L	486.48 ppb		10:41:08
3	Cd 226.502†	51393.8	47602.2	463.69 µg/L	463.69 ppb		10:41:08
3	Co 228.616†	27422.8	25449.6	583.72 µg/L	583.72 ppb		10:41:28
3	Cr 267.716†	35116.4	32183.0	643.93 µg/L	643.93 ppb		10:41:08
3	Cu 324.752†	121872.7	110195.2	826.13 µg/L	826.13 ppb		10:41:08
3	Mn 257.610†	3168429.8	2914301.7	4594.7 µg/L	4594.7 ppb		10:41:08
3	Mo 202.031†	9468.8	8677.8	497.46 µg/L	497.46 ppb		10:41:28
3	Ni 231.604†	29760.9	27582.2	767.90 µg/L	767.90 ppb		10:41:28
3	P 214.914†	8632.3	7809.5	4955.1 µg/L	4955.1 ppb		10:41:28
3	Pb 220.353†	5562.5	5180.7	652.71 µg/L	652.71 ppb		10:41:28
3	S 181.975 Axial†	72659.6	66750.0	81935 µg/L	81935 ppb		10:41:08
3	Sb 206.836†	2026.9	1710.0	446.68 µg/L	446.68 ppb		10:41:28
3	Se 196.026†	827.5	785.0	494.45 µg/L	494.45 ppb		10:41:28
3	SiO2†	287256.9	263193.2	44395 µg/L	44395 ppb		10:41:08
3	Si 251.611†	408434.5	375742.5	20751 µg/L	20751 ppb		10:41:08
3	Sn 189.927†	4252.0	3864.0	488.72 µg/L	488.72 ppb		10:41:28
3	Ti 334.940†	372006.9	342944.8	1469.1 µg/L	1469.1 ppb		10:41:08
3	Tl 190.801†	2217.3	2118.1	481.77 µg/L	481.77 ppb		10:41:28
3	U 367.007†	5607.2	4274.8	319.8 µg/L	319.8 ppb		10:41:08
3	V 292.402†	51977.1	47947.6	687.90 µg/L	687.90 ppb		10:41:08
3	Zn 213.857†	146014.1	133426.0	981.85 µg/L	981.85 ppb		10:41:08

Mean Data: 1204072646|1782974|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	396749.7	108.34	%	0.326				0.30%
Sc RADIAL	25070.2	114	%	1.14				1.00%
Y 371.029	419024.2	116.44	%	0.383				0.33%
Ag 328.068†	5893.9	101.31	µg/L	0.743	101.31	ppb	0.743	0.73%
Al 396.153Radial†	309248.4	99435	µg/L	493.60	99435	ppb	493.60	0.50%
As 188.979†	1322.9	600.77	µg/L	1.573	600.77	ppb	1.573	0.26%
B 249.677†	-13150.5	640.78	µg/L	7.847	640.78	ppb	7.847	1.22%

Ba 233.527†	117606.4	983.07	µg/L	2.415	983.07	ppb	2.415	0.25%
Be 313.107†	583347.6	487.72	µg/L	1.319	487.72	ppb	1.319	0.27%
Ca 317.933Radial†	979037.1	209670	µg/L	1717.37	209670	ppb	1717.37	0.82%
Cd 226.502†	47780.1	465.56	µg/L	1.813	465.56	ppb	1.813	0.39%
Co 228.616†	25523.7	585.43	µg/L	1.487	585.43	ppb	1.487	0.25%
Cr 267.716†	32230.4	644.86	µg/L	1.945	644.86	ppb	1.945	0.30%
Cu 324.752†	110487.5	828.27	µg/L	1.933	828.27	ppb	1.933	0.23%
Fe 238.204 Radial†	1424462.8	277250	µg/L	2119.65	277250	ppb	2119.65	0.76%
K 766.490 Radial†	17694.2	16051	µg/L	84.58	16051	ppb	84.58	0.53%
Mg 279.077 IEC†	63648.6	104020	µg/L	407.78	104020	ppb	407.78	0.39%
Mn 257.610†	2923229.2	4608.7	µg/L	13.47	4608.7	ppb	13.47	0.29%
Mo 202.031†	8698.0	498.60	µg/L	1.239	498.60	ppb	1.239	0.25%
Na 589.592 Radial†	3693.8	5317.3	µg/L	25.75	5317.3	ppb	25.75	0.48%
Ni 231.604†	27668.7	770.29	µg/L	2.093	770.29	ppb	2.093	0.27%
P 214.914†	7833.1	4971.0	µg/L	13.74	4971.0	ppb	13.74	0.28%
Pb 220.353†	5209.1	656.17	µg/L	3.035	656.17	ppb	3.035	0.46%
S 181.975 Axial†	66899.9	82119	µg/L	201.39	82119	ppb	201.39	0.25%
Concentration greater than upper limit for S 181.975 Axial.								
Sb 206.836†	1715.0	448.14	µg/L	1.958	448.14	ppb	1.958	0.44%
Se 196.026†	789.3	496.36	µg/L	8.512	496.36	ppb	8.512	1.71%
SiO2†	264039.4	44538	µg/L	139.52	44538	ppb	139.52	0.31%
Si 251.611†	376881.3	20814	µg/L	61.93	20814	ppb	61.93	0.30%
Sn 189.927†	3875.2	490.11	µg/L	1.363	490.11	ppb	1.363	0.28%
Sr 421.552†	227023.7	1331.3	µg/L	7.42	1331.3	ppb	7.42	0.56%
Ti 334.940†	343756.7	1472.6	µg/L	3.41	1472.6	ppb	3.41	0.23%
Tl 190.801†	2142.4	486.97	µg/L	4.566	486.97	ppb	4.566	0.94%
U 367.007†	4313.6	334.7	µg/L	30.22	334.7	ppb	30.22	9.03%
V 292.402†	48019.7	688.81	µg/L	1.881	688.81	ppb	1.881	0.27%
Zn 213.857†	133710.4	984.03	µg/L	2.605	984.03	ppb	2.605	0.26%

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Sequence No.: 2 | **Autosampler Location: 150**
Sample ID: 1204072646|1782974|10| | **Date Collected: 7/23/2018 10:41:37**
Analyst: HSC | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: 1204072646|1782974|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25068.1	25068.1	114	%			10:42:13
1	Al 396.153Radial†	56166.9	49566.0	15918	µg/L	15918	ppb	10:42:13
1	Ca 317.933Radial†	148063.3	130118.5	27866	µg/L	27866	ppb	10:42:13
1	Fe 238.204 Radial†	208346.3	183477.3	35711	µg/L	35711	ppb	10:42:08
1	K 766.490 Radial†	7893.4	6530.8	5931.4	µg/L	5931.4	ppb	10:42:13
1	Mg 279.077 IEC†	11394.1	9979.9	16309	µg/L	16309	ppb	10:42:13
1	Na 589.592 Radial†	3700.2	3131.5	4768.8	µg/L	4768.8	ppb	10:42:13
1	Sr 421.552†	108374.3	95196.1	559.29	µg/L	559.29	ppb	10:42:08
1	Sc 361.383	398034.3	398034.3	108.69	%			10:42:40
1	Y 371.029	393567.0	393567.0	109.37	%			10:42:40
1	Ag 328.068†	9086.5	9043.6	97.487	µg/L	97.487	ppb	10:42:40
1	As 188.979†	1219.8	1135.1	505.16	µg/L	505.16	ppb	10:43:00
1	B 249.677†	12506.6	11333.3	513.95	µg/L	513.95	ppb	10:42:40
1	Ba 233.527†	68338.5	62889.3	528.46	µg/L	528.46	ppb	10:42:40
1	Be 313.107†	614881.8	569286.3	473.60	µg/L	473.60	ppb	10:42:40
1	Cd 226.502†	49697.2	46046.2	474.01	µg/L	474.01	ppb	10:42:40
1	Co 228.616†	22542.3	20962.1	482.76	µg/L	482.76	ppb	10:43:00
1	Cr 267.716†	27446.9	25130.2	500.61	µg/L	500.61	ppb	10:43:00
1	Cu 324.752†	78359.3	70173.1	517.36	µg/L	517.36	ppb	10:42:40
1	Mn 257.610†	668746.1	614812.5	967.86	µg/L	967.86	ppb	10:42:40
1	Mo 202.031†	9630.0	8827.0	501.38	µg/L	501.38	ppb	10:43:00
1	Ni 231.604†	20306.8	18886.9	522.76	µg/L	522.76	ppb	10:43:00
1	P 214.914†	1793.9	1518.7	971.67	µg/L	971.67	ppb	10:43:00
1	Pb 220.353†	4298.4	4018.2	498.38	µg/L	498.38	ppb	10:43:00
1	S 181.975 Axial†	11995.7	10944.1	13436	µg/L	13436	ppb	10:43:00
1	Sb 206.836†	2027.0	1710.3	482.28	µg/L	482.28	ppb	10:43:00
1	Se 196.026†	1106.5	1041.8	508.28	µg/L	508.28	ppb	10:43:00
1	SiO2†	94663.1	86028.0	14508	µg/L	14508	ppb	10:42:40
1	Si 251.611†	133499.1	122832.0	6781.9	µg/L	6781.9	ppb	10:42:40
1	Sn 189.927†	4450.6	4047.2	505.36	µg/L	505.36	ppb	10:43:00
1	Ti 334.940†	151517.8	140123.1	597.52	µg/L	597.52	ppb	10:42:40
1	Tl 190.801†	2440.0	2323.2	501.46	µg/L	501.46	ppb	10:43:00
1	U 367.007†	2926.9	1809.4	483.6	µg/L	483.6	ppb	10:42:40
1	V 292.402†	41684.9	38483.4	514.90	µg/L	514.90	ppb	10:42:40
1	Zn 213.857†	78639.0	71452.7	537.42	µg/L	537.42	ppb	10:42:40
2	Sc RADIAL	24923.9	24923.9	113	%			10:42:23
2	Al 396.153Radial†	55996.4	49701.2	15961	µg/L	15961	ppb	10:42:23
2	Ca 317.933Radial†	147854.8	130688.3	27988	µg/L	27988	ppb	10:42:23
2	Fe 238.204 Radial†	209670.9	185712.6	36146	µg/L	36146	ppb	10:42:18
2	K 766.490 Radial†	7937.8	6610.4	6003.6	µg/L	6003.6	ppb	10:42:23
2	Mg 279.077 IEC†	11391.6	10035.7	16401	µg/L	16401	ppb	10:42:23
2	Na 589.592 Radial†	3674.1	3127.3	4761.7	µg/L	4761.7	ppb	10:42:23
2	Sr 421.552†	109016.8	96317.6	565.89	µg/L	565.89	ppb	10:42:18
2	Sc 361.383	400479.2	400479.2	109.36	%			10:43:06
2	Y 371.029	395924.3	395924.3	110.02	%			10:43:06
2	Ag 328.068†	9189.9	9087.1	98.015	µg/L	98.015	ppb	10:43:06
2	As 188.979†	1224.9	1132.9	504.22	µg/L	504.22	ppb	10:43:27
2	B 249.677†	12637.6	11382.8	517.30	µg/L	517.30	ppb	10:43:06
2	Ba 233.527†	68956.0	63070.1	529.97	µg/L	529.97	ppb	10:43:06
2	Be 313.107†	618614.5	569245.9	473.56	µg/L	473.56	ppb	10:43:06
2	Cd 226.502†	50199.3	46226.2	475.83	µg/L	475.83	ppb	10:43:06
2	Co 228.616†	22595.1	20883.8	480.95	µg/L	480.95	ppb	10:43:27
2	Cr 267.716†	27581.2	25098.8	500.03	µg/L	500.03	ppb	10:43:27
2	Cu 324.752†	78641.3	69990.9	516.02	µg/L	516.02	ppb	10:43:06
2	Mn 257.610†	673098.3	615036.0	968.24	µg/L	968.24	ppb	10:43:06
2	Mo 202.031†	9662.8	8802.9	500.02	µg/L	500.02	ppb	10:43:27
2	Ni 231.604†	20363.2	18824.4	521.04	µg/L	521.04	ppb	10:43:27
2	P 214.914†	1801.3	1515.4	969.10	µg/L	969.10	ppb	10:43:27

2	Pb 220.353†	4316.8	4010.9	497.51 µg/L	497.51 ppb		10:43:27
2	S 181.975 Axial†	12057.5	10933.3	13423 µg/L	13423 ppb		10:43:27
2	Sb 206.836†	2036.8	1707.9	481.53 µg/L	481.53 ppb		10:43:27
2	Se 196.026†	1106.8	1035.9	505.67 µg/L	505.67 ppb		10:43:27
2	SiO2†	95412.6	86181.7	14534 µg/L	14534 ppb		10:43:06
2	Si 251.611†	134227.1	122747.8	6777.3 µg/L	6777.3 ppb		10:43:06
2	Sn 189.927†	4473.6	4043.2	504.87 µg/L	504.87 ppb		10:43:27
2	Ti 334.940†	152299.6	139987.0	596.97 µg/L	596.97 ppb		10:43:06
2	Tl 190.801†	2440.3	2309.8	498.62 µg/L	498.62 ppb		10:43:27
2	U 367.007†	2829.8	1704.1	444.8 µg/L	444.8 ppb		10:43:06
2	V 292.402†	42002.2	38539.4	515.69 µg/L	515.69 ppb		10:43:06
2	Zn 213.857†	79360.3	71670.6	539.04 µg/L	539.04 ppb		10:43:06
3	Sc RADIAL	24891.8	24891.8	113 %			10:42:33
3	Al 396.153Radial†	56072.4	49832.7	16004 µg/L	16004 ppb		10:42:33
3	Ca 317.933Radial†	147957.3	130948.5	28043 µg/L	28043 ppb		10:42:33
3	Fe 238.204 Radial†	209359.6	185676.4	36139 µg/L	36139 ppb		10:42:28
3	K 766.490 Radial†	7846.5	6538.5	5938.3 µg/L	5938.3 ppb		10:42:33
3	Mg 279.077 IEC†	11409.2	10064.4	16448 µg/L	16448 ppb		10:42:33
3	Na 589.592 Radial†	3677.6	3134.6	4772.9 µg/L	4772.9 ppb		10:42:33
3	Sr 421.552†	108922.0	96358.2	566.13 µg/L	566.13 ppb		10:42:28
3	Sc 361.383	399113.0	399113.0	108.99 %			10:43:33
3	Y 371.029	394596.6	394596.6	109.65 %			10:43:33
3	Ag 328.068†	9068.0	9004.0	97.169 µg/L	97.169 ppb		10:43:33
3	As 188.979†	1206.0	1119.3	498.24 µg/L	498.24 ppb		10:43:53
3	B 249.677†	12712.7	11491.3	520.87 µg/L	520.87 ppb		10:43:33
3	Ba 233.527†	69000.2	63326.5	532.13 µg/L	532.13 ppb		10:43:33
3	Be 313.107†	619756.7	572230.3	476.05 µg/L	476.05 ppb		10:43:33
3	Cd 226.502†	50259.4	46438.5	478.04 µg/L	478.04 ppb		10:43:33
3	Co 228.616†	22567.5	20929.1	481.99 µg/L	481.99 ppb		10:43:53
3	Cr 267.716†	27448.7	25063.5	499.31 µg/L	499.31 ppb		10:43:53
3	Cu 324.752†	78815.9	70397.2	519.01 µg/L	519.01 ppb		10:43:33
3	Mn 257.610†	674466.4	618398.2	973.52 µg/L	973.52 ppb		10:43:33
3	Mo 202.031†	9607.4	8782.3	498.85 µg/L	498.85 ppb		10:43:53
3	Ni 231.604†	20297.7	18828.0	521.14 µg/L	521.14 ppb		10:43:53
3	P 214.914†	1804.0	1523.6	974.53 µg/L	974.53 ppb		10:43:53
3	Pb 220.353†	4288.3	3998.2	495.94 µg/L	495.94 ppb		10:43:53
3	S 181.975 Axial†	12016.8	10933.6	13423 µg/L	13423 ppb		10:43:53
3	Sb 206.836†	2015.2	1694.4	477.68 µg/L	477.68 ppb		10:43:53
3	Se 196.026†	1091.8	1025.6	500.81 µg/L	500.81 ppb		10:43:53
3	SiO2†	95488.1	86549.6	14596 µg/L	14596 ppb		10:43:33
3	Si 251.611†	134474.9	123395.3	6813.1 µg/L	6813.1 ppb		10:43:33
3	Sn 189.927†	4443.7	4029.8	503.21 µg/L	503.21 ppb		10:43:53
3	Ti 334.940†	152551.2	140694.6	599.98 µg/L	599.98 ppb		10:43:33
3	Tl 190.801†	2422.7	2301.2	496.80 µg/L	496.80 ppb		10:43:53
3	U 367.007†	2854.7	1735.9	456.0 µg/L	456.0 ppb		10:43:33
3	V 292.402†	42008.2	38676.4	517.47 µg/L	517.47 ppb		10:43:33
3	Zn 213.857†	79343.6	71903.7	540.81 µg/L	540.81 ppb		10:43:33

Mean Data: 1204072646|1782974|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	399208.8	109.01	%	0.335				0.31%
Sc RADIAL	24961.3	113	%	0.43				0.38%
Y 371.029	394696.0	109.68	%	0.328				0.30%
Ag 328.068†	9044.9	97.557	µg/L	0.4269	97.557	ppb	0.4269	0.44%
Al 396.153Radial†	49700.0	15961	µg/L	42.95	15961	ppb	42.95	0.27%
As 188.979†	1129.1	502.54	µg/L	3.752	502.54	ppb	3.752	0.75%
B 249.677†	11402.5	517.37	µg/L	3.462	517.37	ppb	3.462	0.67%
Ba 233.527†	63095.3	530.19	µg/L	1.844	530.19	ppb	1.844	0.35%
Be 313.107†	570254.1	474.40	µg/L	1.422	474.40	ppb	1.422	0.30%
Ca 317.933Radial†	130585.1	27966	µg/L	90.92	27966	ppb	90.92	0.33%
Cd 226.502†	46237.0	475.96	µg/L	2.014	475.96	ppb	2.014	0.42%
Co 228.616†	20925.0	481.90	µg/L	0.907	481.90	ppb	0.907	0.19%
Cr 267.716†	25097.5	499.98	µg/L	0.651	499.98	ppb	0.651	0.13%
Cu 324.752†	70187.1	517.47	µg/L	1.498	517.47	ppb	1.498	0.29%
Fe 238.204 Radial†	184955.4	35998	µg/L	249.17	35998	ppb	249.17	0.69%
K 766.490 Radial†	6559.9	5957.8	µg/L	39.85	5957.8	ppb	39.85	0.67%
Mg 279.077 IEC†	10026.7	16386	µg/L	70.23	16386	ppb	70.23	0.43%
Mn 257.610†	616082.2	969.87	µg/L	3.163	969.87	ppb	3.163	0.33%
Mo 202.031†	8804.0	500.08	µg/L	1.265	500.08	ppb	1.265	0.25%

Na 589.592 Radial†	3131.2	4767.8	µg/L	5.69	4767.8	ppb	5.69	0.12%
Ni 231.604†	18846.5	521.65	µg/L	0.965	521.65	ppb	0.965	0.19%
P 214.914†	1519.2	971.77	µg/L	2.717	971.77	ppb	2.717	0.28%
Pb 220.353†	4009.1	497.28	µg/L	1.234	497.28	ppb	1.234	0.25%
S 181.975 Axial†	10937.0	13427	µg/L	7.63	13427	ppb	7.63	0.06%
Sb 206.836†	1704.2	480.50	µg/L	2.469	480.50	ppb	2.469	0.51%
Se 196.026†	1034.4	504.92	µg/L	3.793	504.92	ppb	3.793	0.75%
SiO2†	86253.1	14546	µg/L	45.31	14546	ppb	45.31	0.31%
Si 251.611†	122991.7	6790.8	µg/L	19.48	6790.8	ppb	19.48	0.29%
Sn 189.927†	4040.1	504.48	µg/L	1.125	504.48	ppb	1.125	0.22%
Sr 421.552†	95957.3	563.77	µg/L	3.877	563.77	ppb	3.877	0.69%
Ti 334.940†	140268.2	598.16	µg/L	1.602	598.16	ppb	1.602	0.27%
Tl 190.801†	2311.4	498.96	µg/L	2.352	498.96	ppb	2.352	0.47%
U 367.007†	1749.8	461.5	µg/L	19.95	461.5	ppb	19.95	4.32%
V 292.402†	38566.4	516.02	µg/L	1.315	516.02	ppb	1.315	0.25%
Zn 213.857†	71675.7	539.09	µg/L	1.699	539.09	ppb	1.699	0.32%

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Sequence No.: 5 | **Autosampler Location: 7**
Sample ID: CCV | **Date Collected: 7/23/2018 10:48:55**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24924.4	24924.4	113	%			10:49:33
1	Al 396.153Radial†	17040.6	15190.0	4863.2	µg/L	4863.2	ppb	10:49:33
1	Ca 317.933Radial†	26801.0	23446.2	5021.1	µg/L	5021.1	ppb	10:49:33
1	Fe 238.204 Radial†	28657.2	25351.9	4934.3	µg/L	4934.3	ppb	10:49:33
1	K 766.490 Radial†	6345.0	5199.3	4724.6	µg/L	4724.6	ppb	10:49:33
1	Mg 279.077 IEC†	3576.6	3112.4	5086.3	µg/L	5086.3	ppb	10:49:33
1	Na 589.592 Radial†	7119.6	6179.5	9496.0	µg/L	9496.0	ppb	10:49:33
1	Sr 421.552†	89837.7	79325.2	466.37	µg/L	466.37	ppb	10:49:28
1	Sc 361.383	402995.6	402995.6	110.05	%			10:50:01
1	Y 371.029	393610.5	393610.5	109.38	%			10:50:01
1	Ag 328.068†	50349.3	46436.5	471.59	µg/L	471.59	ppb	10:50:01
1	As 188.979†	1229.0	1129.6	500.90	µg/L	500.90	ppb	10:50:21
1	B 249.677†	16067.2	14427.2	496.90	µg/L	496.90	ppb	10:50:01
1	Ba 233.527†	62015.2	56369.2	474.34	µg/L	474.34	ppb	10:50:01
1	Be 313.107†	627892.9	574145.0	477.31	µg/L	477.31	ppb	10:50:01
1	Cd 226.502†	51033.7	46697.8	484.15	µg/L	484.15	ppb	10:50:01
1	Co 228.616†	22609.2	20767.6	478.59	µg/L	478.59	ppb	10:50:21
1	Cr 267.716†	26245.5	23727.6	472.38	µg/L	472.38	ppb	10:50:21
1	Cu 324.752†	71899.3	63415.3	465.81	µg/L	465.81	ppb	10:50:01
1	Mn 257.610†	332796.9	301958.3	474.55	µg/L	474.55	ppb	10:50:01
1	Mo 202.031†	9256.7	8378.7	475.37	µg/L	475.37	ppb	10:50:21
1	Ni 231.604†	19118.5	17577.1	485.94	µg/L	485.94	ppb	10:50:21
1	P 214.914†	4086.4	3581.7	2370.6	µg/L	2370.6	ppb	10:50:21
1	Pb 220.353†	4256.3	3931.2	486.31	µg/L	486.31	ppb	10:50:21
1	S 181.975 Axial†	969.5	788.7	966.58	µg/L	966.58	ppb	10:50:21
1	Sb 206.836†	1976.9	1641.8	466.99	µg/L	466.99	ppb	10:50:21
1	Se 196.026†	1123.6	1044.8	496.03	µg/L	496.03	ppb	10:50:21
1	SiO2†	34180.4	29994.8	5046.2	µg/L	5046.2	ppb	10:50:01
1	Si 251.611†	47181.8	42882.6	2363.3	µg/L	2363.3	ppb	10:50:01
1	Sn 189.927†	4327.7	3885.1	484.37	µg/L	484.37	ppb	10:50:21
1	Ti 334.940†	119627.1	109427.7	465.85	µg/L	465.85	ppb	10:50:01
1	Tl 190.801†	2393.9	2253.7	483.41	µg/L	483.41	ppb	10:50:21
1	U 367.007†	2383.7	1282.6	429.4	µg/L	429.4	ppb	10:50:01
1	V 292.402†	39481.4	36008.9	476.02	µg/L	476.02	ppb	10:50:01
1	Zn 213.857†	69957.4	62673.0	474.09	µg/L	474.09	ppb	10:50:01
2	Sc RADIAL	25219.6	25219.6	114	%			10:49:43
2	Al 396.153Radial†	17204.4	15156.7	4852.5	µg/L	4852.5	ppb	10:49:43
2	Ca 317.933Radial†	27157.5	23480.4	5028.5	µg/L	5028.5	ppb	10:49:43
2	Fe 238.204 Radial†	29068.3	25414.7	4946.5	µg/L	4946.5	ppb	10:49:43
2	K 766.490 Radial†	6279.3	5075.9	4612.5	µg/L	4612.5	ppb	10:49:43
2	Mg 279.077 IEC†	3611.3	3105.7	5075.4	µg/L	5075.4	ppb	10:49:43
2	Na 589.592 Radial†	7150.8	6133.1	9424.6	µg/L	9424.6	ppb	10:49:43
2	Sr 421.552†	90325.6	78820.9	463.41	µg/L	463.41	ppb	10:49:38
2	Sc 361.383	401922.0	401922.0	109.75	%			10:50:27
2	Y 371.029	391977.5	391977.5	108.92	%			10:50:27
2	Ag 328.068†	50057.6	46292.9	470.13	µg/L	470.13	ppb	10:50:27
2	As 188.979†	1233.0	1136.3	503.82	µg/L	503.82	ppb	10:50:47
2	B 249.677†	16040.4	14441.7	497.42	µg/L	497.42	ppb	10:50:27
2	Ba 233.527†	61929.1	56441.3	474.94	µg/L	474.94	ppb	10:50:27
2	Be 313.107†	625407.6	573404.7	476.70	µg/L	476.70	ppb	10:50:27
2	Cd 226.502†	50806.8	46614.9	483.29	µg/L	483.29	ppb	10:50:27
2	Co 228.616†	22647.8	20857.6	480.67	µg/L	480.67	ppb	10:50:47
2	Cr 267.716†	26261.3	23805.7	473.93	µg/L	473.93	ppb	10:50:47
2	Cu 324.752†	71687.3	63396.7	465.68	µg/L	465.68	ppb	10:50:27
2	Mn 257.610†	331722.5	301787.1	474.28	µg/L	474.28	ppb	10:50:27
2	Mo 202.031†	9241.8	8387.6	475.87	µg/L	475.87	ppb	10:50:47
2	Ni 231.604†	19122.9	17627.5	487.33	µg/L	487.33	ppb	10:50:47
2	P 214.914†	4057.0	3564.8	2359.3	µg/L	2359.3	ppb	10:50:47

2	Pb 220.353†	4241.1	3927.8	485.88 µg/L	485.88 ppb	10:50:47
2	S 181.975 Axial†	965.5	787.3	964.95 µg/L	964.95 ppb	10:50:47
2	Sb 206.836†	1963.2	1634.2	464.78 µg/L	464.78 ppb	10:50:47
2	Se 196.026†	1125.6	1049.3	498.16 µg/L	498.16 ppb	10:50:47
2	SiO2†	33984.3	29899.1	5030.0 µg/L	5030.0 ppb	10:50:27
2	Si 251.611†	46928.0	42765.9	2356.8 µg/L	2356.8 ppb	10:50:27
2	Sn 189.927†	4329.9	3897.6	485.91 µg/L	485.91 ppb	10:50:47
2	Ti 334.940†	119360.8	109475.3	466.05 µg/L	466.05 ppb	10:50:27
2	Tl 190.801†	2382.6	2249.2	482.45 µg/L	482.45 ppb	10:50:47
2	U 367.007†	2399.0	1302.4	436.3 µg/L	436.3 ppb	10:50:27
2	V 292.402†	39282.0	35923.0	474.91 µg/L	474.91 ppb	10:50:27
2	Zn 213.857†	69725.5	62631.5	473.76 µg/L	473.76 ppb	10:50:27
3	Sc RADIAL	25012.5	25012.5	113 %		10:49:53
3	Al 396.153Radial†	17001.1	15101.9	4835.1 µg/L	4835.1 ppb	10:49:53
3	Ca 317.933Radial†	26879.1	23431.6	5018.0 µg/L	5018.0 ppb	10:49:53
3	Fe 238.204 Radial†	28752.4	25346.6	4933.2 µg/L	4933.2 ppb	10:49:53
3	K 766.490 Radial†	6247.0	5093.0	4628.0 µg/L	4628.0 ppb	10:49:53
3	Mg 279.077 IEC†	3556.2	3083.2	5038.7 µg/L	5038.7 ppb	10:49:53
3	Na 589.592 Radial†	7060.3	6105.0	9381.4 µg/L	9381.4 ppb	10:49:53
3	Sr 421.552†	90186.6	79353.1	466.54 µg/L	466.54 ppb	10:49:48
3	Sc 361.383	406216.6	406216.6	110.93 %		10:50:53
3	Y 371.029	396257.8	396257.8	110.11 %		10:50:53
3	Ag 328.068†	50730.0	46416.9	471.39 µg/L	471.39 ppb	10:50:53
3	As 188.979†	1220.9	1113.4	493.75 µg/L	493.75 ppb	10:51:13
3	B 249.677†	16211.8	14441.8	497.39 µg/L	497.39 ppb	10:50:53
3	Ba 233.527†	62688.5	56529.3	475.69 µg/L	475.69 ppb	10:50:53
3	Be 313.107†	635200.9	576208.9	479.03 µg/L	479.03 ppb	10:50:53
3	Cd 226.502†	51487.5	46739.2	484.57 µg/L	484.57 ppb	10:50:53
3	Co 228.616†	22622.9	20617.0	475.11 µg/L	475.11 ppb	10:51:13
3	Cr 267.716†	26248.2	23540.9	468.66 µg/L	468.66 ppb	10:51:13
3	Cu 324.752†	72615.9	63543.3	466.76 µg/L	466.76 ppb	10:50:53
3	Mn 257.610†	336168.2	302599.5	475.55 µg/L	475.55 ppb	10:50:53
3	Mo 202.031†	9247.5	8303.7	471.11 µg/L	471.11 ppb	10:51:13
3	Ni 231.604†	19124.0	17444.3	482.26 µg/L	482.26 ppb	10:51:13
3	P 214.914†	4066.8	3534.5	2339.2 µg/L	2339.2 ppb	10:51:13
3	Pb 220.353†	4229.6	3876.5	479.54 µg/L	479.54 ppb	10:51:13
3	S 181.975 Axial†	955.3	768.8	942.20 µg/L	942.20 ppb	10:51:13
3	Sb 206.836†	1965.2	1617.0	459.91 µg/L	459.91 ppb	10:51:13
3	Se 196.026†	1129.4	1041.9	494.64 µg/L	494.64 ppb	10:51:13
3	SiO2†	34554.7	30085.9	5061.8 µg/L	5061.8 ppb	10:50:53
3	Si 251.611†	47487.7	42818.4	2359.8 µg/L	2359.8 ppb	10:50:53
3	Sn 189.927†	4322.0	3848.8	479.86 µg/L	479.86 ppb	10:51:13
3	Ti 334.940†	120915.2	109726.9	467.13 µg/L	467.13 ppb	10:50:53
3	Tl 190.801†	2397.5	2239.7	480.43 µg/L	480.43 ppb	10:51:13
3	U 367.007†	2405.2	1284.9	430.2 µg/L	430.2 ppb	10:50:53
3	V 292.402†	39829.4	36038.2	476.36 µg/L	476.36 ppb	10:50:53
3	Zn 213.857†	70546.2	62699.7	474.31 µg/L	474.31 ppb	10:50:53

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	403711.4	110.24	%	0.610				0.55%
Sc RADIAL	25052.2	113	%	0.69				0.60%
Y 371.029	393948.6	109.47	%	0.600				0.55%
Ag 328.068†	46382.1	471.03	µg/L	0.791	471.03	ppb	0.791	0.17%
QC value within limits for Ag 328.068 Recovery = 94.21%								
Al 396.153Radial†	15149.5	4850.2	µg/L	14.19	4850.2	ppb	14.19	0.29%
QC value within limits for Al 396.153Radial Recovery = 97.00%								
As 188.979†	1126.4	499.49	µg/L	5.183	499.49	ppb	5.183	1.04%
QC value within limits for As 188.979 Recovery = 99.90%								
B 249.677†	14436.9	497.24	µg/L	0.294	497.24	ppb	0.294	0.06%
QC value within limits for B 249.677 Recovery = 99.45%								
Ba 233.527†	56446.6	474.99	µg/L	0.675	474.99	ppb	0.675	0.14%
QC value within limits for Ba 233.527 Recovery = 95.00%								
Be 313.107†	574586.2	477.68	µg/L	1.206	477.68	ppb	1.206	0.25%
QC value within limits for Be 313.107 Recovery = 95.54%								
Ca 317.933Radial†	23452.7	5022.5	µg/L	5.37	5022.5	ppb	5.37	0.11%
QC value within limits for Ca 317.933Radial Recovery = 100.45%								
Cd 226.502†	46684.0	484.00	µg/L	0.656	484.00	ppb	0.656	0.14%
QC value within limits for Cd 226.502 Recovery = 96.80%								

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Co 228.616†            20747.4      478.12 µg/L         2.806      478.12 ppb          2.806   0.59%
   QC value within limits for Co 228.616  Recovery = 95.62%
Cr 267.716†            23691.4      471.66 µg/L         2.709      471.66 ppb          2.709   0.57%
   QC value within limits for Cr 267.716  Recovery = 94.33%
Cu 324.752†            63451.8      466.08 µg/L         0.586      466.08 ppb          0.586   0.13%
   QC value within limits for Cu 324.752  Recovery = 93.22%
Fe 238.204 Radial†     25371.0      4938.0 µg/L          7.37      4938.0 ppb           7.37   0.15%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.76%
K 766.490 Radial†       5122.7      4655.1 µg/L         60.74      4655.1 ppb          60.74   1.30%
