

ANALYTICAL REPORT

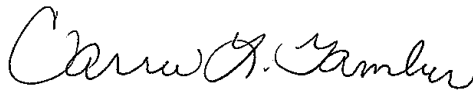
Job Number: 180-41613-1

Job Description: Harley Davidson

For:

Groundwater Sciences Corporation
2601 Market Place Street, Suite 310
Harrisburg, PA 17110-9307

Attention: Allan Miller



Approved for release.
Carrie L. Gamber
Senior Project Manager
3/17/2015 2:15 PM

Carrie L Gamber, Senior Project Manager
301 Alpha Drive, Pittsburgh, PA, 15238
(412)963-2428
carrie.gamber@testamericainc.com
03/17/2015

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager or designee who has signed this report.

Table of Contents

Cover Title Page	1
Data Summaries	5
Definitions	5
Case Narrative	6
Detection Summary	7
Client Sample Results	10
Default Detection Limits	38
Surrogate Summary	40
QC Sample Results	41
QC Association	47
Chronicle	49
Certification Summary	52
Method Summary	53
Sample Summary	54
Manual Integration Summary	55
Reagent Traceability	58
COAs	75
Organic Sample Data	161
GC/MS VOA	161
Method 8260C Low Level	161
Method 8260C Low Level QC Summary	162
Method 8260C Low Level Sample Data	174
Standards Data	266
Method 8260C Low Level ICAL Data	266
Method 8260C Low Level CCAL Data	321
Raw QC Data	335

Table of Contents

Method 8260C Low Level Tune Data	335
Method 8260C Low Level Blank Data	347
Method 8260C Low Level LCS/LCSD Data	361
Method 8260C Low Level Run Logs	373
HPLC/IC	376
300_ORGFMS	376
300_ORGFMS QC Summary	377
300_ORGFMS Sample Data	379
Standards Data	397
300_ORGFMS ICAL Data	397
300_ORGFMS CCAL Data	416
Raw QC Data	440
300_ORGFMS Blank Data	440
300_ORGFMS LCS/LCSD Data	458
300_ORGFMS Run Logs	461
Inorganic Sample Data	465
Metals Data	465
Met Cover Page	466
Met Sample Data	467
Met QC Data	473
Met ICV/CCV	473
Met CRQL	475
Met Blanks	476
Met ICSA/ICSAB	478
Met MS/MSD/PDS	480
Met LCS/LCSD	483

Table of Contents

Met Serial Dilution	484
Met MDL	485
Met Linear Ranges	487
Met Preparation Log	488
Met Analysis Run Log	489
Met ICP/MS Int Stds	492
Met Raw Data	494
Met Prep Data	589
General Chemistry Data	590
Gen Chem Cover Page	591
Gen Chem Sample Data	592
Gen Chem QC Data	598
Gen Chem ICV/CCV	598
Gen Chem Blanks	599
Gen Chem Duplicates	600
Gen Chem LCS/LCSD	601
Gen Chem MDL	602
Gen Chem Analysis Run Log	604
Gen Chem Raw Data	605
Gen Chem Prep Data	608
Shipping and Receiving Documents	611
Client Chain of Custody	612
Sample Receipt Checklist	614

Definitions/Glossary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Groundwater Sciences Corporation

Project: Harley Davidson

Report Number: 180-41613-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 02/28/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.8 C.

8260C

Several samples were diluted to bring the concentration of target analytes within the calibration range. Elevated reporting limits (RLs) are provided.

The laboratory control sample (LCS) for batch 135153 recovered outside control limits for the following analytes: Cis and Trans-1,3-dichloropropene. A low-level LCS (LLCS), spiked at the reporting limit (RL), was prepared with this batch. The affected target analytes recovered within acceptance limits; therefore, the LLCS demonstrates the analytical system had sufficient sensitivity to detect the compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

The laboratory control sample (LCS) for batch 135260 recovered outside control limits for the following analytes: Cis and Trans-1,3-dichloropropene. A low-level LCS (LLCS), spiked at the reporting limit (RL), was prepared with this batch. The affected target analytes recovered within acceptance limits; therefore, the LLCS demonstrates the analytical system had sufficient sensitivity to detect the compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

METALS

Calcium and Sodium were detected in method blank MB 180-134585/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

GENERAL CHEMISTRY

Bicarbonate Alkalinity as CaCO₃ and Total Alkalinity as CaCO₃ to pH 4.5 were detected in method blank MB 180-135183/2 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

The following samples was analyzed outside of analytical holding time for Nitrate due to the instrument stopping prior to the initial analysis. The instrument was re-started the next day; however, the holding time for Nitrate analysis had expired. HD-MW-127-0/1-0 (180-41613-6), HD-MW-132-0/1-0 (180-41613-7), HD-MW-50S-0/1-0 (180-41613-4), HD-MW-51D-0/1-0 (180-41613-5), HD-MW-95-0/1-0 (180-41613-8), HD-MW-97-0/1-0 (180-41613-9).

Chloride and Nitrate as N were detected in method blank MB 180-134458/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Client Sample ID: HD-QC-5-0/1-2

Lab Sample ID: 180-41613-1

No Detections.

Client Sample ID: HD-QC-2-0/1-3

Lab Sample ID: 180-41613-2

No Detections.

Client Sample ID: HD-QC-2-0/1-4

Lab Sample ID: 180-41613-3

No Detections.

Client Sample ID: HD-MW-50S-0/1-0

Lab Sample ID: 180-41613-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	54		50	15	ug/L	50		8260C	Total/NA
1,1-Dichloroethane	9.2	J	50	5.8	ug/L	50		8260C	Total/NA
cis-1,2-Dichloroethene	850		50	12	ug/L	50		8260C	Total/NA
1,1,1-Trichloroethane	130		50	14	ug/L	50		8260C	Total/NA
Trichloroethene	840		50	7.2	ug/L	50		8260C	Total/NA
Tetrachloroethene	220		50	7.4	ug/L	50		8260C	Total/NA
Nitrate as N	2.7	H B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	170	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	57		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	120000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	9500		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	16000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	50000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	230	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	230	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-MW-51D-0/1-0

Lab Sample ID: 180-41613-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	120		50	15	ug/L	50		8260C	Total/NA
1,1-Dichloroethane	56		50	5.8	ug/L	50		8260C	Total/NA
cis-1,2-Dichloroethene	520		50	12	ug/L	50		8260C	Total/NA
1,1,1-Trichloroethane	35	J	50	14	ug/L	50		8260C	Total/NA
Trichloroethene	1000		50	7.2	ug/L	50		8260C	Total/NA
Tetrachloroethene	69		50	7.4	ug/L	50		8260C	Total/NA
Nitrate as N	0.88	H B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	170	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	63		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	100000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	24000		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	30000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	49000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	290	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	290	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-MW-127-0/1-0

Lab Sample ID: 180-41613-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	5.4	J	13	3.7	ug/L	12.5		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pittsburgh

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Client Sample ID: HD-MW-127-0/1-0 (Continued)

Lab Sample ID: 180-41613-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	2.5	J	13	1.5	ug/L	12.5		8260C	Total/NA
cis-1,2-Dichloroethene	290		13	3.0	ug/L	12.5		8260C	Total/NA
1,1,1-Trichloroethane	4.9	J	13	3.6	ug/L	12.5		8260C	Total/NA
Trichloroethene	120		13	1.8	ug/L	12.5		8260C	Total/NA
Tetrachloroethene	14		13	1.9	ug/L	12.5		8260C	Total/NA
Nitrate as N	2.4	H B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	100	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	7.6		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	100000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	4200		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	21000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	25000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	270	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	270	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-MW-132-0/1-0

Lab Sample ID: 180-41613-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	19		2.5	0.74	ug/L	2.5		8260C	Total/NA
trans-1,2-Dichloroethene	3.0		2.5	0.42	ug/L	2.5		8260C	Total/NA
1,1-Dichloroethane	13		2.5	0.29	ug/L	2.5		8260C	Total/NA
cis-1,2-Dichloroethene	530	E	2.5	0.59	ug/L	2.5		8260C	Total/NA
Trichloroethene	440	E	2.5	0.36	ug/L	2.5		8260C	Total/NA
Tetrachloroethene	1.8	J	2.5	0.37	ug/L	2.5		8260C	Total/NA
1,1-Dichloroethene - DL	21	J	25	7.4	ug/L	25		8260C	Total/NA
1,1-Dichloroethane - DL	13	J	25	2.9	ug/L	25		8260C	Total/NA
cis-1,2-Dichloroethene - DL	590		25	5.9	ug/L	25		8260C	Total/NA
Trichloroethene - DL	500		25	3.6	ug/L	25		8260C	Total/NA
Nitrate as N	4.6	H B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	11	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	3.9		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	56000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	1800		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	4100		100	1.2	ug/L	1		6020A	Total/NA
Sodium	4800	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	160	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	160	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-MW-95-0/1-0

Lab Sample ID: 180-41613-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.30	J	1.0	0.30	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	0.29	J	1.0	0.12	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	6.1		1.0	0.24	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane	0.46	J	1.0	0.29	ug/L	1		8260C	Total/NA
Trichloroethene	4.3		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	4.3		1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	0.70	H B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	60	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	37		1.0	0.21	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pittsburgh

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Client Sample ID: HD-MW-95-0/1-0 (Continued)

Lab Sample ID: 180-41613-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	110000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	3100		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	9100		100	1.2	ug/L	1		6020A	Total/NA
Sodium	30000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	270	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	270	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-MW-97-0/1-0

Lab Sample ID: 180-41613-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	8.2	J	25	5.7	ug/L	25		8260C	Total/NA
1,1-Dichloroethene	9.2	J	25	7.4	ug/L	25		8260C	Total/NA
1,1-Dichloroethane	5.2	J	25	2.9	ug/L	25		8260C	Total/NA
cis-1,2-Dichloroethene	470		25	5.9	ug/L	25		8260C	Total/NA
1,1,1-Trichloroethane	8.8	J	25	7.2	ug/L	25		8260C	Total/NA
Trichloroethene	610		25	3.6	ug/L	25		8260C	Total/NA
Tetrachloroethene	85		25	3.7	ug/L	25		8260C	Total/NA
Nitrate as N	1.8	H B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	130	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	30		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	93000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6800		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	20000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	40000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	220	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	220	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-QC-5-0/1-2

Date Collected: 02/27/15 12:00

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/10/15 21:50	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/10/15 21:50	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/10/15 21:50	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/10/15 21:50	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/10/15 21:50	1
Acetone	5.0	U	5.0	2.5	ug/L			03/10/15 21:50	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/10/15 21:50	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/10/15 21:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/10/15 21:50	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/10/15 21:50	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/10/15 21:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/10/15 21:50	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/10/15 21:50	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/10/15 21:50	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/10/15 21:50	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/10/15 21:50	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/10/15 21:50	1
Benzene	1.0	U	1.0	0.11	ug/L			03/10/15 21:50	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/10/15 21:50	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/10/15 21:50	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/10/15 21:50	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/10/15 21:50	1
cis-1,3-Dichloropropene	1.0	U *	1.0	0.19	ug/L			03/10/15 21:50	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/10/15 21:50	1
Toluene	1.0	U	1.0	0.15	ug/L			03/10/15 21:50	1
trans-1,3-Dichloropropene	1.0	U *	1.0	0.15	ug/L			03/10/15 21:50	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/10/15 21:50	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/10/15 21:50	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/10/15 21:50	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/10/15 21:50	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/10/15 21:50	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/10/15 21:50	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/10/15 21:50	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/10/15 21:50	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/10/15 21:50	1
Styrene	1.0	U	1.0	0.097	ug/L			03/10/15 21:50	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/10/15 21:50	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/10/15 21:50	1
Acrylonitrile	20	U	20	0.55	ug/L			03/10/15 21:50	1
1,4-Dioxane	200	U	200	34	ug/L			03/10/15 21:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		64 - 135		03/10/15 21:50	1
Toluene-d8 (Surr)	102		71 - 118		03/10/15 21:50	1
4-Bromofluorobenzene (Surr)	103		70 - 118		03/10/15 21:50	1
Dibromofluoromethane (Surr)	100		70 - 128		03/10/15 21:50	1

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-QC-2-0/1-3

Date Collected: 02/27/15 11:55

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/10/15 22:38	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/10/15 22:38	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/10/15 22:38	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/10/15 22:38	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/10/15 22:38	1
Acetone	5.0	U	5.0	2.5	ug/L			03/10/15 22:38	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/10/15 22:38	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/10/15 22:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/10/15 22:38	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/10/15 22:38	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/10/15 22:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/10/15 22:38	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/10/15 22:38	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/10/15 22:38	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/10/15 22:38	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/10/15 22:38	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/10/15 22:38	1
Benzene	1.0	U	1.0	0.11	ug/L			03/10/15 22:38	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/10/15 22:38	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/10/15 22:38	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/10/15 22:38	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/10/15 22:38	1
cis-1,3-Dichloropropene	1.0	U *	1.0	0.19	ug/L			03/10/15 22:38	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/10/15 22:38	1
Toluene	1.0	U	1.0	0.15	ug/L			03/10/15 22:38	1
trans-1,3-Dichloropropene	1.0	U *	1.0	0.15	ug/L			03/10/15 22:38	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/10/15 22:38	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/10/15 22:38	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/10/15 22:38	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/10/15 22:38	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/10/15 22:38	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/10/15 22:38	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/10/15 22:38	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/10/15 22:38	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/10/15 22:38	1
Styrene	1.0	U	1.0	0.097	ug/L			03/10/15 22:38	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/10/15 22:38	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/10/15 22:38	1
Acrylonitrile	20	U	20	0.55	ug/L			03/10/15 22:38	1
1,4-Dioxane	200	U	200	34	ug/L			03/10/15 22:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		64 - 135		03/10/15 22:38	1
Toluene-d8 (Surr)	102		71 - 118		03/10/15 22:38	1
4-Bromofluorobenzene (Surr)	103		70 - 118		03/10/15 22:38	1
Dibromofluoromethane (Surr)	96		70 - 128		03/10/15 22:38	1

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-QC-2-0/1-4

Date Collected: 02/27/15 12:00

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/11/15 16:22	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/11/15 16:22	1
Bromomethane	1.0	U *	1.0	0.31	ug/L			03/11/15 16:22	1
Chloroethane	1.0	U *	1.0	0.21	ug/L			03/11/15 16:22	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/11/15 16:22	1
Acetone	5.0	U	5.0	2.5	ug/L			03/11/15 16:22	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/11/15 16:22	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/11/15 16:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/11/15 16:22	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/11/15 16:22	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/11/15 16:22	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/11/15 16:22	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/11/15 16:22	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/11/15 16:22	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/11/15 16:22	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/11/15 16:22	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/11/15 16:22	1
Benzene	1.0	U	1.0	0.11	ug/L			03/11/15 16:22	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/11/15 16:22	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/11/15 16:22	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/11/15 16:22	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/11/15 16:22	1
cis-1,3-Dichloropropene	1.0	U *	1.0	0.19	ug/L			03/11/15 16:22	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/11/15 16:22	1
Toluene	1.0	U	1.0	0.15	ug/L			03/11/15 16:22	1
trans-1,3-Dichloropropene	1.0	U *	1.0	0.15	ug/L			03/11/15 16:22	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/11/15 16:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/11/15 16:22	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/11/15 16:22	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/11/15 16:22	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/11/15 16:22	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/11/15 16:22	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/11/15 16:22	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/11/15 16:22	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/11/15 16:22	1
Styrene	1.0	U	1.0	0.097	ug/L			03/11/15 16:22	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/11/15 16:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/11/15 16:22	1
Acrylonitrile	20	U	20	0.55	ug/L			03/11/15 16:22	1
1,4-Dioxane	200	U	200	34	ug/L			03/11/15 16:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		64 - 135		03/11/15 16:22	1
Toluene-d8 (Surr)	109		71 - 118		03/11/15 16:22	1
4-Bromofluorobenzene (Surr)	109		70 - 118		03/11/15 16:22	1
Dibromofluoromethane (Surr)	101		70 - 128		03/11/15 16:22	1

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-MW-50S-0/1-0

Date Collected: 02/27/15 09:55

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	50	U	50	14	ug/L			03/10/15 21:02	50
Vinyl chloride	50	U	50	11	ug/L			03/10/15 21:02	50
Bromomethane	50	U	50	16	ug/L			03/10/15 21:02	50
Chloroethane	50	U	50	11	ug/L			03/10/15 21:02	50
1,1-Dichloroethene	54		50	15	ug/L			03/10/15 21:02	50
Acetone	250	U	250	130	ug/L			03/10/15 21:02	50
Carbon disulfide	50	U	50	11	ug/L			03/10/15 21:02	50
Methylene Chloride	50	U	50	6.3	ug/L			03/10/15 21:02	50
trans-1,2-Dichloroethene	50	U	50	8.5	ug/L			03/10/15 21:02	50
Methyl tert-butyl ether	50	U	50	9.2	ug/L			03/10/15 21:02	50
1,1-Dichloroethane	9.2	J	50	5.8	ug/L			03/10/15 21:02	50
cis-1,2-Dichloroethene	850		50	12	ug/L			03/10/15 21:02	50
Bromochloromethane	50	U	50	9.0	ug/L			03/10/15 21:02	50
2-Butanone (MEK)	250	U	250	27	ug/L			03/10/15 21:02	50
Chloroform	50	U	50	8.5	ug/L			03/10/15 21:02	50
1,1,1-Trichloroethane	130		50	14	ug/L			03/10/15 21:02	50
Carbon tetrachloride	50	U	50	6.8	ug/L			03/10/15 21:02	50
Benzene	50	U	50	5.3	ug/L			03/10/15 21:02	50
1,2-Dichloroethane	50	U	50	11	ug/L			03/10/15 21:02	50
Trichloroethene	840		50	7.2	ug/L			03/10/15 21:02	50
1,2-Dichloropropane	50	U	50	4.7	ug/L			03/10/15 21:02	50
Bromodichloromethane	50	U	50	6.5	ug/L			03/10/15 21:02	50
cis-1,3-Dichloropropene	50	U *	50	9.3	ug/L			03/10/15 21:02	50
4-Methyl-2-pentanone (MIBK)	250	U	250	26	ug/L			03/10/15 21:02	50
Toluene	50	U	50	7.5	ug/L			03/10/15 21:02	50
trans-1,3-Dichloropropene	50	U *	50	7.4	ug/L			03/10/15 21:02	50
1,1,2-Trichloroethane	50	U	50	10	ug/L			03/10/15 21:02	50
Tetrachloroethene	220		50	7.4	ug/L			03/10/15 21:02	50
2-Hexanone	250	U	250	8.0	ug/L			03/10/15 21:02	50
Dibromochloromethane	50	U	50	6.8	ug/L			03/10/15 21:02	50
1,2-Dibromoethane (EDB)	50	U	50	9.0	ug/L			03/10/15 21:02	50
Chlorobenzene	50	U	50	6.8	ug/L			03/10/15 21:02	50
1,1,1,2-Tetrachloroethane	50	U	50	14	ug/L			03/10/15 21:02	50
Ethylbenzene	50	U	50	11	ug/L			03/10/15 21:02	50
Xylenes, Total	150	U	150	24	ug/L			03/10/15 21:02	50
Styrene	50	U	50	4.8	ug/L			03/10/15 21:02	50
Bromoform	50	U	50	9.6	ug/L			03/10/15 21:02	50
1,1,2,2-Tetrachloroethane	50	U	50	10	ug/L			03/10/15 21:02	50
Acrylonitrile	1000	U	1000	27	ug/L			03/10/15 21:02	50
1,4-Dioxane	10000	U	10000	1700	ug/L			03/10/15 21:02	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 135		03/10/15 21:02	50
Toluene-d8 (Surr)	103		71 - 118		03/10/15 21:02	50
4-Bromofluorobenzene (Surr)	106		70 - 118		03/10/15 21:02	50
Dibromofluoromethane (Surr)	104		70 - 128		03/10/15 21:02	50

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-MW-51D-0/1-0

Date Collected: 02/27/15 10:05

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	50	U	50	14	ug/L			03/10/15 21:26	50
Vinyl chloride	50	U	50	11	ug/L			03/10/15 21:26	50
Bromomethane	50	U	50	16	ug/L			03/10/15 21:26	50
Chloroethane	50	U	50	11	ug/L			03/10/15 21:26	50
1,1-Dichloroethene	120		50	15	ug/L			03/10/15 21:26	50
Acetone	250	U	250	130	ug/L			03/10/15 21:26	50
Carbon disulfide	50	U	50	11	ug/L			03/10/15 21:26	50
Methylene Chloride	50	U	50	6.3	ug/L			03/10/15 21:26	50
trans-1,2-Dichloroethene	50	U	50	8.5	ug/L			03/10/15 21:26	50
Methyl tert-butyl ether	50	U	50	9.2	ug/L			03/10/15 21:26	50
1,1-Dichloroethane	56		50	5.8	ug/L			03/10/15 21:26	50
cis-1,2-Dichloroethene	520		50	12	ug/L			03/10/15 21:26	50
Bromochloromethane	50	U	50	9.0	ug/L			03/10/15 21:26	50
2-Butanone (MEK)	250	U	250	27	ug/L			03/10/15 21:26	50
Chloroform	50	U	50	8.5	ug/L			03/10/15 21:26	50
1,1,1-Trichloroethane	35 J		50	14	ug/L			03/10/15 21:26	50
Carbon tetrachloride	50	U	50	6.8	ug/L			03/10/15 21:26	50
Benzene	50	U	50	5.3	ug/L			03/10/15 21:26	50
1,2-Dichloroethane	50	U	50	11	ug/L			03/10/15 21:26	50
Trichloroethene	1000		50	7.2	ug/L			03/10/15 21:26	50
1,2-Dichloropropane	50	U	50	4.7	ug/L			03/10/15 21:26	50
Bromodichloromethane	50	U	50	6.5	ug/L			03/10/15 21:26	50
cis-1,3-Dichloropropene	50	U *	50	9.3	ug/L			03/10/15 21:26	50
4-Methyl-2-pentanone (MIBK)	250	U	250	26	ug/L			03/10/15 21:26	50
Toluene	50	U	50	7.5	ug/L			03/10/15 21:26	50
trans-1,3-Dichloropropene	50	U *	50	7.4	ug/L			03/10/15 21:26	50
1,1,2-Trichloroethane	50	U	50	10	ug/L			03/10/15 21:26	50
Tetrachloroethene	69		50	7.4	ug/L			03/10/15 21:26	50
2-Hexanone	250	U	250	8.0	ug/L			03/10/15 21:26	50
Dibromochloromethane	50	U	50	6.8	ug/L			03/10/15 21:26	50
1,2-Dibromoethane (EDB)	50	U	50	9.0	ug/L			03/10/15 21:26	50
Chlorobenzene	50	U	50	6.8	ug/L			03/10/15 21:26	50
1,1,1,2-Tetrachloroethane	50	U	50	14	ug/L			03/10/15 21:26	50
Ethylbenzene	50	U	50	11	ug/L			03/10/15 21:26	50
Xylenes, Total	150	U	150	24	ug/L			03/10/15 21:26	50
Styrene	50	U	50	4.8	ug/L			03/10/15 21:26	50
Bromoform	50	U	50	9.6	ug/L			03/10/15 21:26	50
1,1,2,2-Tetrachloroethane	50	U	50	10	ug/L			03/10/15 21:26	50
Acrylonitrile	1000	U	1000	27	ug/L			03/10/15 21:26	50
1,4-Dioxane	10000	U	10000	1700	ug/L			03/10/15 21:26	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		64 - 135		03/10/15 21:26	50
Toluene-d8 (Surr)	103		71 - 118		03/10/15 21:26	50
4-Bromofluorobenzene (Surr)	103		70 - 118		03/10/15 21:26	50
Dibromofluoromethane (Surr)	99		70 - 128		03/10/15 21:26	50

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-MW-127-0/1-0

Date Collected: 02/27/15 09:35

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	13	U	13	3.5	ug/L			03/10/15 22:14	12.5
Vinyl chloride	13	U	13	2.8	ug/L			03/10/15 22:14	12.5
Bromomethane	13	U	13	3.9	ug/L			03/10/15 22:14	12.5
Chloroethane	13	U	13	2.7	ug/L			03/10/15 22:14	12.5
1,1-Dichloroethene	5.4	J	13	3.7	ug/L			03/10/15 22:14	12.5
Acetone	63	U	63	31	ug/L			03/10/15 22:14	12.5
Carbon disulfide	13	U	13	2.7	ug/L			03/10/15 22:14	12.5
Methylene Chloride	13	U	13	1.6	ug/L			03/10/15 22:14	12.5
trans-1,2-Dichloroethene	13	U	13	2.1	ug/L			03/10/15 22:14	12.5
Methyl tert-butyl ether	13	U	13	2.3	ug/L			03/10/15 22:14	12.5
1,1-Dichloroethane	2.5	J	13	1.5	ug/L			03/10/15 22:14	12.5
cis-1,2-Dichloroethene	290		13	3.0	ug/L			03/10/15 22:14	12.5
Bromochloromethane	13	U	13	2.3	ug/L			03/10/15 22:14	12.5
2-Butanone (MEK)	63	U	63	6.8	ug/L			03/10/15 22:14	12.5
Chloroform	13	U	13	2.1	ug/L			03/10/15 22:14	12.5
1,1,1-Trichloroethane	4.9	J	13	3.6	ug/L			03/10/15 22:14	12.5
Carbon tetrachloride	13	U	13	1.7	ug/L			03/10/15 22:14	12.5
Benzene	13	U	13	1.3	ug/L			03/10/15 22:14	12.5
1,2-Dichloroethane	13	U	13	2.6	ug/L			03/10/15 22:14	12.5
Trichloroethene	120		13	1.8	ug/L			03/10/15 22:14	12.5
1,2-Dichloropropane	13	U	13	1.2	ug/L			03/10/15 22:14	12.5
Bromodichloromethane	13	U	13	1.6	ug/L			03/10/15 22:14	12.5
cis-1,3-Dichloropropene	13	U *	13	2.3	ug/L			03/10/15 22:14	12.5
4-Methyl-2-pentanone (MIBK)	63	U	63	6.6	ug/L			03/10/15 22:14	12.5
Toluene	13	U	13	1.9	ug/L			03/10/15 22:14	12.5
trans-1,3-Dichloropropene	13	U *	13	1.9	ug/L			03/10/15 22:14	12.5
1,1,2-Trichloroethane	13	U	13	2.5	ug/L			03/10/15 22:14	12.5
Tetrachloroethene	14		13	1.9	ug/L			03/10/15 22:14	12.5
2-Hexanone	63	U	63	2.0	ug/L			03/10/15 22:14	12.5
Dibromochloromethane	13	U	13	1.7	ug/L			03/10/15 22:14	12.5
1,2-Dibromoethane (EDB)	13	U	13	2.3	ug/L			03/10/15 22:14	12.5
Chlorobenzene	13	U	13	1.7	ug/L			03/10/15 22:14	12.5
1,1,1,2-Tetrachloroethane	13	U	13	3.5	ug/L			03/10/15 22:14	12.5
Ethylbenzene	13	U	13	2.8	ug/L			03/10/15 22:14	12.5
Xylenes, Total	38	U	38	6.1	ug/L			03/10/15 22:14	12.5
Styrene	13	U	13	1.2	ug/L			03/10/15 22:14	12.5
Bromoform	13	U	13	2.4	ug/L			03/10/15 22:14	12.5
1,1,2,2-Tetrachloroethane	13	U	13	2.5	ug/L			03/10/15 22:14	12.5
Acrylonitrile	250	U	250	6.8	ug/L			03/10/15 22:14	12.5
1,4-Dioxane	2500	U	2500	430	ug/L			03/10/15 22:14	12.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 135		03/10/15 22:14	12.5
Toluene-d8 (Surr)	105		71 - 118		03/10/15 22:14	12.5
4-Bromofluorobenzene (Surr)	100		70 - 118		03/10/15 22:14	12.5
Dibromofluoromethane (Surr)	98		70 - 128		03/10/15 22:14	12.5