   QC value within limits for K 766.490 Radial  Recovery = 93.10%
Mg 279.077 IEC†         3100.4      5066.8 µg/L         24.93      5066.8 ppb          24.93   0.49%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.34%
Mn 257.610†           302115.0      474.79 µg/L         0.672      474.79 ppb          0.672   0.14%
   QC value within limits for Mn 257.610  Recovery = 94.96%
Mo 202.031†             8356.6      474.12 µg/L         2.613      474.12 ppb          2.613   0.55%
   QC value within limits for Mo 202.031  Recovery = 94.82%
Na 589.592 Radial†      6139.2      9434.0 µg/L         57.88      9434.0 ppb          57.88   0.61%
   QC value within limits for Na 589.592 Radial  Recovery = 94.34%
Ni 231.604†            17549.6      485.18 µg/L         2.617      485.18 ppb          2.617   0.54%
   QC value within limits for Ni 231.604  Recovery = 97.04%
P 214.914†              3560.3      2356.4 µg/L         15.88      2356.4 ppb          15.88   0.67%
   QC value within limits for P 214.914  Recovery = 94.25%
Pb 220.353†             3911.8      483.91 µg/L         3.791      483.91 ppb          3.791   0.78%
   QC value within limits for Pb 220.353  Recovery = 96.78%
S 181.975 Axial†         781.6      957.91 µg/L        13.629      957.91 ppb         13.629   1.42%
   QC value within limits for S 181.975 Axial  Recovery = 95.79%
Sb 206.836†             1631.0      463.90 µg/L         3.623      463.90 ppb          3.623   0.78%
   QC value within limits for Sb 206.836  Recovery = 92.78%
Se 196.026†             1045.3      496.28 µg/L         1.774      496.28 ppb          1.774   0.36%
   QC value within limits for Se 196.026  Recovery = 99.26%
SiO2†                  29993.2      5046.0 µg/L         15.90      5046.0 ppb          15.90   0.32%
   QC value within limits for SiO2  Recovery = 94.36%
Si 251.611†            42822.3      2359.9 µg/L          3.24      2359.9 ppb           3.24   0.14%
   QC value within limits for Si 251.611  Recovery = 94.40%
Sn 189.927†             3877.2      483.38 µg/L         3.147      483.38 ppb          3.147   0.65%
   QC value within limits for Sn 189.927  Recovery = 96.68%
Sr 421.552†            79166.4      465.44 µg/L         1.761      465.44 ppb          1.761   0.38%
   QC value within limits for Sr 421.552  Recovery = 93.09%
Ti 334.940†           109543.3      466.35 µg/L         0.686      466.35 ppb          0.686   0.15%
   QC value within limits for Ti 334.940  Recovery = 93.27%
Tl 190.801†             2247.5      482.10 µg/L         1.524      482.10 ppb          1.524   0.32%
   QC value within limits for Tl 190.801  Recovery = 96.42%
U 367.007†              1290.0       431.9 µg/L          3.78       431.9 ppb           3.78   0.87%
   QC value less than the lower limit for U 367.007  Recovery = 86.39%
V 292.402†             35990.0      475.76 µg/L         0.757      475.76 ppb          0.757   0.16%
   QC value within limits for V 292.402  Recovery = 95.15%
Zn 213.857†            62668.1      474.06 µg/L         0.276      474.06 ppb          0.276   0.06%
   QC value within limits for Zn 213.857  Recovery = 94.81%
QC Failed.  Continue with analysis.
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Sequence No.: 6 | **Autosampler Location: 8**
Sample ID: CCB | **Date Collected: 7/23/2018 10:51:22**
Analyst: | **Data Type: Original**
Initial Sample Wt: | **Initial Sample Vol:**
Dilution: | **Sample Prep Vol:**
Wash Time: 5 | **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24857.3	24857.3	113	%			10:52:13
1	Al 396.153Radial†	-131.5	-22.9	-7.3544	µg/L	-7.3544	ppb	10:52:13
1	Ca 317.933Radial†	536.2	179.9	38.536	µg/L	38.536	ppb	10:52:13
1	Fe 238.204 Radial†	51.7	10.9	2.1212	µg/L	2.1212	ppb	10:52:13
1	K 766.490 Radial†	510.2	31.6	28.704	µg/L	28.704	ppb	10:51:53
1	Mg 279.077 IEC†	64.0	0.8	1.2982	µg/L	1.2982	ppb	10:52:13
1	Na 589.592 Radial†	110.6	-29.3	-45.054	µg/L	-45.054	ppb	10:52:13
1	Sr 421.552†	281.4	-10.5	-0.0626	µg/L	-0.0626	ppb	10:51:53
1	Sc 361.383	405160.4	405160.4	110.64	%			10:53:10
1	Y 371.029	398923.2	398923.2	110.85	%			10:53:10
1	Ag 328.068†	-691.4	58.7	0.5886	µg/L	0.5886	ppb	10:53:10
1	As 188.979†	-10.6	3.2	1.3970	µg/L	1.3970	ppb	10:53:30
1	B 249.677†	268.4	69.4	2.3114	µg/L	2.3114	ppb	10:53:30
1	Ba 233.527†	15.4	29.5	0.2479	µg/L	0.2479	ppb	10:53:30
1	Be 313.107†	-3599.7	320.3	0.2695	µg/L	0.2695	ppb	10:53:10
1	Cd 226.502†	-290.1	60.9	0.6317	µg/L	0.6317	ppb	10:53:30
1	Co 228.616†	-200.5	41.2	0.9488	µg/L	0.9488	ppb	10:53:30
1	Cr 267.716†	118.5	-14.8	-0.3039	µg/L	-0.3039	ppb	10:53:30
1	Cu 324.752†	2075.4	-44.2	-0.3174	µg/L	-0.3174	ppb	10:53:10
1	Mn 257.610†	459.5	-41.6	-0.0652	µg/L	-0.0652	ppb	10:53:30
1	Mo 202.031†	36.2	-0.2	-0.0139	µg/L	-0.0139	ppb	10:53:30
1	Ni 231.604†	-248.9	-21.0	-0.5808	µg/L	-0.5808	ppb	10:53:30
1	P 214.914†	116.1	-26.7	-17.794	µg/L	-17.794	ppb	10:53:30
1	Pb 220.353†	-82.4	-11.0	-1.3651	µg/L	-1.3651	ppb	10:53:30
1	S 181.975 Axial†	111.2	8.1	9.9920	µg/L	9.9920	ppb	10:53:30
1	Sb 206.836†	172.5	1.3	0.3871	µg/L	0.3871	ppb	10:53:30
1	Se 196.026†	-9.5	15.2	7.1711	µg/L	7.1711	ppb	10:53:30
1	SiO2†	1207.0	25.7	4.3356	µg/L	4.3356	ppb	10:53:30
1	Si 251.611†	164.6	157.0	8.6821	µg/L	8.6821	ppb	10:53:30
1	Sn 189.927†	41.3	-10.2	-1.2629	µg/L	-1.2629	ppb	10:53:30
1	Ti 334.940†	-751.9	41.9	0.1748	µg/L	0.1748	ppb	10:53:10
1	Tl 190.801†	-89.5	-2.6	-0.5560	µg/L	-0.5560	ppb	10:53:30
1	U 367.007†	1014.5	33.5	11.76	µg/L	11.76	ppb	10:53:10
1	V 292.402†	-136.2	8.8	0.1218	µg/L	0.1218	ppb	10:53:30
1	Zn 213.857†	1504.7	462.2	3.5247	µg/L	3.5247	ppb	10:53:30
2	Sc RADIAL	24755.5	24755.5	112	%			10:52:38
2	Al 396.153Radial†	-109.5	-3.6	-1.1950	µg/L	-1.1950	ppb	10:52:38
2	Ca 317.933Radial†	560.7	203.8	43.639	µg/L	43.639	ppb	10:52:38
2	Fe 238.204 Radial†	43.8	4.0	0.7875	µg/L	0.7875	ppb	10:52:38
2	K 766.490 Radial†	496.0	20.7	18.862	µg/L	18.862	ppb	10:52:18
2	Mg 279.077 IEC†	56.2	-5.9	-9.7216	µg/L	-9.7216	ppb	10:52:38
2	Na 589.592 Radial†	109.2	-30.1	-46.358	µg/L	-46.358	ppb	10:52:38
2	Sr 421.552†	173.2	-106.0	-0.6244	µg/L	-0.6244	ppb	10:52:18
2	Sc 361.383	404690.9	404690.9	110.51	%			10:53:35
2	Y 371.029	398277.6	398277.6	110.68	%			10:53:35
2	Ag 328.068†	-728.7	24.3	0.2283	µg/L	0.2283	ppb	10:53:35
2	As 188.979†	-25.2	-10.0	-4.4000	µg/L	-4.4000	ppb	10:53:55
2	B 249.677†	249.2	52.3	1.7382	µg/L	1.7382	ppb	10:53:55
2	Ba 233.527†	11.6	26.1	0.2193	µg/L	0.2193	ppb	10:53:55
2	Be 313.107†	-3588.1	327.0	0.2799	µg/L	0.2799	ppb	10:53:35
2	Cd 226.502†	-279.0	70.6	0.7324	µg/L	0.7324	ppb	10:53:55
2	Co 228.616†	-198.2	43.1	0.9926	µg/L	0.9926	ppb	10:53:55
2	Cr 267.716†	127.6	-6.5	-0.1536	µg/L	-0.1536	ppb	10:53:55
2	Cu 324.752†	2051.2	-64.0	-0.4509	µg/L	-0.4509	ppb	10:53:35
2	Mn 257.610†	481.1	-21.5	-0.0338	µg/L	-0.0338	ppb	10:53:55
2	Mo 202.031†	45.4	8.1	0.4590	µg/L	0.4590	ppb	10:53:55
2	Ni 231.604†	-220.6	4.3	0.1184	µg/L	0.1184	ppb	10:53:55
2	P 214.914†	96.3	-44.5	-29.630	µg/L	-29.630	ppb	10:53:55

2	Pb 220.353†	-62.3	7.1	0.8592	µg/L	0.8592	ppb	10:53:55
2	S 181.975 Axial†	100.3	-1.6	-1.9117	µg/L	-1.9117	ppb	10:53:55
2	Sb 206.836†	158.5	-11.1	-3.1803	µg/L	-3.1803	ppb	10:53:55
2	Se 196.026†	-9.8	14.9	7.0574	µg/L	7.0574	ppb	10:53:55
2	SiO2†	1195.0	16.1	2.6948	µg/L	2.6948	ppb	10:53:55
2	Si 251.611†	177.3	168.7	9.3213	µg/L	9.3213	ppb	10:53:55
2	Sn 189.927†	47.0	-5.0	-0.6219	µg/L	-0.6219	ppb	10:53:55
2	Ti 334.940†	-652.7	130.9	0.5451	µg/L	0.5451	ppb	10:53:35
2	Tl 190.801†	-88.5	-1.8	-0.3633	µg/L	-0.3633	ppb	10:53:55
2	U 367.007†	1074.6	88.9	31.24	µg/L	31.24	ppb	10:53:35
2	V 292.402†	-138.7	6.4	0.1055	µg/L	0.1055	ppb	10:53:55
2	Zn 213.857†	1447.4	411.9	3.1383	µg/L	3.1383	ppb	10:53:55
3	Sc RADIAL	24790.8	24790.8	112	%			10:53:03
3	Al 396.153Radial†	-85.6	17.8	5.7104	µg/L	5.7104	ppb	10:53:03
3	Ca 317.933Radial†	566.8	208.5	44.652	µg/L	44.652	ppb	10:53:03
3	Fe 238.204 Radial†	60.9	19.2	3.7418	µg/L	3.7418	ppb	10:53:03
3	K 766.490 Radial†	499.6	23.3	21.200	µg/L	21.200	ppb	10:52:43
3	Mg 279.077 IEC†	74.4	10.2	16.669	µg/L	16.669	ppb	10:53:03
3	Na 589.592 Radial†	101.6	-37.1	-57.084	µg/L	-57.084	ppb	10:53:03
3	Sr 421.552†	273.4	-17.0	-0.1005	µg/L	-0.1005	ppb	10:52:43
3	Sc 361.383	404407.1	404407.1	110.43	%			10:54:00
3	Y 371.029	397968.7	397968.7	110.59	%			10:54:00
3	Ag 328.068†	-676.9	70.8	0.7113	µg/L	0.7113	ppb	10:54:00
3	As 188.979†	-18.3	-3.8	-1.6634	µg/L	-1.6634	ppb	10:54:20
3	B 249.677†	218.0	24.2	0.8159	µg/L	0.8159	ppb	10:54:20
3	Ba 233.527†	10.3	24.9	0.2094	µg/L	0.2094	ppb	10:54:20
3	Be 313.107†	-3490.7	413.0	0.3460	µg/L	0.3460	ppb	10:54:00
3	Cd 226.502†	-276.9	72.3	0.7504	µg/L	0.7504	ppb	10:54:20
3	Co 228.616†	-193.7	47.0	1.0831	µg/L	1.0831	ppb	10:54:20
3	Cr 267.716†	135.9	1.2	0.0159	µg/L	0.0159	ppb	10:54:20
3	Cu 324.752†	2084.3	-32.7	-0.2343	µg/L	-0.2343	ppb	10:54:00
3	Mn 257.610†	465.9	-35.0	-0.0547	µg/L	-0.0547	ppb	10:54:20
3	Mo 202.031†	36.3	-0.1	-0.0030	µg/L	-0.0030	ppb	10:54:20
3	Ni 231.604†	-179.5	41.4	1.1448	µg/L	1.1448	ppb	10:54:20
3	P 214.914†	104.5	-37.0	-24.648	µg/L	-24.648	ppb	10:54:20
3	Pb 220.353†	-82.3	-11.0	-1.3655	µg/L	-1.3655	ppb	10:54:20
3	S 181.975 Axial†	101.7	-0.2	-0.2811	µg/L	-0.2811	ppb	10:54:20
3	Sb 206.836†	177.8	6.4	1.8399	µg/L	1.8399	ppb	10:54:20
3	Se 196.026†	-30.7	-4.0	-1.8928	µg/L	-1.8928	ppb	10:54:20
3	SiO2†	1205.5	26.4	4.4607	µg/L	4.4607	ppb	10:54:20
3	Si 251.611†	140.6	135.5	7.4959	µg/L	7.4959	ppb	10:54:20
3	Sn 189.927†	42.7	-8.9	-1.1011	µg/L	-1.1011	ppb	10:54:20
3	Ti 334.940†	-698.8	88.7	0.3756	µg/L	0.3756	ppb	10:54:00
3	Tl 190.801†	-87.7	-1.1	-0.2366	µg/L	-0.2366	ppb	10:54:20
3	U 367.007†	1005.2	26.8	9.377	µg/L	9.377	ppb	10:54:00
3	V 292.402†	-157.7	-10.9	-0.1367	µg/L	-0.1367	ppb	10:54:20
3	Zn 213.857†	1494.7	455.7	3.4656	µg/L	3.4656	ppb	10:54:20

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	404752.8	110.53	%	0.104				0.09%
Sc RADIAL	24801.2	112	%	0.23				0.21%
Y 371.029	398389.8	110.71	%	0.135				0.12%
Ag 328.068†	51.3	0.5094	µg/L	0.25104	0.5094	ppb	0.25104	49.28%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-2.9	-0.9464	µg/L	6.53597	-0.9464	ppb	6.53597	690.64%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.5	-1.5555	µg/L	2.89998	-1.5555	ppb	2.89998	186.44%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	48.7	1.6218	µg/L	0.75450	1.6218	ppb	0.75450	46.52%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.8	0.2256	µg/L	0.01999	0.2256	ppb	0.01999	8.86%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	353.4	0.2984	µg/L	0.04150	0.2984	ppb	0.04150	13.91%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	197.4	42.276	µg/L	3.2781	42.276	ppb	3.2781	7.75%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	67.9	0.7048	µg/L	0.06396	0.7048	ppb	0.06396	9.07%
QC value within limits for Cd 226.502 Recovery = Not calculated								

```
Co 228.616†                43.8      1.0082 µg/L       0.06851      1.0082 ppb        0.06851   6.80%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -6.7     -0.1472 µg/L       0.16002     -0.1472 ppb        0.16002 108.70%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -47.0     -0.3342 µg/L       0.10926     -0.3342 ppb        0.10926  32.69%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         11.4      2.2168 µg/L       1.47948      2.2168 ppb        1.47948  66.74%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          25.2      22.922 µg/L        5.1421      22.922 ppb         5.1421  22.43%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.7      2.7486 µg/L      13.25507      2.7486 ppb       13.25507 482.25%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -32.7     -0.0512 µg/L       0.01599     -0.0512 ppb        0.01599  31.22%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.6      0.1474 µg/L       0.26994      0.1474 ppb        0.26994 183.17%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -32.2     -49.499 µg/L        6.6012     -49.499 ppb         6.6012  13.34%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 8.2      0.2274 µg/L       0.86796      0.2274 ppb        0.86796 381.63%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -36.1     -24.024 µg/L        5.9422     -24.024 ppb         5.9422  24.73%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -5.0     -0.6238 µg/L       1.28430     -0.6238 ppb        1.28430 205.88%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            2.1      2.5997 µg/L       6.45360      2.5997 ppb        6.45360 248.24%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -1.1     -0.3178 µg/L       2.58329     -0.3178 ppb        2.58329 812.97%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 8.7      4.1119 µg/L       5.20051      4.1119 ppb        5.20051 126.47%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      22.7      3.8304 µg/L       0.98541      3.8304 ppb        0.98541  25.73%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               153.7      8.4998 µg/L       0.92624      8.4998 ppb        0.92624  10.90%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -8.0     -0.9953 µg/L       0.33332     -0.9953 ppb        0.33332  33.49%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -44.5     -0.2625 µg/L       0.31396     -0.2625 ppb        0.31396 119.61%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                87.2      0.3652 µg/L       0.18534      0.3652 ppb        0.18534  50.75%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -1.8     -0.3853 µg/L       0.16083     -0.3853 ppb        0.16083  41.74%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 367.007†                 49.7       17.46 µg/L        11.995       17.46 ppb         11.995  68.70%
   QC value within limits for U 367.007  Recovery = Not calculated
V 292.402†                  1.4      0.0302 µg/L       0.14473      0.0302 ppb        0.14473 479.16%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               443.2      3.3762 µg/L       0.20814      3.3762 ppb        0.20814   6.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #14 Daily Performance

Sample ID: Sample
Sample Date/Time: Thursday, July 19, 2018 11:32:49
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\Daily 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\Sample.1421
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default1.tun
Dual Detector Mode: Pulse
Acquisition Date/Time&Time Zone: Thursday, July 19, 2018 11:32:49 Eastern Daylight Time
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	20150.8	20150.802	136.395	0.7
	Mg	24.0	121345.6	121345.601	726.272	0.6
	Co	58.9	27699.6	27699.629	192.393	0.7
	Rh	102.9	30169.9	30169.877	333.602	1.1
	In	114.9	184232.1	184232.144	1936.479	1.1
	Pb	208.0	125044.0	125043.952	991.376	0.8
⌈>	Ba	137.9	158068.5	158068.469	1171.104	0.7
⌊	Ba++	69.0	764.0	0.005	0.000	3.1
⌈>	Ce	139.9	188806.3	188806.315	2195.392	1.2
⌊	CeO	155.9	1329.6	0.007	0.000	1.7
	Bkgd	220.0	0.1	0.100	0.137	136.9

Current Conditions

C Val	Description
1.01	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-14.00	Cell Rod Offset STD [CRO]
10.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
1.03	DRC Mode NEB
-8.50	DRC Mode QRO
-3.00	DRC Mode CRO
-13.00	DRC Mode Cell Entrance/Exit Voltage
0.10	Cell Gas A
375.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-7.00	KED Mode Cell Entrance Voltage
-23.00	KED Mode Cell Exit Voltage
3.00	KED Cell Gas A
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9.012	41	-12.5	3936.5
Mg	23.985	41	-14.5	68797.3
In	114.904	41	-12.0	33022.1
Ce	139.905	41	-10.0	32045.9
Pb	207.977	41	-7.5	23964.1
U	238.050	41	-7.0	46120.3

ICPMS #14 Instrument Tuning Report

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Pk. Width
Be	9.0	9.0	1623	2068	0.717
Mg	24.0	24.0	4611	2068	0.728
Mg	25.0	25.0	4804	2068	0.687
Mg	26.0	26.0	5010	2068	0.694
Co	58.9	58.9	11581	2068	0.731
Rh	102.9	102.9	20375	2069	0.762
In	114.9	114.9	22766	2069	0.768
Ce	139.9	139.9	27770	2080	0.673
Pb	206.0	206.0	40983	2080	0.696
Pb	207.0	207.0	41182	2078	0.729
Pb	208.0	208.0	41372	2075	0.761
U	238.1	238.1	47401	2090	0.626

ICPMS #14 - Summary Report

Sample ID: Cal Blank
Sample Date/Time: Thursday, July 19, 2018 20:07:37
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\Cal Blank.216

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L		22.667	
Be	9		ug/L		1.667	
B	11		ug/L		672.016	
Na	23		ug/L		11125.665	
Mg	24		ug/L		216.668	
Al	27		ug/L		118.667	
P	31		ug/L		69.334	
K	39		ug/L		59213.339	
Ca	44		ug/L		184.668	
>Sc	45		ug/L		427470.429	
Ti	47		ug/L		5.000	
V	51		ug/L		6991.044	
Cr	52		ug/L		230.669	
Cr	53		ug/L		2502.219	
Mn	55		ug/L		316.004	
Fe	57		ug/L		111.334	
Co	59		ug/L		88.667	
Ni	60		ug/L		408.673	
Cu	63		ug/L		77.334	
Cu	65		ug/L		37.333	
Zn	66		ug/L		138.001	
Zn	67		ug/L		28.667	
Zn	68		ug/L		114.667	
>Ge	74		ug/L		294596.953	
As	75		ug/L		501.342	
Se	77		ug/L		196.001	
Se	78		ug/L		130.476	
Se	82		ug/L		12.667	
Kr	83		ug/L		10.667	
Sr	88		ug/L		66.667	
Zr	90		ug/L		146.001	
Mo	98		ug/L		46.904	
Ag	107		ug/L		12.667	
Cd	111		ug/L		15.333	
Cd	114		ug/L		10.670	
>In	115		ug/L		240972.078	
Sn	120		ug/L		210.592	
Sb	121		ug/L		171.334	
Sb	123		ug/L		118.579	
Ba	135		ug/L		72.000	
Ba	137		ug/L		128.001	
>Lu	175		ug/L		403423.857	
Tl	205		ug/L		50.000	
Pb	208		ug/L		426.003	
Th	232		ug/L		1616.758	
U	238		ug/L		138.001	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Simple Linear	
Be	9	Linear Thru Zero	1.0000
B	11	Simple Linear	
Na	23	Linear Thru Zero	1.0000
Mg	24	Simple Linear	
Al	27	Simple Linear	
P	31	Simple Linear	
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Simple Linear	
V	51	Simple Linear	
Cr	52	Simple Linear	
Cr	53	Simple Linear	
Mn	55	Simple Linear	
Fe	57	Simple Linear	
Co	59	Simple Linear	
Ni	60	Simple Linear	
Cu	63	Simple Linear	
Cu	65	Simple Linear	
Zn	66	Simple Linear	
Zn	67	Simple Linear	
Zn	68	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	78	Simple Linear	
Se	82	Simple Linear	
Kr	83	Simple Linear	
Sr	88	Simple Linear	
Zr	90	Simple Linear	
Mo	98	Simple Linear	
Ag	107	Simple Linear	
Cd	111	Simple Linear	
Cd	114	Simple Linear	
In	115	Simple Linear	
Sn	120	Simple Linear	
Sb	121	Simple Linear	
Sb	123	Simple Linear	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Simple Linear	
Pb	208	Simple Linear	
Th	232	Simple Linear	
U	238	Simple Linear	

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Thursday, July 19, 2018 20:10:53
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\Standard 1.217

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**10.000**	**ug/L**	1.679	4982.869	0.011
Be	9	**10.000**	**ug/L**	4.947	1561.085	0.004
B	11	**20.000**	**ug/L**	6.213	1678.099	0.002
Na	23	**1000.000**	**ug/L**	1.658	765138.764	1.737
Mg	24	**1000.000**	**ug/L**	3.319	373956.088	0.861
Al	27	**1000.000**	**ug/L**	1.306	178002.823	0.410
P	31	**1000.000**	**ug/L**	1.800	12341.329	0.028
K	39	**1000.000**	**ug/L**	2.873	438757.563	0.872
Ca	44	**1000.000**	**ug/L**	3.307	16759.833	0.038
>Sc	45		**ug/L**		434045.436	434045.436
Ti	47	**10.000**	**ug/L**	3.914	825.691	0.002
V	51	**10.000**	**ug/L**	1.845	26340.266	0.044
Cr	52	**10.000**	**ug/L**	0.559	21747.208	0.050
Cr	53		**ug/L**		5240.295	0.006
Mn	55	**10.000**	**ug/L**	1.039	14717.579	0.033
Fe	57	**1000.000**	**ug/L**	0.956	46213.295	0.106
Co	59	**10.000**	**ug/L**	1.657	33026.133	0.076
Ni	60	**10.000**	**ug/L**	1.606	9244.991	0.020
Cu	63		**ug/L**		23988.792	0.055
Cu	65	**10.000**	**ug/L**	3.144	12085.779	0.028
Zn	66	**10.000**	**ug/L**	0.768	3985.222	0.012
Zn	67		**ug/L**		639.348	0.002
Zn	68		**ug/L**		2976.311	0.009
>Ge	74		**ug/L**		308783.607	308783.607
As	75	**10.000**	**ug/L**	4.127	3134.122	0.008
Se	77		**ug/L**		289.336	0.000
Se	78	**10.000**	**ug/L**	2.655	461.949	0.001
Se	82		**ug/L**		166.668	0.000
Kr	83		**ug/L**		10.667	-0.000
Sr	88	**10.000**	**ug/L**	2.701	23289.640	0.095
Zr	90	**10.000**	**ug/L**	2.143	27408.270	0.111
Mo	98	**10.000**	**ug/L**	1.791	17621.393	0.072
Ag	107	**10.000**	**ug/L**	2.055	36568.749	0.149
Cd	111	**10.000**	**ug/L**	3.706	5679.129	0.023
Cd	114		**ug/L**		13953.569	0.057
>In	115		**ug/L**		244904.535	244904.535
Sn	120	**10.000**	**ug/L**	1.096	19674.138	0.079
Sb	121	**10.000**	**ug/L**	1.441	14891.759	0.060
Sb	123		**ug/L**		11580.689	0.047
Ba	135		**ug/L**		3615.791	0.009
Ba	137	**10.000**	**ug/L**	3.318	6291.387	0.015
>Lu	175		**ug/L**		411679.434	411679.434
Tl	205	**10.000**	**ug/L**	2.109	70195.379	0.170
Pb	208	**10.000**	**ug/L**	0.412	96908.707	0.234
Th	232	**10.000**	**ug/L**	1.309	86484.327	0.206
U	238	**10.000**	**ug/L**	1.518	83421.865	0.202

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Thursday, July 19, 2018 20:14:09
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\Standard 2.218

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**99.968**	**ug/L**	1.164	49167.143	0.111
Be	9	**99.942**	**ug/L**	0.844	15076.952	0.034
B	11	**199.910**	**ug/L**	1.531	10441.815	0.022
Na	23	**10001.157**	**ug/L**	0.502	7815310.875	17.574
Mg	24	**10003.577**	**ug/L**	2.617	3967129.684	8.935
Al	27	**9998.733**	**ug/L**	0.156	1797030.957	4.047
P	31	**10000.823**	**ug/L**	0.044	126672.487	0.285
K	39	**10005.297**	**ug/L**	0.845	4154200.575	9.217
Ca	44	**10000.660**	**ug/L**	1.793	170870.767	0.384
>Sc	45		**ug/L**		444046.888	444046.888
Ti	47	**100.014**	**ug/L**	0.387	8519.206	0.019
V	51	**99.978**	**ug/L**	0.870	199909.048	0.434
Cr	52	**99.984**	**ug/L**	0.617	216827.859	0.488
Cr	53		**ug/L**		28171.084	0.058
Mn	55	**99.973**	**ug/L**	0.779	143757.699	0.323
Fe	57	**9998.295**	**ug/L**	0.378	463779.744	1.044
Co	59	**99.969**	**ug/L**	1.328	326777.521	0.736
Ni	60	**99.976**	**ug/L**	0.781	88583.149	0.199
Cu	63		**ug/L**		240438.511	0.541
Cu	65	**99.954**	**ug/L**	0.821	117840.032	0.265
Zn	66	**99.977**	**ug/L**	0.600	37379.509	0.122
Zn	67		**ug/L**		6165.330	0.020
Zn	68		**ug/L**		28782.968	0.094
>Ge	74		**ug/L**		306358.159	306358.159
As	75	**99.998**	**ug/L**	0.386	26357.849	0.084
Se	77		**ug/L**		1123.378	0.003
Se	78	**99.978**	**ug/L**	0.785	3293.186	0.010
Se	82		**ug/L**		1551.418	0.005
Kr	83		**ug/L**		12.933	0.000
Sr	88	**100.013**	**ug/L**	0.692	236570.311	0.961
Zr	90	**100.062**	**ug/L**	1.983	292303.832	1.188
Mo	98	**100.027**	**ug/L**	0.956	181543.319	0.738
Ag	107	**99.978**	**ug/L**	0.937	359175.191	1.460
Cd	111	**100.001**	**ug/L**	1.241	56999.493	0.232
Cd	114		**ug/L**		138658.096	0.564
>In	115		**ug/L**		245991.944	245991.944
Sn	120	**100.013**	**ug/L**	0.112	198288.636	0.805
Sb	121	**100.008**	**ug/L**	0.947	149201.191	0.606
Sb	123		**ug/L**		115099.606	0.467
Ba	135		**ug/L**		35874.321	0.084
Ba	137	**99.999**	**ug/L**	1.132	63441.901	0.149
>Lu	175		**ug/L**		423756.018	423756.018
Tl	205	**99.975**	**ug/L**	1.376	704605.944	1.663
Pb	208	**99.962**	**ug/L**	0.403	956719.449	2.257
Th	232	**100.029**	**ug/L**	1.153	901123.758	2.123
U	238	**99.992**	**ug/L**	1.812	850477.684	2.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Thursday, July 19, 2018 20:17:26
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 1.219

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**49.629**	**ug/L**	3.071	24359.436	0.055
Be	9	**51.574**	**ug/L**	0.410	7761.108	0.018
B	11	**102.848**	**ug/L**	1.270	5696.469	0.011
Na	23	**4917.297**	**ug/L**	1.239	3838238.308	8.641
Mg	24	**4688.826**	**ug/L**	0.258	1854910.456	4.188
Al	27	**4923.593**	**ug/L**	0.548	882613.569	1.993
P	31	**4865.468**	**ug/L**	0.825	61499.426	0.139
K	39	**4618.960**	**ug/L**	0.486	1945818.969	4.255
Ca	44	**4876.103**	**ug/L**	1.213	83186.842	0.187
>Sc	45		**ug/L**		442877.310	442877.310
Ti	47	**48.716**	**ug/L**	1.107	4141.267	0.009
V	51	**49.592**	**ug/L**	0.573	102549.425	0.215
Cr	52	**50.402**	**ug/L**	1.166	109131.956	0.246
Cr	53		**ug/L**		15314.872	0.029
Mn	55	**49.885**	**ug/L**	1.802	71709.565	0.161
Fe	57	**4880.049**	**ug/L**	1.004	225818.151	0.510
Co	59	**50.169**	**ug/L**	1.059	163605.519	0.369
Ni	60	**49.987**	**ug/L**	0.703	44384.844	0.099
Cu	63		**ug/L**		120044.437	0.271
Cu	65	**51.132**	**ug/L**	1.383	60147.051	0.136
Zn	66	**50.105**	**ug/L**	1.558	18943.887	0.061
Zn	67		**ug/L**		3139.012	0.010
Zn	68		**ug/L**		14429.951	0.046
>Ge	74		**ug/L**		308632.277	308632.277
As	75	**49.548**	**ug/L**	0.335	13422.080	0.042
Se	77		**ug/L**		688.683	0.002
Se	78	**49.019**	**ug/L**	0.571	1696.273	0.005
Se	82		**ug/L**		804.023	0.003
Kr	83		**ug/L**		11.867	0.000
Sr	88	**49.538**	**ug/L**	1.579	117772.850	0.476
Zr	90	**47.672**	**ug/L**	1.646	140022.926	0.566
Mo	98	**49.413**	**ug/L**	1.815	90137.952	0.364
Ag	107	**49.488**	**ug/L**	1.607	178664.410	0.723
Cd	111	**49.731**	**ug/L**	1.738	28491.720	0.115
Cd	114		**ug/L**		69179.461	0.280
>In	115		**ug/L**		247192.858	247192.858
Sn	120	**48.955**	**ug/L**	0.534	97643.852	0.394
Sb	121	**47.940**	**ug/L**	1.186	71957.444	0.290
Sb	123		**ug/L**		55917.220	0.226
Ba	135		**ug/L**		17841.802	0.042
Ba	137	**49.486**	**ug/L**	1.078	31444.572	0.074
>Lu	175		**ug/L**		423507.717	423507.717
Tl	205	**48.196**	**ug/L**	0.826	339546.102	0.802
Pb	208	**50.470**	**ug/L**	1.459	482929.797	1.139
Th	232	**51.278**	**ug/L**	1.936	462476.049	1.088
U	238	**48.444**	**ug/L**	0.268	411910.052	0.972

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	99.258				
	Be	9	103.149				
	B	11	102.848				
	Na	23	98.346				
	Mg	24	93.777				
	Al	27	97.497				
	P	31	97.309				
	K	39	92.379				
	Ca	44	97.522				
>	Sc	45		103.60			
	Ti	47	97.432				
	V	51	99.183				
	Cr	52	100.804				
	Cr	53					
	Mn	55	99.770				
	Fe	57	97.601				
	Co	59	100.339				
	Ni	60	99.974				
	Cu	63					
	Cu	65	102.264				
	Zn	66	100.210				
	Zn	67					
	Zn	68					
>	Ge	74		104.76			
	As	75	99.096				
	Se	77					
	Se	78	98.037				
	Se	82					
	Kr	83					
	Sr	88	99.076				
	Zr	90	95.344				
	Mo	98	98.826				
	Ag	107	98.977				
	Cd	111	99.463				
	Cd	114					
>	In	115		102.58			
	Sn	120	97.910				
	Sb	121	95.879				
	Sb	123					
	Ba	135					
	Ba	137	98.972				
>	Lu	175		104.98			
	Tl	205	96.391				
	Pb	208	100.939				
	Th	232	102.557				
	U	238	96.889				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Thursday, July 19, 2018 20:20:42
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 2.220

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**0.004**	**ug/L**	536.355	24.667	0.000
Be	9	**-0.002**	**ug/L**	359.538	1.333	-0.000
B	11	**2.551**	**ug/L**	17.870	788.022	0.000
Na	23	**-0.759**	**ug/L**	46.026	10505.195	-0.001
Mg	24	**0.132**	**ug/L**	83.461	265.336	0.000
Al	27	**0.101**	**ug/L**	77.161	135.334	0.000
P	31	**1.297**	**ug/L**	85.633	84.667	0.000
K	39	**4.266**	**ug/L**	237.585	60580.408	0.004
Ca	44	**0.996**	**ug/L**	70.869	200.001	0.000
>Sc	45		**ug/L**		425520.519	425520.519
Ti	47	**0.037**	**ug/L**	69.516	8.000	0.000
V	51	**0.075**	**ug/L**	54.744	7097.763	0.000
Cr	52	**0.023**	**ug/L**	34.931	277.336	0.000
Cr	53		**ug/L**		2538.892	0.000
Mn	55	**0.009**	**ug/L**	368.649	326.670	0.000
Fe	57	**0.476**	**ug/L**	64.830	132.001	0.000
Co	59	**0.008**	**ug/L**	60.959	112.667	0.000
Ni	60	**0.069**	**ug/L**	13.457	464.674	0.000
Cu	63		**ug/L**		80.000	0.000
Cu	65	**0.001**	**ug/L**	1373.995	38.000	0.000
Zn	66	**-0.020**	**ug/L**	68.888	133.334	-0.000
Zn	67		**ug/L**		34.667	0.000
Zn	68		**ug/L**		108.667	-0.000
>Ge	74		**ug/L**		300247.995	300247.995
As	75	**-0.083**	**ug/L**	35.677	490.008	-0.000
Se	77		**ug/L**		212.668	0.000
Se	78	**0.111**	**ug/L**	154.254	136.447	0.000
Se	82		**ug/L**		14.000	0.000
Kr	83		**ug/L**		11.600	0.000
Sr	88	**0.008**	**ug/L**	32.747	83.334	0.000
Zr	90	**0.007**	**ug/L**	68.638	164.001	0.000
Mo	98	**0.068**	**ug/L**	31.545	165.864	0.001
Ag	107	**0.003**	**ug/L**	83.538	22.000	0.000
Cd	111	**-0.013**	**ug/L**	55.322	8.000	-0.000
Cd	114		**ug/L**		23.640	0.000
>In	115		**ug/L**		238132.228	238132.228
Sn	120	**0.011**	**ug/L**	171.179	229.926	0.000
Sb	121	**0.131**	**ug/L**	40.757	359.338	0.001
Sb	123		**ug/L**		289.248	0.001
Ba	135		**ug/L**		70.667	-0.000
Ba	137	**-0.019**	**ug/L**	146.491	116.000	-0.000
>Lu	175		**ug/L**		401221.992	401221.992
Tl	205	**0.023**	**ug/L**	18.041	200.668	0.000
Pb	208	**-0.000**	**ug/L**	2247.723	420.669	-0.000
Th	232	**0.054**	**ug/L**	20.478	2066.816	0.001
U	238	**0.004**	**ug/L**	50.025	171.668	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		99.54			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.92			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.82			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.45			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Thursday, July 19, 2018 20:23:59
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 3.221

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**9.952**	**ug/L**	2.582	4828.816	0.011
Be	9	**0.535**	**ug/L**	11.388	81.000	0.000
B	11	**14.204**	**ug/L**	5.703	1366.065	0.002
Na	23	**248.614**	**ug/L**	1.506	201939.540	0.437
Mg	24	**29.793**	**ug/L**	2.117	11828.229	0.027
Al	27	**50.434**	**ug/L**	2.855	9024.851	0.020
P	31	**50.264**	**ug/L**	6.460	696.017	0.001
K	39	**284.374**	**ug/L**	3.081	174701.921	0.262
Ca	44	**235.057**	**ug/L**	2.426	4129.931	0.009
>Sc	45		**ug/L**		436243.118	436243.118
Ti	47	**9.253**	**ug/L**	5.387	779.021	0.002
V	51	**10.089**	**ug/L**	1.475	26234.069	0.044
Cr	52	**10.214**	**ug/L**	0.696	21972.886	0.050
Cr	53		**ug/L**		5172.937	0.006
Mn	55	**5.173**	**ug/L**	1.288	7614.029	0.017
Fe	57	**98.942**	**ug/L**	3.109	4620.747	0.010
Co	59	**1.052**	**ug/L**	3.340	3469.755	0.008
Ni	60	**2.065**	**ug/L**	5.921	2205.504	0.004
Cu	63		**ug/L**		2575.566	0.006
Cu	65	**1.096**	**ug/L**	1.909	1306.726	0.003
Zn	66	**11.585**	**ug/L**	2.235	4453.361	0.014
Zn	67		**ug/L**		729.352	0.002
Zn	68		**ug/L**		3219.696	0.010
>Ge	74		**ug/L**		306055.862	306055.862
As	75	**4.942**	**ug/L**	3.199	1796.335	0.004
Se	77		**ug/L**		242.002	0.000
Se	78	**5.106**	**ug/L**	4.162	296.624	0.001
Se	82		**ug/L**		96.667	0.000
Kr	83		**ug/L**		10.267	-0.000
Sr	88	**10.046**	**ug/L**	1.394	23745.052	0.097
Zr	90	**9.479**	**ug/L**	1.456	27738.239	0.113
Mo	98	**0.542**	**ug/L**	7.050	1028.192	0.004
Ag	107	**1.037**	**ug/L**	3.095	3726.486	0.015
Cd	111	**1.060**	**ug/L**	6.107	618.013	0.002
Cd	114		**ug/L**		1379.802	0.006
>In	115		**ug/L**		245208.896	245208.896
Sn	120	**4.978**	**ug/L**	2.351	10039.451	0.040
Sb	121	**2.851**	**ug/L**	1.792	4408.680	0.017
Sb	123		**ug/L**		3455.663	0.014
Ba	135		**ug/L**		768.021	0.002
Ba	137	**1.872**	**ug/L**	2.505	1272.057	0.003
>Lu	175		**ug/L**		408464.682	408464.682
Tl	205	**1.983**	**ug/L**	0.756	13519.728	0.033
Pb	208	**2.081**	**ug/L**	2.327	19616.735	0.047
Th	232	**2.065**	**ug/L**	2.196	19531.344	0.044
U	238	**0.208**	**ug/L**	2.978	1848.120	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	99.516				
	Be	9	107.022				
	B	11	94.690				
	Na	23	99.445				
	Mg	24	99.310				
	Al	27	100.868				
	P	31	100.527				
	K	39	94.791				
	Ca	44	117.529				
>	Sc	45		102.05			
	Ti	47	92.527				
	V	51	100.889				
	Cr	52	102.143				
	Cr	53					
	Mn	55	103.465				
	Fe	57	98.942				
	Co	59	105.241				
	Ni	60	103.247				
	Cu	63					
	Cu	65	109.559				
	Zn	66	115.849				
	Zn	67					
	Zn	68					
>	Ge	74		103.89			
	As	75	98.845				
	Se	77					
	Se	78	102.126				
	Se	82					
	Kr	83					
	Sr	88	100.456				
	Zr	90	94.791				
	Mo	98	108.457				
	Ag	107	103.715				
	Cd	111	106.030				
	Cd	114					
>	In	115		101.76			
	Sn	120	99.550				
	Sb	121	95.029				
	Sb	123					
	Ba	135					
	Ba	137	93.613				
>	Lu	175		101.25			
	Tl	205	99.134				
	Pb	208	104.038				
	Th	232	103.234				
	U	238	104.208				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Thursday, July 19, 2018 20:27:15
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 4.222

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**0.130**	**ug/L**	8.939	85.334	0.000
Be	9	**-0.009**	**ug/L**	42.293	0.333	-0.000
B	11	**0.211**	**ug/L**	527.086	691.350	0.000
Na	23	**98214.496**	**ug/L**	1.242	74840605.607	172.586
Mg	24	**95633.968**	**ug/L**	0.915	37030236.997	85.415
Al	27	**100352.882**	**ug/L**	0.357	17608739.592	40.615
P	31	**92610.936**	**ug/L**	1.328	1144635.756	2.640
K	39	**95495.952**	**ug/L**	1.274	38200285.450	87.973
Ca	44	**94339.434**	**ug/L**	0.626	1572111.884	3.626
>Sc	45		**ug/L**		433546.039	433546.039
Ti	47	**1907.741**	**ug/L**	0.817	158560.132	0.366
V	51	**-0.514**	**ug/L**	11.843	6123.312	-0.002
Cr	52	**0.905**	**ug/L**	4.991	2147.495	0.004
Cr	53		**ug/L**		2708.924	0.000
Mn	55	**3.502**	**ug/L**	4.552	5224.289	0.011
Fe	57	**101566.074**	**ug/L**	1.384	4598369.677	10.607
Co	59	**0.362**	**ug/L**	2.856	1244.054	0.003
Ni	60	**0.217**	**ug/L**	18.204	601.346	0.000
Cu	63		**ug/L**		382.672	0.001
Cu	65	**0.169**	**ug/L**	7.699	232.002	0.000
Zn	66	**4.496**	**ug/L**	2.721	1674.765	0.005
Zn	67		**ug/L**		246.669	0.001
Zn	68		**ug/L**		1186.049	0.004
>Ge	74		**ug/L**		282277.147	282277.147
As	75	**0.166**	**ug/L**	26.264	519.787	0.000
Se	77		**ug/L**		203.335	0.000
Se	78	**0.172**	**ug/L**	64.813	129.986	0.000
Se	82		**ug/L**		16.000	0.000
Kr	83		**ug/L**		13.600	0.000
Sr	88	**1.726**	**ug/L**	3.359	3818.510	0.017
Zr	90	**0.795**	**ug/L**	9.803	2275.516	0.009
Mo	98	**2258.761**	**ug/L**	1.510	3773128.660	16.661
Ag	107	**0.177**	**ug/L**	9.286	597.346	0.003
Cd	111	**0.907**	**ug/L**	2.068	490.008	0.002
Cd	114		**ug/L**		848.160	0.004
>In	115		**ug/L**		226472.443	226472.443
Sn	120	**0.114**	**ug/L**	7.163	405.887	0.001
Sb	121	**0.113**	**ug/L**	17.795	315.337	0.001
Sb	123		**ug/L**		245.494	0.001
Ba	135		**ug/L**		252.669	0.000
Ba	137	**0.508**	**ug/L**	13.618	448.674	0.001
>Lu	175		**ug/L**		417056.985	417056.985
Tl	205	**0.013**	**ug/L**	8.281	143.334	0.000
Pb	208	**0.232**	**ug/L**	2.264	2622.762	0.005
Th	232	**0.327**	**ug/L**	13.965	4563.399	0.007
U	238	**0.022**	**ug/L**	10.360	329.004	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	98.214				
	Mg	24	95.634				
	Al	27	100.353				
	P	31	92.611				
	K	39	95.496				
	Ca	44	94.339				
>	Sc	45		101.42			
	Ti	47	95.387				
	V	51					
	Cr	52					
	Cr	53					
	Mn	55	31.857				
	Fe	57	101.566				
	Co	59	101.327				
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.82			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98	112.938				
	Ag	107					
	Cd	111	121.042				
	Cd	114					
>	In	115		93.98			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137	66.823				
>	Lu	175		103.38			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Thursday, July 19, 2018 20:30:31
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 5.223

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**20.346**	**ug/L**	2.266	9766.004	0.023
Be	9	**19.082**	**ug/L**	2.323	2806.276	0.006
B	11	**17.908**	**ug/L**	11.366	1530.749	0.002
Na	23	**98248.185**	**ug/L**	1.619	74695674.576	172.645
Mg	24	**95486.765**	**ug/L**	1.284	36891715.644	85.283
Al	27	**100197.476**	**ug/L**	2.196	17539992.564	40.552
P	31	**94162.183**	**ug/L**	0.508	1161304.646	2.684
K	39	**96794.549**	**ug/L**	1.292	38630719.757	89.170
Ca	44	**93845.619**	**ug/L**	1.611	1560358.483	3.607
>Sc	45		**ug/L**		432602.037	432602.037
Ti	47	**1910.793**	**ug/L**	1.224	158456.626	0.366
V	51	**19.311**	**ug/L**	1.938	43321.588	0.084
Cr	52	**20.026**	**ug/L**	1.681	42491.101	0.098
Cr	53		**ug/L**		7351.224	0.011
Mn	55	**22.235**	**ug/L**	2.113	31393.124	0.072
Fe	57	**102163.012**	**ug/L**	1.401	4615243.421	10.669
Co	59	**19.331**	**ug/L**	1.216	61627.309	0.142
Ni	60	**18.262**	**ug/L**	2.464	16099.067	0.036
Cu	63		**ug/L**		43044.758	0.099
Cu	65	**18.101**	**ug/L**	0.972	20820.495	0.048
Zn	66	**23.416**	**ug/L**	1.561	8064.943	0.028
Zn	67		**ug/L**		1288.725	0.005
Zn	68		**ug/L**		6087.964	0.021
>Ge	74		**ug/L**		278749.573	278749.573
As	75	**19.754**	**ug/L**	1.604	5117.583	0.017
Se	77		**ug/L**		352.004	0.001
Se	78	**19.138**	**ug/L**	2.168	673.311	0.002
Se	82		**ug/L**		268.669	0.001
Kr	83		**ug/L**		10.000	-0.000
Sr	88	**21.878**	**ug/L**	0.598	47479.439	0.210
Zr	90	**20.579**	**ug/L**	0.685	55214.501	0.244
Mo	98	**2266.636**	**ug/L**	1.230	3769676.693	16.719
Ag	107	**18.653**	**ug/L**	1.292	61435.172	0.272
Cd	111	**19.655**	**ug/L**	1.577	10281.032	0.046
Cd	114		**ug/L**		25117.526	0.111
>In	115		**ug/L**		225471.598	225471.598
Sn	120	**20.448**	**ug/L**	1.592	37315.924	0.165
Sb	121	**19.556**	**ug/L**	0.206	26869.913	0.118
Sb	123		**ug/L**		20639.314	0.091
Ba	135		**ug/L**		7022.392	0.017
Ba	137	**18.998**	**ug/L**	1.133	12059.755	0.028
>Lu	175		**ug/L**		420206.117	420206.117
Tl	205	**18.079**	**ug/L**	1.079	126392.668	0.301
Pb	208	**18.619**	**ug/L**	1.306	177055.785	0.420
Th	232	**19.363**	**ug/L**	1.206	174333.964	0.411
U	238	**18.835**	**ug/L**	0.609	158987.518	0.378

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	101.729				
	Be	9	95.412				
	B	11	89.541				
	Na	23	98.248				
	Mg	24	95.487				
	Al	27	100.197				
	P	31	94.162				
	K	39	96.795				
	Ca	44	93.846				
>	Sc	45		101.20			
	Ti	47	95.540				
	V	51	96.556				
	Cr	52	100.130				
	Cr	53					
	Mn	55	71.744				
	Fe	57	102.163				
	Co	59	94.958				
	Ni	60	91.312				
	Cu	63					
	Cu	65	90.507				
	Zn	66	117.078				
	Zn	67					
	Zn	68					
>	Ge	74		94.62			
	As	75	98.768				
	Se	77					
	Se	78	95.688				
	Se	82					
	Kr	83					
	Sr	88	109.388				
	Zr	90	102.894				
	Mo	98	113.332				
	Ag	107	93.264				
	Cd	111	94.729				
	Cd	114					
>	In	115		93.57			
	Sn	120	102.239				
	Sb	121	97.779				
	Sb	123					
	Ba	135					
	Ba	137	91.511				
>	Lu	175		104.16			
	Tl	205	90.394				
	Pb	208	93.095				
	Th	232	96.817				
	U	238	94.174				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Mn	55	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2018 20:33:49
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 6.224

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**51.477**	**ug/L**	2.058	25158.142	0.057
Be	9	**52.602**	**ug/L**	2.592	7881.841	0.018
B	11	**100.105**	**ug/L**	0.376	5539.741	0.011
Na	23	**5093.158**	**ug/L**	0.316	3958718.034	8.950
Mg	24	**4743.760**	**ug/L**	0.296	1868803.341	4.237
Al	27	**5033.055**	**ug/L**	1.333	898451.448	2.037
P	31	**4985.537**	**ug/L**	1.017	62756.896	0.142
K	39	**4693.906**	**ug/L**	0.991	1968125.698	4.324
Ca	44	**4895.046**	**ug/L**	1.018	83162.026	0.188
>Sc	45		**ug/L**		441033.879	441033.879
Ti	47	**47.469**	**ug/L**	2.678	4018.232	0.009
V	51	**51.178**	**ug/L**	0.379	105160.988	0.222
Cr	52	**51.343**	**ug/L**	0.778	110707.361	0.250
Cr	53		**ug/L**		15262.818	0.029
Mn	55	**49.989**	**ug/L**	1.205	71557.440	0.162
Fe	57	**4904.467**	**ug/L**	1.161	226001.700	0.512
Co	59	**50.363**	**ug/L**	0.457	163561.035	0.371
Ni	60	**49.854**	**ug/L**	0.872	44083.915	0.099
Cu	63		**ug/L**		120274.238	0.273
Cu	65	**50.094**	**ug/L**	1.832	58674.259	0.133
Zn	66	**51.542**	**ug/L**	2.273	19228.267	0.063
Zn	67		**ug/L**		3149.681	0.010
Zn	68		**ug/L**		14698.892	0.048
>Ge	74		**ug/L**		304618.911	304618.911
As	75	**49.919**	**ug/L**	1.209	13343.341	0.042
Se	77		**ug/L**		621.347	0.001
Se	78	**50.001**	**ug/L**	2.327	1705.227	0.005
Se	82		**ug/L**		774.021	0.002
Kr	83		**ug/L**		11.200	0.000
Sr	88	**49.975**	**ug/L**	0.290	117315.737	0.480
Zr	90	**47.819**	**ug/L**	0.691	138691.347	0.568
Mo	98	**50.470**	**ug/L**	0.971	90911.582	0.372
Ag	107	**50.007**	**ug/L**	1.171	178261.365	0.730
Cd	111	**50.661**	**ug/L**	1.689	28658.722	0.117
Cd	114		**ug/L**		69830.950	0.286
>In	115		**ug/L**		244071.751	244071.751
Sn	120	**49.939**	**ug/L**	0.846	98344.639	0.402
Sb	121	**48.080**	**ug/L**	0.406	71258.614	0.291
Sb	123		**ug/L**		54984.361	0.225
Ba	135		**ug/L**		17761.705	0.042
Ba	137	**49.872**	**ug/L**	2.271	31335.667	0.075
>Lu	175		**ug/L**		418831.994	418831.994
Tl	205	**48.858**	**ug/L**	0.810	340375.933	0.813
Pb	208	**50.997**	**ug/L**	0.496	482616.767	1.151
Th	232	**51.378**	**ug/L**	0.449	458303.641	1.090
U	238	**48.529**	**ug/L**	1.228	408071.086	0.974

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	102.953				
	Be	9	105.203				
	B	11	100.105				
	Na	23	101.863				
	Mg	24	94.875				
	Al	27	99.664				
	P	31	99.711				
	K	39	93.878				
	Ca	44	97.901				
>	Sc	45		103.17			
	Ti	47	94.937				
	V	51	102.356				
	Cr	52	102.685				
	Cr	53					
	Mn	55	99.979				
	Fe	57	98.089				
	Co	59	100.727				
	Ni	60	99.709				
	Cu	63					
	Cu	65	100.188				
	Zn	66	103.085				
	Zn	67					
	Zn	68					
>	Ge	74		103.40			
	As	75	99.839				
	Se	77					
	Se	78	100.001				
	Se	82					
	Kr	83					
	Sr	88	99.949				
	Zr	90	95.639				
	Mo	98	100.941				
	Ag	107	100.014				
	Cd	111	101.321				
	Cd	114					
>	In	115		101.29			
	Sn	120	99.879				
	Sb	121	96.160				
	Sb	123					
	Ba	135					
	Ba	137	99.743				
>	Lu	175		103.82			
	Tl	205	97.716				
	Pb	208	101.994				
	Th	232	102.756				
	U	238	97.059				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2018 20:37:08
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 7.225

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**-0.003**	**ug/L**	285.496	21.333	-0.000
Be	9	**-0.005**	**ug/L**	154.305	1.000	-0.000
B	11	**-0.760**	**ug/L**	78.640	637.348	-0.000
Na	23	**0.533**	**ug/L**	26.191	11541.327	0.001
Mg	24	**1.476**	**ug/L**	22.237	782.689	0.001
Al	27	**5.138**	**ug/L**	11.510	1010.036	0.002
P	31	**0.322**	**ug/L**	209.692	73.334	0.000
K	39	**6.015**	**ug/L**	166.406	61624.823	0.006
Ca	44	**8.003**	**ug/L**	6.296	316.670	0.000
>Sc	45		**ug/L**		428076.904	428076.904
Ti	47	**0.138**	**ug/L**	42.118	16.333	0.000
V	51	**0.240**	**ug/L**	17.374	7445.273	0.001
Cr	52	**0.021**	**ug/L**	64.112	274.003	0.000
Cr	53		**ug/L**		2672.250	0.000
Mn	55	**-0.042**	**ug/L**	11.279	258.002	-0.000
Fe	57	**1.455**	**ug/L**	24.581	176.668	0.000
Co	59	**0.005**	**ug/L**	126.600	104.000	0.000
Ni	60	**0.044**	**ug/L**	55.076	446.674	0.000
Cu	63		**ug/L**		115.334	0.000
Cu	65	**0.013**	**ug/L**	67.310	52.667	0.000
Zn	66	**0.478**	**ug/L**	6.345	313.337	0.001
Zn	67		**ug/L**		57.333	0.000
Zn	68		**ug/L**		207.335	0.000
>Ge	74		**ug/L**		298731.822	298731.822
As	75	**-0.086**	**ug/L**	180.663	486.675	-0.000
Se	77		**ug/L**		197.335	-0.000
Se	78	**0.001**	**ug/L**	10110.571	132.334	0.000
Se	82		**ug/L**		10.667	-0.000
Kr	83		**ug/L**		10.933	0.000
Sr	88	**0.007**	**ug/L**	49.860	80.667	0.000
Zr	90	**0.005**	**ug/L**	113.385	156.668	0.000
Mo	98	**0.224**	**ug/L**	8.555	435.943	0.002
Ag	107	**0.003**	**ug/L**	45.085	23.333	0.000
Cd	111	**-0.005**	**ug/L**	119.120	12.000	-0.000
Cd	114		**ug/L**		19.805	0.000
>In	115		**ug/L**		236176.575	236176.575
Sn	120	**0.047**	**ug/L**	41.422	295.302	0.000
Sb	121	**0.139**	**ug/L**	28.045	367.338	0.001
Sb	123		**ug/L**		293.667	0.001