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-MW-132-0/1-0

Date Collected: 02/27/15 09:40

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	2.5	U	2.5	0.71	ug/L			03/11/15 21:36	2.5
Vinyl chloride	2.5	U	2.5	0.57	ug/L			03/11/15 21:36	2.5
Bromomethane	2.5	U *	2.5	0.78	ug/L			03/11/15 21:36	2.5
Chloroethane	2.5	U *	2.5	0.54	ug/L			03/11/15 21:36	2.5
1,1-Dichloroethene	19		2.5	0.74	ug/L			03/11/15 21:36	2.5
Acetone	13	U	13	6.3	ug/L			03/11/15 21:36	2.5
Carbon disulfide	2.5	U	2.5	0.53	ug/L			03/11/15 21:36	2.5
Methylene Chloride	2.5	U	2.5	0.31	ug/L			03/11/15 21:36	2.5
trans-1,2-Dichloroethene	3.0		2.5	0.42	ug/L			03/11/15 21:36	2.5
Methyl tert-butyl ether	2.5	U	2.5	0.46	ug/L			03/11/15 21:36	2.5
1,1-Dichloroethane	13		2.5	0.29	ug/L			03/11/15 21:36	2.5
cis-1,2-Dichloroethene	530	E	2.5	0.59	ug/L			03/11/15 21:36	2.5
Bromochloromethane	2.5	U	2.5	0.45	ug/L			03/11/15 21:36	2.5
2-Butanone (MEK)	13	U	13	1.4	ug/L			03/11/15 21:36	2.5
Chloroform	2.5	U	2.5	0.43	ug/L			03/11/15 21:36	2.5
1,1,1-Trichloroethane	2.5	U	2.5	0.72	ug/L			03/11/15 21:36	2.5
Carbon tetrachloride	2.5	U	2.5	0.34	ug/L			03/11/15 21:36	2.5
Benzene	2.5	U	2.5	0.26	ug/L			03/11/15 21:36	2.5
1,2-Dichloroethane	2.5	U	2.5	0.53	ug/L			03/11/15 21:36	2.5
Trichloroethene	440	E	2.5	0.36	ug/L			03/11/15 21:36	2.5
1,2-Dichloropropane	2.5	U	2.5	0.24	ug/L			03/11/15 21:36	2.5
Bromodichloromethane	2.5	U	2.5	0.33	ug/L			03/11/15 21:36	2.5
cis-1,3-Dichloropropene	2.5	U *	2.5	0.47	ug/L			03/11/15 21:36	2.5
4-Methyl-2-pentanone (MIBK)	13	U	13	1.3	ug/L			03/11/15 21:36	2.5
Toluene	2.5	U	2.5	0.38	ug/L			03/11/15 21:36	2.5
trans-1,3-Dichloropropene	2.5	U *	2.5	0.37	ug/L			03/11/15 21:36	2.5
1,1,2-Trichloroethane	2.5	U	2.5	0.50	ug/L			03/11/15 21:36	2.5
Tetrachloroethene	1.8	J	2.5	0.37	ug/L			03/11/15 21:36	2.5
2-Hexanone	13	U	13	0.40	ug/L			03/11/15 21:36	2.5
Dibromochloromethane	2.5	U	2.5	0.34	ug/L			03/11/15 21:36	2.5
1,2-Dibromoethane (EDB)	2.5	U	2.5	0.45	ug/L			03/11/15 21:36	2.5
Chlorobenzene	2.5	U	2.5	0.34	ug/L			03/11/15 21:36	2.5
1,1,1,2-Tetrachloroethane	2.5	U	2.5	0.69	ug/L			03/11/15 21:36	2.5
Ethylbenzene	2.5	U	2.5	0.57	ug/L			03/11/15 21:36	2.5
Xylenes, Total	7.5	U	7.5	1.2	ug/L			03/11/15 21:36	2.5
Styrene	2.5	U	2.5	0.24	ug/L			03/11/15 21:36	2.5
Bromoform	2.5	U	2.5	0.48	ug/L			03/11/15 21:36	2.5
1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.50	ug/L			03/11/15 21:36	2.5
Acrylonitrile	50	U	50	1.4	ug/L			03/11/15 21:36	2.5
1,4-Dioxane	500	U	500	86	ug/L			03/11/15 21:36	2.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		64 - 135		03/11/15 21:36	2.5
Toluene-d8 (Surr)	105		71 - 118		03/11/15 21:36	2.5
4-Bromofluorobenzene (Surr)	105		70 - 118		03/11/15 21:36	2.5
Dibromofluoromethane (Surr)	105		70 - 128		03/11/15 21:36	2.5

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-MW-95-0/1-0

Date Collected: 02/27/15 11:00

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/11/15 17:10	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/11/15 17:10	1
Bromomethane	1.0	U *	1.0	0.31	ug/L			03/11/15 17:10	1
Chloroethane	1.0	U *	1.0	0.21	ug/L			03/11/15 17:10	1
1,1-Dichloroethene	0.30	J	1.0	0.30	ug/L			03/11/15 17:10	1
Acetone	5.0	U	5.0	2.5	ug/L			03/11/15 17:10	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/11/15 17:10	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/11/15 17:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/11/15 17:10	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/11/15 17:10	1
1,1-Dichloroethane	0.29	J	1.0	0.12	ug/L			03/11/15 17:10	1
cis-1,2-Dichloroethene	6.1		1.0	0.24	ug/L			03/11/15 17:10	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/11/15 17:10	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/11/15 17:10	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/11/15 17:10	1
1,1,1-Trichloroethane	0.46	J	1.0	0.29	ug/L			03/11/15 17:10	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/11/15 17:10	1
Benzene	1.0	U	1.0	0.11	ug/L			03/11/15 17:10	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/11/15 17:10	1
Trichloroethene	4.3		1.0	0.14	ug/L			03/11/15 17:10	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/11/15 17:10	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/11/15 17:10	1
cis-1,3-Dichloropropene	1.0	U *	1.0	0.19	ug/L			03/11/15 17:10	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/11/15 17:10	1
Toluene	1.0	U	1.0	0.15	ug/L			03/11/15 17:10	1
trans-1,3-Dichloropropene	1.0	U *	1.0	0.15	ug/L			03/11/15 17:10	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/11/15 17:10	1
Tetrachloroethene	4.3		1.0	0.15	ug/L			03/11/15 17:10	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/11/15 17:10	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/11/15 17:10	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/11/15 17:10	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/11/15 17:10	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/11/15 17:10	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/11/15 17:10	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/11/15 17:10	1
Styrene	1.0	U	1.0	0.097	ug/L			03/11/15 17:10	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/11/15 17:10	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/11/15 17:10	1
Acrylonitrile	20	U	20	0.55	ug/L			03/11/15 17:10	1
1,4-Dioxane	200	U	200	34	ug/L			03/11/15 17:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		64 - 135		03/11/15 17:10	1
Toluene-d8 (Surr)	106		71 - 118		03/11/15 17:10	1
4-Bromofluorobenzene (Surr)	108		70 - 118		03/11/15 17:10	1
Dibromofluoromethane (Surr)	100		70 - 128		03/11/15 17:10	1

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-MW-97-0/1-0

Date Collected: 02/27/15 10:45

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	25	U	25	7.1	ug/L			03/11/15 17:35	25
Vinyl chloride	8.2	J	25	5.7	ug/L			03/11/15 17:35	25
Bromomethane	25	U *	25	7.8	ug/L			03/11/15 17:35	25
Chloroethane	25	U *	25	5.4	ug/L			03/11/15 17:35	25
1,1-Dichloroethene	9.2	J	25	7.4	ug/L			03/11/15 17:35	25
Acetone	130	U	130	63	ug/L			03/11/15 17:35	25
Carbon disulfide	25	U	25	5.3	ug/L			03/11/15 17:35	25
Methylene Chloride	25	U	25	3.1	ug/L			03/11/15 17:35	25
trans-1,2-Dichloroethene	25	U	25	4.2	ug/L			03/11/15 17:35	25
Methyl tert-butyl ether	25	U	25	4.6	ug/L			03/11/15 17:35	25
1,1-Dichloroethane	5.2	J	25	2.9	ug/L			03/11/15 17:35	25
cis-1,2-Dichloroethene	470		25	5.9	ug/L			03/11/15 17:35	25
Bromochloromethane	25	U	25	4.5	ug/L			03/11/15 17:35	25
2-Butanone (MEK)	130	U	130	14	ug/L			03/11/15 17:35	25
Chloroform	25	U	25	4.3	ug/L			03/11/15 17:35	25
1,1,1-Trichloroethane	8.8	J	25	7.2	ug/L			03/11/15 17:35	25
Carbon tetrachloride	25	U	25	3.4	ug/L			03/11/15 17:35	25
Benzene	25	U	25	2.6	ug/L			03/11/15 17:35	25
1,2-Dichloroethane	25	U	25	5.3	ug/L			03/11/15 17:35	25
Trichloroethene	610		25	3.6	ug/L			03/11/15 17:35	25
1,2-Dichloropropane	25	U	25	2.4	ug/L			03/11/15 17:35	25
Bromodichloromethane	25	U	25	3.3	ug/L			03/11/15 17:35	25
cis-1,3-Dichloropropene	25	U *	25	4.7	ug/L			03/11/15 17:35	25
4-Methyl-2-pentanone (MIBK)	130	U	130	13	ug/L			03/11/15 17:35	25
Toluene	25	U	25	3.8	ug/L			03/11/15 17:35	25
trans-1,3-Dichloropropene	25	U *	25	3.7	ug/L			03/11/15 17:35	25
1,1,2-Trichloroethane	25	U	25	5.0	ug/L			03/11/15 17:35	25
Tetrachloroethene	85		25	3.7	ug/L			03/11/15 17:35	25
2-Hexanone	130	U	130	4.0	ug/L			03/11/15 17:35	25
Dibromochloromethane	25	U	25	3.4	ug/L			03/11/15 17:35	25
1,2-Dibromoethane (EDB)	25	U	25	4.5	ug/L			03/11/15 17:35	25
Chlorobenzene	25	U	25	3.4	ug/L			03/11/15 17:35	25
1,1,1,2-Tetrachloroethane	25	U	25	6.9	ug/L			03/11/15 17:35	25
Ethylbenzene	25	U	25	5.7	ug/L			03/11/15 17:35	25
Xylenes, Total	75	U	75	12	ug/L			03/11/15 17:35	25
Styrene	25	U	25	2.4	ug/L			03/11/15 17:35	25
Bromoform	25	U	25	4.8	ug/L			03/11/15 17:35	25
1,1,2,2-Tetrachloroethane	25	U	25	5.0	ug/L			03/11/15 17:35	25
Acrylonitrile	500	U	500	14	ug/L			03/11/15 17:35	25
1,4-Dioxane	5000	U	5000	860	ug/L			03/11/15 17:35	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		64 - 135		03/11/15 17:35	25
Toluene-d8 (Surr)	103		71 - 118		03/11/15 17:35	25
4-Bromofluorobenzene (Surr)	107		70 - 118		03/11/15 17:35	25
Dibromofluoromethane (Surr)	102		70 - 128		03/11/15 17:35	25

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

Client Sample ID: HD-MW-132-0/1-0

Date Collected: 02/27/15 09:40

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	25	U	25	7.1	ug/L			03/11/15 16:46	25
Vinyl chloride	25	U	25	5.7	ug/L			03/11/15 16:46	25
Bromomethane	25	U *	25	7.8	ug/L			03/11/15 16:46	25
Chloroethane	25	U *	25	5.4	ug/L			03/11/15 16:46	25
1,1-Dichloroethene	21	J	25	7.4	ug/L			03/11/15 16:46	25
Acetone	130	U	130	63	ug/L			03/11/15 16:46	25
Carbon disulfide	25	U	25	5.3	ug/L			03/11/15 16:46	25
Methylene Chloride	25	U	25	3.1	ug/L			03/11/15 16:46	25
trans-1,2-Dichloroethene	25	U	25	4.2	ug/L			03/11/15 16:46	25
Methyl tert-butyl ether	25	U	25	4.6	ug/L			03/11/15 16:46	25
1,1-Dichloroethane	13	J	25	2.9	ug/L			03/11/15 16:46	25
cis-1,2-Dichloroethene	590		25	5.9	ug/L			03/11/15 16:46	25
Bromochloromethane	25	U	25	4.5	ug/L			03/11/15 16:46	25
2-Butanone (MEK)	130	U	130	14	ug/L			03/11/15 16:46	25
Chloroform	25	U	25	4.3	ug/L			03/11/15 16:46	25
1,1,1-Trichloroethane	25	U	25	7.2	ug/L			03/11/15 16:46	25
Carbon tetrachloride	25	U	25	3.4	ug/L			03/11/15 16:46	25
Benzene	25	U	25	2.6	ug/L			03/11/15 16:46	25
1,2-Dichloroethane	25	U	25	5.3	ug/L			03/11/15 16:46	25
Trichloroethene	500		25	3.6	ug/L			03/11/15 16:46	25
1,2-Dichloropropane	25	U	25	2.4	ug/L			03/11/15 16:46	25
Bromodichloromethane	25	U	25	3.3	ug/L			03/11/15 16:46	25
cis-1,3-Dichloropropene	25	U *	25	4.7	ug/L			03/11/15 16:46	25
4-Methyl-2-pentanone (MIBK)	130	U	130	13	ug/L			03/11/15 16:46	25
Toluene	25	U	25	3.8	ug/L			03/11/15 16:46	25
trans-1,3-Dichloropropene	25	U *	25	3.7	ug/L			03/11/15 16:46	25
1,1,2-Trichloroethane	25	U	25	5.0	ug/L			03/11/15 16:46	25
Tetrachloroethene	25	U	25	3.7	ug/L			03/11/15 16:46	25
2-Hexanone	130	U	130	4.0	ug/L			03/11/15 16:46	25
Dibromochloromethane	25	U	25	3.4	ug/L			03/11/15 16:46	25
1,2-Dibromoethane (EDB)	25	U	25	4.5	ug/L			03/11/15 16:46	25
Chlorobenzene	25	U	25	3.4	ug/L			03/11/15 16:46	25
1,1,1,2-Tetrachloroethane	25	U	25	6.9	ug/L			03/11/15 16:46	25
Ethylbenzene	25	U	25	5.7	ug/L			03/11/15 16:46	25
Xylenes, Total	75	U	75	12	ug/L			03/11/15 16:46	25
Styrene	25	U	25	2.4	ug/L			03/11/15 16:46	25
Bromoform	25	U	25	4.8	ug/L			03/11/15 16:46	25
1,1,2,2-Tetrachloroethane	25	U	25	5.0	ug/L			03/11/15 16:46	25
Acrylonitrile	500	U	500	14	ug/L			03/11/15 16:46	25
1,4-Dioxane	5000	U	5000	860	ug/L			03/11/15 16:46	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 135		03/11/15 16:46	25
Toluene-d8 (Surr)	102		71 - 118		03/11/15 16:46	25
4-Bromofluorobenzene (Surr)	105		70 - 118		03/11/15 16:46	25
Dibromofluoromethane (Surr)	99		70 - 128		03/11/15 16:46	25

TestAmerica Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-MW-50S-0/1-0

Lab Sample ID: 180-41613-4

Date Collected: 02/27/15 09:55

Matrix: Water

Date Received: 02/28/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.7	H B	0.10	0.0062	mg/L	—		03/01/15 15:09	1
Chloride	170	B	1.0	0.20	mg/L			03/01/15 15:09	1
Sulfate	57		1.0	0.21	mg/L			03/01/15 15:09	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-MW-51D-0/1-0

Date Collected: 02/27/15 10:05

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.88	H B	0.10	0.0062	mg/L			03/01/15 15:24	1
Chloride	170	B	1.0	0.20	mg/L			03/01/15 15:24	1
Sulfate	63		1.0	0.21	mg/L			03/01/15 15:24	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-MW-127-0/1-0

Date Collected: 02/27/15 09:35

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.4	H B	0.10	0.0062	mg/L			03/01/15 15:40	1
Chloride	100	B	1.0	0.20	mg/L			03/01/15 15:40	1
Sulfate	7.6		1.0	0.21	mg/L			03/01/15 15:40	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-MW-132-0/1-0

Date Collected: 02/27/15 09:40

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	4.6	H B	0.10	0.0062	mg/L			03/01/15 15:55	1
Chloride	11	B	1.0	0.20	mg/L			03/01/15 15:55	1
Sulfate	3.9		1.0	0.21	mg/L			03/01/15 15:55	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-MW-95-0/1-0

Date Collected: 02/27/15 11:00

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.70	H B	0.10	0.0062	mg/L			03/01/15 16:10	1
Chloride	60	B	1.0	0.20	mg/L			03/01/15 16:10	1
Sulfate	37		1.0	0.21	mg/L			03/01/15 16:10	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-MW-97-0/1-0

Date Collected: 02/27/15 10:45

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.8	H B	0.10	0.0062	mg/L			03/01/15 16:25	1
Chloride	130	B	1.0	0.20	mg/L			03/01/15 16:25	1
Sulfate	30		1.0	0.21	mg/L			03/01/15 16:25	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-MW-50S-0/1-0

Lab Sample ID: 180-41613-4

Date Collected: 02/27/15 09:55

Matrix: Water

Date Received: 02/28/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	120000	B	100	2.8	ug/L	—	03/03/15 08:32	03/12/15 10:27	1
Potassium	9500		100	5.8	ug/L		03/03/15 08:32	03/12/15 10:27	1
Magnesium	16000		100	1.2	ug/L		03/03/15 08:32	03/12/15 10:27	1
Sodium	50000	B	100	3.8	ug/L		03/03/15 08:32	03/12/15 10:27	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-MW-51D-0/1-0

Date Collected: 02/27/15 10:05

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	100000	B	100	2.8	ug/L		03/03/15 08:32	03/12/15 10:48	1
Potassium	24000		100	5.8	ug/L		03/03/15 08:32	03/12/15 10:48	1
Magnesium	30000		100	1.2	ug/L		03/03/15 08:32	03/12/15 10:48	1
Sodium	49000	B	100	3.8	ug/L		03/03/15 08:32	03/12/15 10:48	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-MW-127-0/1-0

Date Collected: 02/27/15 09:35

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	100000	B	100	2.8	ug/L		03/03/15 08:32	03/12/15 10:52	1
Potassium	4200		100	5.8	ug/L		03/03/15 08:32	03/12/15 10:52	1
Magnesium	21000		100	1.2	ug/L		03/03/15 08:32	03/12/15 10:52	1
Sodium	25000	B	100	3.8	ug/L		03/03/15 08:32	03/12/15 10:52	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-MW-132-0/1-0

Date Collected: 02/27/15 09:40

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	56000	B	100	2.8	ug/L		03/03/15 08:32	03/12/15 10:57	1
Potassium	1800		100	5.8	ug/L		03/03/15 08:32	03/12/15 10:57	1
Magnesium	4100		100	1.2	ug/L		03/03/15 08:32	03/12/15 10:57	1
Sodium	4800	B	100	3.8	ug/L		03/03/15 08:32	03/12/15 10:57	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-MW-95-0/1-0

Date Collected: 02/27/15 11:00

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	110000	B	100	2.8	ug/L		03/03/15 08:32	03/12/15 11:13	1
Potassium	3100		100	5.8	ug/L		03/03/15 08:32	03/12/15 11:13	1
Magnesium	9100		100	1.2	ug/L		03/03/15 08:32	03/12/15 11:13	1
Sodium	30000	B	100	3.8	ug/L		03/03/15 08:32	03/12/15 11:13	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-MW-97-0/1-0

Date Collected: 02/27/15 10:45

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	93000	B	100	2.8	ug/L		03/03/15 08:32	03/12/15 11:17	1
Potassium	6800		100	5.8	ug/L		03/03/15 08:32	03/12/15 11:17	1
Magnesium	20000		100	1.2	ug/L		03/03/15 08:32	03/12/15 11:17	1
Sodium	40000	B	100	3.8	ug/L		03/03/15 08:32	03/12/15 11:17	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

General Chemistry

Client Sample ID: HD-MW-50S-0/1-0

Date Collected: 02/27/15 09:55

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	230	B	5.0	0.41	mg/L	—		03/11/15 05:30	1
Bicarbonate Alkalinity as CaCO3	230	B	5.0	0.41	mg/L			03/11/15 05:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/11/15 05:30	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

General Chemistry

Client Sample ID: HD-MW-51D-0/1-0

Date Collected: 02/27/15 10:05

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	290	B	5.0	0.41	mg/L			03/11/15 05:30	1
Bicarbonate Alkalinity as CaCO3	290	B	5.0	0.41	mg/L			03/11/15 05:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/11/15 05:30	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

General Chemistry

Client Sample ID: HD-MW-127-0/1-0

Date Collected: 02/27/15 09:35

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	270	B	5.0	0.41	mg/L			03/11/15 05:30	1
Bicarbonate Alkalinity as CaCO3	270	B	5.0	0.41	mg/L			03/11/15 05:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/11/15 05:30	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

General Chemistry

Client Sample ID: HD-MW-132-0/1-0

Date Collected: 02/27/15 09:40

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	160	B	5.0	0.41	mg/L			03/11/15 05:30	1
Bicarbonate Alkalinity as CaCO3	160	B	5.0	0.41	mg/L			03/11/15 05:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/11/15 05:30	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

General Chemistry

Client Sample ID: HD-MW-95-0/1-0

Date Collected: 02/27/15 11:00

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	270	B	5.0	0.41	mg/L			03/11/15 05:30	1
Bicarbonate Alkalinity as CaCO3	270	B	5.0	0.41	mg/L			03/11/15 05:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/11/15 05:30	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

General Chemistry

Client Sample ID: HD-MW-97-0/1-0

Date Collected: 02/27/15 10:45

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	220	B	5.0	0.41	mg/L			03/11/15 05:30	1
Bicarbonate Alkalinity as CaCO3	220	B	5.0	0.41	mg/L			03/11/15 05:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/11/15 05:30	1

Default Detection Limits

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.28	ug/L	8260C
1,1,1-Trichloroethane	1.0	0.29	ug/L	8260C
1,1,2,2-Tetrachloroethane	1.0	0.20	ug/L	8260C
1,1,2-Trichloroethane	1.0	0.20	ug/L	8260C
1,1-Dichloroethane	1.0	0.12	ug/L	8260C
1,1-Dichloroethene	1.0	0.30	ug/L	8260C
1,2-Dibromoethane (EDB)	1.0	0.18	ug/L	8260C
1,2-Dichloroethane	1.0	0.21	ug/L	8260C
1,2-Dichloropropane	1.0	0.095	ug/L	8260C
1,4-Dioxane	200	34	ug/L	8260C
2-Butanone (MEK)	5.0	0.55	ug/L	8260C
2-Hexanone	5.0	0.16	ug/L	8260C
4-Methyl-2-pentanone (MIBK)	5.0	0.53	ug/L	8260C
Acetone	5.0	2.5	ug/L	8260C
Acrylonitrile	20	0.55	ug/L	8260C
Benzene	1.0	0.11	ug/L	8260C
Bromochloromethane	1.0	0.18	ug/L	8260C
Bromodichloromethane	1.0	0.13	ug/L	8260C
Bromoform	1.0	0.19	ug/L	8260C
Bromomethane	1.0	0.31	ug/L	8260C
Carbon disulfide	1.0	0.21	ug/L	8260C
Carbon tetrachloride	1.0	0.14	ug/L	8260C
Chlorobenzene	1.0	0.14	ug/L	8260C
Chloroethane	1.0	0.21	ug/L	8260C
Chloroform	1.0	0.17	ug/L	8260C
Chloromethane	1.0	0.28	ug/L	8260C
cis-1,2-Dichloroethene	1.0	0.24	ug/L	8260C
cis-1,3-Dichloropropene	1.0	0.19	ug/L	8260C
Dibromochloromethane	1.0	0.14	ug/L	8260C
Ethylbenzene	1.0	0.23	ug/L	8260C
Methyl tert-butyl ether	1.0	0.18	ug/L	8260C
Methylene Chloride	1.0	0.13	ug/L	8260C
Styrene	1.0	0.097	ug/L	8260C
Tetrachloroethene	1.0	0.15	ug/L	8260C
Toluene	1.0	0.15	ug/L	8260C
trans-1,2-Dichloroethene	1.0	0.17	ug/L	8260C
trans-1,3-Dichloropropene	1.0	0.15	ug/L	8260C
Trichloroethene	1.0	0.14	ug/L	8260C
Vinyl chloride	1.0	0.23	ug/L	8260C
Xylenes, Total	3.0	0.49	ug/L	8260C

Method: 300.0 - Anions, Ion Chromatography

Analyte	RL	MDL	Units	Method
Chloride	1.0	0.20	mg/L	300.0
Nitrate as N	0.10	0.0062	mg/L	300.0
Sulfate	1.0	0.21	mg/L	300.0

Method: 6020A - Metals (ICP/MS)

Analyte	RL	MDL	Units	Method
Calcium	100	2.8	ug/L	6020A

TestAmerica Pittsburgh

Default Detection Limits

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	RL	MDL	Units	Method
Magnesium	100	1.2	ug/L	6020A
Potassium	100	5.8	ug/L	6020A
Sodium	100	3.8	ug/L	6020A

General Chemistry

Analyte	RL	MDL	Units	Method
Bicarbonate Alkalinity as CaCO ₃	5.0	0.41	mg/L	SM 2320B
Carbonate Alkalinity as CaCO ₃	5.0	0.41	mg/L	SM 2320B
Total Alkalinity as CaCO ₃ to pH 4.5	5.0	0.41	mg/L	SM 2320B

Surrogate Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (64-135)	TOL (71-118)	BFB (70-118)	DBFM (70-128)
180-41613-1	HD-QC-5-0/1-2	103	102	103	100
180-41613-2	HD-QC-2-0/1-3	101	102	103	96
180-41613-3	HD-QC-2-0/1-4	113	109	109	101
180-41613-4	HD-MW-50S-0/1-0	105	103	106	104
180-41613-5	HD-MW-51D-0/1-0	103	103	103	99
180-41613-6	HD-MW-127-0/1-0	99	105	100	98
180-41613-7 - DL	HD-MW-132-0/1-0	108	102	105	99
180-41613-7	HD-MW-132-0/1-0	112	105	105	105
180-41613-8	HD-MW-95-0/1-0	112	106	108	100
180-41613-9	HD-MW-97-0/1-0	112	103	107	102
LCS 180-135153/7	Lab Control Sample	100	109	100	100
LCS 180-135260/8	Lab Control Sample	113	109	106	103
MB 180-135153/4	Method Blank	101	101	101	97
MB 180-135260/5	Method Blank	112	107	108	99

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-135153/4

Matrix: Water

Analysis Batch: 135153

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/10/15 12:44	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/10/15 12:44	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/10/15 12:44	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/10/15 12:44	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/10/15 12:44	1
Acetone	5.0	U	5.0	2.5	ug/L			03/10/15 12:44	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/10/15 12:44	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/10/15 12:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/10/15 12:44	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/10/15 12:44	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/10/15 12:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/10/15 12:44	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/10/15 12:44	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/10/15 12:44	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/10/15 12:44	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/10/15 12:44	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/10/15 12:44	1
Benzene	1.0	U	1.0	0.11	ug/L			03/10/15 12:44	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/10/15 12:44	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/10/15 12:44	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/10/15 12:44	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/10/15 12:44	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/10/15 12:44	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/10/15 12:44	1
Toluene	1.0	U	1.0	0.15	ug/L			03/10/15 12:44	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/10/15 12:44	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/10/15 12:44	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/10/15 12:44	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/10/15 12:44	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/10/15 12:44	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/10/15 12:44	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/10/15 12:44	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/10/15 12:44	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/10/15 12:44	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/10/15 12:44	1
Styrene	1.0	U	1.0	0.097	ug/L			03/10/15 12:44	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/10/15 12:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/10/15 12:44	1
Acrylonitrile	20	U	20	0.55	ug/L			03/10/15 12:44	1
1,4-Dioxane	200	U	200	34	ug/L			03/10/15 12:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		64 - 135		03/10/15 12:44	1
Toluene-d8 (Surr)	101		71 - 118		03/10/15 12:44	1
4-Bromofluorobenzene (Surr)	101		70 - 118		03/10/15 12:44	1
Dibromofluoromethane (Surr)	97		70 - 128		03/10/15 12:44	1