Ba	135		**ug/L**		20.000	-0.000
Ba	137	**-0.151**	**ug/L**	9.274	36.667	-0.000
>Lu	175		**ug/L**		402904.521	402904.521
Tl	205	**0.024**	**ug/L**	16.165	210.668	0.000
Pb	208	**0.002**	**ug/L**	181.179	440.669	0.000
Th	232	**0.017**	**ug/L**	51.577	1763.442	0.000
U	238	**0.007**	**ug/L**	15.255	197.335	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		100.14			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.40			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.01			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.87			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Thursday, July 19, 2018 20:40:26
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 10.226

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**992.980**	**ug/L**	1.576	483299.355	1.099
Be	9	**983.792**	**ug/L**	1.383	146928.410	0.334
B	11	**-2.506**	**ug/L**	26.828	570.011	-0.000
Na	23	**50147.614**	**ug/L**	1.474	38751708.668	88.121
Mg	24	**48105.412**	**ug/L**	1.517	18888656.352	42.965
Al	27	**50666.733**	**ug/L**	0.538	9016265.252	20.506
P	31	**23855.625**	**ug/L**	0.728	299078.481	0.680
K	39	**48803.490**	**ug/L**	1.465	19827834.397	44.959
Ca	44	**49152.370**	**ug/L**	1.477	830792.280	1.889
>Sc	45		**ug/L**		439676.474	439676.474
Ti	47	**10.324**	**ug/L**	2.472	875.360	0.002
V	51	**987.702**	**ug/L**	2.115	1891381.036	4.286
Cr	52	**1046.868**	**ug/L**	1.454	2245425.948	5.107
Cr	53		**ug/L**		248061.355	0.558
Mn	55	**972.838**	**ug/L**	1.399	1382198.946	3.143
Fe	57	**52076.852**	**ug/L**	2.513	2390889.602	5.439
Co	59	**1058.722**	**ug/L**	1.839	3425427.619	7.792
Ni	60	**937.823**	**ug/L**	2.016	819125.595	1.862
Cu	63		**ug/L**		2427304.380	5.521
Cu	65	**933.633**	**ug/L**	1.187	1089491.708	2.478
Zn	66	**2399.697**	**ug/L**	0.108	842731.794	2.917
Zn	67		**ug/L**		130922.539	0.453
Zn	68		**ug/L**		622240.541	2.154
>Ge	74		**ug/L**		288827.443	288827.443
As	75	**985.909**	**ug/L**	1.049	240627.638	0.831
Se	77		**ug/L**		4495.374	0.015
Se	78	**480.745**	**ug/L**	0.537	14441.832	0.050
Se	82		**ug/L**		7086.424	0.024
Kr	83		**ug/L**		13.067	0.000
Sr	88	**1128.011**	**ug/L**	0.424	2520342.255	10.843
Zr	90	**507.515**	**ug/L**	0.801	1400382.426	6.024
Mo	98	**1033.298**	**ug/L**	0.525	1771530.263	7.622
Ag	107	**241.878**	**ug/L**	0.351	821073.672	3.533
Cd	111	**970.524**	**ug/L**	0.599	522564.171	2.248
Cd	114		**ug/L**		1270223.490	5.465
>In	115		**ug/L**		232426.139	232426.139
Sn	120	**1004.640**	**ug/L**	1.533	1880072.578	8.088
Sb	121	**229.075**	**ug/L**	1.418	322687.658	1.388
Sb	123		**ug/L**		251456.300	1.081
Ba	135		**ug/L**		344265.665	0.825
Ba	137	**956.387**	**ug/L**	1.280	595886.307	1.429
>Lu	175		**ug/L**		416949.951	416949.951
Tl	205	**530.158**	**ug/L**	0.326	3676438.807	8.817
Pb	208	**5402.023**	**ug/L**	1.086	50846191.837	121.952
Th	232	**2898.909**	**ug/L**	2.868	25647610.985	61.515
U	238	**5562.512**	**ug/L**	1.410	46546028.630	111.641

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	99.298				
	Be	9	98.379				
	B	11					
	Na	23	100.295				
	Mg	24	96.211				
	Al	27	101.333				
	P	31	95.423				
	K	39	97.607				
	Ca	44	98.305				
>	Sc	45		102.86			
	Ti	47					
	V	51	98.770				
	Cr	52	104.687				
	Cr	53					
	Mn	55	97.284				
	Fe	57	104.154				
	Co	59	105.872				
	Ni	60	93.782				
	Cu	63					
	Cu	65	93.363				
	Zn	66	95.988				
	Zn	67					
	Zn	68					
>	Ge	74		98.04			
	As	75	98.591				
	Se	77					
	Se	78	96.149				
	Se	82					
	Kr	83					
	Sr	88	112.801				
	Zr	90	101.503				
	Mo	98	103.330				
	Ag	107	96.751				
	Cd	111	97.052				
	Cd	114					
>	In	115		96.45			
	Sn	120	100.464				
	Sb	121	91.630				
	Sb	123					
	Ba	135					
	Ba	137	95.639				
>	Lu	175		103.35			
	Tl	205	106.032				
	Pb	208	108.040				
	Th	232	115.956				
	U	238	111.250				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Sr	88	LRS is out of limits (+/- 10%)
QC Std 10	Th	232	LRS is out of limits (+/- 10%)
QC Std 10	U	238	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Thursday, July 19, 2018 20:43:43
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 11.227

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**50.817**	**ug/L**	1.951	25425.946	0.056
Be	9	**51.777**	**ug/L**	0.613	7943.541	0.018
B	11	**95.750**	**ug/L**	3.625	5455.709	0.011
Na	23	**4920.452**	**ug/L**	1.162	3915788.033	8.646
Mg	24	**4652.979**	**ug/L**	0.673	1876632.597	4.156
Al	27	**4921.036**	**ug/L**	1.087	899396.330	1.992
P	31	**4929.835**	**ug/L**	1.113	63529.623	0.141
K	39	**4596.851**	**ug/L**	1.196	1974605.447	4.235
Ca	44	**4853.368**	**ug/L**	0.804	84418.702	0.187
>Sc	45		**ug/L**		451519.440	451519.440
Ti	47	**47.166**	**ug/L**	1.536	4087.918	0.009
V	51	**49.357**	**ug/L**	1.104	104094.571	0.214
Cr	52	**50.190**	**ug/L**	0.420	110796.671	0.245
Cr	53		**ug/L**		15264.151	0.028
Mn	55	**48.990**	**ug/L**	0.334	71804.003	0.158
Fe	57	**4865.653**	**ug/L**	0.904	229555.078	0.508
Co	59	**49.895**	**ug/L**	0.243	165892.996	0.367
Ni	60	**49.830**	**ug/L**	1.515	45111.793	0.099
Cu	63		**ug/L**		121051.428	0.268
Cu	65	**50.062**	**ug/L**	0.931	60035.223	0.133
Zn	66	**51.496**	**ug/L**	2.015	19291.690	0.063
Zn	67		**ug/L**		3111.006	0.010
Zn	68		**ug/L**		14532.055	0.047
>Ge	74		**ug/L**		305837.873	305837.873
As	75	**50.013**	**ug/L**	0.264	13420.523	0.042
Se	77		**ug/L**		648.015	0.001
Se	78	**50.795**	**ug/L**	0.854	1736.960	0.005
Se	82		**ug/L**		752.020	0.002
Kr	83		**ug/L**		11.333	0.000
Sr	88	**49.445**	**ug/L**	1.130	116999.863	0.475
Zr	90	**48.646**	**ug/L**	1.605	142204.294	0.577
Mo	98	**50.304**	**ug/L**	2.118	91330.277	0.371
Ag	107	**49.969**	**ug/L**	1.327	179545.282	0.730
Cd	111	**49.915**	**ug/L**	0.178	28464.332	0.116
Cd	114		**ug/L**		68785.831	0.280
>In	115		**ug/L**		246029.201	246029.201
Sn	120	**49.602**	**ug/L**	0.876	98468.157	0.399
Sb	121	**49.966**	**ug/L**	0.920	74637.133	0.303
Sb	123		**ug/L**		57934.316	0.235
Ba	135		**ug/L**		17749.020	0.042
Ba	137	**49.207**	**ug/L**	2.971	31085.123	0.074
>Lu	175		**ug/L**		421120.862	421120.862
Tl	205	**48.610**	**ug/L**	1.945	340459.392	0.808
Pb	208	**50.688**	**ug/L**	1.839	482269.963	1.144
Th	232	**51.523**	**ug/L**	1.390	462058.897	1.093
U	238	**48.696**	**ug/L**	0.927	411688.592	0.977

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	101.634				
	Be	9	103.554				
	B	11	95.750				
	Na	23	98.409				
	Mg	24	93.060				
	Al	27	97.446				
	P	31	98.597				
	K	39	91.937				
	Ca	44	97.067				
>	Sc	45		105.63			
	Ti	47	94.332				
	V	51	98.715				
	Cr	52	100.379				
	Cr	53					
	Mn	55	97.979				
	Fe	57	97.313				
	Co	59	99.790				
	Ni	60	99.661				
	Cu	63					
	Cu	65	100.124				
	Zn	66	102.993				
	Zn	67					
	Zn	68					
>	Ge	74		103.82			
	As	75	100.026				
	Se	77					
	Se	78	101.591				
	Se	82					
	Kr	83					
	Sr	88	98.890				
	Zr	90	97.293				
	Mo	98	100.607				
	Ag	107	99.938				
	Cd	111	99.829				
	Cd	114					
>	In	115		102.10			
	Sn	120	99.205				
	Sb	121	99.932				
	Sb	123					
	Ba	135					
	Ba	137	98.415				
>	Lu	175		104.39			
	Tl	205	97.219				
	Pb	208	101.377				
	Th	232	103.047				
	U	238	97.392				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Thursday, July 19, 2018 20:47:00
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 12.228

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**0.038**	**ug/L**	103.730	41.333	0.000
Be	9	**0.027**	**ug/L**	16.396	5.667	0.000
B	11	**-2.830**	**ug/L**	12.173	546.010	-0.000
Na	23	**-1.468**	**ug/L**	30.724	10146.938	-0.003
Mg	24	**1.325**	**ug/L**	12.896	732.019	0.001
Al	27	**1.183**	**ug/L**	3.692	327.337	0.000
P	31	**0.411**	**ug/L**	325.637	75.334	0.000
K	39	**5.872**	**ug/L**	105.006	62283.606	0.005
Ca	44	**0.787**	**ug/L**	49.347	200.001	0.000
>Sc	45		**ug/L**		432783.966	432783.966
Ti	47	**0.008**	**ug/L**	474.298	5.667	0.000
V	51	**-0.242**	**ug/L**	39.270	6621.534	-0.001
Cr	52	**0.033**	**ug/L**	15.366	302.670	0.000
Cr	53		**ug/L**		2410.203	-0.000
Mn	55	**-0.057**	**ug/L**	9.180	240.002	-0.000
Fe	57	**1.903**	**ug/L**	9.656	198.668	0.000
Co	59	**0.030**	**ug/L**	32.472	186.001	0.000
Ni	60	**0.109**	**ug/L**	16.767	507.342	0.000
Cu	63		**ug/L**		153.334	0.000
Cu	65	**0.033**	**ug/L**	45.318	76.000	0.000
Zn	66	**0.024**	**ug/L**	195.135	149.334	0.000
Zn	67		**ug/L**		38.000	0.000
Zn	68		**ug/L**		118.667	0.000
>Ge	74		**ug/L**		300414.524	300414.524
As	75	**-0.153**	**ug/L**	85.362	472.452	-0.000
Se	77		**ug/L**		185.335	-0.000
Se	78	**-0.004**	**ug/L**	1648.819	132.937	-0.000
Se	82		**ug/L**		8.000	-0.000
Kr	83		**ug/L**		8.667	-0.000
Sr	88	**0.025**	**ug/L**	43.432	124.001	0.000
Zr	90	**0.012**	**ug/L**	43.679	179.334	0.000
Mo	98	**0.194**	**ug/L**	14.775	391.576	0.001
Ag	107	**0.008**	**ug/L**	28.738	39.333	0.000
Cd	111	**0.028**	**ug/L**	45.906	30.667	0.000
Cd	114		**ug/L**		50.214	0.000
>In	115		**ug/L**		240390.582	240390.582
Sn	120	**0.139**	**ug/L**	17.191	479.282	0.001
Sb	121	**0.729**	**ug/L**	1.945	1232.720	0.004
Sb	123		**ug/L**		940.110	0.003
Ba	135		**ug/L**		71.334	-0.000
Ba	137	**-0.024**	**ug/L**	55.868	113.334	-0.000
>Lu	175		**ug/L**		402146.155	402146.155
Tl	205	**0.039**	**ug/L**	15.807	308.670	0.001
Pb	208	**0.113**	**ug/L**	15.153	1454.031	0.003
Th	232	**0.142**	**ug/L**	12.843	2822.279	0.003
U	238	**0.101**	**ug/L**	8.805	950.032	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		101.24			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.97			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.76			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.68			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2018 22:54:41
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 6.267

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**54.985**	**ug/L**	1.226	27060.275	0.061
Be	9	**54.859**	**ug/L**	2.483	8277.731	0.019
B	11	**97.282**	**ug/L**	2.220	5442.370	0.011
Na	23	**5179.367**	**ug/L**	0.524	4054052.861	9.101
Mg	24	**4752.733**	**ug/L**	1.345	1885501.080	4.245
Al	27	**4974.887**	**ug/L**	0.355	894434.185	2.013
P	31	**4858.800**	**ug/L**	2.727	61583.136	0.139
K	39	**4565.822**	**ug/L**	1.700	1929527.723	4.206
Ca	44	**4754.287**	**ug/L**	1.653	81363.828	0.183
>Sc	45		**ug/L**		444186.515	444186.515
Ti	47	**46.979**	**ug/L**	2.196	4004.895	0.009
V	51	**51.161**	**ug/L**	1.713	105863.466	0.222
Cr	52	**50.030**	**ug/L**	0.697	108644.922	0.244
Cr	53		**ug/L**		16775.179	0.032
Mn	55	**48.540**	**ug/L**	0.641	69991.059	0.157
Fe	57	**4732.679**	**ug/L**	0.507	219659.507	0.494
Co	59	**49.187**	**ug/L**	1.260	160868.047	0.362
Ni	60	**49.039**	**ug/L**	0.840	43678.007	0.097
Cu	63		**ug/L**		119216.114	0.268
Cu	65	**49.362**	**ug/L**	1.013	58237.166	0.131
Zn	66	**52.172**	**ug/L**	0.390	18840.416	0.063
Zn	67		**ug/L**		3099.003	0.010
Zn	68		**ug/L**		13955.480	0.047
>Ge	74		**ug/L**		294865.435	294865.435
As	75	**50.133**	**ug/L**	0.920	12968.551	0.042
Se	77		**ug/L**		675.349	0.002
Se	78	**49.286**	**ug/L**	2.675	1628.584	0.005
Se	82		**ug/L**		734.019	0.002
Kr	83		**ug/L**		10.133	-0.000
Sr	88	**49.851**	**ug/L**	2.087	111713.140	0.479
Zr	90	**49.546**	**ug/L**	1.284	137193.115	0.588
Mo	98	**50.632**	**ug/L**	1.552	87067.828	0.373
Ag	107	**51.001**	**ug/L**	1.056	173574.912	0.745
Cd	111	**50.722**	**ug/L**	2.380	27390.236	0.117
Cd	114		**ug/L**		66739.249	0.286
>In	115		**ug/L**		233023.452	233023.452
Sn	120	**50.048**	**ug/L**	1.125	94088.073	0.403
Sb	121	**48.354**	**ug/L**	1.031	68418.800	0.293
Sb	123		**ug/L**		52690.825	0.226
Ba	135		**ug/L**		16896.655	0.042
Ba	137	**49.521**	**ug/L**	2.256	29802.392	0.074
>Lu	175		**ug/L**		401144.351	401144.351
Tl	205	**49.167**	**ug/L**	0.633	328069.702	0.818
Pb	208	**51.328**	**ug/L**	1.705	465206.106	1.159
Th	232	**51.984**	**ug/L**	1.594	444077.463	1.103
U	238	**49.422**	**ug/L**	1.071	398018.578	0.992

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	109.969				
	Be	9	109.719				
	B	11	97.282				
	Na	23	103.587				
	Mg	24	95.055				
	Al	27	98.513				
	P	31	97.176				
	K	39	91.316				
	Ca	44	95.086				
>	Sc	45		103.91			
	Ti	47	93.957				
	V	51	102.323				
	Cr	52	100.061				
	Cr	53					
	Mn	55	97.081				
	Fe	57	94.654				
	Co	59	98.375				
	Ni	60	98.078				
	Cu	63					
	Cu	65	98.724				
	Zn	66	104.344				
	Zn	67					
	Zn	68					
>	Ge	74		100.09			
	As	75	100.266				
	Se	77					
	Se	78	98.571				
	Se	82					
	Kr	83					
	Sr	88	99.702				
	Zr	90	99.093				
	Mo	98	101.264				
	Ag	107	102.002				
	Cd	111	101.443				
	Cd	114					
>	In	115		96.70			
	Sn	120	100.095				
	Sb	121	96.708				
	Sb	123					
	Ba	135					
	Ba	137	99.041				
>	Lu	175		99.43			
	Tl	205	98.334				
	Pb	208	102.656				
	Th	232	103.969				
	U	238	98.845				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2018 22:57:59
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 7.268

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**0.087**	**ug/L**	18.321	66.000	0.000
Be	9	**0.002**	**ug/L**	683.457	2.000	0.000
B	11	**-5.869**	**ug/L**	7.597	408.673	-0.001
Na	23	**-7.422**	**ug/L**	1.264	5720.478	-0.013
Mg	24	**0.853**	**ug/L**	8.790	558.678	0.001
Al	27	**5.060**	**ug/L**	4.111	1024.703	0.002
P	31	**0.572**	**ug/L**	133.284	78.667	0.000
K	39	**-6.041**	**ug/L**	130.494	58559.933	-0.006
Ca	44	**4.610**	**ug/L**	46.455	268.669	0.000
>Sc	45		**ug/L**		440619.061	440619.061
Ti	47	**0.022**	**ug/L**	105.309	7.000	0.000
V	51	**2.437**	**ug/L**	4.344	11864.258	0.011
Cr	52	**0.130**	**ug/L**	11.851	517.343	0.001
Cr	53		**ug/L**		4279.975	0.004
Mn	55	**-0.033**	**ug/L**	38.396	278.003	-0.000
Fe	57	**1.303**	**ug/L**	8.995	174.668	0.000
Co	59	**-0.004**	**ug/L**	105.436	77.334	-0.000
Ni	60	**-0.109**	**ug/L**	17.683	326.004	-0.000
Cu	63		**ug/L**		96.000	0.000
Cu	65	**0.009**	**ug/L**	20.412	49.333	0.000
Zn	66	**0.448**	**ug/L**	14.891	298.003	0.001
Zn	67		**ug/L**		56.667	0.000
Zn	68		**ug/L**		216.002	0.000
>Ge	74		**ug/L**		293979.453	293979.453
As	75	**0.544**	**ug/L**	11.520	635.125	0.000
Se	77		**ug/L**		244.002	0.000
Se	78	**-0.086**	**ug/L**	217.974	127.563	-0.000
Se	82		**ug/L**		9.333	-0.000
Kr	83		**ug/L**		10.000	-0.000
Sr	88	**0.005**	**ug/L**	100.598	75.334	0.000
Zr	90	**0.009**	**ug/L**	25.838	165.334	0.000
Mo	98	**0.037**	**ug/L**	18.264	108.676	0.000
Ag	107	**0.001**	**ug/L**	132.967	15.333	0.000
Cd	111	**-0.008**	**ug/L**	149.097	10.667	-0.000
Cd	114		**ug/L**		12.544	0.000
>In	115		**ug/L**		232808.821	232808.821
Sn	120	**0.038**	**ug/L**	11.761	275.294	0.000
Sb	121	**0.112**	**ug/L**	37.394	323.337	0.001
Sb	123		**ug/L**		254.249	0.001
Ba	135		**ug/L**		22.000	-0.000
Ba	137	**-0.160**	**ug/L**	13.400	30.667	-0.000
>Lu	175		**ug/L**		392582.025	392582.025
Tl	205	**0.019**	**ug/L**	6.937	173.334	0.000
Pb	208	**0.000**	**ug/L**	776.233	416.669	0.000
Th	232	**0.035**	**ug/L**	30.487	1862.788	0.001
U	238	**0.007**	**ug/L**	20.463	193.001	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		103.08			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.79			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.61			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		97.31			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: 1204070925
Sample Date/Time: Thursday, July 19, 2018 23:01:15
Sample Type: Sample
Sample Description: QC A 6020 MB
Number of Replicates: 3
Batch ID: 1782963|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\1204070925.269

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**0.062**	**ug/L**	22.806	61.333	0.000
Be	9	**0.002**	**ug/L**	425.106	2.333	0.000
B	11	**-7.121**	**ug/L**	3.105	400.006	-0.001
Na	23	**-7.266**	**ug/L**	1.617	6710.909	-0.013
Mg	24	**1.416**	**ug/L**	7.674	897.362	0.001
Al	27	**2.396**	**ug/L**	5.412	631.347	0.001
P	31	**9.280**	**ug/L**	8.733	216.002	0.000
K	39	**-15.985**	**ug/L**	49.186	62637.888	-0.015
Ca	44	**10.060**	**ug/L**	18.882	414.673	0.000
>Sc	45		**ug/L**		506224.541	506224.541
Ti	47	**0.117**	**ug/L**	47.501	17.333	0.000
V	51	**1.046**	**ug/L**	10.477	10573.912	0.005
Cr	52	**0.174**	**ug/L**	13.375	702.017	0.001
Cr	53		**ug/L**		3871.192	0.002
Mn	55	**-0.009**	**ug/L**	67.257	359.338	-0.000
Fe	57	**3.864**	**ug/L**	10.110	336.004	0.000
Co	59	**-0.012**	**ug/L**	34.490	62.000	-0.000
Ni	60	**-0.127**	**ug/L**	19.778	356.671	-0.000
Cu	63		**ug/L**		1306.727	0.002
Cu	65	**0.407**	**ug/L**	4.507	591.346	0.001
Zn	66	**5.420**	**ug/L**	3.195	2279.515	0.007
Zn	67		**ug/L**		330.004	0.001
Zn	68		**ug/L**		1569.420	0.004
>Ge	74		**ug/L**		323084.753	323084.753
As	75	**-0.063**	**ug/L**	108.384	532.677	-0.000
Se	77		**ug/L**		217.335	0.000
Se	78	**-0.059**	**ug/L**	254.258	141.118	-0.000
Se	82		**ug/L**		8.000	-0.000
Kr	83		**ug/L**		11.467	-0.000
Sr	88	**0.021**	**ug/L**	20.454	124.001	0.000
Zr	90	**0.040**	**ug/L**	36.676	283.336	0.000
Mo	98	**0.030**	**ug/L**	16.359	109.124	0.000
Ag	107	**0.000**	**ug/L**	325.481	14.667	0.000
Cd	111	**-0.012**	**ug/L**	78.179	9.333	-0.000
Cd	114		**ug/L**		-23.398	-0.000
>In	115		**ug/L**		260899.910	260899.910
Sn	120	**5.245**	**ug/L**	1.394	11246.333	0.042
Sb	121	**-0.030**	**ug/L**	39.599	138.001	-0.000
Sb	123		**ug/L**		91.077	-0.000
Ba	135		**ug/L**		30.000	-0.000
Ba	137	**-0.119**	**ug/L**	10.630	60.667	-0.000
>Lu	175		**ug/L**		433456.450	433456.450
Tl	205	**0.004**	**ug/L**	20.738	84.000	0.000
Pb	208	**0.011**	**ug/L**	27.623	560.671	0.000
Th	232	**0.042**	**ug/L**	13.758	2118.824	0.001
U	238	**0.003**	**ug/L**	35.955	178.001	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		118.42			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		109.67			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		108.27			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		107.44			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: 1204070926
Sample Date/Time: Thursday, July 19, 2018 23:04:31
Sample Type: Sample
Sample Description: QC A 6020 LCS
Number of Replicates: 3
Batch ID: 1782963|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\1204070926.270

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**27.898**	**ug/L**	2.066	15345.572	0.031
Be	9	**26.578**	**ug/L**	2.608	4480.369	0.009
B	11	**45.687**	**ug/L**	3.483	3267.040	0.005
Na	23	**1023.360**	**ug/L**	0.749	905003.781	1.798
Mg	24	**979.222**	**ug/L**	1.386	434079.630	0.875
Al	27	**1004.654**	**ug/L**	4.075	201761.229	0.407
P	31	**909.032**	**ug/L**	2.255	12933.852	0.026
K	39	**915.341**	**ug/L**	3.550	486901.747	0.843
Ca	44	**1018.148**	**ug/L**	2.113	19624.137	0.039
>Sc	45		**ug/L**		496126.915	496126.915
Ti	47	**23.822**	**ug/L**	3.467	2272.514	0.005
V	51	**25.285**	**ug/L**	2.075	62539.267	0.110
Cr	52	**25.016**	**ug/L**	4.123	60791.822	0.122
Cr	53		**ug/L**		10593.260	0.016
Mn	55	**24.375**	**ug/L**	2.048	39437.716	0.079
Fe	57	**984.562**	**ug/L**	3.863	51117.314	0.103
Co	59	**24.889**	**ug/L**	1.791	90962.711	0.183
Ni	60	**24.848**	**ug/L**	3.097	24946.432	0.049
Cu	63		**ug/L**		67141.441	0.135
Cu	65	**25.416**	**ug/L**	3.445	33499.241	0.067
Zn	66	**27.059**	**ug/L**	1.295	10738.702	0.033
Zn	67		**ug/L**		1774.110	0.005
Zn	68		**ug/L**		8115.638	0.025
>Ge	74		**ug/L**		321891.788	321891.788
As	75	**22.722**	**ug/L**	0.383	6716.023	0.019
Se	77		**ug/L**		410.006	0.001
Se	78	**21.187**	**ug/L**	2.638	845.454	0.002
Se	82		**ug/L**		366.005	0.001
Kr	83		**ug/L**		10.000	-0.000
Sr	88	**24.817**	**ug/L**	1.487	61615.934	0.239
Zr	90	**24.450**	**ug/L**	0.377	75040.598	0.290
Mo	98	**25.440**	**ug/L**	0.817	48464.156	0.188
Ag	107	**25.493**	**ug/L**	1.851	96059.892	0.372
Cd	111	**23.819**	**ug/L**	3.479	14249.105	0.055
Cd	114		**ug/L**		34514.837	0.134
>In	115		**ug/L**		258010.229	258010.229
Sn	120	**30.053**	**ug/L**	0.835	62649.015	0.242
Sb	121	**23.595**	**ug/L**	0.355	37060.011	0.143
Sb	123		**ug/L**		28626.734	0.110
Ba	135		**ug/L**		9345.723	0.021
Ba	137	**24.852**	**ug/L**	1.281	16463.482	0.037
>Lu	175		**ug/L**		439686.403	439686.403
Tl	205	**24.103**	**ug/L**	1.381	176297.831	0.401
Pb	208	**25.062**	**ug/L**	1.720	249201.764	0.566
Th	232	**24.153**	**ug/L**	0.457	227116.611	0.513
U	238	**24.164**	**ug/L**	0.995	213372.683	0.485

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		116.06			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		109.27			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		107.07			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		108.99			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2018 23:07:48
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 6.271

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**54.166**	**ug/L**	1.576	26922.014	0.060
Be	9	**54.671**	**ug/L**	0.707	8332.763	0.019
B	11	**96.470**	**ug/L**	4.886	5457.711	0.011
Na	23	**5129.688**	**ug/L**	0.597	4055183.162	9.014
Mg	24	**4763.959**	**ug/L**	1.499	1908722.971	4.255
Al	27	**4950.151**	**ug/L**	1.199	898896.853	2.003
P	31	**4816.558**	**ug/L**	1.897	61660.118	0.137
K	39	**4469.262**	**ug/L**	0.910	1908998.849	4.117
Ca	44	**4706.020**	**ug/L**	0.965	81328.192	0.181
>Sc	45		**ug/L**		448601.851	448601.851
Ti	47	**46.258**	**ug/L**	2.640	3982.555	0.009
V	51	**50.797**	**ug/L**	0.389	106220.805	0.220
Cr	52	**50.116**	**ug/L**	1.270	109908.522	0.244
Cr	53		**ug/L**		16143.784	0.030
Mn	55	**48.505**	**ug/L**	1.321	70629.504	0.157
Fe	57	**4734.701**	**ug/L**	0.794	221920.464	0.494
Co	59	**48.949**	**ug/L**	0.839	161696.751	0.360
Ni	60	**49.512**	**ug/L**	2.653	44527.297	0.098
Cu	63		**ug/L**		120867.158	0.269
Cu	65	**49.164**	**ug/L**	1.926	58571.846	0.130
Zn	66	**52.079**	**ug/L**	0.283	18983.272	0.063
Zn	67		**ug/L**		3115.006	0.010
Zn	68		**ug/L**		14299.153	0.048
>Ge	74		**ug/L**		297625.931	297625.931
As	75	**49.557**	**ug/L**	0.579	12945.196	0.042
Se	77		**ug/L**		664.015	0.002
Se	78	**48.264**	**ug/L**	1.855	1612.679	0.005
Se	82		**ug/L**		760.687	0.003
Kr	83		**ug/L**		11.333	0.000
Sr	88	**49.284**	**ug/L**	1.646	112260.029	0.474
Zr	90	**48.328**	**ug/L**	2.480	135992.965	0.574
Mo	98	**49.518**	**ug/L**	2.043	86544.341	0.365
Ag	107	**49.822**	**ug/L**	1.869	172328.554	0.728
Cd	111	**50.023**	**ug/L**	1.509	27458.364	0.116
Cd	114		**ug/L**		67334.673	0.284
>In	115		**ug/L**		236851.147	236851.147
Sn	120	**49.742**	**ug/L**	0.813	95055.783	0.400
Sb	121	**48.184**	**ug/L**	1.654	69290.973	0.292
Sb	123		**ug/L**		53425.393	0.225
Ba	135		**ug/L**		17075.536	0.042
Ba	137	**48.775**	**ug/L**	0.341	29771.657	0.073
>Lu	175		**ug/L**		406775.416	406775.416
Tl	205	**48.193**	**ug/L**	0.174	326091.773	0.802
Pb	208	**50.963**	**ug/L**	1.290	468427.343	1.151
Th	232	**51.392**	**ug/L**	0.535	445230.995	1.091
U	238	**48.681**	**ug/L**	1.453	397586.215	0.977

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	108.331				
	Be	9	109.342				
	B	11	96.470				
	Na	23	102.594				
	Mg	24	95.279				
	Al	27	98.023				
	P	31	96.331				
	K	39	89.385				
	Ca	44	94.120				
>	Sc	45		104.94			
	Ti	47	92.517				
	V	51	101.594				
	Cr	52	100.232				
	Cr	53					
	Mn	55	97.010				
	Fe	57	94.694				
	Co	59	97.899				
	Ni	60	99.025				
	Cu	63					
	Cu	65	98.328				
	Zn	66	104.158				
	Zn	67					
	Zn	68					
>	Ge	74		101.03			
	As	75	99.114				
	Se	77					
	Se	78	96.529				
	Se	82					
	Kr	83					
	Sr	88	98.569				
	Zr	90	96.657				
	Mo	98	99.037				
	Ag	107	99.644				
	Cd	111	100.046				
	Cd	114					
>	In	115		98.29			
	Sn	120	99.484				
	Sb	121	96.367				
	Sb	123					
	Ba	135					
	Ba	137	97.551				
>	Lu	175		100.83			
	Tl	205	96.386				
	Pb	208	101.926				
	Th	232	102.784				
	U	238	97.361				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2018 23:11:06
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 7.272

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**0.028**	**ug/L**	48.294	37.333	0.000
Be	9	**-0.001**	**ug/L**	2720.684	1.667	-0.000
B	11	**-6.477**	**ug/L**	3.165	381.338	-0.001
Na	23	**-7.522**	**ug/L**	3.952	5670.459	-0.013
Mg	24	**0.532**	**ug/L**	22.222	434.673	0.000
Al	27	**4.256**	**ug/L**	6.228	886.028	0.002
P	31	**0.003**	**ug/L**	37494.296	72.000	0.000
K	39	**-5.911**	**ug/L**	155.384	58892.682	-0.005
Ca	44	**5.606**	**ug/L**	18.440	286.670	0.000
>Sc	45		**ug/L**		442796.225	442796.225
Ti	47	**0.041**	**ug/L**	90.299	8.667	0.000
V	51	**1.730**	**ug/L**	10.094	10563.906	0.008
Cr	52	**0.094**	**ug/L**	4.929	442.007	0.000
Cr	53		**ug/L**		3893.864	0.003
Mn	55	**-0.083**	**ug/L**	11.330	208.002	-0.000
Fe	57	**0.321**	**ug/L**	126.655	130.001	0.000
Co	59	**-0.004**	**ug/L**	32.119	78.000	-0.000
Ni	60	**-0.096**	**ug/L**	36.315	338.671	-0.000
Cu	63		**ug/L**		95.334	0.000
Cu	65	**0.008**	**ug/L**	84.475	48.000	0.000
Zn	66	**0.406**	**ug/L**	10.417	283.336	0.000
Zn	67		**ug/L**		57.333	0.000
Zn	68		**ug/L**		210.668	0.000
>Ge	74		**ug/L**		294425.913	294425.913
As	75	**0.232**	**ug/L**	24.377	558.455	0.000
Se	77		**ug/L**		221.335	0.000
Se	78	**-0.097**	**ug/L**	264.706	127.348	-0.000
Se	82		**ug/L**		6.667	-0.000
Kr	83		**ug/L**		12.667	0.000
Sr	88	**0.009**	**ug/L**	13.944	85.334	0.000
Zr	90	**0.008**	**ug/L**	31.092	164.001	0.000
Mo	98	**0.044**	**ug/L**	12.135	121.863	0.000
Ag	107	**0.002**	**ug/L**	16.334	19.333	0.000
Cd	111	**-0.000**	**ug/L**	3237.654	14.667	-0.000
Cd	114		**ug/L**		22.726	0.000
>In	115		**ug/L**		233292.493	233292.493
Sn	120	**0.045**	**ug/L**	45.660	287.910	0.000
Sb	121	**0.124**	**ug/L**	40.630	341.338	0.001
Sb	123		**ug/L**		262.413	0.001
Ba	135		**ug/L**		19.333	-0.000
Ba	137	**-0.167**	**ug/L**	10.332	26.667	-0.000
>Lu	175		**ug/L**		394026.053	394026.053
Tl	205	**0.023**	**ug/L**	20.319	198.668	0.000
Pb	208	**0.007**	**ug/L**	20.505	482.670	0.000
Th	232	**0.045**	**ug/L**	20.111	1956.134	0.001
U	238	**0.007**	**ug/L**	4.677	192.335	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		103.59			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.94			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.81			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		97.67			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: 454715001
Sample Date/Time: Thursday, July 19, 2018 23:14:24
Sample Type: Sample
Sample Description: URSC 6020
Number of Replicates: 3
Batch ID: 1782963|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\454715001.273

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**143.866**	**ug/L**	1.526	77415.871	0.159
Be	9	**3.253**	**ug/L**	3.199	539.010	0.001
B	11	**36.065**	**ug/L**	2.760	2687.586	0.004
Na	23	**618.145**	**ug/L**	0.943	540470.908	1.086
Mg	24	**52708.637**	**ug/L**	0.203	22876829.373	47.076
Al	27	**61540.037**	**ug/L**	1.057	12102605.441	24.906
P	31	**1889.072**	**ug/L**	1.866	26251.442	0.054
K	39	**13501.539**	**ug/L**	0.247	6111510.691	12.438
Ca	44	**114655.738**	**ug/L**	0.911	2141713.232	4.407
>Sc	45		**ug/L**		485943.378	485943.378
Ti	47	**468.134**	**ug/L**	0.403	43616.486	0.090
V	51	**109.892**	**ug/L**	0.736	239686.221	0.477
Cr	52	**90.382**	**ug/L**	1.221	214527.027	0.441
Cr	53		**ug/L**		26844.541	0.049
Mn	55	**2508.373**	**ug/L**	0.349	3938830.942	8.105
Fe	57	**139782.041**	**ug/L**	0.834	7094064.724	14.598
Co	59	**58.040**	**ug/L**	0.623	207673.434	0.427
Ni	60	**139.367**	**ug/L**	1.317	134950.472	0.277
Cu	63		**ug/L**		350514.211	0.721
Cu	65	**134.660**	**ug/L**	0.533	173727.361	0.357
Zn	66	**293.954**	**ug/L**	2.227	103723.198	0.357
Zn	67		**ug/L**		17829.121	0.061
Zn	68		**ug/L**		81489.171	0.281
>Ge	74		**ug/L**		289942.739	289942.739
As	75	**35.854**	**ug/L**	1.504	9259.889	0.030
Se	77		**ug/L**		286.003	0.000
Se	78	**4.060**	**ug/L**	6.848	249.835	0.000
Se	82		**ug/L**		153.334	0.000
Kr	83		**ug/L**		84.267	0.000
Sr	88	**541.070**	**ug/L**	0.993	1236567.352	5.201
Zr	90	**44.097**	**ug/L**	1.598	124589.683	0.523
Mo	98	**5.941**	**ug/L**	0.619	10464.508	0.044
Ag	107	**0.237**	**ug/L**	7.408	834.024	0.003
Cd	111	**0.546**	**ug/L**	3.788	316.003	0.001
Cd	114		**ug/L**		700.192	0.003
>In	115		**ug/L**		237745.523	237745.523
Sn	120	**2.126**	**ug/L**	1.597	4276.437	0.017
Sb	121	**0.194**	**ug/L**	10.707	448.674	0.001
Sb	123		**ug/L**		321.990	0.001
Ba	135		**ug/L**		182098.032	0.419
Ba	137	**493.849**	**ug/L**	1.526	320929.215	0.738
>Lu	175		**ug/L**		434790.044	434790.044
Tl	205	**0.617**	**ug/L**	0.155	4518.715	0.010
Pb	208	**63.771**	**ug/L**	1.235	626388.480	1.440
Th	232	**21.878**	**ug/L**	1.095	203591.176	0.464
U	238	**3.199**	**ug/L**	0.784	28065.542	0.064

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		113.68			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.42			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.66			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		107.77			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mg 24 Upper, S, EE	Mg	24	Sample is out of limits (over linear range)
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 1204070927
Sample Date/Time: Thursday, July 19, 2018 23:17:39
Sample Type: Sample
Sample Description: QC A 6020 DUP
Number of Replicates: 3
Batch ID: 1782963|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\1204070927.274

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**136.172**	**ug/L**	1.547	72306.554	0.151
Be	9	**3.465**	**ug/L**	2.359	566.345	0.001
B	11	**36.824**	**ug/L**	3.359	2691.587	0.004
Na	23	**632.775**	**ug/L**	1.289	545630.917	1.112
Mg	24	**47109.235**	**ug/L**	0.728	20174114.042	42.075
Al	27	**61819.737**	**ug/L**	1.238	11995779.899	25.020
P	31	**1799.818**	**ug/L**	0.794	24679.969	0.051
K	39	**14356.886**	**ug/L**	1.358	6407538.383	13.226
Ca	44	**105822.277**	**ug/L**	1.555	1950178.629	4.067
>Sc	45		**ug/L**		479479.016	479479.016
Ti	47	**506.696**	**ug/L**	1.211	46578.481	0.097
V	51	**113.046**	**ug/L**	0.908	243048.837	0.491
Cr	52	**90.105**	**ug/L**	0.318	211023.906	0.440
Cr	53		**ug/L**		26366.311	0.049
Mn	55	**2518.627**	**ug/L**	0.386	3902176.993	8.138
Fe	57	**133949.848**	**ug/L**	0.735	6707397.171	13.989
Co	59	**57.638**	**ug/L**	1.170	203475.523	0.424
Ni	60	**132.648**	**ug/L**	0.582	126760.595	0.263
Cu	63		**ug/L**		365742.254	0.763
Cu	65	**141.721**	**ug/L**	0.958	180395.206	0.376
Zn	66	**290.921**	**ug/L**	0.489	100825.223	0.354
Zn	67		**ug/L**		17596.165	0.062
Zn	68		**ug/L**		80690.582	0.283
>Ge	74		**ug/L**		284709.923	284709.923
As	75	**34.281**	**ug/L**	0.542	8715.992	0.029
Se	77		**ug/L**		294.003	0.000
Se	78	**3.962**	**ug/L**	21.110	242.325	0.000
Se	82		**ug/L**		175.334	0.001
Kr	83		**ug/L**		76.934	0.000
Sr	88	**615.984**	**ug/L**	1.687	1377973.973	5.921
Zr	90	**42.527**	**ug/L**	1.602	117612.843	0.505
Mo	98	**5.921**	**ug/L**	3.592	10207.949	0.044
Ag	107	**0.231**	**ug/L**	6.562	798.022	0.003
Cd	111	**0.483**	**ug/L**	8.662	275.336	0.001
Cd	114		**ug/L**		630.313	0.003
>In	115		**ug/L**		232730.723	232730.723
Sn	120	**2.381**	**ug/L**	1.189	4663.916	0.019
Sb	121	**0.162**	**ug/L**	12.009	393.339	0.001
Sb	123		**ug/L**		301.574	0.001
Ba	135		**ug/L**		196808.477	0.451
Ba	137	**528.908**	**ug/L**	0.083	345095.803	0.790
>Lu	175		**ug/L**		436542.264	436542.264
Tl	205	**0.615**	**ug/L**	0.968	4518.048	0.010
Pb	208	**62.627**	**ug/L**	0.572	617645.033	1.414
Th	232	**21.332**	**ug/L**	0.384	199356.710	0.453
U	238	**2.863**	**ug/L**	0.575	25230.929	0.057

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		112.17			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.64			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.58			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		108.21			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 1204070928
Sample Date/Time: Thursday, July 19, 2018 23:20:56
Sample Type: Sample
Sample Description: QC A 6020 MS
Number of Replicates: 3
Batch ID: 1782963|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\1204070928.275

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**169.196**	**ug/L**	0.815	89724.257	0.187
Be	9	**26.453**	**ug/L**	2.329	4304.649	0.009
B	11	**96.803**	**ug/L**	0.740	5841.194	0.011
Na	23	**1592.216**	**ug/L**	0.718	1352235.543	2.798
Mg	24	**54336.999**	**ug/L**	0.927	23238501.277	48.531
Al	27	**75406.671**	**ug/L**	0.341	14614457.561	30.519
P	31	**2678.892**	**ug/L**	0.958	36650.296	0.076
K	39	**19505.340**	**ug/L**	0.304	8670772.359	17.969
Ca	44	**111738.886**	**ug/L**	2.210	2056951.454	4.295
>Sc	45		**ug/L**		478861.163	478861.163
Ti	47	**579.506**	**ug/L**	1.006	53201.882	0.111
V	51	**162.083**	**ug/L**	0.796	344628.715	0.703
Cr	52	**129.049**	**ug/L**	1.749	301699.339	0.630
Cr	53		**ug/L**		36656.306	0.071
Mn	55	**2650.048**	**ug/L**	1.931	4100356.171	8.562
Fe	57	**145228.025**	**ug/L**	1.509	7262656.505	15.167
Co	59	**81.717**	**ug/L**	1.646	288061.427	0.601
Ni	60	**160.617**	**ug/L**	1.288	153184.934	0.319
Cu	63		**ug/L**		407598.818	0.851
Cu	65	**157.715**	**ug/L**	1.411	200482.328	0.419
Zn	66	**337.444**	**ug/L**	1.124	114557.485	0.410
Zn	67		**ug/L**		20072.759	0.072
Zn	68		**ug/L**		92836.006	0.332
>Ge	74		**ug/L**		278954.753	278954.753
As	75	**59.416**	**ug/L**	0.769	14452.196	0.050
Se	77		**ug/L**		462.674	0.001
Se	78	**24.778**	**ug/L**	0.836	836.068	0.003
Se	82		**ug/L**		448.674	0.002
Kr	83		**ug/L**		81.734	0.000
Sr	88	**585.075**	**ug/L**	1.768	1300123.989	5.624
Zr	90	**70.082**	**ug/L**	1.127	192444.286	0.832
Mo	98	**29.987**	**ug/L**	0.909	51177.904	0.221
Ag	107	**23.058**	**ug/L**	1.907	77856.288	0.337
Cd	111	**23.759**	**ug/L**	2.095	12739.681	0.055
Cd	114		**ug/L**		30979.328	0.134
>In	115		**ug/L**		231173.148	231173.148
Sn	120	**9.777**	**ug/L**	1.384	18397.704	0.079
Sb	121	**4.762**	**ug/L**	2.000	6831.633	0.029
Sb	123		**ug/L**		5258.292	0.022
Ba	135		**ug/L**		235595.514	0.546
Ba	137	**640.972**	**ug/L**	1.114	412985.126	0.958
>Lu	175		**ug/L**		431159.197	431159.197
Tl	205	**23.002**	**ug/L**	0.590	165000.268	0.383
Pb	208	**90.898**	**ug/L**	1.576	885097.840	2.052
Th	232	**46.768**	**ug/L**	1.481	429595.293	0.992
U	238	**26.520**	**ug/L**	1.165	229617.082	0.532

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		112.02			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.69			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.93			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		106.87			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mg 24 Upper, S, EE	Mg	24	Sample is out of limits (over linear range)
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 1204070929
Sample Date/Time: Thursday, July 19, 2018 23:24:13
Sample Type: Sample
Sample Description: QC A 6020 SDILT
Number of Replicates: 3
Batch ID: 1782963|10|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\1204070929.276

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**30.139**	ug/L	1.312	15027.235	0.033
Be	9	**0.754**	ug/L	5.189	117.000	0.000
B	11	**1.665**	ug/L	99.877	788.689	0.000
Na	23	**123.673**	ug/L	2.206	109410.764	0.217
Mg	24	**11281.335**	ug/L	0.854	4530569.241	10.076
Al	27	**13112.512**	ug/L	0.375	2386451.341	5.307
P	31	**432.611**	ug/L	1.469	5618.438	0.012
K	39	**2608.724**	ug/L	1.747	1142761.537	2.403
Ca	44	**23149.079**	ug/L	1.667	400210.675	0.890
>Sc	45		ug/L		449653.540	449653.540
Ti	47	**96.242**	ug/L	0.834	8301.412	0.018
V	51	**21.195**	ug/L	0.879	48712.929	0.092
Cr	52	**18.919**	ug/L	0.440	41742.232	0.092
Cr	53		ug/L		6196.677	0.008
Mn	55	**481.081**	ug/L	1.536	699288.315	1.554
Fe	57	**26895.646**	ug/L	1.310	1263013.678	2.809
Co	59	**12.326**	ug/L	1.189	40880.415	0.091
Ni	60	**29.833**	ug/L	1.391	27066.284	0.059
Cu	63		ug/L		71480.391	0.159
Cu	65	**29.679**	ug/L	1.665	35455.946	0.079
Zn	66	**66.575**	ug/L	3.297	23538.717	0.081
Zn	67		ug/L		4051.908	0.014
Zn	68		ug/L		18251.657	0.063
>Ge	74		ug/L		289223.969	289223.969
As	75	**6.891**	ug/L	0.971	2173.054	0.006
Se	77		ug/L		134.667	-0.000
Se	78	**0.422**	ug/L	28.343	140.675	0.000
Se	82		ug/L		40.667	0.000
Kr	83		ug/L		26.000	0.000
Sr	88	**108.140**	ug/L	1.655	241535.446	1.040
Zr	90	**8.762**	ug/L	0.104	24304.660	0.104
Mo	98	**1.241**	ug/L	2.704	2172.174	0.009
Ag	107	**0.045**	ug/L	19.664	164.668	0.001
Cd	111	**0.112**	ug/L	20.461	75.334	0.000
Cd	114		ug/L		169.465	0.001
>In	115		ug/L		232328.447	232328.447
Sn	120	**0.444**	ug/L	5.797	1033.953	0.004
Sb	121	**-0.019**	ug/L	74.500	138.667	-0.000
Sb	123		ug/L		99.828	-0.000
Ba	135		ug/L		35731.301	0.085
Ba	137	**99.931**	ug/L	0.957	62685.231	0.149
>Lu	175		ug/L		418996.843	418996.843
Tl	205	**0.133**	ug/L	5.605	982.034	0.002
Pb	208	**13.380**	ug/L	1.104	126994.961	0.302
Th	232	**4.431**	ug/L	0.658	41074.301	0.094
U	238	**0.657**	ug/L	1.904	5665.790	0.013

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		105.19			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.18			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.41			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		103.86			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: 454715002
Sample Date/Time: Thursday, July 19, 2018 23:27:29
Sample Type: Sample
Sample Description: URSC 6020
Number of Replicates: 3
Batch ID: 1782963|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\454715002.277

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**133.782**	**ug/L**	0.531	70796.330	0.148
Be	9	**3.319**	**ug/L**	9.581	540.677	0.001
B	11	**38.940**	**ug/L**	2.966	2793.607	0.004
Na	23	**703.250**	**ug/L**	1.457	602977.801	1.236
Mg	24	**48521.739**	**ug/L**	1.033	20707756.158	43.337
Al	27	**60206.993**	**ug/L**	1.121	11643280.961	24.367
P	31	**1766.574**	**ug/L**	1.872	24139.712	0.050
K	39	**14232.024**	**ug/L**	1.460	6330798.991	13.111
Ca	44	**105789.746**	**ug/L**	0.268	1943108.211	4.066
>Sc	45		**ug/L**		477859.541	477859.541
Ti	47	**546.476**	**ug/L**	0.768	50064.910	0.105
V	51	**108.999**	**ug/L**	0.741	233837.066	0.473
Cr	52	**86.797**	**ug/L**	0.841	202584.994	0.423
Cr	53		**ug/L**		25598.918	0.048
Mn	55	**2551.810**	**ug/L**	0.485	3940152.100	8.245
Fe	57	**132195.229**	**ug/L**	1.117	6596799.081	13.806
Co	59	**55.396**	**ug/L**	0.548	194910.731	0.408
Ni	60	**129.620**	**ug/L**	1.423	123448.445	0.257
Cu	63		**ug/L**		339040.695	0.709
Cu	65	**131.977**	**ug/L**	1.320	167426.857	0.350
Zn	66	**281.641**	**ug/L**	1.551	96015.655	0.342
Zn	67		**ug/L**		16565.601	0.059
Zn	68		**ug/L**		76553.245	0.273
>Ge	74		**ug/L**		280035.404	280035.404
As	75	**33.788**	**ug/L**	0.913	8456.280	0.028
Se	77		**ug/L**		295.336	0.000
Se	78	**4.247**	**ug/L**	2.825	246.645	0.000
Se	82		**ug/L**		169.334	0.001
Kr	83		**ug/L**		75.200	0.000
Sr	88	**552.973**	**ug/L**	0.952	1233862.568	5.316
Zr	90	**39.643**	**ug/L**	0.265	109371.755	0.471
Mo	98	**5.563**	**ug/L**	0.254	9570.548	0.041
Ag	107	**0.225**	**ug/L**	6.021	775.354	0.003
Cd	111	**0.466**	**ug/L**	3.696	265.336	0.001
Cd	114		**ug/L**		617.920	0.003
>In	115		**ug/L**		232121.303	232121.303
Sn	120	**2.383**	**ug/L**	2.316	4655.888	0.019
Sb	121	**0.184**	**ug/L**	6.574	423.340	0.001
Sb	123		**ug/L**		335.990	0.001
Ba	135		**ug/L**		184079.231	0.420
Ba	137	**494.059**	**ug/L**	1.859	323678.168	0.738
>Lu	175		**ug/L**		438351.928	438351.928
Tl	205	**0.612**	**ug/L**	1.428	4514.713	0.010
Pb	208	**61.821**	**ug/L**	0.396	612248.393	1.396
Th	232	**20.842**	**ug/L**	0.953	195618.226	0.442
U	238	**2.749**	**ug/L**	0.433	24333.039	0.055

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		111.79			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.06			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.33			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		108.66			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 454715003
Sample Date/Time: Thursday, July 19, 2018 23:30:45
Sample Type: Sample
Sample Description: URSC 6020
Number of Replicates: 3
Batch ID: 1782963|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\454715003.278

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**138.434**	**ug/L**	0.344	70932.352	0.153
Be	9	**3.376**	**ug/L**	3.004	532.343	0.001
B	11	**37.858**	**ug/L**	3.639	2649.579	0.004
Na	23	**688.730**	**ug/L**	0.283	571973.428	1.210
Mg	24	**51198.870**	**ug/L**	0.170	21156592.321	45.728
Al	27	**60388.295**	**ug/L**	1.096	11308257.000	24.440
P	31	**1845.070**	**ug/L**	2.088	24408.170	0.053
K	39	**14051.741**	**ug/L**	0.972	6052795.062	12.945
Ca	44	**105847.742**	**ug/L**	0.171	1882411.574	4.068
>Sc	45		**ug/L**		462663.478	462663.478
Ti	47	**504.496**	**ug/L**	0.532	44751.993	0.097
V	51	**112.606**	**ug/L**	0.948	233647.387	0.489
Cr	52	**88.816**	**ug/L**	0.416	200709.522	0.433
Cr	53		**ug/L**		25353.814	0.049
Mn	55	**2461.818**	**ug/L**	1.211	3680320.697	7.954
Fe	57	**134960.770**	**ug/L**	1.029	6520861.632	14.095
Co	59	**57.271**	**ug/L**	0.865	195094.492	0.421
Ni	60	**135.830**	**ug/L**	0.702	125237.265	0.270
Cu	63		**ug/L**		331000.510	0.715
Cu	65	**134.635**	**ug/L**	0.853	165382.682	0.357
Zn	66	**297.445**	**ug/L**	0.310	99252.289	0.362
Zn	67		**ug/L**		17176.320	0.063
Zn	68		**ug/L**		78222.246	0.285
>Ge	74		**ug/L**		274129.498	274129.498
As	75	**35.025**	**ug/L**	0.881	8563.455	0.030
Se	77		**ug/L**		297.336	0.000
Se	78	**3.906**	**ug/L**	11.129	231.881	0.000
Se	82		**ug/L**		176.668	0.001
Kr	83		**ug/L**		74.000	0.000
Sr	88	**525.348**	**ug/L**	2.161	1160355.364	5.050
Zr	90	**40.596**	**ug/L**	0.598	110859.147	0.482
Mo	98	**5.973**	**ug/L**	4.143	10168.371	0.044
Ag	107	**0.238**	**ug/L**	8.574	810.690	0.003
Cd	111	**0.489**	**ug/L**	10.478	274.669	0.001
Cd	114		**ug/L**		662.158	0.003
>In	115		**ug/L**		229763.744	229763.744
Sn	120	**2.477**	**ug/L**	3.380	4782.674	0.020
Sb	121	**0.181**	**ug/L**	19.084	416.006	0.001
Sb	123		**ug/L**		294.744	0.001
Ba	135		**ug/L**		172962.775	0.405
Ba	137	**472.167**	**ug/L**	0.778	301565.805	0.705
>Lu	175		**ug/L**		427303.092	427303.092
Tl	205	**0.641**	**ug/L**	1.826	4608.743	0.011
Pb	208	**62.429**	**ug/L**	0.751	602667.791	1.409
Th	232	**21.059**	**ug/L**	0.727	192659.787	0.447
U	238	**3.055**	**ug/L**	1.155	26349.947	0.061

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		108.23			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.05			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.35			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		105.92			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mg 24 Upper, S, EE	Mg	24	Sample is out of limits (over linear range)
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2018 23:34:03
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 6.279

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**54.321**	**ug/L**	0.213	26045.724	0.060
Be	9	**53.881**	**ug/L**	0.147	7922.196	0.018
B	11	**92.490**	**ug/L**	2.085	5074.235	0.010
Na	23	**5077.376**	**ug/L**	0.446	3872061.685	8.922
Mg	24	**4665.646**	**ug/L**	2.312	1803195.276	4.167
Al	27	**4790.954**	**ug/L**	1.609	839130.825	1.939
P	31	**4744.394**	**ug/L**	2.830	58595.992	0.135
K	39	**4525.040**	**ug/L**	0.774	1863679.513	4.169