TestAmerica Pittsburgh

QC Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-135153/7

Matrix: Water

Analysis Batch: 135153

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	8.77		ug/L		88	50 - 139
Vinyl chloride	10.0	9.10		ug/L		91	53 - 138
Bromomethane	10.0	12.6		ug/L		126	33 - 150
Chloroethane	10.0	11.2		ug/L		112	36 - 142
1,1-Dichloroethene	10.0	9.96		ug/L		100	65 - 136
Acetone	20.0	19.9		ug/L		100	22 - 150
Carbon disulfide	10.0	9.92		ug/L		99	54 - 132
Methylene Chloride	10.0	9.53		ug/L		95	63 - 129
trans-1,2-Dichloroethene	10.0	10.3		ug/L		103	73 - 126
Methyl tert-butyl ether	10.0	6.36		ug/L		64	64 - 123
1,1-Dichloroethane	10.0	9.34		ug/L		93	73 - 126
cis-1,2-Dichloroethene	10.0	9.85		ug/L		99	70 - 120
Bromochloromethane	10.0	9.21		ug/L		92	70 - 127
2-Butanone (MEK)	20.0	17.5		ug/L		87	39 - 138
Chloroform	10.0	9.97		ug/L		100	72 - 127
1,1,1-Trichloroethane	10.0	7.66		ug/L		77	63 - 133
Carbon tetrachloride	10.0	9.07		ug/L		91	55 - 150
Benzene	10.0	9.95		ug/L		99	80 - 120
1,2-Dichloroethane	10.0	10.2		ug/L		102	68 - 132
Trichloroethene	10.0	10.3		ug/L		103	73 - 120
1,2-Dichloropropane	10.0	8.70		ug/L		87	76 - 124
Bromodichloromethane	10.0	10.1		ug/L		101	66 - 130
cis-1,3-Dichloropropene	10.0	6.54	*	ug/L		65	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	17.4		ug/L		87	45 - 145
Toluene	10.0	10.9		ug/L		109	80 - 123
trans-1,3-Dichloropropene	10.0	5.53	*	ug/L		55	65 - 125
1,1,2-Trichloroethane	10.0	10.4		ug/L		104	77 - 127
Tetrachloroethene	10.0	11.1		ug/L		111	70 - 135
2-Hexanone	20.0	15.4		ug/L		77	25 - 132
Dibromochloromethane	10.0	10.7		ug/L		107	60 - 140
1,2-Dibromoethane (EDB)	10.0	9.28		ug/L		93	74 - 123
Chlorobenzene	10.0	10.6		ug/L		106	80 - 120
1,1,1,2-Tetrachloroethane	10.0	9.41		ug/L		94	63 - 140
Ethylbenzene	10.0	11.0		ug/L		110	72 - 126
Xylenes, Total	20.0	21.8		ug/L		109	76 - 128
Styrene	10.0	10.3		ug/L		103	71 - 127
Bromoform	10.0	11.1		ug/L		111	46 - 150
1,1,2,2-Tetrachloroethane	10.0	10.6		ug/L		106	62 - 125
1,4-Dioxane	200	184	J	ug/L		92	10 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		64 - 135
Toluene-d8 (Surr)	109		71 - 118
4-Bromofluorobenzene (Surr)	100		70 - 118
Dibromofluoromethane (Surr)	100		70 - 128

QC Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-135260/5

Matrix: Water

Analysis Batch: 135260

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/11/15 12:32	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/11/15 12:32	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/11/15 12:32	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/11/15 12:32	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/11/15 12:32	1
Acetone	5.0	U	5.0	2.5	ug/L			03/11/15 12:32	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/11/15 12:32	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/11/15 12:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/11/15 12:32	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/11/15 12:32	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/11/15 12:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/11/15 12:32	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/11/15 12:32	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/11/15 12:32	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/11/15 12:32	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/11/15 12:32	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/11/15 12:32	1
Benzene	1.0	U	1.0	0.11	ug/L			03/11/15 12:32	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/11/15 12:32	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/11/15 12:32	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/11/15 12:32	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/11/15 12:32	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/11/15 12:32	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/11/15 12:32	1
Toluene	1.0	U	1.0	0.15	ug/L			03/11/15 12:32	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/11/15 12:32	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/11/15 12:32	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/11/15 12:32	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/11/15 12:32	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/11/15 12:32	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/11/15 12:32	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/11/15 12:32	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/11/15 12:32	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/11/15 12:32	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/11/15 12:32	1
Styrene	1.0	U	1.0	0.097	ug/L			03/11/15 12:32	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/11/15 12:32	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/11/15 12:32	1
Acrylonitrile	20	U	20	0.55	ug/L			03/11/15 12:32	1
1,4-Dioxane	200	U	200	34	ug/L			03/11/15 12:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		64 - 135		03/11/15 12:32	1
Toluene-d8 (Surr)	107		71 - 118		03/11/15 12:32	1
4-Bromofluorobenzene (Surr)	108		70 - 118		03/11/15 12:32	1
Dibromofluoromethane (Surr)	99		70 - 128		03/11/15 12:32	1

TestAmerica Pittsburgh

QC Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-135260/8

Matrix: Water

Analysis Batch: 135260

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	7.06		ug/L		71	50 - 139
Vinyl chloride	10.0	8.54		ug/L		85	53 - 138
Bromomethane	10.0	17.6	*	ug/L		176	33 - 150
Chloroethane	10.0	14.7	*	ug/L		147	36 - 142
1,1-Dichloroethene	10.0	9.10		ug/L		91	65 - 136
Acetone	20.0	20.9		ug/L		104	22 - 150
Carbon disulfide	10.0	9.10		ug/L		91	54 - 132
Methylene Chloride	10.0	9.76		ug/L		98	63 - 129
trans-1,2-Dichloroethene	10.0	9.64		ug/L		96	73 - 126
Methyl tert-butyl ether	10.0	6.63		ug/L		66	64 - 123
1,1-Dichloroethane	10.0	9.32		ug/L		93	73 - 126
cis-1,2-Dichloroethene	10.0	9.49		ug/L		95	70 - 120
Bromochloromethane	10.0	10.2		ug/L		102	70 - 127
2-Butanone (MEK)	20.0	17.9		ug/L		89	39 - 138
Chloroform	10.0	10.7		ug/L		107	72 - 127
1,1,1-Trichloroethane	10.0	8.16		ug/L		82	63 - 133
Carbon tetrachloride	10.0	9.82		ug/L		98	55 - 150
Benzene	10.0	9.62		ug/L		96	80 - 120
1,2-Dichloroethane	10.0	10.7		ug/L		107	68 - 132
Trichloroethene	10.0	9.96		ug/L		100	73 - 120
1,2-Dichloropropane	10.0	8.53		ug/L		85	76 - 124
Bromodichloromethane	10.0	10.6		ug/L		106	66 - 130
cis-1,3-Dichloropropene	10.0	6.52	*	ug/L		65	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	16.6		ug/L		83	45 - 145
Toluene	10.0	10.8		ug/L		108	80 - 123
trans-1,3-Dichloropropene	10.0	6.00	*	ug/L		60	65 - 125
1,1,2-Trichloroethane	10.0	10.4		ug/L		104	77 - 127
Tetrachloroethene	10.0	10.8		ug/L		108	70 - 135
2-Hexanone	20.0	16.3		ug/L		82	25 - 132
Dibromochloromethane	10.0	11.7		ug/L		117	60 - 140
1,2-Dibromoethane (EDB)	10.0	9.31		ug/L		93	74 - 123
Chlorobenzene	10.0	10.4		ug/L		104	80 - 120
1,1,1,2-Tetrachloroethane	10.0	9.82		ug/L		98	63 - 140
Ethylbenzene	10.0	10.3		ug/L		103	72 - 126
Xylenes, Total	20.0	21.2		ug/L		106	76 - 128
Styrene	10.0	10.1		ug/L		101	71 - 127
Bromoform	10.0	12.4		ug/L		124	46 - 150
1,1,2,2-Tetrachloroethane	10.0	10.4		ug/L		104	62 - 125
1,4-Dioxane	200	177	J	ug/L		88	10 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	113		64 - 135
Toluene-d8 (Surr)	109		71 - 118
4-Bromofluorobenzene (Surr)	106		70 - 118
Dibromofluoromethane (Surr)	103		70 - 128

QC Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-134458/6

Matrix: Water

Analysis Batch: 134458

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0106	J	0.10	0.0062	mg/L			02/28/15 12:02	1
Chloride	0.281	J	1.0	0.20	mg/L			02/28/15 12:02	1
Sulfate	1.0	U	1.0	0.21	mg/L			02/28/15 12:02	1

Lab Sample ID: LCS 180-134458/5

Matrix: Water

Analysis Batch: 134458

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.72		mg/L		109	90 - 110
Chloride	50.0	50.8		mg/L		102	90 - 110
Sulfate	50.0	50.4		mg/L		101	90 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: 180-41613-4 MS

Matrix: Water

Analysis Batch: 135448

Client Sample ID: HD-MW-50S-0/1-0

Prep Type: Total/NA

Prep Batch: 134585

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	120000	B	50000	170000		ug/L		91	75 - 125
Potassium	9500		50000	54300		ug/L		89	75 - 125
Magnesium	16000		50000	61200		ug/L		91	75 - 125
Sodium	50000	B	50000	94300		ug/L		88	75 - 125

Lab Sample ID: 180-41613-4 MSD

Matrix: Water

Analysis Batch: 135448

Client Sample ID: HD-MW-50S-0/1-0

Prep Type: Total/NA

Prep Batch: 134585

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	120000	B	50000	171000		ug/L		92	75 - 125	0	20
Potassium	9500		50000	55200		ug/L		91	75 - 125	2	20
Magnesium	16000		50000	62600		ug/L		94	75 - 125	2	20
Sodium	50000	B	50000	95400		ug/L		90	75 - 125	1	20

Lab Sample ID: MB 180-134585/1-A

Matrix: Water

Analysis Batch: 135448

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 134585

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	5.27	J	100	2.8	ug/L		03/03/15 08:32	03/12/15 10:18	1
Potassium	100	U	100	5.8	ug/L		03/03/15 08:32	03/12/15 10:18	1
Magnesium	100	U	100	1.2	ug/L		03/03/15 08:32	03/12/15 10:18	1
Sodium	5.05	J	100	3.8	ug/L		03/03/15 08:32	03/12/15 10:18	1

QC Sample Results

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-134585/2-A

Matrix: Water

Analysis Batch: 135448

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 134585

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Calcium	50000	47500		ug/L		95	80 - 120	
Potassium	50000	45900		ug/L		92	80 - 120	
Magnesium	50000	44300		ug/L		89	80 - 120	
Sodium	50000	42800		ug/L		86	80 - 120	

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 180-135183/2

Matrix: Water

Analysis Batch: 135183

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity as CaCO3 to pH 4.5	2.04	J	5.0	0.41	mg/L			03/11/15 05:30	1
Bicarbonate Alkalinity as CaCO3	2.04	J	5.0	0.41	mg/L			03/11/15 05:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/11/15 05:30	1

Lab Sample ID: LCS 180-135183/1

Matrix: Water

Analysis Batch: 135183

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Total Alkalinity as CaCO3 to pH 4.5	250	257		mg/L		103	80 - 120	

Lab Sample ID: 180-41613-4 DU

Matrix: Water

Analysis Batch: 135183

Client Sample ID: HD-MW-50S-0/1-0

Prep Type: Total/NA

Analyte	Sample Sample		DU Result	DU Qualifier	Unit	D	RPD	Limit
	Result	Qualifier						
Total Alkalinity as CaCO3 to pH 4.5	230	B	233		mg/L		0.9	20
Bicarbonate Alkalinity as CaCO3	230	B	233		mg/L		0.9	20
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

QC Association Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

GC/MS VOA

Analysis Batch: 135153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41613-1	HD-QC-5-0/1-2	Total/NA	Water	8260C	
180-41613-2	HD-QC-2-0/1-3	Total/NA	Water	8260C	
180-41613-4	HD-MW-50S-0/1-0	Total/NA	Water	8260C	
180-41613-5	HD-MW-51D-0/1-0	Total/NA	Water	8260C	
180-41613-6	HD-MW-127-0/1-0	Total/NA	Water	8260C	
LCS 180-135153/7	Lab Control Sample	Total/NA	Water	8260C	
MB 180-135153/4	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 135260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41613-3	HD-QC-2-0/1-4	Total/NA	Water	8260C	
180-41613-7 - DL	HD-MW-132-0/1-0	Total/NA	Water	8260C	
180-41613-7	HD-MW-132-0/1-0	Total/NA	Water	8260C	
180-41613-8	HD-MW-95-0/1-0	Total/NA	Water	8260C	
180-41613-9	HD-MW-97-0/1-0	Total/NA	Water	8260C	
LCS 180-135260/8	Lab Control Sample	Total/NA	Water	8260C	
MB 180-135260/5	Method Blank	Total/NA	Water	8260C	

HPLC/IC

Analysis Batch: 134458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41613-4	HD-MW-50S-0/1-0	Total/NA	Water	300.0	
180-41613-5	HD-MW-51D-0/1-0	Total/NA	Water	300.0	
180-41613-6	HD-MW-127-0/1-0	Total/NA	Water	300.0	
180-41613-7	HD-MW-132-0/1-0	Total/NA	Water	300.0	
180-41613-8	HD-MW-95-0/1-0	Total/NA	Water	300.0	
180-41613-9	HD-MW-97-0/1-0	Total/NA	Water	300.0	
LCS 180-134458/5	Lab Control Sample	Total/NA	Water	300.0	
MB 180-134458/6	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 134585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41613-4	HD-MW-50S-0/1-0	Total/NA	Water	3005A	
180-41613-4 MS	HD-MW-50S-0/1-0	Total/NA	Water	3005A	
180-41613-4 MSD	HD-MW-50S-0/1-0	Total/NA	Water	3005A	
180-41613-4 PDS	HD-MW-50S-0/1-0	Total/NA	Water	3005A	
180-41613-4 SD	HD-MW-50S-0/1-0	Total/NA	Water	3005A	
180-41613-5	HD-MW-51D-0/1-0	Total/NA	Water	3005A	
180-41613-6	HD-MW-127-0/1-0	Total/NA	Water	3005A	
180-41613-7	HD-MW-132-0/1-0	Total/NA	Water	3005A	
180-41613-8	HD-MW-95-0/1-0	Total/NA	Water	3005A	
180-41613-9	HD-MW-97-0/1-0	Total/NA	Water	3005A	
LCS 180-134585/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 180-134585/1-A	Method Blank	Total Recoverable	Water	3005A	

QC Association Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Metals (Continued)

Analysis Batch: 135448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41613-4	HD-MW-50S-0/1-0	Total/NA	Water	6020A	134585
180-41613-4 MS	HD-MW-50S-0/1-0	Total/NA	Water	6020A	134585
180-41613-4 MSD	HD-MW-50S-0/1-0	Total/NA	Water	6020A	134585
180-41613-4 PDS	HD-MW-50S-0/1-0	Total/NA	Water	6020A	134585
180-41613-4 SD	HD-MW-50S-0/1-0	Total/NA	Water	6020A	134585
180-41613-5	HD-MW-51D-0/1-0	Total/NA	Water	6020A	134585
180-41613-6	HD-MW-127-0/1-0	Total/NA	Water	6020A	134585
180-41613-7	HD-MW-132-0/1-0	Total/NA	Water	6020A	134585
180-41613-8	HD-MW-95-0/1-0	Total/NA	Water	6020A	134585
180-41613-9	HD-MW-97-0/1-0	Total/NA	Water	6020A	134585
CRI 180-135448/7	DL		Water	6020A	
CRI 180-135448/91	DL		Water	6020A	
ICSA 180-135448/8	ICS		Water	6020A	
ICSAB 180-135448/9	ICS		Water	6020A	
LCS 180-134585/2-A	Lab Control Sample	Total Recoverable	Water	6020A	134585
MB 180-134585/1-A	Method Blank	Total Recoverable	Water	6020A	134585

General Chemistry

Analysis Batch: 135183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41613-4	HD-MW-50S-0/1-0	Total/NA	Water	SM 2320B	
180-41613-4 DU	HD-MW-50S-0/1-0	Total/NA	Water	SM 2320B	
180-41613-5	HD-MW-51D-0/1-0	Total/NA	Water	SM 2320B	
180-41613-6	HD-MW-127-0/1-0	Total/NA	Water	SM 2320B	
180-41613-7	HD-MW-132-0/1-0	Total/NA	Water	SM 2320B	
180-41613-8	HD-MW-95-0/1-0	Total/NA	Water	SM 2320B	
180-41613-9	HD-MW-97-0/1-0	Total/NA	Water	SM 2320B	
LCS 180-135183/1	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 180-135183/2	Method Blank	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Client Sample ID: HD-QC-5-0/1-2

Date Collected: 02/27/15 12:00

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135153	03/10/15 21:50	DLF	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-QC-2-0/1-3

Date Collected: 02/27/15 11:55

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135153	03/10/15 22:38	DLF	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-QC-2-0/1-4

Date Collected: 02/27/15 12:00

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135260	03/11/15 16:22	DLF	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-MW-50S-0/1-0

Date Collected: 02/27/15 09:55

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		50	5 mL	5 mL	135153	03/10/15 21:02	DLF	TAL PIT
Instrument ID: CHHP5										
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134458	03/01/15 15:09	JMO	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Prep	3005A			50 mL	50 mL	134585	03/03/15 08:32	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	135448	03/12/15 10:27	CNF	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	135183	03/11/15 05:30	CLL	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: HD-MW-51D-0/1-0

Date Collected: 02/27/15 10:05

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		50	5 mL	5 mL	135153	03/10/15 21:26	DLF	TAL PIT
Instrument ID: CHHP5										
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134458	03/01/15 15:24	JMO	TAL PIT
Instrument ID: CHIC2100A										

TestAmerica Pittsburgh

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Client Sample ID: HD-MW-51D-0/1-0

Lab Sample ID: 180-41613-5

Date Collected: 02/27/15 10:05

Matrix: Water

Date Received: 02/28/15 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			50 mL	50 mL	134585	03/03/15 08:32	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	135448	03/12/15 10:48	CNF	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	135183	03/11/15 05:30	CLL	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: HD-MW-127-0/1-0

Lab Sample ID: 180-41613-6

Date Collected: 02/27/15 09:35

Matrix: Water

Date Received: 02/28/15 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		12.5	5 mL	5 mL	135153	03/10/15 22:14	DLF	TAL PIT
		Instrument ID: CHHP5								
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134458	03/01/15 15:40	JMO	TAL PIT
		Instrument ID: CHIC2100A								
Total/NA	Prep	3005A			50 mL	50 mL	134585	03/03/15 08:32	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	135448	03/12/15 10:52	CNF	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	135183	03/11/15 05:30	CLL	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: HD-MW-132-0/1-0

Lab Sample ID: 180-41613-7

Date Collected: 02/27/15 09:40

Matrix: Water

Date Received: 02/28/15 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	25	5 mL	5 mL	135260	03/11/15 16:46	DLF	TAL PIT
		Instrument ID: CHHP5								
Total/NA	Analysis	8260C		2.5	5 mL	5 mL	135260	03/11/15 21:36	DLF	TAL PIT
		Instrument ID: CHHP5								
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134458	03/01/15 15:55	JMO	TAL PIT
		Instrument ID: CHIC2100A								
Total/NA	Prep	3005A			50 mL	50 mL	134585	03/03/15 08:32	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	135448	03/12/15 10:57	CNF	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	135183	03/11/15 05:30	CLL	TAL PIT
		Instrument ID: NOEQUIP								

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Client Sample ID: HD-MW-95-0/1-0

Date Collected: 02/27/15 11:00

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135260	03/11/15 17:10	DLF	TAL PIT
		Instrument ID: CHHP5								
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134458	03/01/15 16:10	JMO	TAL PIT
		Instrument ID: CHIC2100A								
Total/NA	Prep	3005A			50 mL	50 mL	134585	03/03/15 08:32	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	135448	03/12/15 11:13	CNF	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	135183	03/11/15 05:30	CLL	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: HD-MW-97-0/1-0

Date Collected: 02/27/15 10:45

Date Received: 02/28/15 09:15

Lab Sample ID: 180-41613-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	5 mL	5 mL	135260	03/11/15 17:35	DLF	TAL PIT
		Instrument ID: CHHP5								
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134458	03/01/15 16:25	JMO	TAL PIT
		Instrument ID: CHIC2100A								
Total/NA	Prep	3005A			50 mL	50 mL	134585	03/03/15 08:32	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	135448	03/12/15 11:17	CNF	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	135183	03/11/15 05:30	CLL	TAL PIT
		Instrument ID: NOEQUIP								

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

AB1 = Ashwin Baikadi

Batch Type: Analysis

CLL = Cheryl Loheyde

CNF = Caitlin Ferguson

DLF = Donald Ferguson

JMO = John Oravec

Certification Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Laboratory: TestAmerica Pittsburgh

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Pennsylvania	NELAP	3	02-00416	04-30-15

Method Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020A	Metals (ICP/MS)	SW846	TAL PIT
SM 2320B	Alkalinity	SM	TAL PIT

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Sample Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41613-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-41613-1	HD-QC-5-0/1-2	Water	02/27/15 12:00	02/28/15 09:15
180-41613-2	HD-QC-2-0/1-3	Water	02/27/15 11:55	02/28/15 09:15
180-41613-3	HD-QC-2-0/1-4	Water	02/27/15 12:00	02/28/15 09:15
180-41613-4	HD-MW-50S-0/1-0	Water	02/27/15 09:55	02/28/15 09:15
180-41613-5	HD-MW-51D-0/1-0	Water	02/27/15 10:05	02/28/15 09:15
180-41613-6	HD-MW-127-0/1-0	Water	02/27/15 09:35	02/28/15 09:15
180-41613-7	HD-MW-132-0/1-0	Water	02/27/15 09:40	02/28/15 09:15
180-41613-8	HD-MW-95-0/1-0	Water	02/27/15 11:00	02/28/15 09:15
180-41613-9	HD-MW-97-0/1-0	Water	02/27/15 10:45	02/28/15 09:15

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 134613Lab Sample ID: IC 180-134613/8 Client Sample ID: _____Date Analyzed: 03/03/15 14:28 Lab File ID: 50303008.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TBA-d9 (IS)	4.31	Peak Tail	fergusond	03/04/15 09:28
1,4-Dioxane	8.07	Peak Tail	fergusond	03/04/15 09:20

Lab Sample ID: ICIS 180-134613/9 Client Sample ID: _____Date Analyzed: 03/03/15 14:52 Lab File ID: 50303009.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TBA-d9 (IS)	4.32	Peak Tail	fergusond	03/04/15 09:28
1,4-Dioxane	8.06	Peak Tail	fergusond	03/04/15 09:25

Lab Sample ID: IC 180-134613/10 Client Sample ID: _____Date Analyzed: 03/03/15 15:16 Lab File ID: 50303010.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TBA-d9 (IS)	4.32	Peak Tail	fergusond	03/04/15 09:31

Lab Sample ID: IC 180-134613/11 Client Sample ID: _____Date Analyzed: 03/03/15 15:40 Lab File ID: 50303011.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TBA-d9 (IS)	4.32	Peak Tail	fergusond	03/04/15 09:33
tert-Butyl alcohol	4.45	Peak Tail	fergusond	03/04/15 09:35

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 134613Lab Sample ID: IC 180-134613/12 Client Sample ID: _____Date Analyzed: 03/03/15 16:04 Lab File ID: 50303012.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
tert-Butyl alcohol	4.45	Peak Tail	fergusond	03/04/15 09:37

Lab Sample ID: IC 180-134613/13 Client Sample ID: _____Date Analyzed: 03/03/15 16:28 Lab File ID: 50303013.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
tert-Butyl alcohol	4.45	Peak Tail	fergusond	03/04/15 09:39

Lab Sample ID: IC 180-134613/18 Client Sample ID: _____Date Analyzed: 03/03/15 18:29 Lab File ID: 50303018.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.52	Peak Tail	fergusond	03/04/15 09:45
Cyclohexane	6.59	Split Peak	fergusond	03/04/15 09:45

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 135153Lab Sample ID: 180-41613-6 Client Sample ID: HD-MW-127-0/1-0Date Analyzed: 03/10/15 22:14 Lab File ID: 50310027.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,2-Dichloroethene	4.55	Split Peak	fergusond	03/11/15 09:24