Ca	44	**4711.012**	**ug/L**	1.031	78531.259	0.181
>Sc	45		**ug/L**		432721.014	432721.014
Ti	47	**46.558**	**ug/L**	0.864	3867.190	0.009
V	51	**48.268**	**ug/L**	0.367	97713.733	0.209
Cr	52	**49.611**	**ug/L**	0.357	104962.215	0.242
Cr	53		**ug/L**		14195.720	0.027
Mn	55	**48.761**	**ug/L**	2.374	68499.260	0.158
Fe	57	**4755.781**	**ug/L**	1.283	215038.061	0.497
Co	59	**49.318**	**ug/L**	2.038	157151.977	0.363
Ni	60	**48.534**	**ug/L**	1.672	42115.995	0.096
Cu	63		**ug/L**		114567.586	0.265
Cu	65	**48.343**	**ug/L**	1.497	55557.835	0.128
Zn	66	**52.470**	**ug/L**	1.118	18390.498	0.064
Zn	67		**ug/L**		3028.321	0.010
Zn	68		**ug/L**		13806.003	0.048
>Ge	74		**ug/L**		286207.366	286207.366
As	75	**49.033**	**ug/L**	0.787	12321.978	0.041
Se	77		**ug/L**		612.013	0.001
Se	78	**48.684**	**ug/L**	2.436	1562.989	0.005
Se	82		**ug/L**		721.352	0.002
Kr	83		**ug/L**		9.733	-0.000
Sr	88	**48.864**	**ug/L**	1.724	108372.855	0.470
Zr	90	**48.384**	**ug/L**	3.021	132566.437	0.574
Mo	98	**49.212**	**ug/L**	1.670	83749.395	0.363
Ag	107	**49.708**	**ug/L**	1.149	167416.626	0.726
Cd	111	**50.398**	**ug/L**	2.979	26933.372	0.117
Cd	114		**ug/L**		65831.544	0.285
>In	115		**ug/L**		230613.857	230613.857
Sn	120	**50.005**	**ug/L**	0.965	93041.979	0.403
Sb	121	**48.290**	**ug/L**	2.330	67611.637	0.293
Sb	123		**ug/L**		52137.134	0.226
Ba	135		**ug/L**		16847.932	0.041
Ba	137	**47.475**	**ug/L**	0.726	29420.267	0.071
>Lu	175		**ug/L**		412928.976	412928.976
Tl	205	**47.493**	**ug/L**	0.970	326229.979	0.790
Pb	208	**50.117**	**ug/L**	0.390	467630.653	1.131
Th	232	**50.161**	**ug/L**	0.561	441176.785	1.064
U	238	**47.532**	**ug/L**	0.543	394064.242	0.954

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	108.641				
	Be	9	107.762				
	B	11	92.490				
	Na	23	101.548				
	Mg	24	93.313				
	Al	27	94.870				
	P	31	94.888				
	K	39	90.501				
	Ca	44	94.220				
>	Sc	45		101.23			
	Ti	47	93.116				
	V	51	96.535				
	Cr	52	99.222				
	Cr	53					
	Mn	55	97.522				
	Fe	57	95.116				
	Co	59	98.637				
	Ni	60	97.068				
	Cu	63					
	Cu	65	96.686				
	Zn	66	104.939				
	Zn	67					
	Zn	68					
>	Ge	74		97.15			
	As	75	98.065				
	Se	77					
	Se	78	97.367				
	Se	82					
	Kr	83					
	Sr	88	97.729				
	Zr	90	96.769				
	Mo	98	98.424				
	Ag	107	99.416				
	Cd	111	100.797				
	Cd	114					
>	In	115		95.70			
	Sn	120	100.011				
	Sb	121	96.579				
	Sb	123					
	Ba	135					
	Ba	137	94.949				
>	Lu	175		102.36			
	Tl	205	94.987				
	Pb	208	100.235				
	Th	232	100.321				
	U	238	95.064				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2018 23:37:21
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180719\QC Std 7.280

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**-0.004**	**ug/L**	99.770	20.667	-0.000
Be	9	**0.005**	**ug/L**	81.946	2.333	0.000
B	11	**-7.171**	**ug/L**	3.472	335.337	-0.001
Na	23	**-7.886**	**ug/L**	1.981	5198.279	-0.014
Mg	24	**0.911**	**ug/L**	35.866	562.678	0.001
Al	27	**4.607**	**ug/L**	2.743	915.363	0.002
P	31	**0.336**	**ug/L**	143.442	73.334	0.000
K	39	**-6.096**	**ug/L**	137.091	56739.914	-0.006
Ca	44	**5.935**	**ug/L**	26.190	282.003	0.000
>Sc	45		**ug/L**		427200.931	427200.931
Ti	47	**0.049**	**ug/L**	75.351	9.000	0.000
V	51	**-0.770**	**ug/L**	8.282	5557.748	-0.003
Cr	52	**-0.001**	**ug/L**	1720.493	229.335	-0.000
Cr	53		**ug/L**		1984.138	-0.001
Mn	55	**-0.081**	**ug/L**	6.523	204.001	-0.000
Fe	57	**1.255**	**ug/L**	16.098	167.334	0.000
Co	59	**-0.002**	**ug/L**	122.340	82.000	-0.000
Ni	60	**-0.115**	**ug/L**	8.666	311.337	-0.000
Cu	63		**ug/L**		134.001	0.000
Cu	65	**0.034**	**ug/L**	16.592	76.000	0.000
Zn	66	**0.446**	**ug/L**	21.924	286.670	0.001
Zn	67		**ug/L**		54.667	0.000
Zn	68		**ug/L**		210.002	0.000
>Ge	74		**ug/L**		283311.276	283311.276
As	75	**-0.503**	**ug/L**	5.628	362.005	-0.000
Se	77		**ug/L**		152.667	-0.000
Se	78	**-0.524**	**ug/L**	27.632	110.205	-0.000
Se	82		**ug/L**		9.333	-0.000
Kr	83		**ug/L**		10.800	0.000
Sr	88	**0.003**	**ug/L**	208.651	68.667	0.000
Zr	90	**0.003**	**ug/L**	201.837	146.001	0.000
Mo	98	**0.052**	**ug/L**	23.894	131.863	0.000
Ag	107	**-0.000**	**ug/L**	635.717	11.333	-0.000
Cd	111	**-0.007**	**ug/L**	197.965	10.667	-0.000
Cd	114		**ug/L**		21.774	0.000
>In	115		**ug/L**		226924.823	226924.823
Sn	120	**0.048**	**ug/L**	31.456	285.268	0.000
Sb	121	**0.127**	**ug/L**	8.301	335.337	0.001
Sb	123		**ug/L**		254.664	0.001
Ba	135		**ug/L**		16.667	-0.000
Ba	137	**-0.159**	**ug/L**	7.572	32.000	-0.000
>Lu	175		**ug/L**		400069.469	400069.469
Tl	205	**0.019**	**ug/L**	8.701	173.334	0.000
Pb	208	**-0.001**	**ug/L**	488.547	415.336	-0.000
Th	232	**0.022**	**ug/L**	42.803	1793.446	0.000
U	238	**0.006**	**ug/L**	30.376	182.001	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		99.94			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.17			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.17			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.17			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

==========

Analysis Begun

Logged In Analyst: lab **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: S10**

Sample Information File: C:\data-AA\lab\Sample Information\071918WS1.SIF
Batch ID:
Results Data Set: 071918WS1
Results Library: C:\data-AA\lab\Results\Results.mdb

==========

Method Loaded
Method Name: SOIL **Method Last Saved: 3/2/2018 12:10:27**
Method Description: 7471A, ILM04 ANALYST JXL

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank **Date Collected: 7/19/2018 11:59:51**
Analyst: **Data Type: Original**

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0006	0.0029	0.0006	12:00:42	Yes
2		[0.00]	0.0006	0.0029	0.0006	12:01:12	Yes
Mean:		[0.00]	0.0006				
SD:		0.00	0.0000				
%RSD:		0.00	0.49				

Auto-zero performed.

==========

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S0.2 **Date Collected: 7/19/2018 12:01:31**
Analyst: **Data Type: Original**

Replicate Data: S0.2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0031	0.0209	0.0036	12:02:21	Yes
2		[0.2]	0.0032	0.0211	0.0037	12:02:51	Yes
Mean:		[0.2]	0.0031				
SD:		0.0	0.0001				
%RSD:		0.0	2.23				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01552 Intercept: 0.00000

==========

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S0.5 **Date Collected: 7/19/2018 12:03:11**
Analyst: **Data Type: Original**

Replicate Data: S0.5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0073	0.0442	0.0079	12:04:02	Yes
2		[0.5]	0.0074	0.0439	0.0080	12:04:32	Yes
Mean:		[0.5]	0.0074				
SD:		0.0	0.0000				
%RSD:		0.0	0.41				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999708 Slope: 0.01470 Intercept: 0.00006

==========

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S2.0 **Date Collected: 7/19/2018 12:04:51**
Analyst: **Data Type: Original**

Replicate Data: S2.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0288	0.1642	0.0293	12:05:43	Yes
2		[2.0]	0.0292	0.1647	0.0298	12:06:13	Yes
Mean:		[2.0]	0.0290				
SD:		0.0	0.0003				
%RSD:		0.0	1.02				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999976 Slope: 0.01445 Intercept: 0.00011

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S5.0 **Date Collected: 7/19/2018 12:06:33**
Analyst: **Data Type: Original**

Replicate Data: S5.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0704	0.3957	0.0710	12:07:25	Yes
2		[5.0]	0.0704	0.3944	0.0709	12:07:55	Yes
Mean:		[5.0]	0.0704				
SD:		0.0	0.0000				
%RSD:		0.0	0.03				

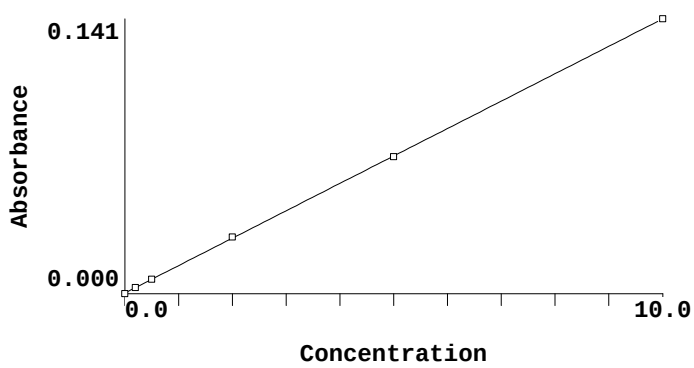
Standard number 4 applied. [5.0]
Correlation Coef.: 0.999933 Slope: 0.01406 Intercept: 0.00032

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: S10.0 **Date Collected: 7/19/2018 12:08:16**
Analyst: **Data Type: Original**

Replicate Data: S10.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1422	0.8028	0.1428	12:09:06	Yes
2		[10.0]	0.1405	0.7860	0.1410	12:09:35	Yes
Mean:		[10.0]	0.1413				
SD:		0.0	0.0013				
%RSD:		0.0	0.89				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999984 Slope: 0.01410 Intercept: 0.00027



Calibration data for Hg 253.7 **Equation: Linear, Calculated Intercept**

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.019	0.00	0.5
S0.2	0.0031	0.2	0.201	0.00	2.2
S0.5	0.0074	0.5	0.503	0.00	0.4
S2.0	0.0290	2.0	2.037	0.00	1.0

S5.0	0.0704	5.0	4.973	0.00	0.0
S10.0	0.1413	10.0	10.006	0.00	0.9

Correlation Coef.: 0.999984 Slope: 0.01410 Intercept: 0.00027

==========

Sequence No.: 7 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 7/19/2018 12:09:54**
Analyst: **Data Type: Original**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.012	5.012	0.0709	0.3990	0.0715	12:10:45	Yes
2	5.067	5.067	0.0717	0.3994	0.0723	12:11:16	Yes
Mean:	5.040	5.040	0.0713				
SD:	0.039	0.039	0.0005				
%RSD:	0.773	0.773	0.77				

QC value within limits for Hg 253.7 Recovery = 100.80%
All analyte(s) passed QC.

==========

Sequence No.: 8 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 7/19/2018 12:11:35**
Analyst: **Data Type: Original**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.014	-0.014	0.0001	0.0034	0.0006	12:12:27	Yes
2	-0.009	-0.009	0.0001	0.0039	0.0007	12:12:57	Yes
Mean:	-0.012	-0.012	0.0001				
SD:	0.004	0.004	0.0001				
%RSD:	30.37	30.37	47.74				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 9 **Autosampler Location: 11**
Sample ID: CRDL **Date Collected: 7/19/2018 12:13:17**
Analyst: **Data Type: Original**

Replicate Data: CRDL

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.174	0.174	0.0027	0.0180	0.0033	12:14:09	Yes
2	0.181	0.181	0.0028	0.0187	0.0034	12:14:39	Yes
Mean:	0.178	0.178	0.0028				
SD:	0.005	0.005	0.0001				
%RSD:	2.768	2.768	2.50				

QC value within limits for Hg 253.7 Recovery = 88.76%
All analyte(s) passed QC.

==========

Sequence No.: 10 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/19/2018 12:14:59**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.003	5.003	0.0708	0.4020	0.0714	12:15:49	Yes
2	5.027	5.027	0.0711	0.4007	0.0717	12:16:19	Yes
Mean:	5.015	5.015	0.0710				
SD:	0.017	0.017	0.0002				
%RSD:	0.331	0.331	0.33				

QC value within limits for Hg 253.7 Recovery = 100.30%
All analyte(s) passed QC.

==========

Sequence No.: 11 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/19/2018 12:16:38**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.007	-0.007	0.0002	0.0040	0.0007	12:17:29	Yes
2	-0.014	-0.014	0.0001	0.0033	0.0006	12:18:00	Yes
Mean:	-0.011	-0.011	0.0001				
SD:	0.005	0.005	0.0001				
%RSD:	48.67	48.67	59.41				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 12 **Autosampler Location: 84**
Sample ID: 1204071412|1783215|1 **Date Collected: 7/19/2018 12:18:19**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071412|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.015	-0.015	0.0001	0.0037	0.0006	12:19:11	Yes
2	-0.021	-0.021	-0.0000	0.0027	0.0005	12:19:41	Yes
Mean:	-0.018	-0.018	0.0000				
SD:	0.004	0.004	0.0001				
%RSD:	23.92	23.92	379.43				

==========

Sequence No.: 13 **Autosampler Location: 85**
Sample ID: 1204071413|1783215|1 **Date Collected: 7/19/2018 12:20:01**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071413|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.047	2.047	0.0291	0.1657	0.0297	12:20:53	Yes
2	2.042	2.042	0.0291	0.1645	0.0296	12:21:23	Yes
Mean:	2.044	2.044	0.0291				
SD:	0.003	0.003	0.0000				
%RSD:	0.158	0.158	0.16				

==========

Sequence No.: 14 **Autosampler Location: 86**
Sample ID: 453960001|1783215|1 **Date Collected: 7/19/2018 12:21:43**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 453960001|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.155	0.155	0.0025	0.0166	0.0030	12:22:35	Yes
2	0.154	0.154	0.0025	0.0169	0.0030	12:23:05	Yes
Mean:	0.155	0.155	0.0025				
SD:	0.000	0.000	0.0000				
%RSD:	0.288	0.288	0.26				

==========

Sequence No.: 15 **Autosampler Location: 87**
Sample ID: 1204071423|1783215|1 **Date Collected: 7/19/2018 12:23:26**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071423|1783215|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.148	0.148	0.0024	0.0168	0.0029	12:24:17	Yes
2	0.149	0.149	0.0024	0.0161	0.0029	12:24:48	Yes
Mean:	0.148	0.148	0.0024				
SD:	0.001	0.001	0.0000				
%RSD:	0.645	0.645	0.57				

==========

Sequence No.: 16 **Autosampler Location: 88**
Sample ID: 1204071424|1783215|1 **Date Collected: 7/19/2018 12:25:08**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071424|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.205	2.205	0.0314	0.1793	0.0319	12:25:59	Yes
2	2.210	2.210	0.0314	0.1769	0.0320	12:26:30	Yes
Mean:	2.208	2.208	0.0314				
SD:	0.004	0.004	0.0001				
%RSD:	0.170	0.170	0.17				

==========

Sequence No.: 17 **Autosampler Location: 89**
Sample ID: 1204071425|1783215|5 **Date Collected: 7/19/2018 12:26:50**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071425|1783215|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.010	0.010	0.0004	0.0055	0.0010	12:27:41	Yes
2	0.012	0.012	0.0004	0.0059	0.0010	12:28:11	Yes
Mean:	0.011	0.011	0.0004				
SD:	0.001	0.001	0.0000				
%RSD:	12.06	12.06	4.47				

==========

Sequence No.: 18 **Autosampler Location: 90**
Sample ID: 1204071426|1783215|1 **Date Collected: 7/19/2018 12:28:31**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071426|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.355	2.355	0.0335	0.1897	0.0340	12:29:23	Yes
2	2.349	2.349	0.0334	0.1887	0.0340	12:29:53	Yes
Mean:	2.352	2.352	0.0334				
SD:	0.004	0.004	0.0001				
%RSD:	0.187	0.187	0.19				

==========

Sequence No.: 19 **Autosampler Location: 91**
Sample ID: 453963001|1783215|1 **Date Collected: 7/19/2018 12:30:13**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 453963001|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.509	5.509	0.0779	0.4434	0.0785	12:31:05	Yes
2	5.574	5.574	0.0789	0.4415	0.0794	12:31:35	Yes
Mean:	5.541	5.541	0.0784				
SD:	0.046	0.046	0.0006				
%RSD:	0.829	0.829	0.83				

==========

Sequence No.: 20 **Autosampler Location: 92**
Sample ID: 453963002|1783215|1 **Date Collected: 7/19/2018 12:31:55**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 453963002|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.712	4.712	0.0667	0.3780	0.0673	12:32:47	Yes
2	4.678	4.678	0.0662	0.3725	0.0668	12:33:17	Yes
Mean:	4.695	4.695	0.0665				
SD:	0.024	0.024	0.0003				
%RSD:	0.505	0.505	0.50				

==========

Sequence No.: 21 **Autosampler Location: 93**
Sample ID: 453965001|1783215|1 **Date Collected: 7/19/2018 12:33:38**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 453965001|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.079	0.079	0.0014	0.0105	0.0020	12:34:29	Yes
2	0.078	0.078	0.0014	0.0105	0.0019	12:34:59	Yes
Mean:	0.079	0.079	0.0014				
SD:	0.001	0.001	0.0000				
%RSD:	0.799	0.799	0.64				

==========

Sequence No.: 22 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/19/2018 12:35:20**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.950	4.950	0.0701	0.3975	0.0706	12:36:10	Yes
2	4.972	4.972	0.0704	0.3966	0.0709	12:36:40	Yes
Mean:	4.961	4.961	0.0702				
SD:	0.016	0.016	0.0002				
%RSD:	0.316	0.316	0.31				

QC value within limits for Hg 253.7 Recovery = 99.21%
All analyte(s) passed QC.

==========

Sequence No.: 23 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/19/2018 12:36:59**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.016	-0.016	0.0000	0.0031	0.0006	12:37:50	Yes
2	-0.021	-0.021	-0.0000	0.0030	0.0005	12:38:20	Yes
Mean:	-0.019	-0.019	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	16.24	16.24	344.20				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 24 **Autosampler Location: 94**
Sample ID: 454411001|1783215|1 **Date Collected: 7/19/2018 12:38:39**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454411001|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	17.09	17.09	0.2411	1.3578	0.2417	12:39:31	Yes

Sample concentration is greater than that of the highest standard.

Replicate Data: 454711001|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.598	2.598	0.0369	0.2100	0.0375	12:54:52	Yes
2	2.516	2.516	0.0357	0.2033	0.0363	12:55:22	Yes
Mean:	2.557	2.557	0.0363				
SD:	0.058	0.058	0.0008				
%RSD:	2.267	2.267	2.25				

==========

Sequence No.: 34 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/19/2018 12:55:43**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.976	4.976	0.0704	0.3967	0.0710	12:56:33	Yes
2	4.969	4.969	0.0703	0.3937	0.0709	12:57:03	Yes
Mean:	4.973	4.973	0.0704				
SD:	0.004	0.004	0.0001				
%RSD:	0.088	0.088	0.09				

QC value within limits for Hg 253.7 Recovery = 99.45%
All analyte(s) passed QC.

==========

Sequence No.: 35 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/19/2018 12:57:22**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.008	-0.008	0.0002	0.0037	0.0007	12:58:13	Yes
2	-0.010	-0.010	0.0001	0.0034	0.0007	12:58:43	Yes
Mean:	-0.009	-0.009	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	17.25	17.25	15.44				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 36 **Autosampler Location: 104**
Sample ID: 454711002|1783215|1 **Date Collected: 7/19/2018 12:59:03**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454711002|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.038	0.038	0.0008	0.0075	0.0014	12:59:54	Yes
2	0.042	0.042	0.0009	0.0079	0.0014	13:00:24	Yes
Mean:	0.040	0.040	0.0008				
SD:	0.003	0.003	0.0000				
%RSD:	7.589	7.589	5.10				

==========

Sequence No.: 37 **Autosampler Location: 105**
Sample ID: 454711003|1783215|1 **Date Collected: 7/19/2018 13:00:45**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454711003|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.043	0.043	0.0009	0.0082	0.0014	13:01:37	Yes
2	0.036	0.036	0.0008	0.0076	0.0013	13:02:07	Yes
Mean:	0.039	0.039	0.0008				
SD:	0.005	0.005	0.0001				

%RSD:	13.27	13.27	8.88

==========

Sequence No.: 38 **Autosampler Location: 106**
Sample ID: 454711004|1783215|1 **Date Collected: 7/19/2018 13:02:28**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454711004|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.010	0.010	0.0004	0.0052	0.0010	13:03:19	Yes
2	0.018	0.018	0.0005	0.0061	0.0011	13:03:50	Yes
Mean:	0.014	0.014	0.0005				
SD:	0.005	0.005	0.0001				
%RSD:	40.01	40.01	16.55				

==========

Sequence No.: 39 **Autosampler Location: 107**
Sample ID: 454711005|1783215|1 **Date Collected: 7/19/2018 13:04:10**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454711005|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.904	0.904	0.0130	0.0755	0.0136	13:05:02	Yes
2	0.916	0.916	0.0132	0.0756	0.0138	13:05:32	Yes
Mean:	0.910	0.910	0.0131				
SD:	0.009	0.009	0.0001				
%RSD:	0.936	0.936	0.92				

==========

Sequence No.: 40 **Autosampler Location: 108**
Sample ID: 454711006|1783215|1 **Date Collected: 7/19/2018 13:05:53**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454711006|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.518	0.518	0.0076	0.0446	0.0081	13:06:45	Yes
2	0.521	0.521	0.0076	0.0447	0.0082	13:07:15	Yes
Mean:	0.519	0.519	0.0076				
SD:	0.002	0.002	0.0000				
%RSD:	0.467	0.467	0.45				

==========

Sequence No.: 41 **Autosampler Location: 109**
Sample ID: 454715001|1783215|1 **Date Collected: 7/19/2018 13:07:35**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454715001|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.387	0.387	0.0057	0.0354	0.0063	13:08:27	Yes
2	0.382	0.382	0.0057	0.0341	0.0062	13:08:57	Yes
Mean:	0.385	0.385	0.0057				
SD:	0.004	0.004	0.0000				
%RSD:	0.917	0.917	0.87				

==========

Sequence No.: 42 **Autosampler Location: 110**
Sample ID: 454715002|1783215|1 **Date Collected: 7/19/2018 13:09:18**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454715002|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	0.401	0.401	0.0059	0.0364	0.0065	13:10:10	Yes
2	0.392	0.392	0.0058	0.0355	0.0064	13:10:40	Yes
Mean:	0.397	0.397	0.0059				
SD:	0.007	0.007	0.0001				
%RSD:	1.642	1.642	1.57				

==========

Sequence No.: 43 **Autosampler Location: 111**
Sample ID: 454715003|1783215|1 **Date Collected: 7/19/2018 13:11:01**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454715003|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.351	0.351	0.0052	0.0321	0.0058	13:11:52	Yes
2	0.353	0.353	0.0053	0.0324	0.0058	13:12:22	Yes
Mean:	0.352	0.352	0.0052				
SD:	0.002	0.002	0.0000				
%RSD:	0.465	0.465	0.44				

==========

Sequence No.: 44 **Autosampler Location: 112**
Sample ID: 454717001|1783215|1 **Date Collected: 7/19/2018 13:12:43**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454717001|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	9.155	9.155	0.1293	0.7284	0.1299	13:13:35	Yes
2	9.255	9.255	0.1308	0.7302	0.1313	13:14:05	Yes
Mean:	9.205	9.205	0.1300				
SD:	0.071	0.071	0.0010				
%RSD:	0.774	0.774	0.77				

==========

Sequence No.: 45 **Autosampler Location: 113**
Sample ID: 1204071418|1783215|1 **Date Collected: 7/19/2018 13:14:25**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071418|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	12.38	12.38	0.1748	0.9825	0.1753	13:15:17	Yes
	Sample concentration is greater than that of the highest standard.						