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
icccv_01178	03/01/15	02/28/15	DI Water, Lot 0	15 mL	ICPRIMARYSTA_00006	0.3 mL	Chloride	50 ug/mL
							Nitrate as N	2.5 ug/mL
							Sulfate	50 ug/mL
.ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Chloride	2500 ug/mL
							Nitrate as N	125 ug/mL
							Sulfate	2500 ug/mL
icicv_01209	03/01/15	02/28/15	DI Water, Lot NA	5 mL	ICSECONDSTD1_00004	0.6 mL	Chloride	60 ug/mL
							Nitrate as N	3 ug/mL
							Sulfate	60 ug/mL
.ICSECONDSTD1_00004	03/01/15	inorganic ventures, Lot H2-MEB512078			(Purchased Reagent)		Chloride	500 ug/mL
							Nitrate as N	25 ug/mL
							Sulfate	500 ug/mL
ICSTDL2_00155	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00200	0.1 mL	Bromide	0.2 ug/mL
							Chloride	1 ug/mL
							Fluoride	0.05 ug/mL
							Nitrate as N	0.05 ug/mL
							Sulfate	1 ug/mL
							Nitrite as N	0.05 ug/mL
.ICSTDL6_00200	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL3_00194	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00200	0.5 mL	Bromide	1 ug/mL
							Chloride	5 ug/mL
							Fluoride	0.25 ug/mL
							Nitrate as N	0.25 ug/mL
							Orthophosphate as P	0.25 ug/mL
							Sulfate	5 ug/mL
							Nitrite as N	0.25 ug/mL
.ICSTDL6_00200	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626		(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL4_00131	02/18/15	02/17/15	DI Water, Lot na	5 mL	ICSTDL7_00131	0.5 mL	Bromide	2 ug/mL
							Chloride	10 ug/mL
							Fluoride	0.5 ug/mL
							Nitrate as N	0.5 ug/mL
							Orthophosphate as P	0.5 ug/mL
							Sulfate	10 ug/mL
							Nitrite as N	0.5 ug/mL
.ICSTDL7_00131	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
					ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
..ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624		(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626		(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL5_00132	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICSTDL7_00131	1 mL	Bromide	4 ug/mL
							Chloride	20 ug/mL
							Fluoride	1 ug/mL
							Nitrate as N	1 ug/mL
							Orthophosphate as P	1 ug/mL
							Sulfate	20 ug/mL
							Nitrite as N	1 ug/mL
.ICSTDL7_00131	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
					ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
..ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624		(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626		(Purchased Reagent)		Nitrite as N	125 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
ICSTDL6_00200	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
.ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624		ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
							(Purchased Reagent)	
							Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
.ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626				Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
							(Purchased Reagent)	
							Nitrite as N	125 ug/mL
ICSTDL7_00131	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
.ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624		ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
							(Purchased Reagent)	
							Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
.ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626				Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
							(Purchased Reagent)	
							Nitrite as N	125 ug/mL
ICSTDL8_00101	02/19/15	02/18/15	DI Water, Lot SUPER Q	10 mL	ICPRIMARYSTA_00006	0.6 mL	Bromide	30 ug/mL
							Chloride	150 ug/mL
							Fluoride	7.5 ug/mL
							Nitrate as N	7.5 ug/mL
							Orthophosphate as P	7.5 ug/mL
							Sulfate	150 ug/mL
.ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624		ICPRIMARYSTDB_00008	0.6 mL	Nitrite as N	7.5 ug/mL
							(Purchased Reagent)	
							Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
.ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626				Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
							(Purchased Reagent)	
							Nitrite as N	125 ug/mL
ICSTDL9_00106	02/19/15	02/18/15	DI Water, Lot SUPER Q	10 mL	ICPRIMARYSTA_00006	0.8 mL	Bromide	40 ug/mL
							Chloride	200 ug/mL
							Fluoride	10 ug/mL
							Nitrate as N	10 ug/mL
							Orthophosphate as P	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Sulfate	200 ug/mL
					ICPRIMARYSTDB_00008	0.8 mL	Nitrite as N	10 ug/mL
.ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
.ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
MCCV1X_00073	04/19/15	02/19/15	2% Nitric Acid, Lot 1241747	500 mL	MCALSPECAREV_00005	10 mL	Calcium	50 ppm
							Magnesium	50 ppm
							Potassium	50 ppm
							Sodium	50 ppm
.MCALSPECAREV_00005	05/01/15	Inorganic Ventures, Lot F2-MEB524026			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MCR1X_00062	04/05/15	03/05/15	HNO3, Lot 1191081	250 mL	MMSCRI-1B_00004	1 mL	Calcium	0.1 ppm
							Magnesium	0.1 ppm
							Potassium	0.1 ppm
							Sodium	0.1 ppm
.MMSCRI-1B_00004	10/01/15	Inorganic Ventures, Lot H2-MEB549023			(Purchased Reagent)		Calcium	25 ppm
							Magnesium	25 ppm
							Potassium	25 ppm
							Sodium	25 ppm
MICSABX_00067	03/20/15	02/20/15	2% Nitric Acid, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm
							Potassium	100 ppm
							Sodium	100 ppm
							Ti	2 ppm
					M6020ICS-0B_00006	1 mL	Ag	0.02 ppm
							As	0.02 ppm
							Cd	0.02 ppm
							Co	0.02 ppm
							Cr	0.02 ppm
							Cu	0.02 ppm
							Mn	0.0225 ppm
							Ni	0.02 ppm
					MMSICSAB-1_00007	0.2 mL	Zn	0.025 ppm
							Ba	0.02 ppm
							Be	0.02 ppm
							Pb	0.02 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MMSICSAB-2_00006	0.2 mL	Sr	0.025 ppm
							Tl	0.02 ppm
							V	0.02 ppm
							B	0.05 ppm
							Sb	0.02 ppm
							Se	0.05 ppm
							Si	0.5 ppm
							Sn	0.1 ppm
.M6020ICS-0A_00005	09/01/15	Inorganic Ventures, Lot G2-MEB476152MCA			(Purchased Reagent)		Al	1000 ppm
							Calcium	1000 ppm
							Fe	1000 ppm
							Magnesium	1000 ppm
							Mo	20 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
							Ti	20 ppm
.M6020ICS-0B_00006	09/01/15	Inorganic Ventures, Lot G2-MEB463151			(Purchased Reagent)		Ag	2 ppm
							As	2 ppm
							Cd	2 ppm
							Co	2 ppm
							Cr	2 ppm
							Cu	2 ppm
							Mn	2.25 ppm
							Ni	2 ppm
.MMSICSAB-1_00007	05/01/15	Inorganic Ventures, Lot F2-MEB524028			(Purchased Reagent)		Zn	2.5 ppm
							Ba	10 ppm
							Be	10 ppm
							Pb	10 ppm
							Sr	12.5 ppm
							Tl	10 ppm
							V	10 ppm
.MMSICSAB-2_00006	05/01/15	Inorganic Ventures, Lot G2-MEB467043			(Purchased Reagent)		B	25 ppm
							Sb	10 ppm
							Se	25 ppm
							Si	250 ppm
							Sn	50 ppm
MICSAX_00063	03/20/15	02/20/15	DI Water, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm
							Potassium	100 ppm
							Sodium	100 ppm
							Ti	2 ppm
.M6020ICS-0A_00005	09/01/15	Inorganic Ventures, Lot G2-MEB476152MCA			(Purchased Reagent)		Al	1000 ppm
							Calcium	1000 ppm
							Fe	1000 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Magnesium	1000 ppm
							Mo	20 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
							Ti	20 ppm
MICVX_00030	04/05/15	03/05/15	2% Nitric Acid, Lot 25106	250 mg/L	MICPMSICV_00018	10 mg/L	Calcium	40 mg/L
							Magnesium	40 mg/L
							Potassium	40 mg/L
							Sodium	40 mg/L
.MICPMSICV_00018	11/30/15	SPEX CertiPrep, Lot 7-230WL			(Purchased Reagent)		Calcium	1000 ppm
							Magnesium	1000 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
MSTD2X_00042	04/19/15	02/19/15	DI Water, Lot 1241717	250 mL	MCALSPECAREV_00005	10 mg/L	Calcium	100 ppm
							Magnesium	100 ppm
							Potassium	100 ppm
							Sodium	100 ppm
.MCALSPECAREV_00005	05/01/15	Inorganic Ventures, Lot F2-MEB524026			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MTAPITTCFMS_00020	07/01/15	INORGANIC VENTURES, Lot H2-MEB532047			(Purchased Reagent)		Ag	5 ug/mL
							Al	200 ug/mL
							As	4 ug/mL
							B	100 ug/mL
							Ba	200 ug/mL
							Be	5 ug/mL
							Cd	5 ug/mL
							Co	50 ug/mL
							Cr	20 ug/mL
							Cu	25 ug/mL
							Fe	100 ug/mL
							Mn	50 ug/mL
							Ni	50 ug/mL
							Pb	2 ug/mL
							Se	1 ug/mL
							Sr	100 ug/mL
							Tl	5 ug/mL
							V	50 ug/mL
							Zn	50 ug/mL
MTAPITMSA_00023	12/01/15	INORGANIC VENTURES, Lot H2-MEB532044			(Purchased Reagent)		Calcium	5000 ug/mL
							Magnesium	5000 ug/mL
							Potassium	5000 ug/mL
							Sodium	5000 ug/mL
MTAPITMSC_00029	12/01/15	Inorganic Ventures, Lot H2-MEB532046			(Purchased Reagent)		Mo	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica PittsburghJob No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Sb	50 ug/mL
							Si	1000 ug/mL
							SiO2	2140 ug/mL
							Sn	200 ug/mL
							Ti	100 ug/mL
VOA8260INT_00029	03/13/15	02/13/15	Methanol, Lot 85233	10 mL	VOA8260INTRES_00090	1 mL	1,4-Dichlorobenzene-d4	25 ug/mL
							Chlorobenzene-d5	25 ug/mL
							Fluorobenzene (IS)	25 ug/mL
							TBA-d9 (IS)	500 ug/mL
.VOA8260INTRES_00090	07/31/19		Restek, Lot A0104742		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
VOA8260SURR_00031	03/13/15	02/13/15	Methanol, Lot 85233	100 mL	VOA8260SURRES_00062	1 mL	1,2-Dichloroethane-d4 (Surr)	25 ug/mL
							4-Bromofluorobenzene (Surr)	25 ug/mL
							Dibromofluoromethane (Surr)	25 ug/mL
							Toluene-d8 (Surr)	25 ug/mL
.VOA8260SURRES_00062	01/31/19		Restek, Lot A0100424		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
VOA8260VOA2ND_00105	03/12/15	03/05/15	Methanol, Lot 85233	8 mL	VOA8260GAS2ND_00086	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00103	1 mL	1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL
							1,4-Dioxane	500 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Dibromochloromethane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethylbenzene	25 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylene Chloride	25 ug/mL
							Styrene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							Trichloroethene	25 ug/mL
							Xylenes, Total	50 ug/mL
.VOA8260GAS2ND_00086	11/30/15		Restek, Lot A099261		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOA2ND_00103	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260MEGA2_00027	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260MEGA2_00027	02/28/16		Restek, Lot A093733		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							Styrene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	4000 ug/mL
VOA8260VOAPRI_00102	03/04/15	02/25/15	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00086	0.1 mL	Bromomethane	25 ug/mL
							Butadiene	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Dichlorodifluoromethane	25 ug/mL
							Dichlorofluoromethane	25 ug/mL
							Trichlorofluoromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00101	1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
							1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloro-1,2,2-trifluor oethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,1-Dichloropropene	25 ug/mL
							1,2,3-Trichlorobenzene	25 ug/mL
							1,2,3-Trichloropropane	25 ug/mL
							1,2,4-Trichlorobenzene	25 ug/mL
							1,2,4-Trimethylbenzene	25 ug/mL
							1,2-Dibromo-3-Chloropropane	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichlorobenzene	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL
							1,3,5-Trimethylbenzene	25 ug/mL
							1,3-Dichlorobenzene	25 ug/mL
							1,3-Dichloropropane	25 ug/mL
							1,4-Dichlorobenzene	25 ug/mL
							1,4-Dioxane	500 ug/mL
							2,2-Dichloropropane	25 ug/mL
							2-Chlorotoluene	25 ug/mL
							2-Methyl-2-propanol	250 ug/mL
							3-Chloro-1-propene	25 ug/mL
							4-Chlorotoluene	25 ug/mL
							4-Isopropyltoluene	25 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromobenzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Cyclohexane	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Dibromomethane	25 ug/mL
							Ethyl ether	25 ug/mL
							Ethyl methacrylate	25 ug/mL
							Ethylbenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexane	25 ug/mL
							Iodomethane	25 ug/mL
							Isobutyl alcohol	625 ug/mL
							Isopropylbenzene	25 ug/mL
							m-Xylene & p-Xylene	25 ug/mL
							Methyl acetate	125 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica PittsburghJob No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl tert-butyl ether	25 ug/mL
							Methylcyclohexane	25 ug/mL
							Methylene Chloride	25 ug/mL
							n-Butylbenzene	25 ug/mL
							n-Heptane	25 ug/mL
							N-Propylbenzene	25 ug/mL
							Naphthalene	25 ug/mL
							o-Xylene	25 ug/mL
							sec-Butylbenzene	25 ug/mL
							Styrene	25 ug/mL
							tert-Butylbenzene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Tetrahydrofuran	50 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							trans-1,4-Dichloro-2-butene	25 ug/mL
							Trichloroethene	25 ug/mL
.VOA8260GAS1ST_00086	09/30/16		Restek, Lot A0105755		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOAPRI_00101	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260KET1ST_00036	0.2 mL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					VOA8260MEGA1_00027	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloro-1,2,2-trifluor oethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,1-Dichloropropene	200 ug/mL
							1,2,3-Trichlorobenzene	200 ug/mL
							1,2,3-Trichloropropane	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2,4-Trimethylbenzene	200 ug/mL
							1,2-Dibromo-3-Chloropropane	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica PittsburghJob No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3,5-Trimethylbenzene	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dichloropropane	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							2,2-Dichloropropane	200 ug/mL
							2-Chlorotoluene	200 ug/mL
							2-Methyl-2-propanol	2000 ug/mL
							3-Chloro-1-propene	200 ug/mL
							4-Chlorotoluene	200 ug/mL
							4-Isopropyltoluene	200 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromobenzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Cyclohexane	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Dibromomethane	200 ug/mL
							Ethyl ether	200 ug/mL
							Ethyl methacrylate	200 ug/mL
							Ethylbenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexane	200 ug/mL
							Iodomethane	200 ug/mL
							Isobutyl alcohol	5000 ug/mL
							Isopropylbenzene	200 ug/mL
							m-Xylene & p-Xylene	200 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylcyclohexane	200 ug/mL
							Methylene Chloride	200 ug/mL
							n-Butylbenzene	200 ug/mL
							n-Heptane	200 ug/mL
							N-Propylbenzene	200 ug/mL
							Naphthalene	200 ug/mL
							o-Xylene	200 ug/mL
							sec-Butylbenzene	200 ug/mL
							Styrene	200 ug/mL
							tert-Butylbenzene	200 ug/mL
							Tetrachloroethene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrahydrofuran	400 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							trans-1,4-Dichloro-2-butene	200 ug/mL
							Trichloroethene	200 ug/mL
..VOA8260KET1ST_00036	02/28/16		Restek, Lot A093365		(Purchased Reagent)		2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
..VOA8260MEGA1_00027	02/28/16		Restek, Lot A093581		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloro-1,2,2-trifluor oethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,1-Dichloropropene	2000 ug/mL
							1,2,3-Trichlorobenzene	2000 ug/mL
							1,2,3-Trichloropropane	2000 ug/mL
							1,2,4-Trichlorobenzene	2000 ug/mL
							1,2,4-Trimethylbenzene	2000 ug/mL
							1,2-Dibromo-3-Chloropropane	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichlorobenzene	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,3,5-Trimethylbenzene	2000 ug/mL
							1,3-Dichlorobenzene	2000 ug/mL
							1,3-Dichloropropane	2000 ug/mL
							1,4-Dichlorobenzene	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							2,2-Dichloropropane	2000 ug/mL
							2-Chlorotoluene	2000 ug/mL
							2-Methyl-2-propanol	20000 ug/mL
							3-Chloro-1-propene	2000 ug/mL
							4-Chlorotoluene	2000 ug/mL
							4-Isopropyltoluene	2000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromobenzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Cyclohexane	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Dibromomethane	2000 ug/mL
							Ethyl ether	2000 ug/mL
							Ethyl methacrylate	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Hexachlorobutadiene	2000 ug/mL
							Hexane	2000 ug/mL
							Iodomethane	2000 ug/mL
							Isobutyl alcohol	50000 ug/mL
							Isopropylbenzene	2000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methyl acetate	10000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylcyclohexane	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							n-Butylbenzene	2000 ug/mL
							n-Heptane	2000 ug/mL
							N-Propylbenzene	2000 ug/mL
							Naphthalene	2000 ug/mL
							o-Xylene	2000 ug/mL
							sec-Butylbenzene	2000 ug/mL
							Styrene	2000 ug/mL
							tert-Butylbenzene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Tetrahydrofuran	4000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							trans-1,4-Dichloro-2-butene	2000 ug/mL
							Trichloroethene	2000 ug/mL
VOA8260VOAPRI_00104	03/12/15	03/05/15	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00088	0.08 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00101	1 mL	1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	500 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Ethylbenzene	25 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylene Chloride	25 ug/mL
							Styrene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							Trichloroethene	25 ug/mL
							Xylenes, Total	50 ug/mL
.VOA8260GAS1ST_00088	09/30/16		Restek, Lot A0108198		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00101	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260MEGA1_00027	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropene	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica PittsburghJob No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260MEGA1_00027	02/28/16		Restek, Lot A093581		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropene	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							Styrene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	4000 ug/mL
VOAACRPRI_00003	03/31/15	03/03/15	Methanol, Lot 85233	100 mL	VOAACRORES_00064	0.125 mL	Acrolein	25 ug/mL
.VOAACRORES_00064	03/31/15		Restek, Lot A0107338		(Purchased Reagent)		Acrolein	20000 ug/mL
VOAVAPRI_00003	03/12/15	02/12/15	Methanol, Lot 85233	20 mL	VOA8260VARES_00047	0.125 mL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00047	04/30/15		Restek, Lot A0106957		(Purchased Reagent)		Vinyl acetate	4000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
voaWEEpri Res_00003	03/30/15	03/02/15	Methanol, Lot 85233	25 mL	VOARESEE1ST_00008	0.125 mL	1,2-dichloro-4-(trifluoromethyl)benzene	25 ug/mL
							2,3,6-Trichlorotoluene	25 ug/mL
							2,4,5-Trichlorotoluene	25 ug/mL
							2,4-Dichloro-1-(triflouromethyl)-benzene	25 ug/mL
							2,5-Dichlorobenzotrifluoride	25 ug/mL
							2-Chlorobenzotrifluoride	25 ug/mL
							3-Chlorobenzotrifluoride	25 ug/mL
							3-Chlorotoluene	25 ug/mL
							4-Chlorobenzotrifluoride	25 ug/mL
.VOARESEE1ST_00008	02/28/15	Restek, Lot A097285			(Purchased Reagent)		1,2-dichloro-4-(trifluoromethyl)benzene	5000 ug/mL
							2,3,6-Trichlorotoluene	5000 ug/mL
							2,4,5-Trichlorotoluene	5000 ug/mL
							2,4-Dichloro-1-(triflouromethyl)-benzene	5000 ug/mL
							2,5-Dichlorobenzotrifluoride	5000 ug/mL
							2-Chlorobenzotrifluoride	5000 ug/mL
							3-Chlorobenzotrifluoride	5000 ug/mL
							3-Chlorotoluene	5000 ug/mL
							4-Chlorobenzotrifluoride	5000 ug/mL
voaWKetpri Re_00003	03/26/15	02/24/15	Methanol, Lot 85233	50 mL	VOA8260KET1ST_00037	0.125 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET1ST_00037	02/28/16	Restek, Lot A093365			(Purchased Reagent)		2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
WALK125PPMCCV_00081	08/25/15	02/25/15	DI Water, Lot SUPERQ	1000 mL	WNa2CO3P_00007	0.125 g	Total Alkalinity as CaCO3 to pH 4.5	125 mg/L
.WNa2CO3P_00007	07/09/18	Fisher Scientific, Lot 138124			(Purchased Reagent)		Total Alkalinity as CaCO3 to pH 4.5	1 g/g
WALK250PPMPi_00090	08/25/15	02/25/15	DI Water, Lot Super Q	1000 mL	WNa2CO3P_00007	0.25 g	Total Alkalinity as CaCO3 to pH 4.5	250 mg/L
.WNa2CO3P_00007	07/09/18	Fisher Scientific, Lot 138124			(Purchased Reagent)		Total Alkalinity as CaCO3 to pH 4.5	1 g/g

Reagent

ICPRIMARYSTA_00006

Certificate of Analysis

Product Description:

Name: IC Spike
Part Number: SM-606-005 Solution A
Lot Number: 1427624
Matrix: H₂O
Purity: 99.1+%

Certified Values:

Component	Certified Value (µg/mL)	NIST SRM ID	NIST SRM Lot #
Bromide	500 ± 5	3184	020701
Chloride	2500 ± 25	3182	060925
Fluoride	125.00 ± 1.25	3183	050721
NO ₃ as N	125.00 ± 1.25	3185	050517
PO ₄ as P	125.00 ± 1.25	3186	090723
Sulfate	2500 ± 25	3181	080603

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via ion chromatography (IC) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

Custom standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by IC for conformity prior to use. The matrix is 18 megohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. Standard Weight and Analytical Balance

The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.

The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. Volumetric Device

The calibration of volumetric vessels is checked annually using the ASTM method E542.

Lot No.: 1427624
Rev. No.: 3.2.1
Page 1 of 2

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

c. **Thermometer**

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**

The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided.

Preparation Date: October 3, 2014

* Shipped Date: October 8, 2014

Expiration Date: October 8, 2015

Certificate Issue Date: October 8, 2014

Quality Information:



ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

A handwritten signature in cursive script, appearing to read "Angel Sellers".

Angel Sellers,
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Lot No.: 1427624
Rev. No.: 3.2.1
Page 2 of 2

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Reagent

ICPRIMARYSTDB_00008

Certificate of Analysis

Product Description:

Name:	IC Spike	Source Material:	Sodium Nitrite
Part Number:	SM-606-005 Solution B	Material Purity:	100%
Lot Number:	1427626	Matrix:	H ₂ O

Certified Value:

NO₂ as N 125.00 µg/mL ± 1.25 µg/mL

The Certified value is based on gravimetric preparation and verified against a second source or independent lot via ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

The highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was prepared using methods developed at NIST for the preparation of SRM Spectrometric Standard Solutions. The matrix is 18 megohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**

The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.

The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**

The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**

The Calibration Standard is traceable to a second source or independent lot.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided.

Preparation Date: October 3, 2014
Shipped Date: October 8, 2014
Expiration Date: October 8, 2015
Certificate Issue Date: October 8, 2014

Quality Information:



ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

A handwritten signature in cursive script, appearing to read "Angel Sellers".

Angel Sellers,
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICSECONDSTD1_00004

1.0 INORGANIC VENTURES is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



2.0 DESCRIPTION OF CRM Ion Chromatography Custom Second Source Solution

Catalog No.: TA-17

Lot Number: H2-MEB512078

Matrix: H2O

500 mg/L ea:

Chloride, Sulfate,

100 mg/L ea:

Bromide,

25 mg/L ea:

Fluoride, Nitrate as N, o-Phosphate as P

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ION	CERTIFIED VALUE	ION	CERTIFIED VALUE	ION	CERTIFIED VALUE
Bromide	100.0 ± 0.6 mg/L	Chloride	500.1 ± 3.1 mg/L	Fluoride	25.00 ± 0.13 mg/L
Nitrate as N	25.00 ± 0.15 mg/L	o-Phosphate as P	25.00 ± 0.20 mg/L	Sulfate	500.0 ± 2.6 mg/L

Certified Density: 1.002 g/mL (measured at 20 ± 1°C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

($\bar{x}$) = mean

x_i = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[\sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[\sum (s_i)^2 \right]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ION	METHOD	NIST SRM#	SRM LOT#
Bromide	IC Assay	3184	020701
Bromide	Volhard	999b	999b
Chloride	IC Assay	3182	060925
Chloride	Volhard	999b	999b
Fluoride	Calculated		See Sec. 4.2
Fluoride	IC Assay	3183	050721
Nitrate_as_N	Calculated		See Sec. 4.2
Nitrate_as_N	IC Assay	3185	050517
oPhosphate_as_P	Calculated		See Sec. 4.2
oPhosphate_as_P	IC Assay	3186	090723
Sulfate	Calculated		See Sec. 4.2
Sulfate	IC Assay	3181	080603

4.2 BALANCE CALIBRATION - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 THERMOMETER CALIBRATION - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 GLASSWARE CALIBRATION - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 Chromatogram - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:

HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry

For the validation of analytical methods

For the preparation of "working reference samples"

For interference studies and the determination of correction coefficients

For detection limit and linearity studies

For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep tightly sealed when not in use. Store and use at $20 \pm 4^\circ\text{C}$. Do Not pipette from the container. Do Not return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"

- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission

- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: February 05, 2014

Expiration Date:

EXPIRES

01/12/2015

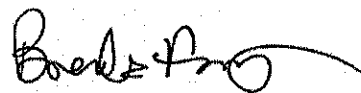
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared

By:

Brenda Francis

Product Documentation Technician

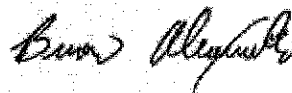


Certificate Approved

By:

Brian Alexander

PhD., Technical Process Director



Certifying Officer:

Paul Gaines

PhD., Senior Technical Director



Reagent

M6020ICS-0A_00005

1.0 INORGANIC VENTURES is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



2.0 DESCRIPTION OF CRM **Stock Solution**

Catalog No.: 6020ICS-0A

Lot Number: **G2-MEB476152MCA**

Matrix: 1.4% HNO₃(v/v)

10,000 µg/mL ea:

Chloride,

2,000 µg/mL ea:

C,

1,000 µg/mL ea:

Al, Ca, Fe, K, Mg, Na, P, S,

20 µg/mL ea:

Mo, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	1,002 ± 6 µg/mL	Calcium, Ca	1,002 ± 6 µg/mL	Carbon, C	2,004 ± 13 µg/mL
Chloride, Chloride	10,020.0 ± 50.0 µg/mL	Iron, Fe	1,002 ± 7 µg/mL	Magnesium, Mg	1,002 ± 4 µg/mL
Molybdenum, Mo	20.04 ± 0.14 µg/mL	Phosphorus, P	1,002 ± 7 µg/mL	Potassium, K	1,002 ± 4 µg/mL
Sodium, Na	1,002 ± 7 µg/mL	Sulfur, S	1,002 ± 5 µg/mL	Titanium, Ti	20.04 ± 0.13 µg/mL

Certified Density: 1.034 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

($\bar{x}$) = mean

x_i = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[\sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[\sum (s_i)^2 \right]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)
- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.
- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Gravimetric		See Sec. 4.2
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	010728
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84k	84k
Ti	ICP Assay	3162a	060808

- 4.2 BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).
- 4.3 THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.
- 4.4 GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL

Custom-Grade solutions are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

<u>s</u> Al	<u>M</u> Dy < 0.000100	<u>O</u> Li 0.002000	<u>M</u> Pr < 0.000100	<u>M</u> Te < 0.012007
<u>M</u> Sb < 0.000600	<u>M</u> Er < 0.000100	<u>M</u> Lu < 0.000100	<u>M</u> Re < 0.000100	<u>M</u> Tb < 0.000100
<u>O</u> As < 0.020000	<u>M</u> Eu < 0.000100	<u>s</u> Mg	<u>M</u> Rh < 0.000100	<u>M</u> Tl < 0.000100
<u>O</u> Ba < 0.000200	<u>M</u> Gd < 0.000100	<u>O</u> Mn 0.003000	<u>M</u> Rb < 0.020012	<u>M</u> Th < 0.000100
<u>O</u> Be < 0.000090	<u>M</u> Ga < 0.001001	<u>O</u> Hg < 0.005000	<u>M</u> Ru < 0.000100	<u>M</u> Tm < 0.000100
<u>M</u> Bi < 0.005003	<u>O</u> Ge < 0.015000	<u>s</u> Mo	<u>M</u> Sm < 0.000100	<u>M</u> Sn < 0.003002
<u>O</u> B < 0.005000	<u>M</u> Au < 0.001001	<u>M</u> Nd < 0.000100	<u>O</u> Sc < 0.000700	<u>s</u> Ti
<u>O</u> Cd 0.003400	<u>M</u> Hf < 0.002001	<u>O</u> Ni < 0.002000	<u>M</u> Se < 0.050029	<u>O</u> W < 0.007000
<u>s</u> Ca	<u>M</u> Ho < 0.000100	<u>M</u> Nb < 0.002001	<u>n</u> Si	<u>M</u> U < 0.000100
<u>M</u> Ce < 0.000500	<u>M</u> In < 0.001001	<u>n</u> Os	<u>M</u> Ag < 0.001001	<u>O</u> V < 0.004000
<u>M</u> Cs < 0.001001	<u>M</u> Ir < 0.000100	<u>M</u> Pd < 0.003002	<u>s</u> Na	<u>M</u> Yb < 0.000100
<u>O</u> Cr < 0.010000	<u>s</u> Fe	<u>s</u> P	<u>O</u> Sr 0.005000	<u>M</u> Y < 0.000100
<u>M</u> Co < 0.001001	<u>M</u> La < 0.000200	<u>M</u> Pt < 0.000100	<u>s</u> S	<u>M</u> Zn 0.016610
<u>O</u> Cu < 0.020000	<u>M</u> Pb 0.002001	<u>s</u> K	<u>M</u> Ta < 0.001001	<u>M</u> Zr < 0.004002

M - Checked by ICP-MS

O - Checked by ICP-OES

i - Spectral Interference

n - Not Checked For

s - Solution Standard Element

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

- 10.1 ISO 9001 Quality Management System Registration
 - SAI Global File Number 010105
- 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
 - Chemical Testing - Accredited A2LA Certificate Number 883.01
- 10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
 - Reference Materials Production - Accredited A2LA Certificate Number 883.02
- 10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
 - Domestic Licensing of Production and Utilization Facilities
- 10.5 10CFR21 - Nuclear Regulatory Commission
 - Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: July 12, 2013

Expiration Date: **EXPIRES**
01st 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Zach Saunders
Product Documentation Technician

Zachary Saunders

Certificate Approved By: Allyson Guillems
Quality Control Supervisor

Allyson Guillems

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Paul R. Gaines

Reagent

M6020ICS-0B_00006

1.0 INORGANIC VENTURES is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



2.0 DESCRIPTION OF CRM Stock Solution
Catalog No.: 6020ICS-0B
Lot Number: **G2-MEB463151**
Matrix: 3% HNO₃(v/v)

2 µg/mL ea:

Ag, As, Cd, Co, Cr₃, Cu, Mn, Ni, Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Arsenic, As	2.000 ± 0.013 µg/mL	Gadimium, Cd	2.000 ± 0.013 µg/mL	Chromium+3, Cr ₃	2.000 ± 0.013 µg/mL
Cobalt, Co	2.000 ± 0.013 µg/mL	Copper, Cu	2.000 ± 0.013 µg/mL	Manganese, Mn	2.000 ± 0.013 µg/mL
Nickel, Ni	2.000 ± 0.013 µg/mL	Silver, Ag	2.000 ± 0.013 µg/mL	Zinc, Zn	2.000 ± 0.013 µg/mL

Certified Density: 1.012 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

($\bar{x}$) = mean

x_i = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 [\sum (s_i)^2]^{1/2}$$

2 = the coverage factor.