2	12.39	12.39	0.1750	0.9838	0.1755	13:15:47	Yes
	Sample concentration is greater than that of the highest standard.						
Mean:	12.38	12.38	0.1749				
SD:	0.009	0.009	0.0001				
%RSD:	0.076	0.076	0.08				
	Sample concentration is greater than that of the highest standard.						

==========

Sequence No.: 46 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/19/2018 13:16:08**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.922	4.922	0.0697	0.3930	0.0702	13:16:58	Yes
2	4.925	4.925	0.0697	0.3922	0.0703	13:17:28	Yes
Mean:	4.924	4.924	0.0697				
SD:	0.002	0.002	0.0000				
%RSD:	0.048	0.048	0.05				

QC value within limits for Hg 253.7 Recovery = 98.48%
All analyte(s) passed QC.

Sequence No.: 47 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/19/2018 13:17:47**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.007	-0.007	0.0002	0.0037	0.0007	13:18:38	Yes
2	-0.011	-0.011	0.0001	0.0034	0.0007	13:19:08	Yes
Mean:	-0.009	-0.009	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	32.85	32.85	30.29				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 48 **Autosampler Location: 114**
Sample ID: 1204071419|1783215|1 **Date Collected: 7/19/2018 13:19:27**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071419|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	13.31	13.31	0.1880	1.0686	0.1885	13:20:19	Yes
	Sample concentration is greater than that of the highest standard.						
2	13.52	13.52	0.1908	1.0732	0.1914	13:20:49	Yes
	Sample concentration is greater than that of the highest standard.						
Mean:	13.41	13.41	0.1894				
SD:	0.144	0.144	0.0020				
%RSD:	1.072	1.072	1.07				

Sample concentration is greater than that of the highest standard.

Sequence No.: 49 **Autosampler Location: 115**
Sample ID: 1204071420|1783215|5 **Date Collected: 7/19/2018 13:21:09**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071420|1783215|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.925	1.925	0.0274	0.1555	0.0280	13:22:01	Yes
2	1.892	1.892	0.0269	0.1514	0.0275	13:22:31	Yes
Mean:	1.908	1.908	0.0272				
SD:	0.023	0.023	0.0003				
%RSD:	1.213	1.213	1.20				

Sequence No.: 50 **Autosampler Location: 116**
Sample ID: 1204071428|1783215|1 **Date Collected: 7/19/2018 13:22:52**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204071428|1783215|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	11.22	11.22	0.1584	0.8971	0.1590	13:23:44	Yes
	Sample concentration is greater than that of the highest standard.						
2	11.33	11.33	0.1601	0.8906	0.1606	13:24:14	Yes
	Sample concentration is greater than that of the highest standard.						
Mean:	11.28	11.28	0.1593				
SD:	0.081	0.081	0.0011				
%RSD:	0.721	0.721	0.72				

Sample concentration is greater than that of the highest standard.

Sequence No.: 51 **Autosampler Location: 117**
Sample ID: 1204071454|1783224|1 **Date Collected: 7/19/2018 13:24:34**

Miscellaneous

Prep Logbook

Acid Digestion of Sediments, Sludges, and Soils

Batch ID: **1782972**
Analyst: Jonathan Eskew-Martin
Method: SW846 3050B
Lab SOP: GL-MA-E-009 REV# 28
Instrument: BAL-893

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204070941	Metals Spike Mix I	UI180710-01	.25	mL
LCS	1204070941	Metals Spike Mix II	UI180710-02	.25	mL
MS	1204070942	Metals Spike Mix I	UI180710-01	.25	mL
MS	1204070942	Metals Spike Mix II	UI180710-02	.25	mL
MSD	1204070943	Metals Spike Mix I	UI180710-01	.25	mL
MSD	1204070943	Metals Spike Mix II	UI180710-02	.25	mL

Sample ID	Initial Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)
1204070940 MB	17-JUL-2018 18:37:11	Soil	0.552	50	90.57971
1204070941 LCS	17-JUL-2018 18:37:11	Soil	0.536	50	93.28358
454715001	17-JUL-2018 18:37:11	Soil	0.518	50	96.5251
1204070944 SDILT (454715001)	17-JUL-2018 18:37:11	Soil	0.518	50	96.5251
1204070942 MS (454715001)	17-JUL-2018 18:37:11	Soil	0.536	50	93.28358
1204070943 MSD (454715001)	17-JUL-2018 18:37:11	Soil	0.503	50	99.40358
454715002	17-JUL-2018 18:37:11	Soil	0.504	50	99.20635
454715003	17-JUL-2018 18:37:11	Soil	0.52	50	96.15385

Reagent/Solvent Lot ID	Description	Amount
2767513	HYDROCHLORIC ACID	10 mL
2771227	Concentrated Nitric Acid	1.25 mL
I-BC180313	Teflon chips for MB/LCS metals Solids	.5 g

Comments:
Block Temperature (90-100C): 92 C
Temperature within limits (Y/N)?: Y
Thermometer ID: 11840
Hot Block ID: 9
Prep Date: 18-JUL-2018 15:57 BAL-893 Jonathan Eskew-Martin
Digestion tube lot #: 1804377

Prep Logbook

Acid Digestion of Sediments, Sludges, and Soils

Batch ID: **1782962**
Analyst: Jonathan Eskew-Martin
Method: SW846 3050B
Lab SOP: GL-MA-E-009 REV# 28
Instrument: BAL-893

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204070926	ICP-MS spiking soluiton A	UI180710-A	.25	mL
LCS	1204070926	ICP-MS spiking solution B	UI180710-B	.25	mL
MS	1204070928	ICP-MS spiking soluiton A	UI180710-A	.25	mL
MS	1204070928	ICP-MS spiking solution B	UI180710-B	.25	mL

Sample ID	Initial Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)
1204070925 MB	17-JUL-2018 18:37:11	Soil	0.529	50	94.51796
1204070926 LCS	17-JUL-2018 18:37:11	Soil	0.539	50	92.76438
454715001	17-JUL-2018 18:37:11	Soil	0.509	50	98.23183
1204070929 SDILT (454715001)	17-JUL-2018 18:37:11	Soil	0.509	50	98.23183
1204070927 DUP (454715001)	17-JUL-2018 18:37:11	Soil	0.538	50	92.9368
1204070928 MS (454715001)	17-JUL-2018 18:37:11	Soil	0.531	50	94.16196
454715002	17-JUL-2018 18:37:11	Soil	0.523	50	95.60229
454715003	17-JUL-2018 18:37:11	Soil	0.524	50	95.41985

Reagent/Solvent Lot ID	Description	Amount
2771227	Concentrated Nitric Acid	5 mL
2801172	Hydrogen Peroxide 30%, from Bioassay (LIMS ID BIO279284)	1.5 mL
I-BC180313	Teflon chips for MB/LCS metals Solids	.5 g

Comments:
Block Temperature (90-100C): 94 C
Temperature within limits (Y/N)?: Y
Thermometer ID: 118631
Hot Block ID: 2
Prep Date: 18-JUL-2018 15:49 BAL-893 Jonathan Eskew-Martin
Digestion tube lot #: 1804377

Prep Logbook

Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Batch ID: **1783214**
Analyst: Alan Stanley
Method: SW846 7471B Prep SW846 7471A Prep
Lab SOP: GL-MA-E-010 REV# 36
Instrument: Ohaus Balance AX432/E

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204071413	MHGSOILMSSPIKE	WHG180718-14	.3	mL
MS	1204071414	MHGSOILMSSPIKE	WHG180718-14	.3	mL
MS	1204071418	MHGSOILMSSPIKE	WHG180718-14	.3	mL
MS	1204071424	MHGSOILMSSPIKE	WHG180718-14	.3	mL
MSD	1204071415	MHGSOILMSSPIKE	WHG180718-14	.3	mL
MSD	1204071419	MHGSOILMSSPIKE	WHG180718-14	.3	mL

Sample ID	Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)
1204071412 MB	18-JUL-2018 15:15:26	Misc Solid	0.52	30	57.69231
1204071413 LCS	18-JUL-2018 15:15:26	Misc Solid	0.529	30	56.71078
453960001	18-JUL-2018 15:15:26	Soil	0.535	30	56.07477
1204071425 SDILT (453960001)	18-JUL-2018 15:15:26	Soil	0.535	30	56.07477
1204071423 DUP (453960001)	18-JUL-2018 15:15:26	Soil	0.523	30	57.36138
1204071424 MS (453960001)	18-JUL-2018 15:15:26	Soil	0.506	30	59.28854
453963001	18-JUL-2018 15:15:26	Soil	0.558	30	53.76344
453963002	18-JUL-2018 15:15:26	Soil	0.538	30	55.76208
453965001	18-JUL-2018 15:15:26	Soil	0.548	30	54.74453
454411001	18-JUL-2018 15:15:26	Misc Solid	0.551	30	54.44646
1204071416 SDILT (454411001)	18-JUL-2018 15:15:26	Misc Solid	0.551	30	54.44646
1204071414 MS (454411001)	18-JUL-2018 15:15:26	Misc Solid	0.533	30	56.28518
1204071415 MSD (454411001)	18-JUL-2018 15:15:26	Misc Solid	0.582	30	51.54639
454688003	18-JUL-2018 15:15:26	Soil	0.531	30	56.49718
454692001	18-JUL-2018 15:15:26	Misc Solid	0.555	30	54.05405
454694001	18-JUL-2018 15:15:26	Oil	0.524	30	57.25191
454697002	18-JUL-2018 15:15:26	Soil	0.585	30	51.28205
454711001	18-JUL-2018 15:15:26	Solid	0.53	30	56.60377
454711002	18-JUL-2018 15:15:26	Solid	0.581	30	51.63511
454711003	18-JUL-2018 15:15:26	Solid	0.528	30	56.81818
454711004	18-JUL-2018 15:15:26	Solid	0.525	30	57.14286
454711005	18-JUL-2018 15:15:26	Solid	0.516	30	58.13953
454711006	18-JUL-2018 15:15:26	Solid	0.504	30	59.52381
454715001	18-JUL-2018 15:15:26	Soil	0.511	30	58.70841
454715002	18-JUL-2018 15:15:26	Soil	0.576	30	52.08333
454715003	18-JUL-2018 15:15:26	Soil	0.532	30	56.39098
454717001	18-JUL-2018 15:15:26	Soil	0.509	30	58.9391
1204071420 SDILT (454717001)	18-JUL-2018 15:15:26	Soil	0.509	30	58.9391
1204071418 MS (454717001)	18-JUL-2018 15:15:26	Soil	0.538	30	55.76208
1204071419 MSD (454717001)	18-JUL-2018 15:15:26	Soil	0.575	30	52.17391

Reagent/Solvent Lot ID	Description	Amount
2768581-C	5% KMnO4 solution	7.5 mL

Comments:
Digestion Start Date: 18-JUL-2018 15:15

Prep Logbook

Sample ID	Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)

Reagent/Solvent Lot ID	Description	Amount
2801727-C	Hg reducing agent	3 mL
2813353-C	50% Aqua Regia	3 mL
I-BC180313	Teflon chips for MB/LCS metals Solids	.5 g
IHG180718-01	Mercury Intermediate 1st Source 200 ug/L	250 mL
IHG180718-02	Mercury Intermediate 2nd Source 200 ug/L	250 mL
UHG2769148-01	Mercury Source Standard #1 1,000 mg/L	50 uL
UHG2769150-02	Mercury Source Standard #2 1,000 mg/L	50 uL
WHG180718-07	Mercury Working Standard 1st Source CAL S 0.2/CRA	30 uL
WHG180718-08	Mercury Working Standard 1st Source CAL S 0.5	75 uL
WHG180718-09	Mercury Working 1st Source CAL S 2.0	300 uL
WHG180718-10	Mercury Working 1st Source CAL S 5.0/CCV	750 uL
WHG180718-11	Mercury Working 1st Source CAL S 10.0	1.5 mL
WHG180718-12	Mercury Working 2nd Source S 5.0/ICV	750 uL

Comments:

Digestion End Date: 18-JUL-2018 15:45
Block Temperature (92-98C): 94 C
Temperature within limits (Y/N)?: Y
Thermometer ID: 119374
Hot Block ID: 6

Standard Logbook

Serial ID:	UHG2769148-01	**Open/Reference Date:**	21-MAY-18	**Amount :**	100 mL
Name:	MHGSTOCK1	**Received:**	21-MAY-18	**Catalog Number :**	G34-060080-02-01
Type:	Source Material	**Expires:**	21-MAY-19	**Lot Number :**	175191-16
Employee:	Alan Stanley			**Solvent :**	10% HNO3
Supplier:	O2SI				
Description:	Mercury Source Standard #1 1,000 mg/L				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID:	UHG2769150-02	**Open/Reference Date:**	21-MAY-18	**Amount :**	100 mL
Name:	MHGSTOCK2	**Received:**	21-MAY-18	**Catalog Number :**	02SI-060080-02-01
Type:	Source Material	**Expires:**	21-MAY-19	**Lot Number :**	143369-148
Employee:	Alan Stanley			**Solvent :**	2% HNO3
Supplier:	02Si				
Description:	Mercury Source Standard #2 1,000 mg/L				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID:	UI171014-60	**Open/Reference Date:**	14-OCT-17	**Amount :**	100 mL
Name:	ICPMS High Range Standar	**Received:**	14-OCT-17	**Catalog Number :**	160212-02-01
Type:	Source Material	**Expires:**	14-OCT-18	**Lot Number :**	10066129-1
Employee:	Paul Boyd			**Solvent :**	2%HNO3
Supplier:	O2SI				
Description:	Linear Range Standard A				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Standard Logbook

Serial ID:	UI171014-61	**Open/Reference Date:**	14-OCT-17	**Amount :**	100 mL
Name:	ICPMS High Range Standar	**Received:**	14-OCT-17	**Catalog Number :**	160212-02-01
Type:	Source Material	**Expires:**	14-OCT-18	**Lot Number :**	10066129-4
Employee:	Paul Boyd			**Solvent :**	2% in 2%HNO3 + Tr HF
Supplier:	O2SI				
Description:	Linear Range Standard B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID:	UI171101-40	**Open/Reference Date:**	26-FEB-18	**Amount :**	500 mL
Name:	TRACE ICP ICSA SOLN. A	**Received:**	31-OCT-17	**Catalog Number :**	160005-08-03
Type:	Source Material	**Expires:**	20-APR-19	**Lot Number :**	10069142-1
Employee:	Helen Camello			**Solvent :**	5% HNO3 mg/l
Supplier:	O2SI				
Description:	Trace ICP Interference Check Standard Solution A				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	20000 mg/L	Calcium	20000 mg/L
Iron	8000 mg/L	Magnesium	20000 mg/L

Serial ID:	UI171206-40	**Open/Reference Date:**	07-FEB-18	**Amount :**	500 mL
Name:	TRACE CALSTD#1A SOUR	**Received:**	04-DEC-17	**Catalog Number :**	HP2270-1-500
Type:	Source Material	**Expires:**	30-NOV-18	**Lot Number :**	1732532
Employee:	Helen Camello	**Verified:**	08-FEB-18	**Solvent :**	HNO3
Supplier:	Environmental Express				
Description:	Trace Calibration Std #1A				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Uranium-235	1.44 mg/L	Uranium-238	198.56 mg/L

Analyte	Concentration	Analyte	Concentration
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI171206-41 **Open/Reference Date:** 07-FEB-18 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUR **Received:** 04-DEC-17 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 30-NOV-18 **Lot Number :** 1732533
Employee: Helen Camello **Verified:** 08-FEB-18 **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI171206-42 **Open/Reference Date:** 12-DEC-17 **Amount :** 250 mL
Name: SILICON **Received:** 04-DEC-17 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 12-DEC-18 **Lot Number :** 1631236
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRONMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI171215-40 **Open/Reference Date:** 28-DEC-17 **Amount :** 1000 mL
Name: ICP HIGH RANGE STD-A **Received:** 08-DEC-17 **Catalog Number :** HP6991-1L
Type: Source Material **Expires:** 28-DEC-18 **Lot Number :** 1733804
Employee: Helen Camello **Verified:** 28-DEC-17 **Solvent :** +/-0.5%in2%HNO3
Supplier: Environmental Express
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Arsenic	100 mg/L
Barium	150 mg/L	Beryllium	30 mg/L
Boron	50 mg/L	Cadmium	100 mg/L
Calcium	500000 ug/L	Chromium	250 mg/L
Cobalt	100 mg/L	Copper	200 mg/L
Iron	500000 ug/L	Lead	250 mg/L
Magnesium	500000 ug/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	150 mg/L
Potassium	300000 ug/L	Selenium	100 mg/L

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Analyte	Concentration	Analyte	Concentration
Sodium	500000 ug/L	Strontium	100 mg/L
Thallium	100 mg/L	Uranium	15000 ug/L
Vanadium	100 mg/L	Zinc	150 mg/L

Serial ID: UI171215-41 **Open/Reference Date:** 28-DEC-17 **Amount :** 1000 mL
Name: ICP HIGH RANGE STD B **Received:** 05-DEC-17 **Catalog Number :** HP6991-1L
Type: Source Material **Expires:** 28-DEC-18 **Lot Number :** 1733805
Employee: Helen Camello **Verified:** 28-DEC-17 **Solvent :** +/-0.5%in2%HNO3
Supplier: Environmental Express
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Molybdenum	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Sulfur	500 mg/L	Tin	10000 ug/L
Titanium	10000 ug/L		

Serial ID: UI180125-40 **Open/Reference Date:** 05-FEB-18 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 24-JAN-18 **Catalog Number :** 160211-06-03-A
Type: Source Material **Expires:** 05-FEB-19 **Lot Number :** 10065978-4
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Arsenic	100 mg/L
Barium	150 mg/L	Beryllium	30 mg/L
Boron	50 mg/L	Cadmium	100 mg/L
Chromium	250 mg/L	Cobalt	100 mg/L
Copper	200 mg/L	Lead	250 mg/L
Manganese	100 mg/L	Molybdenum	100 mg/L
Nickel	100 mg/L	Phosphorous	150 mg/L
Selenium	100 mg/L	Silica	1070 mg/L
Silicon	500 mg/L	Silver	100 mg/L
Strontium	100 mg/L	Thallium	100 mg/L
Tin	100 mg/L	Titanium	100 mg/L
Vanadium	100 mg/L	Zinc	150 mg/L

Standard Logbook

Serial ID:	UI180205-09	**Open/Reference Date:**	05-FEB-18	**Amount :**	250 mL
Name:	ICP-MS CRDL Master #1	**Received:**	05-FEB-18	**Catalog Number :**	160044-13-02
Type:	Source Material	**Expires:**	05-FEB-19	**Lot Number :**	10074107-1
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% IN 2% HNO3
Supplier:	02SI				
Description:	ICPMS CRDL Master Soln #1				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	50 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	30 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	100 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	30 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	2 mg/L
Thorium	2 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID:	UI180205-10	**Open/Reference Date:**	05-FEB-18	**Amount :**	250 mL
Name:	ICP-MS CRDL Master #2	**Received:**	05-FEB-18	**Catalog Number :**	160044-11-02
Type:	Source Material	**Expires:**	05-FEB-19	**Lot Number :**	10074107-3
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% IN 2% HNO3
Supplier:	02SI				
Description:	ICPMS CRDL Soln #2				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	3 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	5 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID:	UI180205-41	**Open/Reference Date:**	06-FEB-18	**Amount :**	500 mL
Name:	TRACE ICP ICSA SOLN A	**Received:**	05-FEB-18	**Catalog Number :**	160005-01-03
Type:	Source Material	**Expires:**	06-FEB-19	**Lot Number :**	156655-7
Employee:	Helen Camello			**Solvent :**	5%HNO3
Supplier:	o2si				
Description:	TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3				
Comments:	None				

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI180205-42 **Open/Reference Date:** 08-FEB-18 **Amount :** 500 mL
Name: SILICON 1000mg/L **Received:** 05-FEB-18 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 08-FEB-19 **Lot Number :** 142610-108
Employee: Helen Camello **Solvent :** in H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI180220-01 **Open/Reference Date:** 26-FEB-18 **Catalog Number :** HP7029-500
Name: Trace ICP ICSAB Source A **Received:** 16-FEB-18 **Lot Number :** 1804507
Type: Source Material **Expires:** 28-FEB-19
Employee: Helen Camello
Supplier: High Purity Standards
Description: Trace ICP ICSAB Source A
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	10 mg/L	Cadmium	20 mg/L
Chromium	20 mg/L	Cobalt	20 mg/L
Copper	20 mg/L	Lead	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Phosphorous	100 mg/L	Potassium	200 mg/L
Selenium	100 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Uranium	20 mg/L
Vanadium	20 mg/L	Zinc	20 mg/L

Serial ID: UI180220-02 **Open/Reference Date:** 26-FEB-18 **Catalog Number :** HP7029-500
Name: Trace ICP ICSAB Source B **Received:** 22-FEB-18 **Lot Number :** 1804508
Type: Source Material **Expires:** 28-FEB-19
Employee: Helen Camello
Supplier: High Purity Standards
Description: Trace ICP ICSAB Source B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Boron	20 ug/mL
Molybdenum	20 mg/L	Silica	42.78 mg/L

Analyte	Concentration	Analyte	Concentration
Silicon	20 mg/L	Silver	10 mg/L
Sulfur	100 mg/L	Tin	20 mg/L
Titanium	20 ug/mL		

Serial ID: UI180228-40 **Open/Reference Date:** 19-APR-18 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 27-FEB-18 **Catalog Number :** 160543-02-03
Type: Source Material **Expires:** 19-APR-19 **Lot Number :** 10064382-3
Employee: Shane Tola **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silica	106.95 mg/L	Silicon	50 mg/L
Silver	2.5 mg/L	Sodium	150 mg/L
Strontium	2.5 mg/L	Sulfur	50 mg/L
Thallium	10 mg/L	Tin	5 mg/L
Titanium	2.5 mg/L	Uranium	25 mg/L
Vanadium	2.5 mg/L	Zinc	5 mg/L

Serial ID: UI180301-40 **Open/Reference Date:** 12-MAR-18 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 01-MAR-18 **Catalog Number :** 160358-01-03
Type: Source Material **Expires:** 12-MAR-19 **Lot Number :** 10075543-2
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: 02si
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L

Analyte	Concentration	Analyte	Concentration
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI180301-41 **Open/Reference Date:** 12-MAR-18 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 01-MAR-18 **Catalog Number :** 160358-01-03
Type: Source Material **Expires:** 12-MAR-19 **Lot Number :** 10075543-4
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: 02si
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI180518-43 **Open/Reference Date:** 26-JUN-18 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 18-MAY-18 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-JUN-19 **Lot Number :** 158237-52
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI180603-03 **Open/Reference Date:** 03-JUN-18 **Catalog Number :** 060074-05-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 03-JUN-18 **Lot Number :** 10070573-2
Type: Source Material **Expires:** 03-JUN-19 **Solvent :** 2% HNO3 + Tr HF
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Standard Logbook

Serial ID:	UI180603-12	**Open/Reference Date:**	03-JUN-18	**Amount :**	250 mL
Name:	ICP-MS ICSAB Master B	**Received:**	03-JUN-18	**Catalog Number :**	160033-02-02
Type:	Source Material	**Expires:**	03-JUN-19	**Lot Number :**	10069799-2
Employee:	Paul Boyd			**Solvent :**	+/- 2.0% in 2% HNO3
Supplier:	02SI				
Description:	ICPMS ICSAB Master B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID:	UI180603-13	**Open/Reference Date:**	03-JUN-18	**Amount :**	250 mL
Name:	ICP-MS ICSAB Master C	**Received:**	03-JUN-18	**Catalog Number :**	160033-03-02
Type:	Source Material	**Expires:**	03-JUN-19	**Lot Number :**	10069799-4
Employee:	Paul Boyd			**Solvent :**	+/- 2.0% in 2% HNO3 + tr HF
Supplier:	02SI				
Description:	ICPMS ICSAB Master C				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID:	UI180614-07	**Open/Reference Date:**	14-JUN-18	**Amount :**	250 mL
Name:	ICP-MS ICV/CCV Master B	**Received:**	14-JUN-18	**Catalog Number :**	160054-02-03
Type:	Source Material	**Expires:**	14-JUN-19	**Lot Number :**	10066767-5
Employee:	Paul Boyd			**Solvent :**	2% HNO3 100 cm2
Supplier:	02SI				
Description:	ICPMS ICV/CCV Soln B - 20ppm				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L

Analyte	Concentration	Analyte	Concentration
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI180614-08 **Open/Reference Date:** 14-JUN-18 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 14-JUN-18 **Catalog Number :** 160054-03-03
Type: Source Material **Expires:** 14-JUN-19 **Lot Number :** 10066767-4
Employee: Paul Boyd **Solvent :** 2% HNO3/1% HF 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 20ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI180614-09 **Open/Reference Date:** 14-JUN-18 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 14-JUN-18 **Catalog Number :** 160055-01-03
Type: Source Material **Expires:** 14-JUN-19 **Lot Number :** 10066767-6
Employee: Paul Boyd **Solvent :** 2% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 2000ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI180710-01 **Open/Reference Date:** 10-JUL-18 **Catalog Number :** GEL-25
Name: METALSPIKE-1 **Received:** 10-JUL-18 **Lot Number :** N2-MEB669365
Type: Source Material **Expires:** 10-JUL-19
Employee: Edmund Frampton
Supplier: Inorganic Ventures
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Lithium	10 ug/mL	Magnesium	1000 ug/mL
Phosphorous	100 ug/mL	Potassium	1000 ug/mL
Silver	20 ug/mL	Sodium	1000 ug/mL
Strontium	100 ug/mL		

Serial ID: UI180710-02 **Open/Reference Date:** 10-JUL-18 **Catalog Number :** GEL-26
Name: METALSPIKE-2 **Received:** 10-JUL-18 **Lot Number :** N2-MEB669364
Type: Source Material **Expires:** 10-JUL-19
Employee: Edmund Frampton
Supplier: Inorganic Ventures
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2139 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Uranium-235	.72 ug/mL	Uranium-238	99.28 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI180710-A **Open/Reference Date:** 10-JUL-18 **Catalog Number :** GEL-12A
Name: ICP-MS SPIKE A **Received:** 10-JUL-18 **Lot Number :** N2-MEB665439
Type: Source Material **Expires:** 10-JUL-19
Employee: Shanta Mack
Supplier: Inorganic Ventures
Description: ICP-MS spiking soluiton A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Hafnium	10 mg/L
Molybdenum	10 mg/L	Tantalum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Tungsten	10 mg/L	Zirconium	10 mg/L

Standard Logbook

Serial ID:	UI180710-B	**Open/Reference Date:**	10-JUL-18	**Catalog Number :**	GEL-12B
Name:	ICP-MS SPIKE B	**Received:**	10-JUL-18	**Lot Number :**	N2-MEB665438
Type:	Source Material	**Expires:**	10-JUL-19		
Employee:	Shanta Mack				
Supplier:	O2Si				
Description:	ICP-MS spiking solution B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	400 mg/L	Arsenic	10 mg/L
Barium	10 mg/L	Beryllium	10 mg/L
Bismuth	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Calcium	400 mg/L
Cesium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Iron	400 mg/L	Lead	10 mg/L
Lithium	10 mg/L	Magnesium	400 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Phosphorous	400 mg/L	Potassium	400 mg/L
Rhenium	10 mg/L	Rhodium	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Sodium	400 mg/L	Strontium	10 mg/L
Thallium	10 mg/L	Thorium	10 mg/L
Uranium	10 mg/L	Uranium-235	.072 mg/L
Uranium-238	9.928 mg/L	Vanadium	10 mg/L
Zinc	10 mg/L		

Serial ID:	UI180717-11	**Open/Reference Date:**	17-JUL-18	**Amount :**	1000 mL
Name:	ICP-MS ICSA Master A Nex	**Received:**	17-JUL-18	**Catalog Number :**	60013-01-01LNexion
Type:	Source Material	**Expires:**	17-JUL-19	**Lot Number :**	10065549-5
Employee:	Paul Boyd			**Solvent :**	5% HNO3 + Tr HF
Supplier:	02SI				
Description:	ICP-MS ICSA Master A NEXION				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Standard Logbook

Serial ID:	UMS180603-01	**Open/Reference Date:**	03-JUN-18	**Amount :**	250 mL
Name:	ICPMSCalSPIKEB	**Received:**	03-JUN-18	**Catalog Number :**	ZGEL-100-250
Type:	Source Material	**Expires:**	30-MAY-19	**Lot Number :**	48-043CR
Employee:	Paul Boyd				
Supplier:	SPEX				
Description:	ICPMS Calibration Standard Solution B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID:	UMS180603-02	**Open/Reference Date:**	03-JUN-18	**Catalog Number :**	ZGEL-102-250
Name:	ICPMSCalSPIKEA	**Received:**	03-JUN-18	**Lot Number :**	48-045CR
Type:	Source Material	**Expires:**	30-MAY-19		
Employee:	Paul Boyd				
Supplier:	SPEX				
Description:	ICPMS Calibration Standard Solution A				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID:	UMS180603-03	**Open/Reference Date:**	03-JUN-18	**Amount :**	250 ml
Name:	ICPMSCalSPIKEC	**Received:**	03-JUN-18	**Catalog Number :**	ZGEL-101-250
Type:	Source Material	**Expires:**	30-MAY-19	**Lot Number :**	48-044CR
Employee:	Paul Boyd				
Supplier:	SPEX				
Description:	ICPMS Calibration Standard Solution C				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Standard Logbook

Serial ID: IHG180718-01 **Open/Reference Date:** 18-JUL-18 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 18-JUL-18 **Pipet Id :** Minou1
Type: Intermediate **Expires:** 20-JUL-18 **Solvent :** 1mL HNO3 + TypeI H2O
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG2769148-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG180718-02 **Open/Reference Date:** 18-JUL-18 **Pipet Id :** Minou1
Name: MHGINTER2 **Received:** 18-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Intermediate **Expires:** 20-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG2769150-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG180718-07 **Open/Reference Date:** 18-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.2CRA **Received:** 18-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 20-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180718-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG180718-08 **Open/Reference Date:** 18-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.5 **Received:** 18-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 20-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180718-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Standard Logbook

Serial ID: WHG180718-09 **Open/Reference Date:** 18-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS2.0 **Received:** 18-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 20-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180718-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG180718-10 **Open/Reference Date:** 18-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS5.0CCV **Received:** 18-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 20-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180718-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG180718-11 **Open/Reference Date:** 18-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS10.0 **Received:** 18-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 20-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180718-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG180718-12 **Open/Reference Date:** 18-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKS5.0ICV **Received:** 18-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 20-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180718-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Standard Logbook

Serial ID: WHG180718-14 **Open/Reference Date:** 18-JUL-18 **Pipet Id :** Hg1289245
Name: MHGSOILMSSPIKE **Received:** 18-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 20-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG2769148-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI180717-40 **Open/Reference Date:** 17-JUL-18 **Balance Id :** 216
Name: ICP HIGH RANGE STANDA **Received:** 25-JAN-18 **Lot Number :** 10065978-1
Type: Working **Expires:** 17-AUG-18 **Pipet Id :** K13302G
Employee: Helen Camello **Solvent :** 3%HCL and1%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STANDARD A
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180125-40	Antimony	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Arsenic	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Barium	150 mg/L	50 mL	500 mL	15000 ug/L
UI180125-40	Beryllium	30 mg/L	50 mL	500 mL	3000 ug/L
UI180125-40	Boron	50 mg/L	50 mL	500 mL	5000 ug/L
UI180125-40	Cadmium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Chromium	250 mg/L	50 mL	500 mL	25000 ug/L
UI180125-40	Cobalt	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Copper	200 mg/L	50 mL	500 mL	20000 ug/L
UI180125-40	Lead	250 mg/L	50 mL	500 mL	25000 ug/L
UI180125-40	Manganese	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Molybdenum	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Nickel	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Phosphorous	150 mg/L	50 mL	500 mL	15000 ug/L
UI180125-40	Selenium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Silica	1070 mg/L	50 mL	500 mL	107000 ug/L
UI180125-40	Silicon	500 mg/L	50 mL	500 mL	50000 ug/L
UI180125-40	Silver	100 mg/L	50 mL	500 mL	1000 ug/L
UI180125-40	Strontium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Thallium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Tin	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Titanium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Vanadium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Zinc	150 mg/L	50 mL	500 mL	15000 ug/L

Standard Logbook

Serial ID:	WI180717-41	**Open/Reference Date:**	17-JUL-18	**Balance Id :**	216
Name:	ICP HIGH RANGE STD B	**Received:**	15-DEC-17	**Lot Number :**	1733804/1733805
Type:	Working	**Expires:**	17-AUG-18	**Pipet Id :**	K13302G
Employee:	Helen Camello			**Solvent :**	3%HCLand 1%HNO3
Supplier:	02SI				

Description: ICP HIGH RANGE STD SOLUTION A and SOLUTION B

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171215-40	Aluminum	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Arsenic	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Barium	150 mg/L	50 mL	500 mL	15000 ug/L
UI171215-40	Beryllium	30 mg/L	50 mL	500 mL	3000 ug/L
UI171215-40	Boron	50 mg/L	50 mL	500 mL	5000 ug/L
UI171215-40	Cadmium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Calcium	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Chromium	250 mg/L	50 mL	500 mL	25000 ug/L
UI171215-40	Cobalt	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Copper	200 mg/L	50 mL	500 mL	20000 ug/L
UI171215-40	Iron	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Lead	250 mg/L	50 mL	500 mL	25000 ug/L
UI171215-40	Magnesium	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Manganese	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Nickel	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Phosphorous	150 mg/L	50 mL	500 mL	15000 ug/L
UI171215-40	Potassium	300000 ug/L	50 mL	500 mL	300000 ug/L
UI171215-40	Selenium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Sodium	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Strontium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Thallium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Uranium	15000 ug/L	50 mL	500 mL	15000 ug/L
UI171215-40	Vanadium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Zinc	150 mg/L	50 mL	500 mL	15000 ug/L
UI171215-41	Antimony	10000 ug/L	50 mL	500 mL	10000 ug/L
UI171215-41	Molybdenum	10000 ug/L	50 mL	500 mL	10000 ug/L
UI171215-41	Silica	107000 ug/L	50 mL	500 mL	107000 ug/L
UI171215-41	Silicon	50000 ug/L	50 mL	500 mL	50000 ug/L
UI171215-41	Sulfur	500 mg/L	50 mL	500 mL	50000 ug/L
UI171215-41	Tin	10000 ug/L	50 mL	500 mL	10000 ug/L
UI171215-41	Titanium	10000 ug/L	50 mL	500 mL	10000 ug/L

Serial ID:	WI180717-48	**Open/Reference Date:**	17-JUL-18	**Amount :**	25 mL
Name:	Trace ICP ICSA	**Received:**	01-NOV-17	**Catalog Number :**	160005-08-03
Type:	Working	**Expires:**	17-OCT-18	**Lot Number :**	1109048
Employee:	Helen Camello			**Solvent :**	3% HCl + 1% HNO3
Supplier:	o2si				

Standard Logbook

Description: Trace ICP Interferent Check Standard A
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171101-40	Aluminum	20000 mg/L	25 mL	1000 mL	500000 UG/L
UI171101-40	Calcium	20000 mg/L	25 mL	1000 mL	500000 UG/L
UI171101-40	Iron	8000 mg/L	25 mL	1000 mL	200000 UG/L
UI171101-40	Magnesium	20000 mg/L	25 mL	1000 mL	500000 UG/L

Serial ID: WI180717-49 **Open/Reference Date:** 17-JUL-18 **Balance Id :** 216
Name: Trace ICP ICSAB **Received:** 01-NOV-17 **Pipet Id :** K13302G
Type: Working **Expires:** 17-AUG-18 **Solvent :** 3%HCL AND 1%HNO3%
Employee: Helen Camello
Supplier: Environmental Express
Description: Trace ICP Interferent Check Standard AB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171101-40	Aluminum	20000 mg/L	12.5 mL	500 mL	500000 ug/L
UI171101-40	Calcium	20000 mg/L	12.5 mL	500 mL	500000 ug/L
UI171101-40	Iron	8000 mg/L	12.5 mL	500 mL	500000 ug/L
UI171101-40	Magnesium	20000 mg/L	12.5 mL	500 mL	500000 ug/L
UI180220-01	Arsenic	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Barium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Beryllium	10 mg/L	12.5 mL	500 mL	250 ug/L
UI180220-01	Cadmium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Chromium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Cobalt	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Copper	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Lead	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Manganese	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Nickel	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Phosphorous	100 mg/L	12.5 mL	500 mL	2500 ug/L
UI180220-01	Potassium	200 mg/L	12.5 mL	500 mL	5000 ug/L
UI180220-01	Selenium	100 mg/L	12.5 mL	500 mL	2500 ug/L
UI180220-01	Strontium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Thallium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Uranium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Vanadium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Zinc	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-02	Antimony	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-02	Boron	20 ug/mL	12.5 mL	500 mL	500 ug/L
UI180220-02	Molybdenum	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-02	Silica	42.78 mg/L	12.5 mL	500 mL	10700 ug/L
UI180220-02	Silicon	20 mg/L	12.5 mL	500 mL	5000 ug/L
UI180220-02	Silver	10 mg/L	12.5 mL	500 mL	250 ug/L
UI180220-02	Sulfur	100 mg/L	12.5 mL	500 mL	2500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180220-02	Tin	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-02	Titanium	20 ug/mL	12.5 mL	500 mL	500 ug/L
UI180518-43	Sodium	1000 ug/mL	2.5 mL	500 mL	5000 ug/L

Serial ID: WI180723-42 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 06-DEC-17 **Pipet Id :** K13302G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL and 1%HNO3 -2814595
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI180723-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI180723-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI180723-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI180723-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI180723-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Serial ID:	WI180723-43	**Open/Reference Date:**	23-JUL-18	**Balance Id :**	216
Name:	TRACE ICP 0.5/CCV STD.	**Received:**	06-DEC-17	**Pipet Id :**	K13302G
Type:	Working	**Expires:**	24-JUL-18	**Solvent :**	3%HCL AND 1%HNO3-2814595
Employee:	Helen Camello				
Supplier:	GEL				
Description:	TRACE ICP O.5/CCV CALIBRATION STD.				
Comments:	None				

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171206-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI171206-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI171206-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI180205-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI180205-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI180518-43	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Standard Logbook

Serial ID:	WI180723-44	**Open/Reference Date:**	23-JUL-18	**Balance Id :**	216
Name:	TRACE ICP SCAL 1.0	**Received:**	06-DEC-17	**Pipet Id :**	K13302G
Type:	Working	**Expires:**	24-JUL-18	**Solvent :**	3%HCL&1%HNO3-2814595
Employee:	Helen Camello				
Supplier:	o2si				
Description:	Trace ICP Calibration Standard 1.0ppm				
Comments:	None				

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171206-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI171206-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI171206-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI180205-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI180205-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Standard Logbook

Serial ID: WI180723-45 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 05-FEB-18 **Pipet Id :** K13002G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL AND 1%HNO3%-2814595
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180205-41	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI180205-41	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI180205-41	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI180205-41	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI180518-43	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI180723-46 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 01-MAR-18 **Pipet Id :** K13302G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL AND 1%HNO-2814595
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171206-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI171206-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI180301-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180301-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI180301-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L

Serial ID: WI180723-47 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: PQL Working Standard **Received:** 28-FEB-18 **Pipet Id :** K13302G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL&1%HNO3-2814595
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180228-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI180228-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI180228-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI180228-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI180228-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI180228-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI180228-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI180228-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI180228-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI180228-40	Silica	106.95 mg/L	2 mL	1000 mL	1069.5 ug/L
UI180228-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI180228-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI180228-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180228-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI180228-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI180228-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS180719-04 **Open/Reference Date:** 19-JUL-18 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 19-JUL-18 **Balance Id :** 4025216
Type: Working **Expires:** 20-JUL-18 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl -2809522
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180603-03	Tungsten	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Arsenic	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Barium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Beryllium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Boron	20 mg/L	5 mL	500 mL	200 ug/l
UMS180603-01	Cadmium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Chromium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Cobalt	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Copper	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Lead	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Lithium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Manganese	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Nickel	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Selenium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Silver	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Strontium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Thallium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Thorium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Uranium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Vanadium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Zinc	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-02	Aluminum	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Calcium	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Iron	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Magnesium	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Phosphorous	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Potassium	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Sodium	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-03	Antimony	10 mg/L	5 mL	500 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS180603-03	Molybdenum	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-03	Tin	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-03	Titanium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-03	Zirconium	10 mg/L	5 mL	500 mL	100 ug/l

Serial ID: WMS180719-04A **Open/Reference Date:** 19-JUL-18 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 19-JUL-18 **Pipet Id :** 3541598
Type: Working **Expires:** 20-JUL-18 **Solvent :** 2%HNO3/1%HCl -2809522
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS180719-04	Aluminum	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180719-04	Antimony	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Arsenic	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Barium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Beryllium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Boron	200 ug/l	50 mL	500 mL	20 ug/l
WMS180719-04	Cadmium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Calcium	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180719-04	Chromium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Cobalt	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Copper	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Iron	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180719-04	Lead	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Lithium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Magnesium	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180719-04	Manganese	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Molybdenum	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Nickel	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Phosphorous	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180719-04	Potassium	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180719-04	Selenium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Silver	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Sodium	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180719-04	Strontium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Thallium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Thorium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Tin	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Titanium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Tungsten	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Uranium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Vanadium	100 ug/l	50 mL	500 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS180719-04	Zinc	100 ug/l	50 mL	500 mL	10 ug/l
WMS180719-04	Zirconium	100 ug/l	50 mL	500 mL	10 ug/l

Serial ID: WMS180719-05 **Open/Reference Date:** 19-JUL-18 **Balance Id :** BAL216
Name: ICPMS ICV **Received:** 19-JUL-18 **Pipet Id :** 3541598
Type: Working **Expires:** 20-JUL-18 **Solvent :** 2%HNO3/1%HCl -2809522
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180614-07	Arsenic	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Barium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Beryllium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Boron	40 mg/L	2.5 mL	1000 mL	100 ug/L
UI180614-07	Cadmium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Chromium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Cobalt	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Copper	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Lead	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Lithium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Manganese	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Nickel	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Selenium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Strontium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Thallium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Thorium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Uranium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Vanadium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Zinc	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Antimony	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Molybdenum	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Silver	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Tin	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Titanium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Tungsten	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Zirconium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-09	Aluminum	2020 mg/L	2.5 mL	1000 mL	5050 ug/L
UI180614-09	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Iron	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Phosphorous	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 ug/L

Standard Logbook

Serial ID:	WMS180719-06	**Open/Reference Date:**	19-JUL-18	**Balance Id :**	BAL216
Name:	ICPMS CRDL	**Received:**	19-JUL-18	**Pipet Id :**	3820544
Type:	Working	**Expires:**	20-JUL-18	**Solvent :**	2%HNO3/1%HCl -2809522
Employee:	Paul Boyd				
Supplier:	GEL				
Description:	ICPMS CRDL				
Comments:	None				

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180205-09	Aluminum	50 mg/L	.5 mL	500 mL	30 ug/L
UI180205-09	Arsenic	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-09	Barium	2 mg/L	.5 mL	500 mL	2 ug/L
UI180205-09	Beryllium	.5 mg/L	.5 mL	500 mL	.5 ug/L
UI180205-09	Boron	15 mg/L	.5 mL	500 mL	15 ug/L
UI180205-09	Cadmium	1 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Calcium	200 mg/L	.5 mL	500 mL	200 ug/L
UI180205-09	Chromium	30 mg/L	.5 mL	500 mL	10 ug/L
UI180205-09	Cobalt	1 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Copper	1 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Iron	100 mg/L	.5 mL	500 mL	100 ug/L
UI180205-09	Lead	2 mg/L	.5 mL	500 mL	2 ug/L
UI180205-09	Lithium	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-09	Magnesium	30 mg/L	.5 mL	500 mL	15 ug/L
UI180205-09	Manganese	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-09	Nickel	2 mg/L	.5 mL	500 mL	2 ug/L
UI180205-09	Phosphorous	50 mg/L	.5 mL	500 mL	50 ug/L
UI180205-09	Potassium	300 mg/L	.5 mL	500 mL	300 ug/L
UI180205-09	Selenium	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-09	Sodium	250 mg/L	.5 mL	500 mL	250 ug/L
UI180205-09	Strontium	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-09	Thallium	2 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Thorium	2 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Uranium	.2 mg/L	.5 mL	500 mL	.2 ug/L
UI180205-09	Vanadium	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-09	Zinc	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-10	Antimony	3 mg/L	.5 mL	500 mL	3 ug/L
UI180205-10	Molybdenum	.5 mg/L	.5 mL	500 mL	.5 ug/L
UI180205-10	Silver	1 mg/L	.5 mL	500 mL	1 ug/L
UI180205-10	Tin	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-10	Titanium	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-10	Tungsten	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-10	Zirconium	2 mg/L	.5 mL	500 mL	2 ug/L

Standard Logbook

Serial ID:	WMS180719-20	**Open/Reference Date:**	19-JUL-18	**Balance Id :**	BAL216
Name:	ICPMS ICSA	**Received:**	19-JUL-18	**Lot Number :**	1064482
Type:	Working	**Expires:**	20-JUL-18	**Pipet Id :**	3541598
Employee:	Paul Boyd			**Solvent :**	2%HNO3/1%HCl -2809522
Supplier:	GEL				
Description:	ICPMS ICSA NexION				
Comments:	None				

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180717-11	Aluminum	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Calcium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Carbon	2000 mg/L	25 mL	250 mL	200000 ug/L
UI180717-11	Chloride	10000 mg/L	25 mL	250 mL	1000000 ug/L
UI180717-11	Iron	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Magnesium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Molybdenum	20 mg/L	25 mL	250 mL	2000 ug/L
UI180717-11	Phosphorous	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Potassium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Sodium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Sulfur	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Titanium	20 mg/L	25 mL	250 mL	2000 ug/L

Serial ID:	WMS180719-21	**Open/Reference Date:**	19-JUL-18	**Balance Id :**	BAL216
Name:	ICPMS ICSAB	**Received:**	19-JUL-18	**Pipet Id :**	1758088
Type:	Working	**Expires:**	20-JUL-18	**Solvent :**	2%HNO3/1%HCl -2809522
Employee:	Paul Boyd				
Supplier:	GEL				
Description:	ICPMS ICSAB NexION				
Comments:	None				

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180603-12	Arsenic	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Barium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Beryllium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Boron	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Cadmium	2 mg/L	2.5 mL	250 mL	20.2 ug/L
UI180603-12	Chromium	2 mg/L	2.5 mL	250 mL	22.2 ug/L
UI180603-12	Cobalt	2 mg/L	2.5 mL	250 mL	20.4 ug/L
UI180603-12	Copper	2 mg/L	2.5 mL	250 mL	23.4 ug/L
UI180603-12	Lead	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Lithium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Manganese	2 mg/L	2.5 mL	250 mL	22.7 ug/L
UI180603-12	Nickel	2 mg/L	2.5 mL	250 mL	22.4 ug/L
UI180603-12	Selenium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Strontium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Thallium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Thorium	2 mg/L	2.5 mL	250 mL	20 ug/L

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Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180603-12	Uranium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Vanadium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Zinc	2 mg/L	2.5 mL	250 mL	27 ug/L
UI180603-13	Antimony	2 mg/L	2.5 mL	250 mL	20.5 ug/L
UI180603-13	Silver	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-13	Tin	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-13	Tungsten	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-13	Zirconium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180717-11	Aluminum	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Calcium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Carbon	2000 mg/L	25 mL	250 mL	200000 ug/L
UI180717-11	Chloride	10000 mg/L	25 mL	250 mL	1000000 ug/L
UI180717-11	Iron	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Magnesium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Molybdenum	20 mg/L	25 mL	250 mL	2000 ug/L
UI180717-11	Phosphorous	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Potassium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Sodium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Sulfur	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Titanium	20 mg/L	25 mL	250 mL	2000 ug/L

Serial ID: WMS180719-70 **Open/Reference Date:** 19-JUL-18 **Balance Id :** BAL216
Name: ICPMS LINEAR RANGE ST **Received:** 19-JUL-18 **Pipet Id :** 1758088
Type: Working **Expires:** 20-JUL-18 **Solvent :** 2%HNO3/1%HCl -2809522
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171014-60	Aluminum	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Arsenic	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Barium	250 mg/L	2.5 mL	250 mL	2500 ug/L
UI171014-60	Beryllium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Cadmium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Calcium	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Chromium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Cobalt	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Copper	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Iron	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Lead	500 mg/L	2.5 mL	250 mL	5000 ug/L
UI171014-60	Lithium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Magnesium	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Manganese	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Nickel	100 mg/L	2.5 mL	250 mL	1000 ug/L

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Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171014-60	Phosphorous	2500 mg/L	2.5 mL	250 mL	25000 ug/L
UI171014-60	Potassium	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Selenium	50 mg/L	2.5 mL	250 mL	500 ug/L
UI171014-60	Sodium	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Strontium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Thallium	50 mg/L	2.5 mL	250 mL	500 ug/L
UI171014-60	Thorium	250 mg/L	2.5 mL	250 mL	2500 ug/L
UI171014-60	Uranium	500 mg/L	2.5 mL	250 mL	5000 ug/L
UI171014-60	Vanadium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Zinc	250 mg/L	2.5 mL	250 mL	2500 ug/L
UI171014-61	Antimony	25 mg/L	2.5 mL	250 mL	250 ug/L
UI171014-61	Molybdenum	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-61	Silver	25 mg/L	2.5 mL	250 mL	250 ug/L
UI171014-61	Tin	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-61	Tungsten	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-61	Zirconium	50 mg/L	2.5 mL	250 mL	500 ug/L

Serial ID: 180719 **Open/Reference Date:** 19-JUL-18 **Lot Number :** 0000194906
Name: I-HCL **Received:** 19-JUL-18
Type: Reagent/Solvent **Expires:** 19-JUL-20
Employee: Edmund Frampton
Supplier: MACRON
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 2574495-A **Open/Reference Date:** 19-JUL-17 **Lot Number :** A0384399
Name: B-NH2OH.HCl-MER **Received:** 19-JUL-17
Type: Reagent/Solvent **Expires:** 19-JUL-18
Employee: Monifa Basdeo
Supplier: BDH
Description: Hydroxlyamine Hydrochloride
Comments: None

Serial ID: 2651775-A **Open/Reference Date:** 13-FEB-18 **Lot Number :** 173169
Name: B-NaCl-MER **Received:** 13-FEB-18
Type: Reagent/Solvent **Expires:** 13-FEB-19
Employee: Monifa Basdeo
Supplier: Fisher Scientific
Description: Sodium Chloride
Comments: None

Standard Logbook

Serial ID: 2681361-A **Open/Reference Date:** 02-MAY-18 **Lot Number :** 16L055201
Name: B-KMnO4(VWR)-MER **Received:** 02-MAY-18
Type: Reagent/Solvent **Expires:** 02-MAY-20
Employee: Alan Stanley
Supplier: EMD
Description: Potassium Permanganate
Comments: None

Serial ID: 2767513 **Open/Reference Date:** 16-MAY-18 **Lot Number :** 0000194906
Name: I-HCL **Received:** 16-MAY-18
Type: Reagent/Solvent **Expires:** 16-MAY-20
Employee: Jonathan Eskew-Martin
Supplier: MACRON
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 2768581-C **Open/Reference Date:** 18-MAY-18 **Balance Id :** BAL-423
Name: B-KMnO4-MER **Received:** 18-MAY-18
Type: Reagent/Solvent **Expires:** 02-MAY-20
Employee: Alan Stanley
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
2681361-A	B-KMnO4(VWR)-MER	Crystals	175 g	3500 mL	5%

Serial ID: 2771227 **Open/Reference Date:** 25-MAY-18 **Lot Number :** 2018041604
Name: I-HNO3 **Received:** 25-MAY-18
Type: Reagent/Solvent **Expires:** 25-MAY-20
Employee: Shanta Mack
Supplier: VWR - BDH Chemicals
Description: Concentrated Nitric Acid
Comments: None

Serial ID: 2799336-1 **Open/Reference Date:** 13-JUN-18 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 13-JUN-18 **Lot Number :** 2018032956
Type: Reagent/Solvent **Expires:** 13-JUN-20
Employee: Alan Stanley
Supplier: MACRON
Description: NITRIC ACID
Comments: None

Standard Logbook

Serial ID: 2800962-A **Open/Reference Date:** 18-JUN-18 **Lot Number :** 0000194906
Name: B-HCl-MER **Received:** 18-JUN-18
Type: Reagent/Solvent **Expires:** 18-JUN-19
Employee: Monifa Basdeo
Supplier: MACRON
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 2801172 **Open/Reference Date:** 18-JUN-18 **Lot Number :** 0000187634 mL
Name: B-H2O2 **Received:** 18-JUN-18
Type: Reagent/Solvent **Expires:** 18-JUN-19
Employee: Shanta Mack
Supplier: J.T. BAKER
Description: Hydrogen Peroxide 30%, from Bioassay (LIMS ID BIO279284)
Comments: None

Serial ID: 2801727-C **Open/Reference Date:** 19-JUN-18 **Balance Id :** BAL-423
Name: B-NaCl.NH2OH.HCl-MER **Received:** 19-JUN-18
Type: Reagent/Solvent **Expires:** 19-JUL-18
Employee: Monifa Basdeo
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
2574495-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	12%
2651775-A	B-NaCl-MER	NA	120 g	1000 mL	12%

Serial ID: 2809522 **Open/Reference Date:** 09-JUL-18 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 09-JUL-18
Type: Reagent/Solvent **Expires:** 23-JUL-18
Employee: Paul Boyd
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
2767513	I-HCL	36.5-38.0	80 mL	8 l	N/A
2771227	I-HNO3	68.0-70.0%	160 mL	8 l	N/A

Standard Logbook

Serial ID: 2813353-C **Open/Reference Date:** 18-JUL-18 **Instrument Id :** METALMAN
Name: B-Aqua Regia-MER **Received:** 18-JUL-18 **Solvent :** DI H2O
Type: Reagent/Solvent **Expires:** 19-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: 50% Aqua Regia
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
2799336-1	B-HNO3-MER	68.0-70.0%	25 mL	200 mL	100 ml
2800962-A	B-HCl-MER	36.5-38%	75 mL	200 mL	100 ml

Serial ID: 2814595 **Open/Reference Date:** 23-JUL-18 **Solvent :** 3%HCL+1%HNO3
Name: B-ICP-RINSE SOLN **Received:** 23-JUL-18
Type: Reagent/Solvent **Expires:** 28-JUL-18
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
180719	I-HCL	36.5-38.0	240 mL	10000 mL	N/A
2771227	I-HNO3	68.0-70.0%	80 mL	10000 mL	N/A

Serial ID: I-BC180313 **Open/Reference Date:** 13-MAR-18 **Lot Number :** 22569094
Name: I-Boiling chips **Received:** 13-MAR-18
Type: Reagent/Solvent **Expires:** 13-MAR-20
Employee: Shanta Mack
Supplier: Chemware
Description: Teflon chips for MB/LCS metals Solids
Comments: None