$[\sum (s_i)^2]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

· The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	00630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Zn	ICP Assay	3168a	080123
Zn	EDTA	928	928

4.2 BALANCE CALIBRATION - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 THERMOMETER CALIBRATION - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 GLASSWARE CALIBRATION - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"

- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission

- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

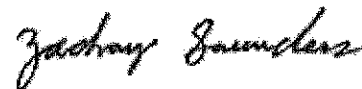
Certification Date: March 25, 2013

Expiration Date: **EXPIRES**

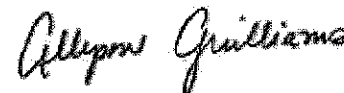
01st 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Zach Saunders
Product Documentation Technician



Certificate Approved By: Allyson Guilliams
Quality Control Supervisor



Certifying Officer: Paul Gaines
PhD., Senior Technical Director



Reagent

MCALSPECAREV_00005

1.0 INORGANIC VENTURES is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



2.0 DESCRIPTION OF CRM **Custom Solution**
Catalog No.: TAPITT-CAL-SPECA-REV
Lot Number: H2-MEB524026
Matrix: 3% HNO₃(v/v)

2,500 µg/mL ea:

Ca, K, Mg, Na,

1,250 µg/mL ea:

Fe,

25 µg/mL ea:

Al, Mn,

5 µg/mL ea:

Ag, As, Ba, Be, Cd, Co, Cr₃, Cu, Ni,
Pb, Se, Sr, Ti, V, Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	24.99 ± 0.18 µg/mL	Arsenic, As	4.998 ± 0.032 µg/mL	Barium, Ba	5.000 ± 0.032 µg/mL
Beryllium, Be	5.000 ± 0.028 µg/mL	Cadmium, Cd	4.998 ± 0.032 µg/mL	Calcium, Ca	2,500 ± 11 µg/mL
Chromium+3, Cr ₃	5.000 ± 0.028 µg/mL	Cobalt, Co	4.999 ± 0.032 µg/mL	Copper, Cu	4.999 ± 0.032 µg/mL
Iron, Fe	1,250 ± 6 µg/mL	Lead, Pb	4.998 ± 0.025 µg/mL	Magnesium, Mg	2,500 ± 16 µg/mL
Manganese, Mn	24.99 ± 0.17 µg/mL	Nickel, Ni	5.003 ± 0.028 µg/mL	Potassium, K	2,500 ± 11 µg/mL
Selenium, Se	5.002 ± 0.028 µg/mL	Silver, Ag	5.000 ± 0.036 µg/mL	Sodium, Na	2,499 ± 11 µg/mL
Strontium, Sr	5.000 ± 0.032 µg/mL	Thallium, Tl	5.000 ± 0.032 µg/mL	Vanadium, V	5.000 ± 0.032 µg/mL
Zinc, Zn	5.004 ± 0.032 µg/mL				

Certified Density: 1.051 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[\sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[\sum (s_i)^2 \right]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

• "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

• This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

• The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	00630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	080123
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[\sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[\sum (s_i)^2 \right]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

• "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

• This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

- 4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).
- 4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.
- 4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.
- 5.0 **TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A**
- 6.0 **INTENDED USE**
 For the calibration of analytical instruments including but not limited to the following:
 HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
 For the validation of analytical methods
 For the preparation of "working reference samples"
 For interference studies and the determination of correction coefficients
 For detection limit and linearity studies
 For additional intended uses, contact Technical Staff
- This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.
- 7.0 **INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**
Storage & Handling - Keep Tightly sealed when not in use. Store and use at $20 \pm 4^{\circ}\text{C}$. Do Not pipette from the container. Do Not return portions removed from pipetting to container.
 Element Specific Information - For specific information regarding any element: Contact technical staff.
 Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.
 Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.
- 8.0 **HAZARDOUS INFORMATION** - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.
- 9.0 **HOMOGENEITY** - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.
 Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.
- 10.0 **QUALITY STANDARD DOCUMENTATION**
- 10.1 **ISO 9001 Quality Management System Registration**
 - SAI Global File Number 010105
- 10.2 **ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**
 - Chemical Testing - Accredited A2LA Certificate Number 883.01
- 10.3 **ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**
 - Reference Materials Production - Accredited A2LA Certificate Number 883.02
- 10.4 **10CFR50 Appendix B - Nuclear Regulatory Commission**
 - Domestic Licensing of Production and Utilization Facilities
- 10.5 **10CFR21 - Nuclear Regulatory Commission**
 - Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

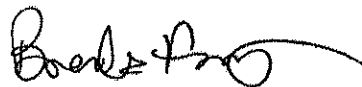
Certification Date: April 04, 2014

Expiration Date:

EXPIRES
01/1/2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Brenda Francis
Product Documentation Technician



Certificate Approved By: Brian Alexander
PhD., Technical Process Director



Certifying Officer: Paul Gaines
PhD., Senior Technical Director



Reagent

MICPMSICV_00018



Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material



Chemical Testing
Cert #2495.02

Catalog Number: ZCAL-60-250 **Lot No.** 7-230WL
Description: Custom Claritas Standard
Matrix: 5% HNO₃ / Tr. Tart. Acid / Tr. HF

This CLARITAS PPT® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Uncertainty	SRM	Analyte	Labeled	Uncertainty	SRM
Ca	1000 µg/mL	±5 µg/mL	3109a*	Co	2 µg/mL	±0.01 µg/mL	3113*
K	1000 µg/mL	±5 µg/mL	3141a*	Cr	2 µg/mL	±0.01 µg/mL	3112a*
Mg	1000 µg/mL	±5 µg/mL	3131a*	Cu	2 µg/mL	±0.01 µg/mL	3114*
Na	1000 µg/mL	±5 µg/mL	3152a*	Mo	2 µg/mL	±0.01 µg/mL	3134*
Fe	500 µg/mL	±3 µg/mL	3126a*	Ni	2 µg/mL	±0.01 µg/mL	3136*
Si	100 µg/mL	±0.5 µg/mL	3150*	Pb	2 µg/mL	±0.01 µg/mL	3128*
Al	10 µg/mL	±0.05 µg/mL	3101a*	Sb	2 µg/mL	±0.01 µg/mL	3102a*
Mn	10 µg/mL	±0.05 µg/mL	3132*	Se	2 µg/mL	±0.01 µg/mL	3149*
Ag	2 µg/mL	±0.01 µg/mL	3151*	Sn	2 µg/mL	±0.01 µg/mL	3161a*
As	2 µg/mL	±0.01 µg/mL	3103a*	Sr	2 µg/mL	±0.01 µg/mL	3153a*
B	2 µg/mL	±0.01 µg/mL	3107*	Ti	2 µg/mL	±0.01 µg/mL	3162a*
Ba	2 µg/mL	±0.01 µg/mL	3104a*	Tl	2 µg/mL	±0.01 µg/mL	3158*
Be	2 µg/mL	±0.01 µg/mL	3105a*	V	2 µg/mL	±0.01 µg/mL	3165*
Cd	2 µg/mL	±0.01 µg/mL	3108*	Zn	2 µg/mL	±0.01 µg/mL	3168a*

* - indicates NIST SRM

† - Indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# ALL 8

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.4	Ga	<2	Ir	<0.1	Pd	<1	Sc	30	Tm	5
Bi	<1	Gd	4	La	5	Pr	5	Sm	<4	U	0.08
Ce	6	Ge	<8	Li	<4	Pt	<0.1	Ta	7	W	10
Cs	<0.08	Hf	0.7	Lu	4	Rb	30	Tb	5	Y	5
Dy	4	Hg	<0.6	Nb	5	Re	4	Te	<4	Yb	4
Er	<0.4	Ho	5	Nd	<3	Rh	<0.2	Th	4	Zr	7
Eu	<0.5	In	<0.2	P	<300	Ru	<2				

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the labeled value. This includes uncertainty components due to preparation, measurement, homogeneity, short-term and long-term stability, as well as transpiration loss. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: NOV 2014

Certifying Officer: Lang Hinfay

© 2013 SPEX CertiPrep, Inc.

Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements – certified by UL-DQS
- ISO 17025: General requirements for the competence of testing and calibration laboratories – accredited by A2LA
- ISO Guide 34: General requirements for the competence of reference material producers – accredited by A2LA
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials – General & Statistical Principles for Certification
- Guide To The Expression Of Uncertainty In Measurement 1997
- EURACHEM/CITAC Guide: Quantifying Uncertainty in Analytical Measurement – Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference materials producers
- ISO/REMCO N280

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Instructions for Use:

Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:

The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = k u_c$ where $k = 2$ is the coverage factor at the 95% confidence level
- u_c is obtained by combining the individual element standard uncertainty components u_i , and $u_c = \sqrt{\sum u_i^2}$

Certification Traveler Report:

All certified values reported were derived from the Traveler Report (SPEX CertiPrep's traceability documentation) identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Legal Notice:

SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, Inc. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, Inc. be liable for any loss of profits or any incidental, special, or consequential damages.

Reagent

MMSICSAB-1_00007

- 1.0** INORGANIC VENTURES is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



- 2.0 DESCRIPTION OF CRM** **Custom Solution**
- Catalog No.: TAPITT-MSICSAB-1
- Lot Number: **H2-MEB524028**
- Matrix: 3% HNO₃(v/v)

10 µg/mL ea:

Ba, Be, Pb, Sr, Tl, V

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Barium, Ba	9.99 ± 0.06 µg/mL	Beryllium, Be	10.00 ± 0.06 µg/mL	Lead, Pb	10.01 ± 0.05 µg/mL
Strontium, Sr	10.00 ± 0.06 µg/mL	Thallium, Tl	10.00 ± 0.06 µg/mL	Vanadium, V	9.99 ± 0.06 µg/mL

Certified Density: 1.022 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

($\bar{x}$) = mean

x_i = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[\sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[\sum (s_i)^2 \right]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

· The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928

4.2 BALANCE CALIBRATION - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 THERMOMETER CALIBRATION - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 GLASSWARE CALIBRATION - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at $20 \pm 4^\circ\text{C}$. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"

- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission

- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

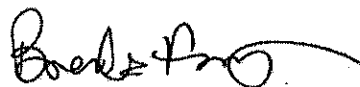
11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: April 04, 2014

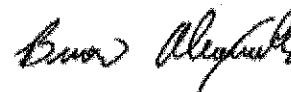
Expiration Date: **EXPIRES**
01/13/2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Brenda Francis
Product Documentation Technician



Certificate Approved By: Brian Alexander
PhD., Technical Process Director



Certifying Officer: Paul Gaines
PhD., Senior Technical Director



Reagent

MMSICSAB-2_00006

1.0 INORGANIC VENTURES is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



2.0 DESCRIPTION OF CRM **Custom Solution**

Catalog No.: TAPITT-MSICSAB-2

Lot Number: **G2-MEB467043**

Matrix: 3% HNO₃(v/v),
tr. HF

250 µg/mL ea:

Si,

50 µg/mL ea:

Sn,

25 µg/mL ea:

B, Se,

10 µg/mL ea:

Sb

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Antimony, Sb	10.00 ± 0.06 µg/mL	Boron, B	24.98 ± 0.17 µg/mL	Selenium, Se	25.01 ± 0.21 µg/mL
Silicon, Si	249.9 ± 1.6 µg/mL	Tin, Sn	50.04 ± 0.36 µg/mL		

Certified Density: 1.018 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

($\bar{x}$) = mean

x_i = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[\sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[\sum (s_i)^2 \right]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)
- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.
- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	070514
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	992106
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330

- 4.2 BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).
- 4.3 THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.
- 4.4 GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at $20 \pm 4^\circ\text{C}$. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element; Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

- 10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105
- 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01
- 10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02
- 10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities
- 10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: March 08, 2013

Expiration Date: **EXPIRES**
01/2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By: Brian Alexander
PhD., Technical Process Director

Brian Alexander

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Paul R. Gaines

Reagent

MTAPIITTICPMS_00020



**INORGANIC
VENTURES**

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

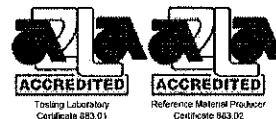
tel. 800.669.6799 • 540.585.3030

fax. 540.585.3012

info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: TAPITT-MS-ICPMS

Lot Number: H2-MEB532047

Matrix: 0.7% (v/v) HNO₃

Value / Analyte(s):

- 200 µg/mL ea: Al, Ba,
- 100 µg/mL ea: B, Fe, Sr,
- 50 µg/mL ea: Co, Mn, Ni, V, Zn,
- 25 µg/mL ea: Cu,
- 20 µg/mL ea: Cr₃,
- 5 µg/mL ea: Ag, Be, Cd, Tl,
- 4 µg/mL ea: As,
- 2 µg/mL ea: Pb,
- 1 µg/mL ea: Se

*Rec'd
6/17/14
RJR*

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	200.0 ± 1.0 µg/mL	Arsenic, As	4.002 ± 0.028 µg/mL	Barium, Ba	200.0 ± 1.0 µg/mL
Beryllium, Be	5.000 ± 0.029 µg/mL	Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	5.000 ± 0.024 µg/mL
Chromium+3, Cr ₃	20.00 ± 0.10 µg/mL	Cobalt, Co	50.02 ± 0.25 µg/mL	Copper, Cu	25.00 ± 0.17 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Lead, Pb	2.000 ± 0.010 µg/mL	Manganese, Mn	49.99 ± 0.22 µg/mL
Nickel, Ni	50.02 ± 0.24 µg/mL	Selenium, Se	1.001 ± 0.006 µg/mL	Silver, Ag	5.002 ± 0.032 µg/mL
Strontium, Sr	100.0 ± 0.6 µg/mL	Thallium, Tl	5.002 ± 0.033 µg/mL	Vanadium, V	50.00 ± 0.24 µg/mL
Zinc, Zn	50.02 ± 0.28 µg/mL				

Certified Density: 1.003 g/mL (measured at 20 ± 1 °C)

Assay Information:

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
B	ICP Assay	3107	070514
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3168	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

$$\text{Uncertainty } (\pm) = 2 \left[\sum (s_i)^2 \right]^{1/2}$$

$(\bar{x})$ = mean
 x_i = individual results
 n = number of measurements

2 = the coverage factor.

$\left[\sum (s_i)^2 \right]^{1/2}$ = The square root of the sum of the squares of the most common errors (where s_i stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at $20 \pm 4^{\circ}\text{C}$. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2014

11.2 Expiration Date

EXPIRES
01/2015

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

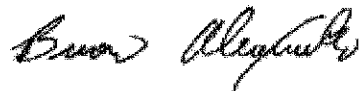
Certificate Prepared By:

Donna Senn
Product Documentation Technician



Certificate Approved By:

Brian Alexander
PhD., Technical Process Director



Certifying Officer:

Paul Gaines
PhD., Senior Technical Director



Reagent

MTAPITTMSA_00023



300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 : 540.585.3030
fax: 540.585.3012
info@inorganicventures.com



1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105)).

2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: TAPITT-MS-A
Lot Number: H2-MEB532044
Matrix: 3% (v/v) HNO₃
Value / Analyte(s): 5 000 µg/mL ea:
Ca, K, Mg,
Na

REC. 11/13/14 SLB

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Calcium	5 000 ± 22 µg/mL	Magnesium	5 000 ± 23 µg/mL
Potassium	5 000 ± 22 µg/mL	Sodium	5 000 ± 22 µg/mL

Certified Density: 1.071 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

($\bar{x}$) = mean
 x_i = individual results
 n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[\sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.
 $\left[\sum (s_i)^2 \right]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

- N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at $20 \pm 4^\circ\text{C}$. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 05, 2014

11.2 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.3. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

11.3 Expiration Date **EXPIRES**

01st 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

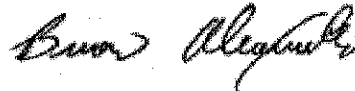
Certificate Prepared By:

Donna Senn
Product Documentation Technician



Certificate Approved By:

Brian Alexander
PhD., Technical Process Director



Certifying Officer:

Paul Gaines
PhD., Senior Technical Director



Reagent

MTAPIITMSC_00029



300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 540.585.3030
fax: 540.585.3012
info@inorganicventures.com



1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: TAPITT-MS-C
Lot Number: H2-MEB532046
Matrix: 3% (v/v) HNO₃
tr. HF
Value / Analyte(s): 1 000 µg/mL ea:
Si,
200 µg/mL ea:
Sn,
100 µg/mL ea:
Mo, Ti,
50 µg/mL ea:
Sb

rec'd 11/13/14
SLB

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony	49.98 ± 0.38 µg/mL	Molybdenum	100.0 ± 0.5 µg/mL
Silicon	1 000 ± 7 µg/mL	Tin	200.0 ± 1.4 µg/mL
Titanium	100.0 ± 0.7 µg/mL		

Certified Density: 1.017 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[\sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[\sum (s_i)^2 \right]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

- N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at $20 \pm 4^\circ\text{C}$. Do not pipette from the container. Do not return removed aliquots to container.

- HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 **CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY**

11.1 Certification Issue Date

June 05, 2014

11.2 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.3. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

11.3 Expiration Date

EXPIRES

01 ~~2~~ 2015

12.0 **NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

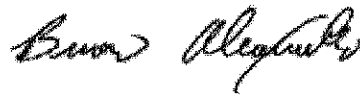
Certificate Prepared By:

Donna Senn
Product Documentation Technician



Certificate Approved By:

Brian Alexander
PhD., Technical Process Director



Certifying Officer:

Paul Gaines
PhD., Senior Technical Director



Reagent

VOA8260GAS1ST_00086



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567645 **Lot No.:** A0105755

Description : 8260 List 1 / Std #3 Gases

8260 List 1 / Std #3 Gases 2,000 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2016 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Dichlorodifluoromethane (CFC-12)	1,996.9 µg/mL	+/-	16.4920	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q16A-86)		+/-	25.3820	µg/mL	Unstressed
	Purity 99%		+/-	28.4359	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,003.6 µg/mL	+/-	13.5945	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBC8470V)		+/-	23.6556	µg/mL	Unstressed
	Purity 99%		+/-	26.9268	µg/mL	Stressed
3	Vinyl chloride	2,001.1 µg/mL	+/-	27.3546	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 17542)		+/-	33.4976	µg/mL	Unstressed
	Purity 99%		+/-	35.8765	µg/mL	Stressed
4	1,3-Butadiene	1,999.9 µg/mL	+/-	23.4547	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBD5808V)		+/-	30.3891	µg/mL	Unstressed
	Purity 99%		+/-	32.9901	µg/mL	Stressed
5	Bromomethane (methyl bromide)	1,998.7 µg/mL	+/-	30.0266	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/-	35.7004	µg/mL	Unstressed
	Purity 99%		+/-	37.9363	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,000.1 µg/mL	+/-	18.0935	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot SHBD1717V)		+/-	26.4730	µg/mL	Unstressed
	Purity 99%		+/-	29.4228	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	1,999.1 µg/mL	+/-	17.9677	µg/mL	Gravimetric
	CAS # 75-43-4 (Lot Q9B-58)		+/-	26.3801	µg/mL	Unstressed
	Purity 99%		+/-	29.3364	µg/mL	Stressed
8	Trichlorofluoromethane (CFC-11)	2,001.1 µg/mL	+/-	24.2299	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBD5121V)		+/-	30.9989	µg/mL	Unstressed
	Purity 99%		+/-	33.5557	µg/mL	Stressed

Reagent

VOA8260GAS1ST_00088



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 Lot No.: A0108198

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,000 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : January 31, 2018 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8 (Lot Q167-08) Purity 99%	2,504.8 µg/mL	+/- 21.9788 µg/mL +/- 32.6918 µg/mL +/- 36.4326 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) CAS # 74-87-3 (Lot SHBC8470V) Purity 99%	2,509.8 µg/mL	+/- 19.6377 µg/mL +/- 31.2039 µg/mL +/- 35.1185 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride CAS # 75-01-4 (Lot 17542) Purity 99%	2,515.3 µg/mL	+/- 22.1368 µg/mL +/- 32.8734 µg/mL +/- 36.6254 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene CAS # 106-99-0 (Lot SHBD5808V) Purity 99%	2,498.0 µg/mL	+/- 23.6713 µg/mL +/- 33.8065 µg/mL +/- 37.4176 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) CAS # 74-83-9 (Lot 101604) Purity 99%	2,503.7 µg/mL	+/- 30.8470 µg/mL +/- 39.2011 µg/mL +/- 42.3685 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) CAS # 75-00-3 (Lot SHBD1717V) Purity 99%	2,507.7 µg/mL	+/- 21.9404 µg/mL +/- 32.6873 µg/mL +/- 36.4370 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) CAS # 75-43-4 (Lot Q9B-58) Purity 99%	2,500.7 µg/mL	+/- 26.0039 µg/mL +/- 35.4965 µg/mL +/- 38.9583 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)	2,501.9	µg/mL	+/-	21.5914	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBD5121V)			+/-	32.4119	µg/mL	Unstressed
	Purity 99%			+/-	36.1734	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:

60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:

helium-constant flow 2.0 mL/min.

Temp. Program:

40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:

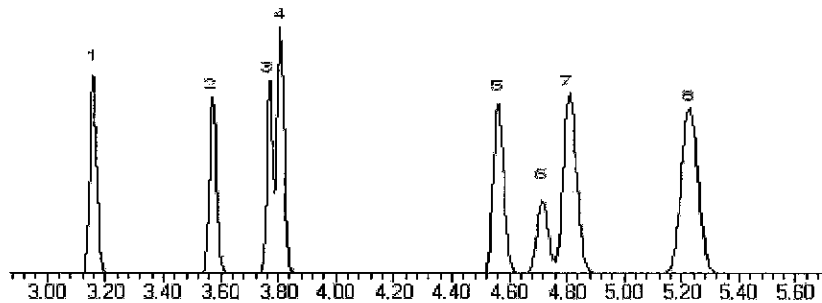
200°C

Det. Temp:

250°C

Det. Type:

MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope
Kendra Swope - Mix Technician

Date Mixed: 08-Jan-2015

Balance: 1125113331

Jennifer L. Pollino
Jennifer L. Pollino - QC Analyst

Date Passed: 14-Jan-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VOA8260GAS2ND_00086



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 567645.sec Lot No.: A099261
Description: 8260 List 1 / Std #3 Gases
8260 List 1 / Std #3 Gases 2,000 ug/ml, P&T Methanol, 1 ml/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: November 30, 2015 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	Dichlorodifluoromethane (CFC-12)	2,002.2 µg/mL	+/-	16.7616	µg/mL Gravimetric
	CAS # 75-71-8.SEC (Lot 18348)		+/-	21.2987	µg/mL Unstressed
	Purity 99%		+/-	24.7536	µg/mL Stressed
2	Chloromethane (methyl chloride)	2,000.6 µg/mL	+/-	15.8216	µg/mL Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/-	21.2729	µg/mL Unstressed
	Purity 99%		+/-	24.7262	µg/mL Stressed
3	Vinyl chloride	2,001.9 µg/mL	+/-	14.6785	µg/mL Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/-	21.2759	µg/mL Unstressed
	Purity 99%		+/-	24.7329	µg/mL Stressed
4	1,3-Butadiene	2,002.8 µg/mL	+/-	16.7307	µg/mL Gravimetric
	CAS # 106-99-0.SEC (Lot 18349)		+/-	21.3051	µg/mL Unstressed
	Purity 99%		+/-	24.7611	µg/mL Stressed
5	Bromomethane (methyl bromide)	1,999.6 µg/mL	+/-	16.2313	µg/mL Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/-	21.2671	µg/mL Unstressed
	Purity 99%		+/-	24.7183	µg/mL Stressed
6	Chloroethane (ethyl chloride)	2,001.0 µg/mL	+/-	14.6721	µg/mL Gravimetric
	CAS # 75-00-3.SEC (Lot Q18B-13)		+/-	21.2666	µg/mL Unstressed
	Purity 99%		+/-	24.7221	µg/mL Stressed
7	Dichlorofluoromethane (CFC-21)	2,004.4 µg/mL	+/-	15.1665	µg/mL Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/-	21.3071	µg/mL Unstressed
	Purity 99%		+/-	24.7678	µg/mL Stressed
8	Trichlorofluoromethane (CFC-11)	2,001.8 µg/mL	+/-	16.2157	µg/mL Gravimetric
	CAS # 75-69-4.SEC (Lot Q139-99)		+/-	21.2894	µg/mL Unstressed
	Purity 99%		+/-	24.7442	µg/mL Stressed

Reagent

VOA8260INTRES_00090



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567649 **Lot No.:** A0104742
Description : 8260 Internal Standard
8260 Internal Standard 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul
Container Size : 5 mL **Pkg Amt:** > 5 mL
Expiration Date : July 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol CAS # 25725-11-5 Purity 99% (Lot I201P5)	5,003.0 µg/mL	+/- 29.0879 µg/mL +/- 106.1005 µg/mL +/- 106.5713 µg/mL	Gravimetric Unstressed Stressed
2	Fluorobenzene CAS # 462-06-6 Purity 99% (Lot I380033)	250.8 µg/mL	+/- 1.4795 µg/mL +/- 5.3247 µg/mL +/- 5.3483 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dioxane-d8 CAS # 17647-74-4 Purity 99% (Lot I11C-596)	5,009.6 µg/mL	+/- 29.1262 µg/mL +/- 106.2405 µg/mL +/- 106.7119 µg/mL	Gravimetric Unstressed Stressed
4	Chlorobenzene-d5 CAS # 3114-55-4 Purity 99% (Lot PR-22736)	250.8 µg/mL	+/- 1.4795 µg/mL +/- 5.3247 µg/mL +/- 5.3483 µg/mL	Gravimetric Unstressed Stressed
5	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 Purity 99% (Lot PR-18488)	250.8 µg/mL	+/- 1.4795 µg/mL +/- 5.3247 µg/mL +/- 5.3483 µg/mL	Gravimetric Unstressed Stressed
Solvent:	P&T Methanol CAS # 67-56-1 Purity 99%			

Reagent

VOA8260KET1ST_00036



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com



Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 567642 Lot No.: A093365

Description: 8260 List 1 / Std #2 Ketones

8260 List 1 / Std #2 Ketones 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size: 2 mL Pkg Amt: > 1 mL

Expiration Date: February 2016 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 67-64-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
2	2-Butanone (MEK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 78-93-3		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 108-10-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
4	2-Hexanone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 591-78-6		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
Solvent: P&T Methanol/Water (90:10)						
CAS # 67-56-1/7732-18-5						
Purity 99%						

Reagent

VOA8260KET1ST_00037



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com



Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 567642 Lot No.: A093365
Description: 8260 List 1 / Std #2 Ketones
8260 List 1 / Std #2 Ketones 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: February 2016 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 67-64-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
2	2-Butanone (MEK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 78-93-3		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 108-10-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
4	2-Hexanone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 591-78-6		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
Solvent: P&T Methanol/Water (90:10)						
CAS # 67-56-1/7732-18-5						
Purity 99%						

Reagent

VOA8260MEGA1_00027



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com



Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 567641 Lot No.: A093581

Description: 8260 List 1 / Std #1 MegaMix

8260 List 1 / Std #1 MegaMix 1000-50,000 µg/ml, P&T Methanol, 1 ml/ampul

Container Size: 2 mL Pkg Amt: > 1 mL

Expiration Date: February 2016 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Diethyl ether (ethyl ether) CAS # 60-29-7 Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 Purity 97%	1,999.9 µg/mL	+/-	11.6279	µg/mL	Gravimetric
			+/-	44.2519	µg/mL	Unstressed
			+/-	44.4323	µg/mL	Stressed
3	1,1-dichloroethene CAS # 75-35-4 Purity 98%	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
			+/-	44.2527	µg/mL	Unstressed
			+/-	44.4331	µg/mL	Stressed
4	tert-Butanol (TBA) CAS # 75-65-0 Purity 99%	20,000.0 µg/mL	+/-	116.2756	µg/mL	Gravimetric
			+/-	442.5291	µg/mL	Unstressed
			+/-	444.3332	µg/mL	Stressed
5	Iodomethane (methyl iodide) CAS # 74-88-4 Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed
6	Allyl chloride (3-chloropropene) CAS # 107-05-1 Purity 98%	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
			+/-	44.2527	µg/mL	Unstressed
			+/-	44.4331	µg/mL	Stressed
7	Methyl acetate CAS # 79-20-9 Purity 99%	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
			+/-	221.2646	µg/mL	Unstressed
			+/-	222.1666	µg/mL	Stressed
8	Carbon disulfide CAS # 75-15-0 Purity 98%	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
			+/-	44.2527	µg/mL	Unstressed
			+/-	44.4331	µg/mL	Stressed
9	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed

10	Acrylonitrile CAS # 107-13-1 Purity 99%	20,000.0	µg/mL	+/-	116.2756	µg/mL	Gravimetric
				+/-	442.5291	µg/mL	Unstressed
				+/-	444.3332	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
12	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
13	n-Hexane (C6) CAS # 110-54-3 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
14	1,1-Dichloroethane CAS # 75-34-3 Purity 98%	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
				+/-	44.2527	µg/mL	Unstressed
				+/-	44.4331	µg/mL	Stressed
15	2,2-Dichloropropane CAS # 594-20-7 Purity 98%	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
				+/-	44.2527	µg/mL	Unstressed
				+/-	44.4331	µg/mL	Stressed
16	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
17	chloroform CAS # 67-66-3 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
18	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1 Purity 99%	50,000.0	µg/mL	+/-	290.6891	µg/mL	Gravimetric
				+/-	1,106.3228	µg/mL	Unstressed
				+/-	1,110.8331	µg/mL	Stressed
19	Bromochloromethane CAS # 74-97-5 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
20	Tetrahydrofuran CAS # 109-99-9 Purity 99%	4,000.0	µg/mL	+/-	23.2563	µg/mL	Gravimetric
				+/-	88.5061	µg/mL	Unstressed
				+/-	88.8670	µg/mL	Stressed
21	1,1,1-trichloroethane CAS # 71-55-6 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
22	Cyclohexane CAS # 110-82-7 Purity 98%	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
				+/-	44.2527	µg/mL	Unstressed
				+/-	44.4331	µg/mL	Stressed
23	1,1-Dichloropropene CAS # 563-58-6 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
24	carbon tetrachloride CAS # 56-23-5 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
25	n-Heptane (C7) CAS # 142-82-5 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
26	Benzene CAS # 71-43-2 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
27	1,2-Dichloroethane CAS # 107-06-2 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
28	Trichloroethene CAS # 79-01-6 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed

29	Methylcyclohexane CAS # 108-87-2 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane CAS # 78-87-5 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1 Purity 99%	40,000.0 µg/mL	+/- 232.5513 +/- 885.0582 +/- 888.6665	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	bromodichloromethane CAS # 75-27-4 Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	cis-1,3-Dichloropropene CAS # 10061-01-5 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Toluene CAS # 108-88-3 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	Ethyl methacrylate CAS # 97-63-2 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	trans-1,3-Dichloropropene CAS # 10061-02-6 Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,1,2-Trichloroethane CAS # 79-00-5 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,3-Dichloropropane CAS # 142-28-9 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
40	Tetrachloroethene CAS # 127-18-4 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	dibromochloromethane CAS # 124-48-1 Purity 98%	2,000.0 µg/mL	+/- 11.6281 +/- 44.2527 +/- 44.4331	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Chlorobenzene CAS # 108-90-7 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	1,1,1,2-Tetrachloroethane CAS # 630-20-6 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	m-Xylene CAS # 108-38-3 Purity 99%	1,000.0 µg/mL	+/- 5.8141 +/- 22.1265 +/- 22.2167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	p-Xylene CAS # 106-42-3 Purity 99%	1,000.0 µg/mL	+/- 5.8141 +/- 22.1265 +/- 22.2167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

48	Ethylbenzene CAS # 100-41-4 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
49	Styrene CAS # 100-42-5 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
50	Isopropylbenzene (cumene) CAS # 98-82-8 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
51	bromoform CAS # 75-25-2 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane CAS # 79-34-5 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene CAS # 110-57-6 Purity 98%	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
				+/-	44.2527	µg/mL	Unstressed
				+/-	44.4331	µg/mL	Stressed
55	n-Propylbenzene CAS # 103-65-1 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
56	Bromobenzene CAS # 108-86-1 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
57	1,3,5-Trimethylbenzene CAS # 108-67-8 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
58	2-Chlorotoluene CAS # 95-49-8 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
59	4-Chlorotoluene CAS # 106-43-4 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
60	tert-Butylbenzene CAS # 98-06-6 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
61	1,2,4-Trimethylbenzene CAS # 95-63-6 Purity 98%	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
				+/-	44.2527	µg/mL	Unstressed
				+/-	44.4331	µg/mL	Stressed
62	sec-Butylbenzene CAS # 135-98-8 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
63	4-Isopropyltoluene (p-Cymene) CAS # 99-87-6 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
66	n-Butylbenzene CAS # 104-51-8 Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed

67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
72	1,2,3-Trichlorobenzene CAS # 87-61-6 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: P&T Methanol CAS # 67-56-1 Purity 99%					

Column:
60m x .25mm x 1.4µm
Rtx-502.2 (cat.#10916)

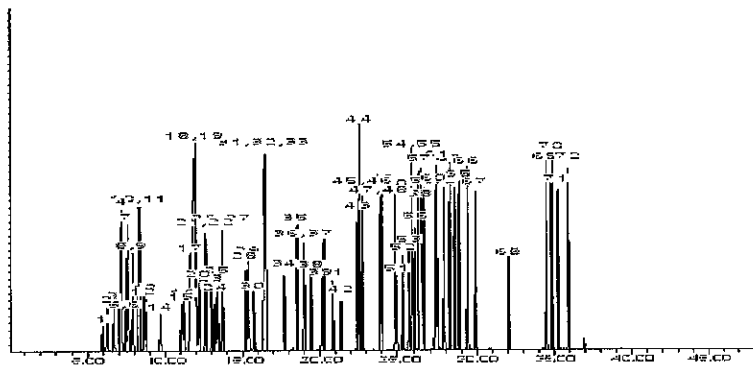
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



Jennifer L. Pollino
Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013

Balance: B251644995

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

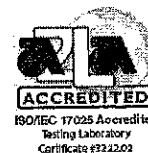
Reagent

VOA8260MEGA2_00027



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com



Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567641.sec Lot No.: A093733
Description : 8260 List 1 / Std #1 MegaMix
8260 List 1 / Std #1 MegaMix 1,000-50,000 µg/ml, P&T Methanol, 1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : February 2016 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Diethyl ether (ethyl ether) CAS # 60-29-7.SEC Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1.SEC Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed
3	1,1-Dichloroethene CAS # 75-35-4.SEC Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed
4	tert-Butanol (TBA) CAS # 75-65-0.SEC Purity 99%	20,000.0 µg/mL	+/-	116.2756	µg/mL	Gravimetric
			+/-	442.5291	µg/mL	Unstressed
			+/-	444.3332	µg/mL	Stressed
5	Iodomethane (methyl iodide) CAS # 74-88-4.SEC Purity 97%	2,000.0 µg/mL	+/-	11.6284	µg/mL	Gravimetric
			+/-	44.2540	µg/mL	Unstressed
			+/-	44.4344	µg/mL	Stressed
6	Allyl chloride (3-chloropropene) CAS # 107-05-1.SEC Purity 98%	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
			+/-	44.2527	µg/mL	Unstressed
			+/-	44.4331	µg/mL	Stressed
7	Methyl acetate CAS # 79-20-9.SEC Purity 99%	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
			+/-	221.2646	µg/mL	Unstressed
			+/-	222.1666	µg/mL	Stressed
8	Carbon disulfide CAS # 75-15-0.SEC Purity 98%	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
			+/-	44.2527	µg/mL	Unstressed
			+/-	44.4331	µg/mL	Stressed
9	Methylene chloride (dichloromethane) CAS # 75-09-2.SEC Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed

10	Acrylonitrile CAS # 107-13-1.SEC Purity 99%	20,000.0	µg/mL	+/-	116.2756	µg/mL	Gravimetric
				+/-	442.5291	µg/mL	Unstressed
				+/-	444.3332	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
12	cis-1,2-Dichloroethene CAS # 156-59-2.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
13	n-Hexane (C6) CAS # 110-54-3.SEC Purity 98%	2,000.1	µg/mL	+/-	11.6286	µg/mL	Gravimetric
				+/-	44.2549	µg/mL	Unstressed
				+/-	44.4353	µg/mL	Stressed
14	1,1-Dichloroethane CAS # 75-34-3.SEC Purity 97%	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
				+/-	44.2540	µg/mL	Unstressed
				+/-	44.4344	µg/mL	Stressed
15	2,2-Dichloropropane CAS # 594-20-7.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
16	trans-1,2-Dichloroethene CAS # 156-60-5.SEC Purity 97%	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
				+/-	44.2540	µg/mL	Unstressed
				+/-	44.4344	µg/mL	Stressed
17	Chloroform CAS # 67-66-3.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
18	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1.SEC Purity 99%	50,000.0	µg/mL	+/-	290.6891	µg/mL	Gravimetric
				+/-	1,106.3228	µg/mL	Unstressed
				+/-	1,110.8331	µg/mL	Stressed
19	Bromochloromethane CAS # 74-97-5.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
20	Tetrahydrofuran CAS # 109-99-9.SEC Purity 99%	4,000.0	µg/mL	+/-	23.2563	µg/mL	Gravimetric
				+/-	88.5061	µg/mL	Unstressed
				+/-	88.8670	µg/mL	Stressed
21	1,1,1-Trichloroethane CAS # 71-55-6.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
22	Cyclohexane CAS # 110-82-7.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
23	1,1-Dichloropropene CAS # 563-58-6.SEC Purity 98%	2,010.5	µg/mL	+/-	11.6890	µg/mL	Gravimetric
				+/-	44.4847	µg/mL	Unstressed
				+/-	44.6661	µg/mL	Stressed
24	Carbon tetrachloride CAS # 56-23-5.SEC Purity 98%	2,000.1	µg/mL	+/-	11.6286	µg/mL	Gravimetric
				+/-	44.2549	µg/mL	Unstressed
				+/-	44.4353	µg/mL	Stressed
25	n-Heptane (C7) CAS # 142-82-5.SEC Purity 99%	2,000.1	µg/mL	+/-	11.6288	µg/mL	Gravimetric
				+/-	44.2553	µg/mL	Unstressed
				+/-	44.4357	µg/mL	Stressed
26	Benzene CAS # 71-43-2.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
27	1,2-Dichloroethane CAS # 107-06-2.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
28	Trichloroethene CAS # 79-01-6.SEC Purity 98%	2,000.1	µg/mL	+/-	11.6286	µg/mL	Gravimetric
				+/-	44.2549	µg/mL	Unstressed
				+/-	44.4353	µg/mL	Stressed

29	Methylcyclohexane CAS # 108-87-2.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane CAS # 78-87-5.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1.SEC Purity 99%	40,000.0 µg/mL	+/- 232.5513 +/- 885.0582 +/- 888.6665	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Bromodichloromethane CAS # 75-27-4.SEC Purity 97%	2,000.1 µg/mL	+/- 11.6290 +/- 44.2562 +/- 44.4366	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	cis-1,3-Dichloropropene CAS # 10061-01-5.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Toluene CAS # 108-88-3.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	Ethyl methacrylate CAS # 97-63-2.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	trans-1,3-Dichloropropene CAS # 10061-02-6.SEC Purity 98%	2,000.0 µg/mL	+/- 11.6281 +/- 44.2527 +/- 44.4331	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,1,2-Trichloroethane CAS # 79-00-5.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,3-Dichloropropane CAS # 142-28-9.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
40	Tetrachloroethene CAS # 127-18-4.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Dibromochloromethane CAS # 124-48-1.SEC Purity 97%	2,000.1 µg/mL	+/- 11.6290 +/- 44.2562 +/- 44.4366	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,2-Dibromoethane (EDB) CAS # 106-93-4.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Chlorobenzene CAS # 108-90-7.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	1,1,1,2-Tetrachloroethane CAS # 630-20-6.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	m-Xylene CAS # 108-38-3.SEC Purity 99%	1,000.0 µg/mL	+/- 5.8141 +/- 22.1265 +/- 22.2167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	p-Xylene CAS # 106-42-3.SEC Purity 99%	1,000.0 µg/mL	+/- 5.8141 +/- 22.1265 +/- 22.2167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

48	Ethylbenzene CAS # 100-41-4.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
49	Styrene CAS # 100-42-5.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
50	Isopropylbenzene (cumene) CAS # 98-82-8.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
51	Bromoform CAS # 75-25-2.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane CAS # 79-34-5.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4.SEC Purity 98%	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
				+/-	44.2527	µg/mL	Unstressed
				+/-	44.4331	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene CAS # 110-57-6.SEC Purity 97%	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
				+/-	44.2540	µg/mL	Unstressed
				+/-	44.4344	µg/mL	Stressed
55	n-Propylbenzene CAS # 103-65-1.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
56	Bromobenzene CAS # 108-86-1.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
57	1,3,5-Trimethylbenzene CAS # 108-67-8.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
58	2-Chlorotoluene CAS # 95-49-8.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
59	4-Chlorotoluene CAS # 106-43-4.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
60	tert-Butylbenzene CAS # 98-06-6.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
61	1,2,4-Trimethylbenzene CAS # 95-63-6.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
62	sec-Butylbenzene CAS # 135-98-8.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene) CAS # 99-87-6.SEC Purity 96%	2,000.1	µg/mL	+/-	11.6285	µg/mL	Gravimetric
				+/-	44.2545	µg/mL	Unstressed
				+/-	44.4349	µg/mL	Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed
66	n-Butylbenzene CAS # 104-51-8.SEC Purity 99%	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
				+/-	44.2531	µg/mL	Unstressed
				+/-	44.4335	µg/mL	Stressed

67	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
72	1,2,3-Trichlorobenzene CAS # 87-61-6.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:

60m x .25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:

helium-constant pressure 30 psi

Temp. Program:

40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:

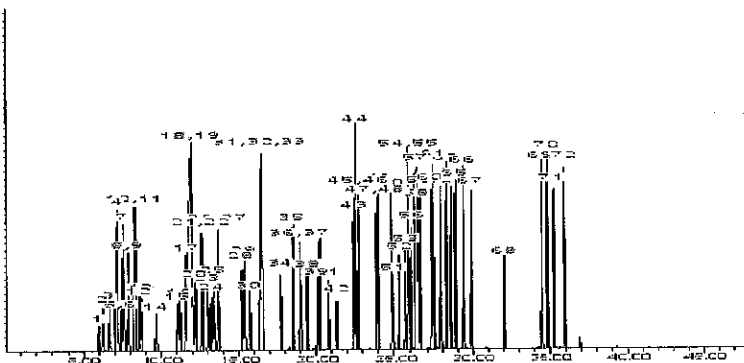
200°C

Det. Temp:

250°C

Det. Type:

MSD



Jennifer L. Pollino
Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013

Balance: 1127510105

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VOA8260SURRES_00062



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0100424
Description : 8260 Surrogate Standard
8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul
Container Size : 5 mL **Pkg Amt:** > 5 mL
Expiration Date : January 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane	2,502.2 µg/mL	+/-	14.5480	µg/mL Gravimetric
	CAS # 1868-53-7 (Lot 022012)		+/-	28.2159	µg/mL Unstressed
	Purity 99%		+/-	32.4683	µg/mL Stressed
2	1,2-Dichloroethane-d4	2,501.2 µg/mL	+/-	14.5422	µg/mL Gravimetric
	CAS # 17060-07-0 (Lot 12K-027)		+/-	28.2046	µg/mL Unstressed
	Purity 99%		+/-	32.4554	µg/mL Stressed
3	Toluene-d8	2,500.8 µg/mL	+/-	14.5399	µg/mL Gravimetric
	CAS # 2037-26-5 (Lot 13I-050)		+/-	28.2001	µg/mL Unstressed
	Purity 99%		+/-	32.4502	µg/mL Stressed
4	1-Bromo-4-fluorobenzene (BFB)	2,501.4 µg/mL	+/-	14.5434	µg/mL Gravimetric
	CAS # 460-00-4 (Lot 01127COV)		+/-	28.2069	µg/mL Unstressed
	Purity 99%		+/-	32.4580	µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VOA8260VARES_00047



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567646 Lot No.: A0106957
Description : 8260 List 1 / Std #6 Vinyl Acetate
8260 List 1 / Std #6 Vinyl Acetate 4000 ug/ml, P&T Methanol, 1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : April 30, 2015 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Vinyl acetate CAS # 108-05-4 Purity 99% (Lot STBC8935V)	4,027.0 µg/mL	+/- 23.6327 µg/mL Gravimetric +/- 214.3321 µg/mL Unstressed +/- 214.5684 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VOAACRORES_00064



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

www.restek.com



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0107338
Description : 8260 List 1/Std #5 Acrolein High
8260 List 1/Std #5 Acrolein High 19,750 µg/ml, Water, 1 ml/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2015 **Storage:** 10°C or colder
Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Acrolein	19,759.0 µg/mL	+/- 115.6933 µg/mL Gravimetric
	CAS # 107-02-8 (Lot 140429JLM)		+/- 633.5357 µg/mL Unstressed
	Purity 99%		+/- 736.4159 µg/mL Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VOARESEE1ST_00008

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568363-FL Lot No.: A097285
Description : Custom EE Standard
Custom EE Standard 5,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : February 28, 2015 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)
1	3-Chlorobenzotrifluoride CAS # 98-15-7 (Lot 21324DO) Purity 99%	5,001.0 µg/mL	+/- 29.3487 µg/mL Gravimetric +/- 53.0822 µg/mL Unstressed +/- 61.7282 µg/mL Stressed
2	4-Chlorobenzotrifluoride CAS # 98-56-6 (Lot 08507BO) Purity 99%	5,003.0 µg/mL	+/- 29.3604 µg/mL Gravimetric +/- 53.1034 µg/mL Unstressed +/- 61.7529 µg/mL Stressed
3	2-Chlorobenzotrifluoride CAS # 88-16-4 (Lot I0316DQ) Purity 99%	5,005.0 µg/mL	+/- 29.3721 µg/mL Gravimetric +/- 53.1247 µg/mL Unstressed +/- 61.7775 µg/mL Stressed
4	3-Chlorotoluene CAS # 108-41-8 (Lot 13528LX) Purity 99%	5,000.0 µg/mL	+/- 29.3428 µg/mL Gravimetric +/- 53.0716 µg/mL Unstressed +/- 61.7158 µg/mL Stressed
5	2,4-Dichlorobenzotrifluoride CAS # 320-60-5 (Lot MKBL3552V) Purity 99%	5,002.0 µg/mL	+/- 29.3545 µg/mL Gravimetric +/- 53.0928 µg/mL Unstressed +/- 61.7405 µg/mL Stressed
6	3,4-Dichlorobenzotrifluoride CAS # 328-84-7 (Lot 11105EJV) Purity 99%	5,000.0 µg/mL	+/- 29.3428 µg/mL Gravimetric +/- 53.0716 µg/mL Unstressed +/- 61.7158 µg/mL Stressed
7	2,5-Dichlorobenzotrifluoride CAS # 320-50-3 (Lot 04415DSV) Purity 99%	5,000.0 µg/mL	+/- 29.3428 µg/mL Gravimetric +/- 53.0716 µg/mL Unstressed +/- 61.7158 µg/mL Stressed
8	2,4-Dichlorotoluene CAS # 95-73-8 (Lot 07715JS) Purity 99%	5,002.0 µg/mL	+/- 29.3545 µg/mL Gravimetric +/- 53.0928 µg/mL Unstressed +/- 61.7405 µg/mL Stressed

9	2,5-Dichlorotoluene CAS # 19398-61-9 Purity 99%	(Lot 10119CU)	5,000.0	µg/mL	+/-	29.3428	µg/mL	Gravimetric
					+/-	53.0716	µg/mL	Unstressed
					+/-	61.7158	µg/mL	Stressed
10	2,6-Dichlorotoluene CAS # 118-69-4 Purity 99%	(Lot 16921JS)	5,001.0	µg/mL	+/-	29.3487	µg/mL	Gravimetric
					+/-	53.0822	µg/mL	Unstressed
					+/-	61.7282	µg/mL	Stressed
11	3,4-Dichlorotoluene CAS # 95-75-0 Purity 99%	(Lot 09419AS)	5,003.0	µg/mL	+/-	29.3604	µg/mL	Gravimetric
					+/-	53.1034	µg/mL	Unstressed
					+/-	61.7529	µg/mL	Stressed
12	2,3-Dichlorotoluene CAS # 32768-54-0 Purity 99%	(Lot 00317)	5,008.0	µg/mL	+/-	29.3897	µg/mL	Gravimetric
					+/-	53.1565	µg/mL	Unstressed
					+/-	61.8146	µg/mL	Stressed
13	2,4,5-Trichlorotoluene CAS # 6639-30-1 Purity 99%	(Lot 1767300)	5,001.0	µg/mL	+/-	29.3487	µg/mL	Gravimetric
					+/-	53.0822	µg/mL	Unstressed
					+/-	61.7282	µg/mL	Stressed
14	2,3,6-Trichlorotoluene CAS # 2077-46-5 Purity 99%	(Lot RM01250)	5,001.0	µg/mL	+/-	29.3487	µg/mL	Gravimetric
					+/-	53.0822	µg/mL	Unstressed
					+/-	61.7282	µg/mL	Stressed
Solvent:	P&T Methanol CAS # 67-56-1 Purity 99%							

Reagent

WNa2CO3P_00007



1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System
Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0064970

This is to certify that units of the above mentioned lot number were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	S263	Quality Test / Release Date 4/8/2014	
Lot Number	138124		
Description	SODIUM CARBONATE, ANHYDROUS, CERTIFIED A.C.S.		
Country of Origin	China	* Suggested Retest Date	Apr-2019
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	White granular powder
ASSAY	%	>= 99.5	100.3
CALCIUM	%	<= 0.03	0.010
CHLORIDE	%	<= 0.001	<0.0010
HEAVY METALS (as Pb)	ppm	<= 5	<5.0
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	ppm	<= 5	<5.0
LOSS ON HEATING @ 285 DEG C	%	<= 1.0	0.1
MAGNESIUM	%	<= 0.005	<0.001
PHOSPHATE (PO4)	%	<= 0.001	0.0010
POTASSIUM (K)	%	<= 0.005	0.001
SILICA (SiO2)	%	<= 0.005	0.005
SULFUR COMPOUNDS	%	<= 0.003	<0.0030



Edgar E. Hare

Lab Manager Fair Lawn



1243950

ID: WNa2CO3P_00007

Exp:07/09/18 Prpd:HRA Opm:07/09/14
Sodium Carbonate



1243948

ID: WNa2CO3P_00007

Exp:07/09/18 Prpd:HRA Opm:07/09/14
Sodium Carbonate



1243949

ID: WNa2CO3P_00007

Exp:07/09/18 Prpd:HRA Opm:07/09/14
Sodium Carbonate



1243947

ID: WNa2CO3P_00007

Exp:07/09/18 Prpd:HRA Opm:07/09/14
Sodium Carbonate

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-6701.

*Based on suggested storage condition.

Method 8260C Low Level

Volatile Organic Compounds (GC/MS)
by Method 8260C Low Level

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Matrix: Water Level: Low
 GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
HD-QC-5-0/1-2	180-41613-1	100	103	102	103
HD-QC-2-0/1-3	180-41613-2	96	101	102	103
HD-QC-2-0/1-4	180-41613-3	101	113	109	109
HD-MW-50S-0/1-0	180-41613-4	104	105	103	106
HD-MW-51D-0/1-0	180-41613-5	99	103	103	103
HD-MW-127-0/1-0	180-41613-6	98	99	105	100
HD-MW-132-0/1-0	180-41613-7	105	112	105	105
HD-MW-132-0/1-0 DL	180-41613-7 DL	99	108	102	105
HD-MW-95-0/1-0	180-41613-8	100	112	106	108
HD-MW-97-0/1-0	180-41613-9	102	112	103	107
	MB 180-135153/4	97	101	101	101
	MB 180-135260/5	99	112	107	108
	LCS 180-135153/7	100	100	109	100
	LCS 180-135260/8	103	113	109	106

	<u>QC LIMITS</u>
DBFM = Dibromofluoromethane (Surr)	70-128
DCA = 1,2-Dichloroethane-d4 (Surr)	64-135
TOL = Toluene-d8 (Surr)	71-118
BFB = 4-Bromofluorobenzene (Surr)	70-118

Column to be used to flag recovery values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: 50310007.D
 Lab ID: LCS 180-135153/7 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	8.77	88	50-139	
Vinyl chloride	10.0	9.10	91	53-138	
Bromomethane	10.0	12.6	126	33-150	
Chloroethane	10.0	11.2	112	36-142	
1,1-Dichloroethene	10.0	9.96	100	65-136	
Acetone	20.0	19.9	100	22-150	
Carbon disulfide	10.0	9.92	99	54-132	
Methylene Chloride	10.0	9.53	95	63-129	
trans-1,2-Dichloroethene	10.0	10.3	103	73-126	
Methyl tert-butyl ether	10.0	6.36	64	64-123	
1,1-Dichloroethane	10.0	9.34	93	73-126	
cis-1,2-Dichloroethene	10.0	9.85	99	70-120	
Bromochloromethane	10.0	9.21	92	70-127	
2-Butanone (MEK)	20.0	17.5	87	39-138	
Chloroform	10.0	9.97	100	72-127	
1,1,1-Trichloroethane	10.0	7.66	77	63-133	
Carbon tetrachloride	10.0	9.07	91	55-150	
Benzene	10.0	9.95	99	80-120	
1,2-Dichloroethane	10.0	10.2	102	68-132	
Trichloroethene	10.0	10.3	103	73-120	
1,2-Dichloropropane	10.0	8.70	87	76-124	
Bromodichloromethane	10.0	10.1	101	66-130	
cis-1,3-Dichloropropene	10.0	6.54	65	66-120	*
4-Methyl-2-pentanone (MIBK)	20.0	17.4	87	45-145	
Toluene	10.0	10.9	109	80-123	
trans-1,3-Dichloropropene	10.0	5.53	55	65-125	*
1,1,2-Trichloroethane	10.0	10.4	104	77-127	
Tetrachloroethene	10.0	11.1	111	70-135	
2-Hexanone	20.0	15.4	77	25-132	
Dibromochloromethane	10.0	10.7	107	60-140	
1,2-Dibromoethane (EDB)	10.0	9.28	93	74-123	
Chlorobenzene	10.0	10.6	106	80-120	
1,1,1,2-Tetrachloroethane	10.0	9.41	94	63-140	
Ethylbenzene	10.0	11.0	110	72-126	
Xylenes, Total	20.0	21.8	109	76-128	
Styrene	10.0	10.3	103	71-127	
Bromoform	10.0	11.1	111	46-150	
1,1,2,2-Tetrachloroethane	10.0	10.6	106	62-125	
1,4-Dioxane	200	184 J	92	10-160	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: 50311008.D
Lab ID: LCS 180-135260/8 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	7.06	71	50-139	
Vinyl chloride	10.0	8.54	85	53-138	
Bromomethane	10.0	17.6	176	33-150	*
Chloroethane	10.0	14.7	147	36-142	*
1,1-Dichloroethene	10.0	9.10	91	65-136	
Acetone	20.0	20.9	104	22-150	
Carbon disulfide	10.0	9.10	91	54-132	
Methylene Chloride	10.0	9.76	98	63-129	
trans-1,2-Dichloroethene	10.0	9.64	96	73-126	
Methyl tert-butyl ether	10.0	6.63	66	64-123	
1,1-Dichloroethane	10.0	9.32	93	73-126	
cis-1,2-Dichloroethene	10.0	9.49	95	70-120	
Bromochloromethane	10.0	10.2	102	70-127	
2-Butanone (MEK)	20.0	17.9	89	39-138	
Chloroform	10.0	10.7	107	72-127	
1,1,1-Trichloroethane	10.0	8.16	82	63-133	
Carbon tetrachloride	10.0	9.82	98	55-150	
Benzene	10.0	9.62	96	80-120	
1,2-Dichloroethane	10.0	10.7	107	68-132	
Trichloroethene	10.0	9.96	100	73-120	
1,2-Dichloropropane	10.0	8.53	85	76-124	
Bromodichloromethane	10.0	10.6	106	66-130	
cis-1,3-Dichloropropene	10.0	6.52	65	66-120	*
4-Methyl-2-pentanone (MIBK)	20.0	16.6	83	45-145	
Toluene	10.0	10.8	108	80-123	
trans-1,3-Dichloropropene	10.0	6.00	60	65-125	*
1,1,2-Trichloroethane	10.0	10.4	104	77-127	
Tetrachloroethene	10.0	10.8	108	70-135	
2-Hexanone	20.0	16.3	82	25-132	
Dibromochloromethane	10.0	11.7	117	60-140	
1,2-Dibromoethane (EDB)	10.0	9.31	93	74-123	
Chlorobenzene	10.0	10.4	104	80-120	
1,1,1,2-Tetrachloroethane	10.0	9.82	98	63-140	
Ethylbenzene	10.0	10.3	103	72-126	
Xylenes, Total	20.0	21.2	106	76-128	
Styrene	10.0	10.1	101	71-127	
Bromoform	10.0	12.4	124	46-150	
1,1,2,2-Tetrachloroethane	10.0	10.4	104	62-125	
1,4-Dioxane	200	177 J	88	10-160	

Column to be used to flag recovery and RPD values

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab File ID: 50310004.D Lab Sample ID: MB 180-135153/4
Matrix: Water Heated Purge: (Y/N) N
Instrument ID: CHHP5 Date Analyzed: 03/10/2015 12:44
GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-135153/7	50310007.D	03/10/2015 14:12
HD-MW-50S-0/1-0	180-41613-4	50310024.D	03/10/2015 21:02
HD-MW-51D-0/1-0	180-41613-5	50310025.D	03/10/2015 21:26
HD-QC-5-0/1-2	180-41613-1	50310026.D	03/10/2015 21:50
HD-MW-127-0/1-0	180-41613-6	50310027.D	03/10/2015 22:14
HD-QC-2-0/1-3	180-41613-2	50310028.D	03/10/2015 22:38

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab File ID: 50311005.D Lab Sample ID: MB 180-135260/5
Matrix: Water Heated Purge: (Y/N) N
Instrument ID: CHHP5 Date Analyzed: 03/11/2015 12:32
GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-135260/8	50311008.D	03/11/2015 13:58
HD-QC-2-0/1-4	180-41613-3	50311014.D	03/11/2015 16:22
HD-MW-132-0/1-0 DL	180-41613-7 DL	50311015.D	03/11/2015 16:46
HD-MW-95-0/1-0	180-41613-8	50311016.D	03/11/2015 17:10
HD-MW-97-0/1-0	180-41613-9	50311017.D	03/11/2015 17:35
HD-MW-132-0/1-0	180-41613-7	50311027.D	03/11/2015 21:36

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab File ID: 50303006.D BFB Injection Date: 03/03/2015
Instrument ID: CHHP5 BFB Injection Time: 12:21
Analysis Batch No.: 134613

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.6
75	30.0 - 60.0 % of mass 95	46.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.7
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	73.0
175	5.0 - 9.0 % of mass 174	5.5 (7.5) 1
176	95.0 - 101.0 % of mass 174	72.9 (99.8) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.3) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 180-134613/8	50303008.D	03/03/2015	14:28
	ICIS 180-134613/9	50303009.D	03/03/2015	14:52
	IC 180-134613/10	50303010.D	03/03/2015	15:16
	IC 180-134613/11	50303011.D	03/03/2015	15:40
	IC 180-134613/12	50303012.D	03/03/2015	16:04
	IC 180-134613/13	50303013.D	03/03/2015	16:28
	IC 180-134613/14	50303014.D	03/03/2015	16:52
	IC 180-134613/18	50303018.D	03/03/2015	18:29

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Lab File ID: 50310001.D BFB Injection Date: 03/10/2015
 Instrument ID: CHHP5 BFB Injection Time: 10:55
 Analysis Batch No.: 135153

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	25.7
75	30.0 - 60.0 % of mass 95	52.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.7
173	Less than 2.0 % of mass 174	0.2 (0.2) 1
174	50.0 - 120.00 % of mass 95	84.5
175	5.0 - 9.0 % of mass 174	7.3 (8.6) 1
176	95.0 - 101.0 % of mass 174	84.4 (99.9) 1
177	5.0 - 9.0 % of mass 176	6.0 (7.1) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-135153/2	50310002.D	03/10/2015	11:37
	MB 180-135153/4	50310004.D	03/10/2015	12:44
	LCS 180-135153/7	50310007.D	03/10/2015	14:12
HD-MW-50S-0/1-0	180-41613-4	50310024.D	03/10/2015	21:02
HD-MW-51D-0/1-0	180-41613-5	50310025.D	03/10/2015	21:26
HD-QC-5-0/1-2	180-41613-1	50310026.D	03/10/2015	21:50
HD-MW-127-0/1-0	180-41613-6	50310027.D	03/10/2015	22:14
HD-QC-2-0/1-3	180-41613-2	50310028.D	03/10/2015	22:38

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab File ID: 50311001.D BFB Injection Date: 03/11/2015
Instrument ID: CHHP5 BFB Injection Time: 10:41
Analysis Batch No.: 135260

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	25.7
75	30.0 - 60.0 % of mass 95	52.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.4
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	86.3
175	5.0 - 9.0 % of mass 174	6.2 (7.2) 1
176	95.0 - 101.0 % of mass 174	82.0 (95.1) 1
177	5.0 - 9.0 % of mass 176	5.1 (6.2) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-135260/2	50311002.D	03/11/2015	11:20
	MB 180-135260/5	50311005.D	03/11/2015	12:32
	LCS 180-135260/8	50311008.D	03/11/2015	13:58
HD-QC-2-0/1-4	180-41613-3	50311014.D	03/11/2015	16:22
HD-MW-132-0/1-0 DL	180-41613-7 DL	50311015.D	03/11/2015	16:46
HD-MW-95-0/1-0	180-41613-8	50311016.D	03/11/2015	17:10
HD-MW-97-0/1-0	180-41613-9	50311017.D	03/11/2015	17:35
HD-MW-132-0/1-0	180-41613-7	50311027.D	03/11/2015	21:36

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Sample No.: CCVIS 180-135153/2 Date Analyzed: 03/10/2015 11:37
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 50310002.D Heated Purge: (Y/N) N
 Calibration ID: 22321

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		68961	4.30	383152	7.27	86796	10.37
UPPER LIMIT		137922	4.80	766304	7.77	173592	10.87
LOWER LIMIT		34481	3.80	191576	6.77	43398	9.87
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-135153/4		86833	4.30	432295	7.27	100617	10.36
LCS 180-135153/7		64251	4.32	376237	7.27	85792	10.37
180-41613-4	HD-MW-50S-0/1-0	64387	4.30	368023	7.27	84223	10.36
180-41613-5	HD-MW-51D-0/1-0	65910	4.29	385353	7.28	87710	10.36
180-41613-1	HD-QC-5-0/1-2	64159	4.30	366480	7.27	85593	10.36
180-41613-6	HD-MW-127-0/1-0	55478	4.30	357405	7.28	82150	10.36
180-41613-2	HD-QC-2-0/1-3	61674	4.29	373198	7.27	86497	10.36

TBA = TBA-d9 (IS)
 FB = Fluorobenzene (IS)
 CBZ = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Sample No.: CCVIS 180-135153/2 Date Analyzed: 03/10/2015 11:37
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 50310002.D Heated Purge: (Y/N) N
 Calibration ID: 22321

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		130106	12.69				
UPPER LIMIT		260212	13.19				
LOWER LIMIT		65053	12.19				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-135153/4		161434	12.68				
LCS 180-135153/7		119827	12.69				
180-41613-4	HD-MW-50S-0/1-0	130885	12.68				
180-41613-5	HD-MW-51D-0/1-0	135450	12.68				
180-41613-1	HD-QC-5-0/1-2	130150	12.69				
180-41613-6	HD-MW-127-0/1-0	127289	12.68				
180-41613-2	HD-QC-2-0/1-3	136157	12.68				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Sample No.: CCVIS 180-135260/2 Date Analyzed: 03/11/2015 11:20
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 50311002.D Heated Purge: (Y/N) N
 Calibration ID: 22321

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		113757	4.31	516360	7.27	116893	10.36
UPPER LIMIT		227514	4.81	1032720	7.77	233786	10.86
LOWER LIMIT		56879	3.81	258180	6.77	58447	9.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-135260/5		126687	4.29	555581	7.28	126896	10.36
LCS 180-135260/8		98793	4.31	507781	7.27	112964	10.36
180-41613-3	HD-QC-2-0/1-4	104476	4.30	506674	7.28	112163	10.36
180-41613-7 DL	HD-MW-132-0/1-0 DL	93248	4.30	502673	7.28	116733	10.36
180-41613-8	HD-MW-95-0/1-0	100116	4.31	502263	7.28	114206	10.36
180-41613-9	HD-MW-97-0/1-0	87998	4.30	469282	7.27	109591	10.36
180-41613-7	HD-MW-132-0/1-0	78530	4.30	464847	7.27	106492	10.36

TBA = TBA-d9 (IS)

FB = Fluorobenzene (IS)

CBZ = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area

RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Sample No.: CCVIS 180-135260/2 Date Analyzed: 03/11/2015 11:20
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 50311002.D Heated Purge: (Y/N) N
 Calibration ID: 22321

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		169715	12.68				
UPPER LIMIT		339430	13.18				
LOWER LIMIT		84858	12.18				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-135260/5		199201	12.68				
LCS 180-135260/8		166456	12.69				
180-41613-3	HD-QC-2-0/1-4	178063	12.69				
180-41613-7 DL	HD-MW-132-0/1-0 DL	175856	12.69				
180-41613-8	HD-MW-95-0/1-0	176368	12.69				
180-41613-9	HD-MW-97-0/1-0	167552	12.69				
180-41613-7	HD-MW-132-0/1-0	167761	12.68				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-QC-5-0/1-2 Lab Sample ID: 180-41613-1

Matrix: Water Lab File ID: 50310026.D

Analysis Method: 8260C Date Collected: 02/27/2015 12:00

Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 21:50

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U *	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U *	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-QC-5-0/1-2 Lab Sample ID: 180-41613-1
 Matrix: Water Lab File ID: 50310026.D
 Analysis Method: 8260C Date Collected: 02/27/2015 12:00
 Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 21:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-135
2037-26-5	Toluene-d8 (Surr)	102		71-118
460-00-4	4-Bromofluorobenzene (Surr)	103		70-118
1868-53-7	Dibromofluoromethane (Surr)	100		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310026.D
 Lims ID: 180-41613-A-1 Lab Sample ID: 180-41613-1
 Client ID: HD-QC-5-0/1-2
 Sample Type: Client
 Inject. Date: 10-Mar-2015 21:50:30 ALS Bottle#: 26 Worklist Smp#: 26
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-41613-A-1
 Misc. Info.: 180-0005958-026
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 09:23:04 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 09:23:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.296	0.000	81	64159	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.271	-0.001	99	366480	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.367	-0.006	99	85593	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	99	130150	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.528	6.529	-0.001	52	78478	50.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.900	-0.001	98	99779	51.5	
\$ 7 Toluene-d8 (Surr)	98	8.925	8.926	-0.001	100	339019	50.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.529	0.000	97	127638	51.4	
12 Chloromethane	50		1.771				ND	
13 Vinyl chloride	62		1.899				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.374				ND	
22 1,1-Dichloroethene	96		3.371				ND	
24 Acetone	43	3.517	3.493	0.024	60	8055	10.5	
26 Carbon disulfide	76		3.651				ND	
31 Methylene Chloride	84		4.126				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.552				ND	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63		5.166				ND	
45 cis-1,2-Dichloroethene	96		5.933				ND	
46 2-Butanone (MEK)	43		5.981				ND	
49 Chlorobromomethane	128		6.218				ND	
52 Chloroform	83		6.340				ND	
53 1,1,1-Trichloroethane	97		6.523				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.955				ND	
59 1,2-Dichloroethane	62		6.979				ND	
64 Trichloroethene	130		7.660				ND	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.068				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.196				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.224				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164		9.540				ND	
82 2-Hexanone	43		9.662				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				ND	
87 Chlorobenzene	112		10.392				ND	
89 1,1,1,2-Tetrachloroethane	131		10.471				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310026.D

Injection Date: 10-Mar-2015 21:50:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-A-1

Lab Sample ID: 180-41613-1

Worklist Smp#: 26

Client ID: HD-QC-5-0/1-2

Purge Vol: 5.000 mL

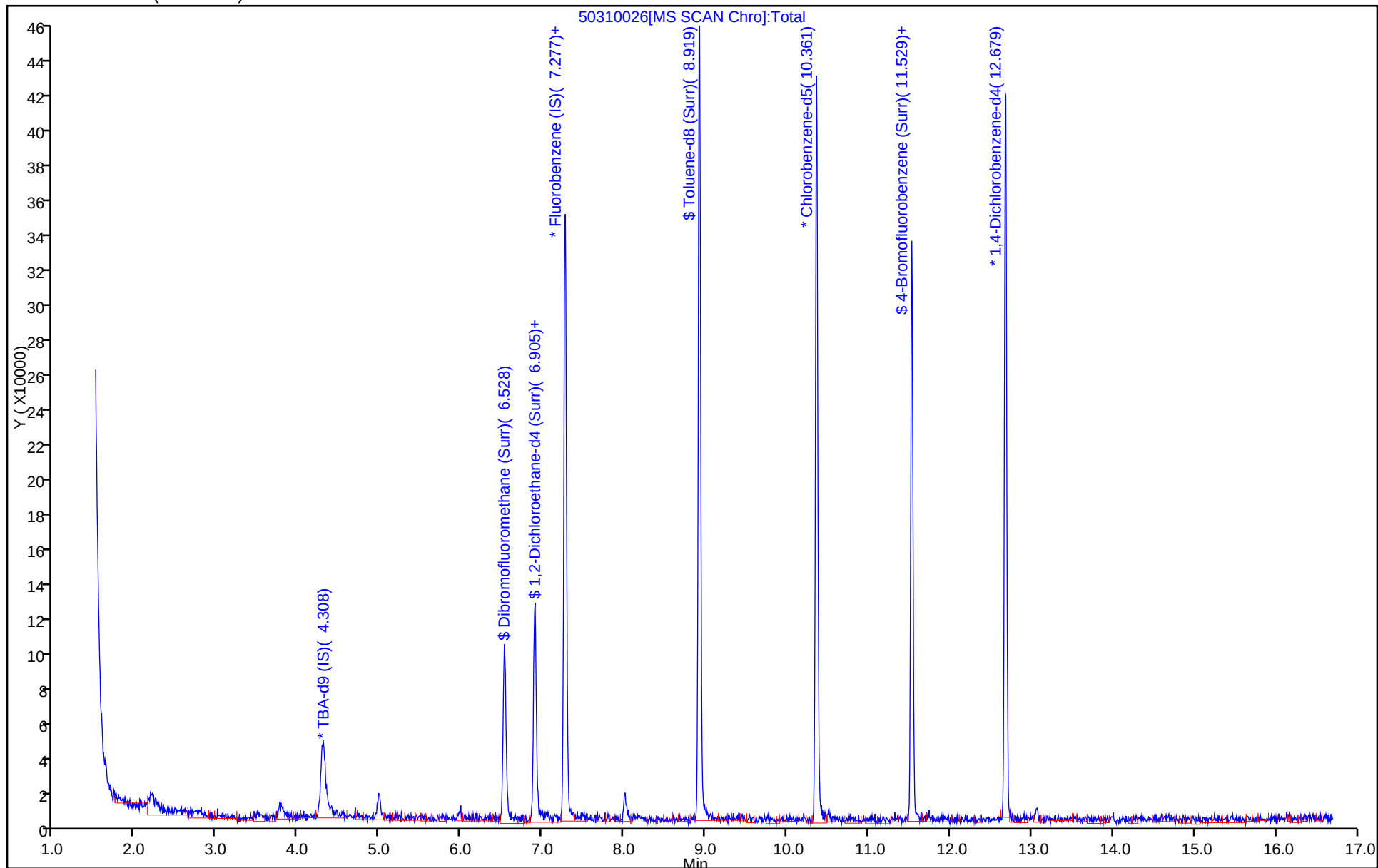
Dil. Factor: 1.0000

ALS Bottle#: 26

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-QC-2-0/1-3 Lab Sample ID: 180-41613-2

Matrix: Water Lab File ID: 50310028.D

Analysis Method: 8260C Date Collected: 02/27/2015 11:55

Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 22:38

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U *	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U *	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-QC-2-0/1-3 Lab Sample ID: 180-41613-2
 Matrix: Water Lab File ID: 50310028.D
 Analysis Method: 8260C Date Collected: 02/27/2015 11:55
 Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 22:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		64-135
2037-26-5	Toluene-d8 (Surr)	102		71-118
460-00-4	4-Bromofluorobenzene (Surr)	103		70-118
1868-53-7	Dibromofluoromethane (Surr)	96		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310028.D
 Lims ID: 180-41613-A-2 Lab Sample ID: 180-41613-2
 Client ID: HD-QC-2-0/1-3
 Sample Type: Client
 Inject. Date: 10-Mar-2015 22:38:30 ALS Bottle#: 28 Worklist Smp#: 28
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-41613-A-2
 Misc. Info.: 180-0005958-028
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 09:27:08 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 09:27:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.285	4.296	-0.011	84	61674	1000.0	
* 2 Fluorobenzene (IS)	96	7.272	7.271	0.001	99	373198	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	99	86497	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.685	-0.005	99	136157	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.523	6.529	-0.006	53	76702	48.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.900	0.000	98	99980	50.6	
\$ 7 Toluene-d8 (Surr)	98	8.920	8.926	-0.006	99	343179	50.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.529	0.001	100	129603	51.7	
12 Chloromethane	50		1.771				ND	
13 Vinyl chloride	62		1.899				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.374				ND	
22 1,1-Dichloroethene	96		3.371				ND	
24 Acetone	43	3.500	3.493	0.007	72	7441	9.49	
26 Carbon disulfide	76		3.651				ND	
31 Methylene Chloride	84		4.126				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.552				ND	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63		5.166				ND	
45 cis-1,2-Dichloroethene	96	5.958	5.933	0.026	1	752	0.3095	
46 2-Butanone (MEK)	43		5.981				ND	
49 Chlorobromomethane	128		6.218				ND	
52 Chloroform	83		6.340				ND	
53 1,1,1-Trichloroethane	97		6.523				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.955				ND	
59 1,2-Dichloroethane	62		6.979				ND	
64 Trichloroethene	130		7.660				ND	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.068				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.196				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.224				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.535	9.540	-0.005	14	715	0.4340	
82 2-Hexanone	43		9.662				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				ND	
87 Chlorobenzene	112		10.392				ND	
89 1,1,1,2-Tetrachloroethane	131		10.471				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310028.D

Injection Date: 10-Mar-2015 22:38:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-A-2

Lab Sample ID: 180-41613-2

Worklist Smp#: 28

Client ID: HD-QC-2-0/1-3

Purge Vol: 5.000 mL

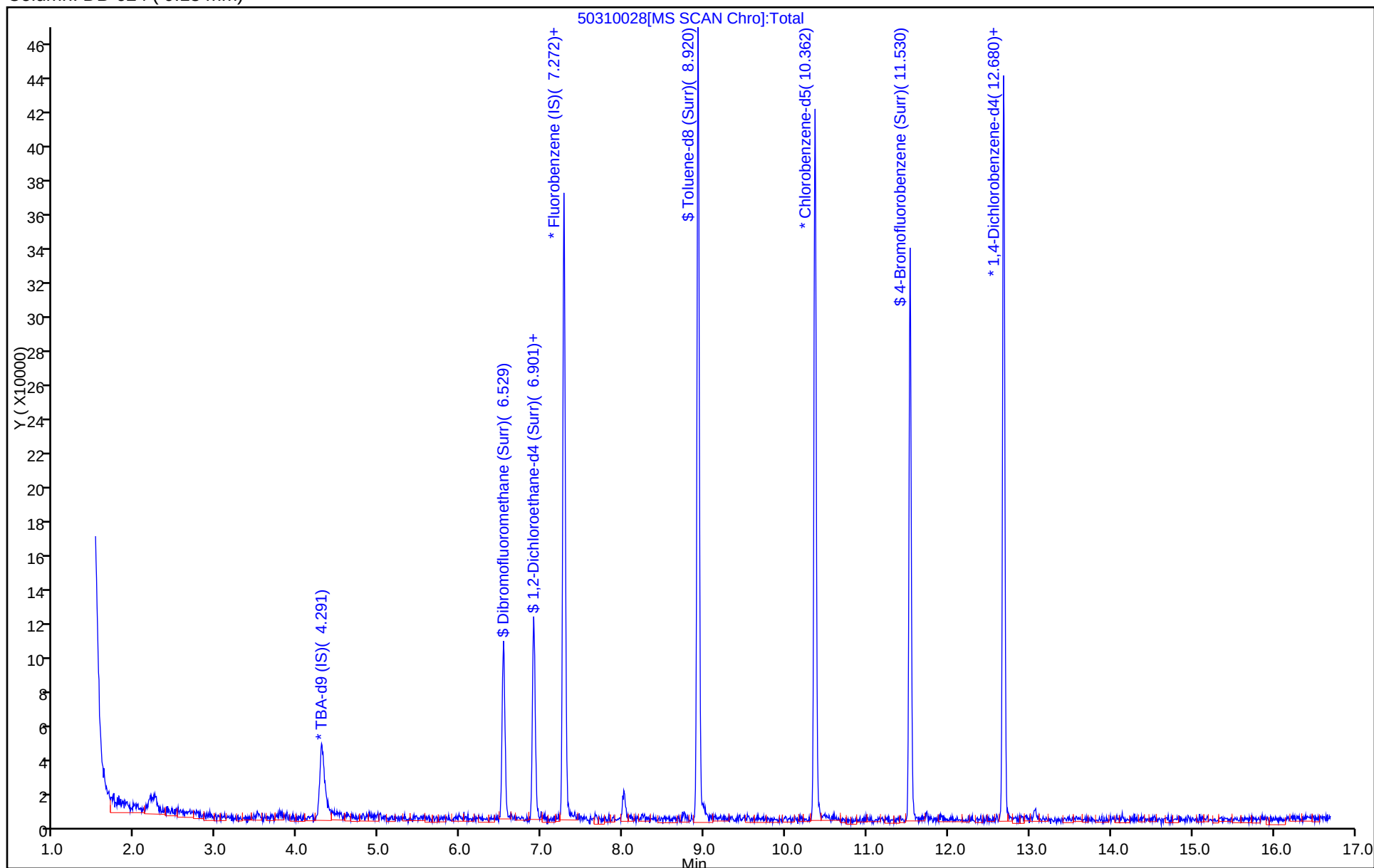
Dil. Factor: 1.0000

ALS Bottle#: 28

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-QC-2-0/1-4 Lab Sample ID: 180-41613-3

Matrix: Water Lab File ID: 50311014.D

Analysis Method: 8260C Date Collected: 02/27/2015 12:00

Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 16:22

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U *	1.0	0.31
75-00-3	Chloroethane	1.0	U *	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U *	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U *	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-QC-2-0/1-4 Lab Sample ID: 180-41613-3
 Matrix: Water Lab File ID: 50311014.D
 Analysis Method: 8260C Date Collected: 02/27/2015 12:00
 Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 16:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		64-135
2037-26-5	Toluene-d8 (Surr)	109		71-118
460-00-4	4-Bromofluorobenzene (Surr)	109		70-118
1868-53-7	Dibromofluoromethane (Surr)	101		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311014.D
 Lims ID: 180-41613-B-3 Lab Sample ID: 180-41613-3
 Client ID: HD-QC-2-0/1-4
 Sample Type: Client
 Inject. Date: 11-Mar-2015 16:22:30 ALS Bottle#: 14 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-41613-B-3
 Misc. Info.: 180-0005976-014
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 12-Mar-2015 08:05:13 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: fergusond

Date: 12-Mar-2015 08:05:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.303	4.305	-0.002	81	104476	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.268	0.009	99	506674	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.364	-0.002	99	112163	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.682	0.004	98	178063	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.526	0.003	52	109628	50.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	96	151782	56.6	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	99	476554	54.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	96	177622	54.6	
12 Chloromethane	50		1.768				ND	
13 Vinyl chloride	62		1.902				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.371				ND	
22 1,1-Dichloroethene	96		3.368				ND	
24 Acetone	43	3.500	3.496	0.004	60	7485	7.03	
26 Carbon disulfide	76		3.648				ND	
31 Methylene Chloride	84		4.135				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.555				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96		5.930				ND	
46 2-Butanone (MEK)	43		5.990				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.532				ND	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130		7.663				ND	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.059				ND	

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311014.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.215				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164		9.531				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311014.D

Injection Date: 11-Mar-2015 16:22:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-B-3

Lab Sample ID: 180-41613-3

Worklist Smp#: 14

Client ID: HD-QC-2-0/1-4

Purge Vol: 5.000 mL

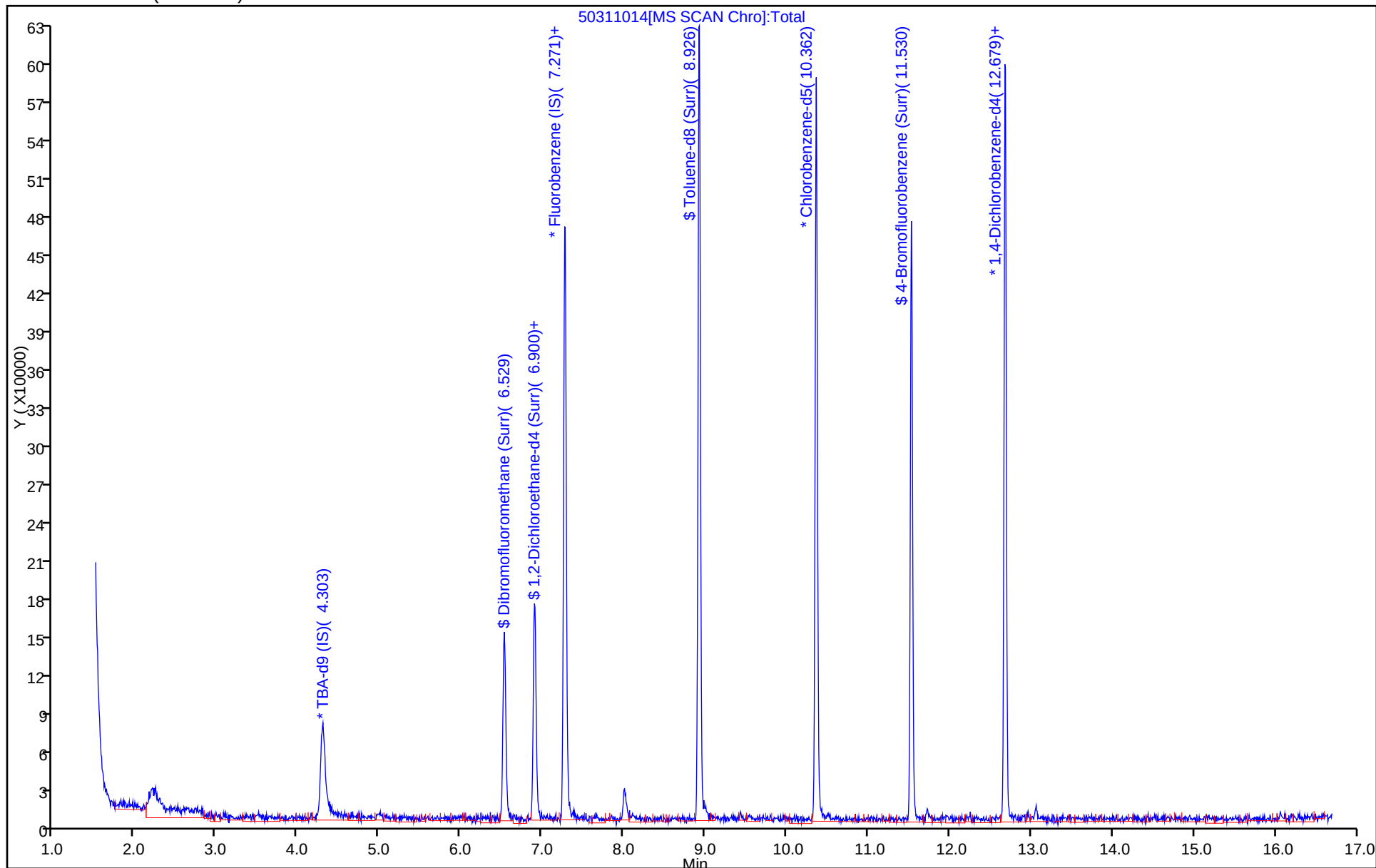
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-MW-50S-0/1-0 Lab Sample ID: 180-41613-4

Matrix: Water Lab File ID: 50310024.D

Analysis Method: 8260C Date Collected: 02/27/2015 09:55

Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 21:02

Soil Aliquot Vol: _____ Dilution Factor: 50

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	50	U	50	14
75-01-4	Vinyl chloride	50	U	50	11
74-83-9	Bromomethane	50	U	50	16
75-00-3	Chloroethane	50	U	50	11
75-35-4	1,1-Dichloroethene	54		50	15
67-64-1	Acetone	250	U	250	130
75-15-0	Carbon disulfide	50	U	50	11
75-09-2	Methylene Chloride	50	U	50	6.3
156-60-5	trans-1,2-Dichloroethene	50	U	50	8.5
1634-04-4	Methyl tert-butyl ether	50	U	50	9.2
75-34-3	1,1-Dichloroethane	9.2	J	50	5.8
156-59-2	cis-1,2-Dichloroethene	850		50	12
74-97-5	Bromochloromethane	50	U	50	9.0
78-93-3	2-Butanone (MEK)	250	U	250	27
67-66-3	Chloroform	50	U	50	8.5
71-55-6	1,1,1-Trichloroethane	130		50	14
56-23-5	Carbon tetrachloride	50	U	50	6.8
71-43-2	Benzene	50	U	50	5.3
107-06-2	1,2-Dichloroethane	50	U	50	11
79-01-6	Trichloroethene	840		50	7.2
78-87-5	1,2-Dichloropropane	50	U	50	4.7
75-27-4	Bromodichloromethane	50	U	50	6.5
10061-01-5	cis-1,3-Dichloropropene	50	U *	50	9.3
108-10-1	4-Methyl-2-pentanone (MIBK)	250	U	250	26
108-88-3	Toluene	50	U	50	7.5
10061-02-6	trans-1,3-Dichloropropene	50	U *	50	7.4
79-00-5	1,1,2-Trichloroethane	50	U	50	10
127-18-4	Tetrachloroethene	220		50	7.4
591-78-6	2-Hexanone	250	U	250	8.0
124-48-1	Dibromochloromethane	50	U	50	6.8
106-93-4	1,2-Dibromoethane (EDB)	50	U	50	9.0
108-90-7	Chlorobenzene	50	U	50	6.8
630-20-6	1,1,1,2-Tetrachloroethane	50	U	50	14
100-41-4	Ethylbenzene	50	U	50	11
1330-20-7	Xylenes, Total	150	U	150	24
100-42-5	Styrene	50	U	50	4.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-MW-50S-0/1-0 Lab Sample ID: 180-41613-4
 Matrix: Water Lab File ID: 50310024.D
 Analysis Method: 8260C Date Collected: 02/27/2015 09:55
 Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 21:02
 Soil Aliquot Vol: _____ Dilution Factor: 50
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	50	U	50	9.6
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	10
107-13-1	Acrylonitrile	1000	U	1000	27
123-91-1	1,4-Dioxane	10000	U	10000	1700

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		64-135
2037-26-5	Toluene-d8 (Surr)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	106		70-118
1868-53-7	Dibromofluoromethane (Surr)	104		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310024.D
 Lims ID: 180-41613-D-4 Lab Sample ID: 180-41613-4
 Client ID: HD-MW-50S-0/1-0
 Sample Type: Client
 Inject. Date: 10-Mar-2015 21:02:30 ALS Bottle#: 24 Worklist Smp#: 24
 Purge Vol: 5.000 mL Dil. Factor: 50.0000
 Sample Info: 180-41613-D-4, 50x
 Misc. Info.: 180-0005958-024
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 09:19:41 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 09:19:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.298	4.296	0.002	79	64387	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.271	0.002	99	368023	50.0	
* 3 Chlorobenzene-d5	119	10.363	10.367	-0.004	99	84223	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.681	12.685	-0.004	99	130885	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.530	6.529	0.001	66	82288	52.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.900	0.001	99	102553	52.7	
\$ 7 Toluene-d8 (Surr)	98	8.921	8.926	-0.005	100	339017	51.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.529	0.002	98	129543	53.0	
12 Chloromethane	50		1.771				ND	
13 Vinyl chloride	62		1.899				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.374				ND	
22 1,1-Dichloroethene	96	3.379	3.371	0.008	97	11634	5.43	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.651				ND	
31 Methylene Chloride	84		4.126				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.552				ND	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63	5.180	5.166	0.014	57	3922	0.9183	
45 cis-1,2-Dichloroethene	96	5.940	5.933	0.008	76	203631	85.0	
46 2-Butanone (MEK)	43		5.981				ND	
49 Chlorobromomethane	128		6.218				ND	
52 Chloroform	83		6.340				ND	
53 1,1,1-Trichloroethane	97	6.536	6.523	0.013	69	30527	13.2	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.955				ND	
59 1,2-Dichloroethane	62		6.979				ND	
64 Trichloroethene	130	7.668	7.660	0.008	98	183292	83.7	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.068				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.196				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.224				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.530	9.540	-0.010	95	34503	21.5	
82 2-Hexanone	43		9.662				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				ND	
87 Chlorobenzene	112		10.392				ND	
89 1,1,1,2-Tetrachloroethane	131		10.471				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310024.D

Injection Date: 10-Mar-2015 21:02:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-D-4

Lab Sample ID: 180-41613-4

Worklist Smp#: 24

Client ID: HD-MW-50S-0/1-0

Purge Vol: 5.000 mL

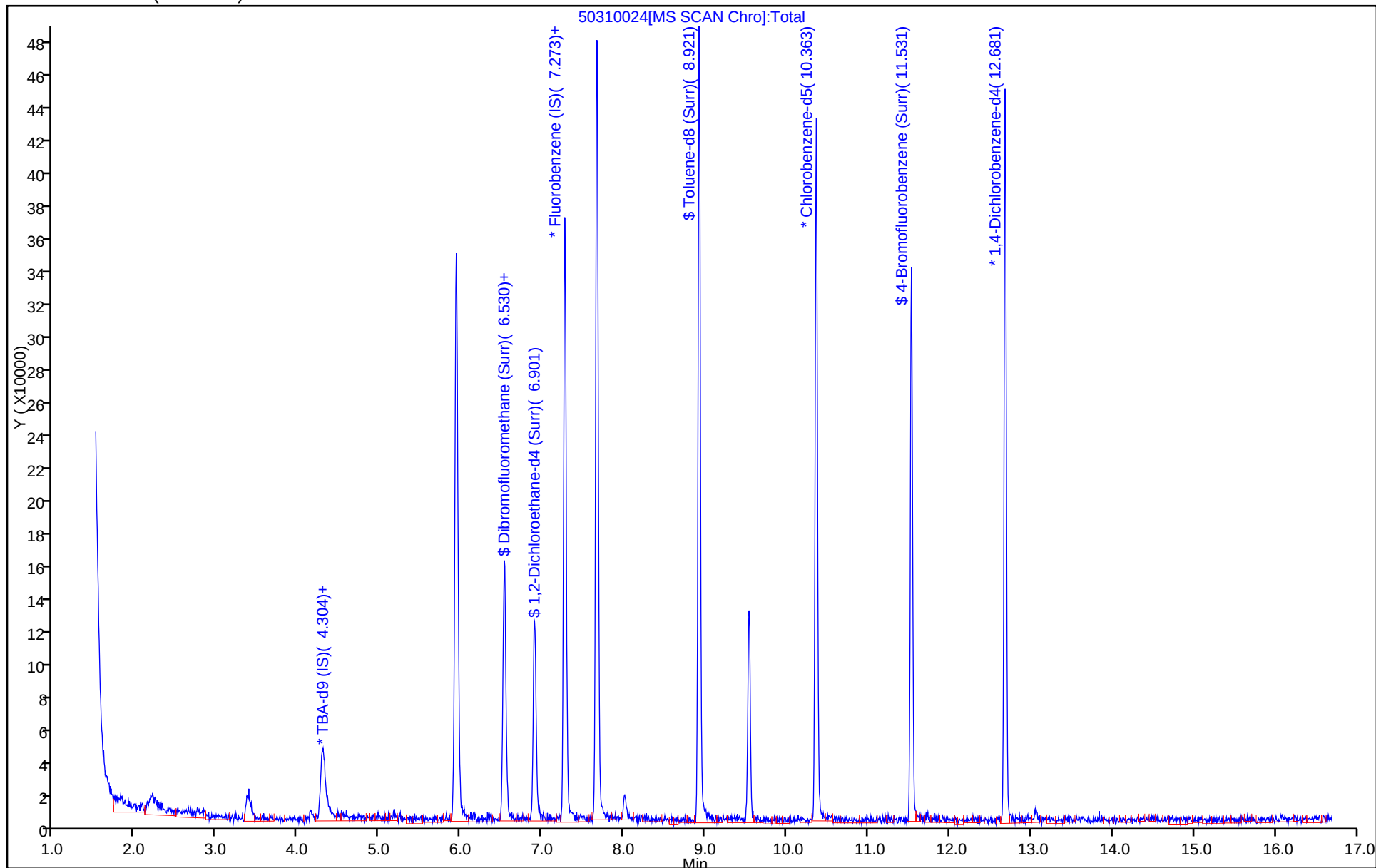
Dil. Factor: 50.0000

ALS Bottle#: 24

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310024.D

Injection Date: 10-Mar-2015 21:02:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-4

Lab Sample ID: 180-41613-4

Client ID: HD-MW-50S-0/1-0

Operator ID: 001562

ALS Bottle#: 24

Worklist Smp#: 24

Purge Vol: 5.000 mL

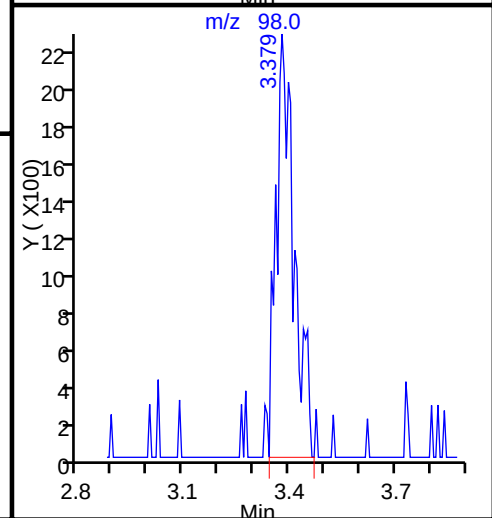
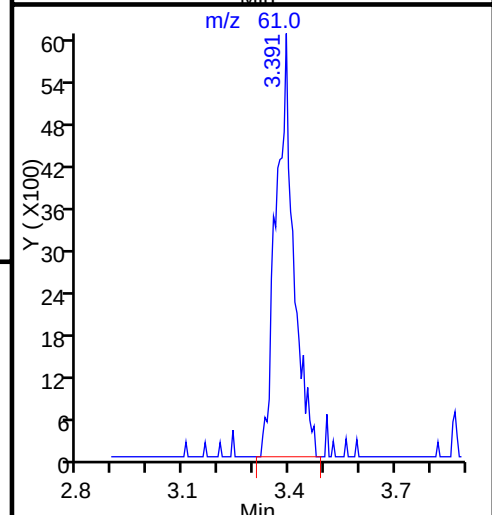
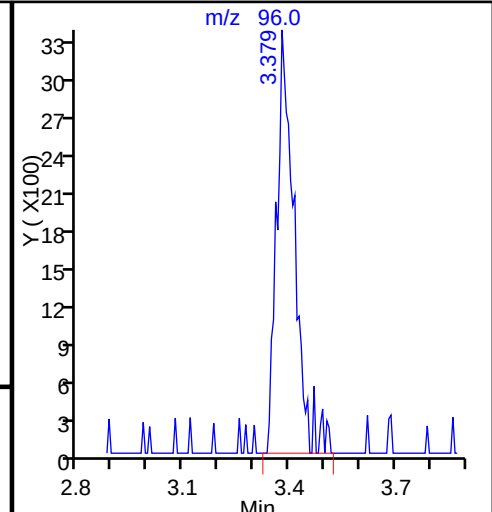
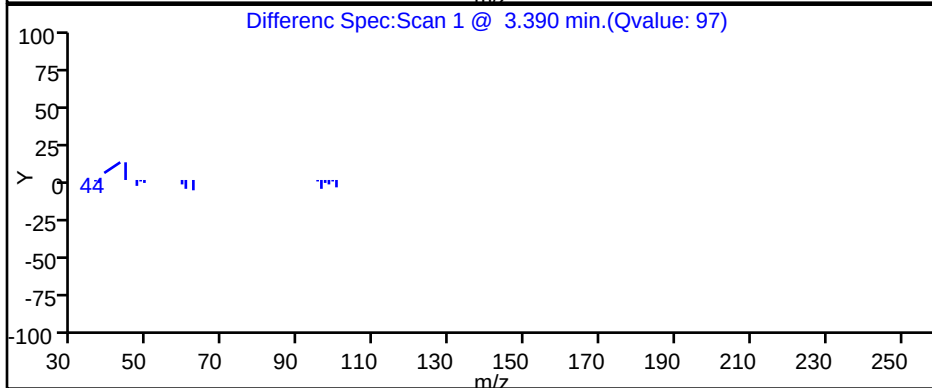
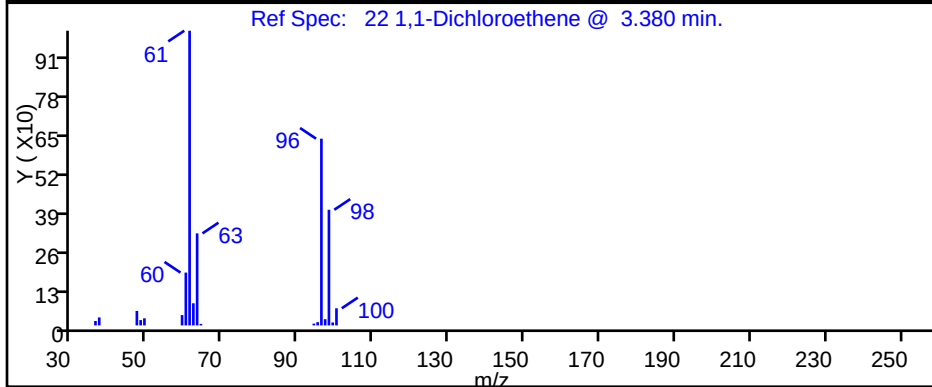
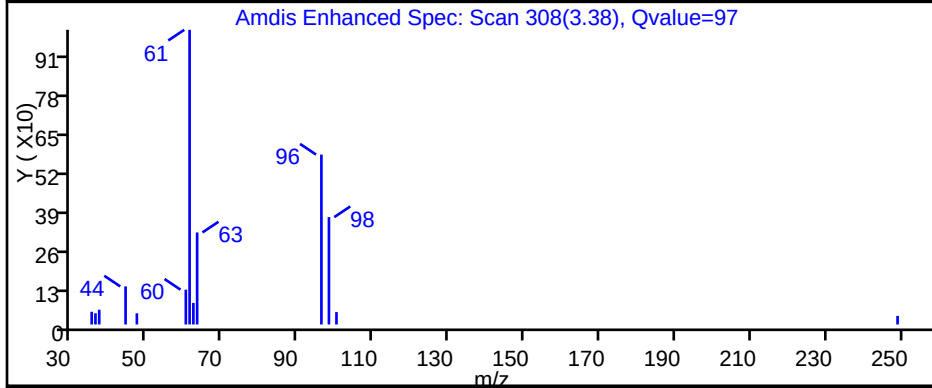
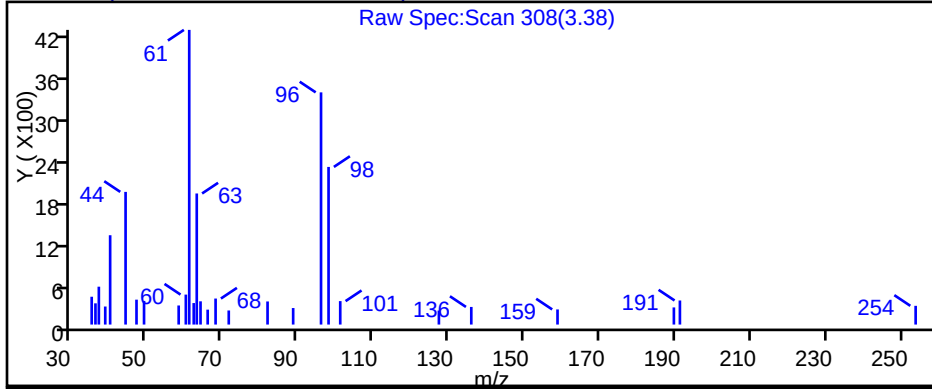
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310024.D

Injection Date: 10-Mar-2015 21:02:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-4

Lab Sample ID: 180-41613-4

Client ID: HD-MW-50S-0/1-0

Operator ID: 001562

ALS Bottle#: 24

Worklist Smp#: 24

Purge Vol: 5.000 mL

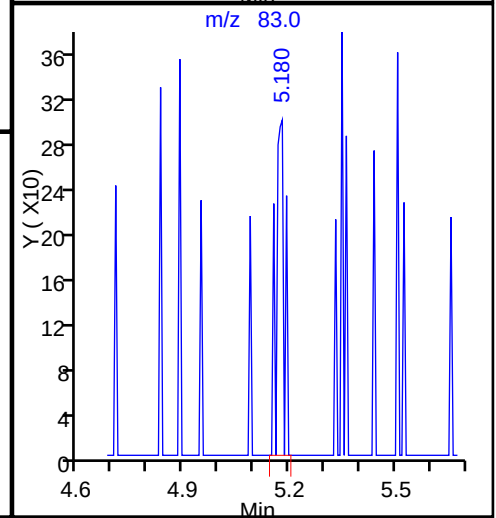
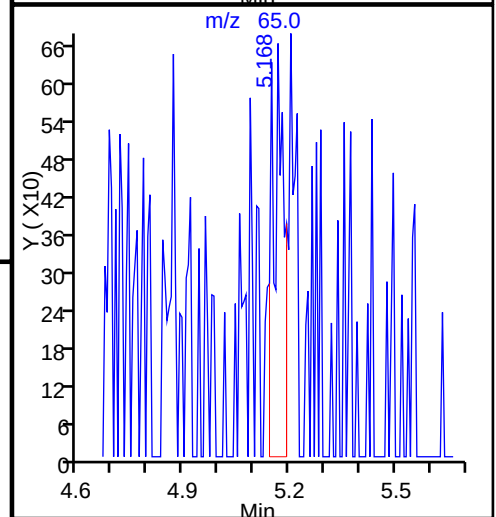
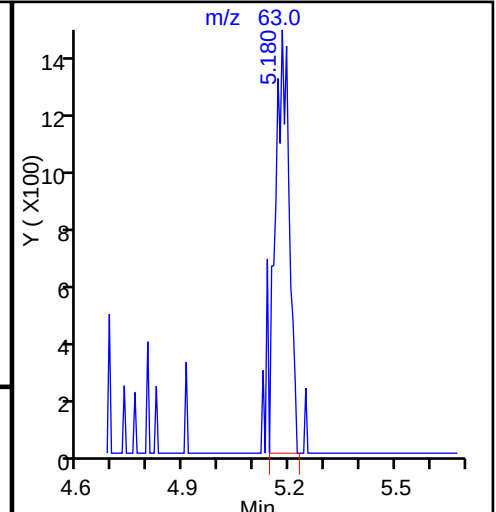
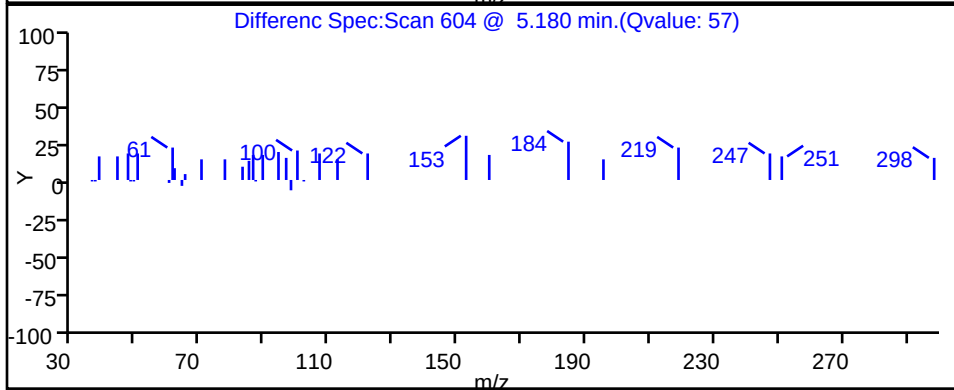
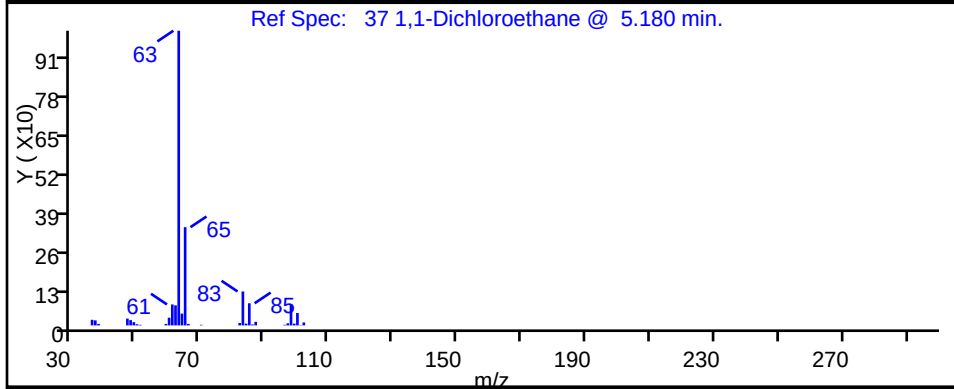
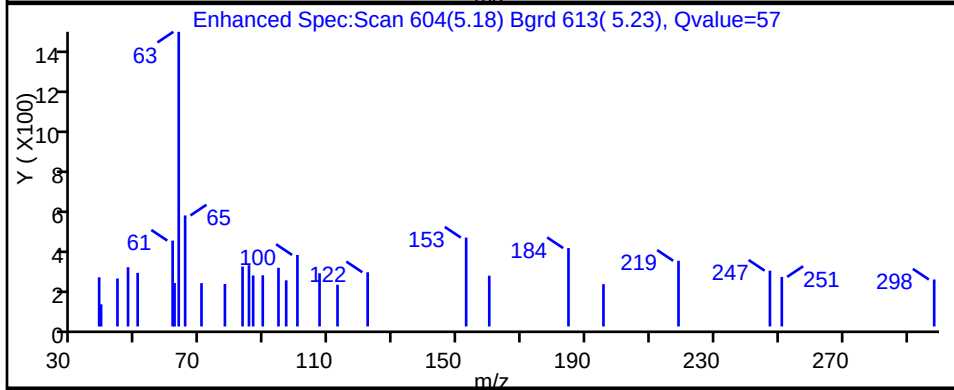
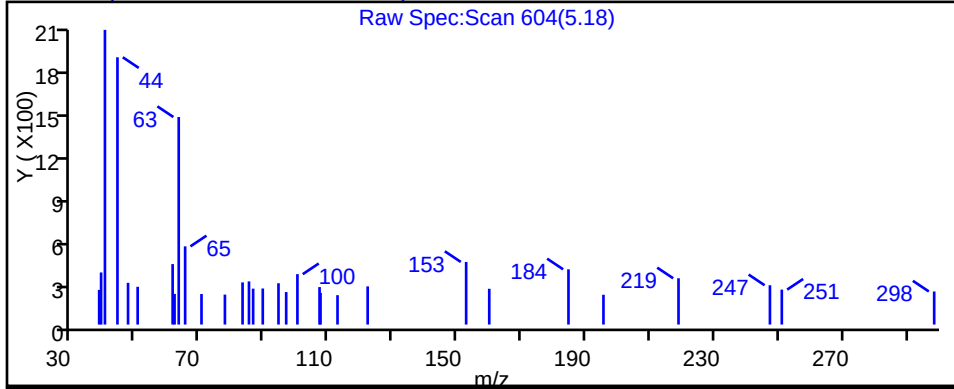
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310024.D

Injection Date: 10-Mar-2015 21:02:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-4

Lab Sample ID: 180-41613-4

Client ID: HD-MW-50S-0/1-0

Operator ID: 001562

ALS Bottle#: 24

Worklist Smp#: 24

Purge Vol: 5.000 mL

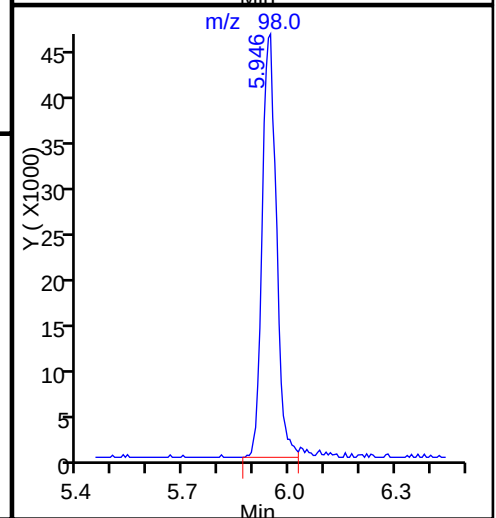
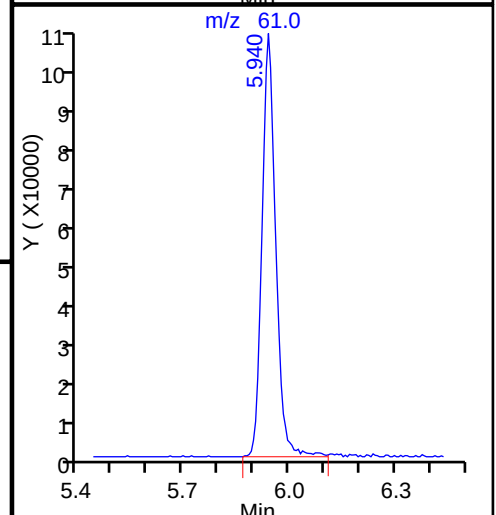
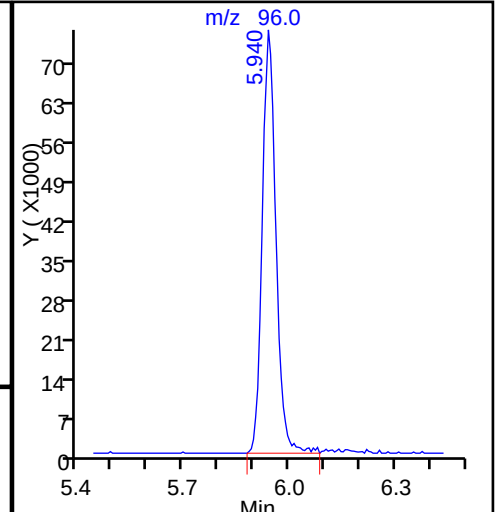
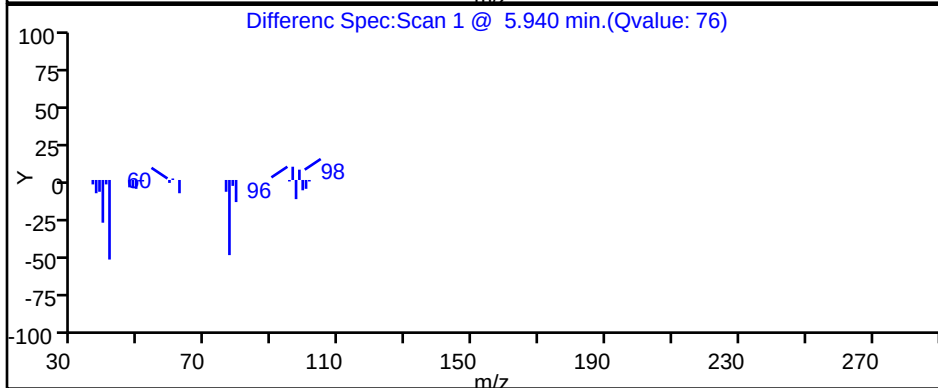
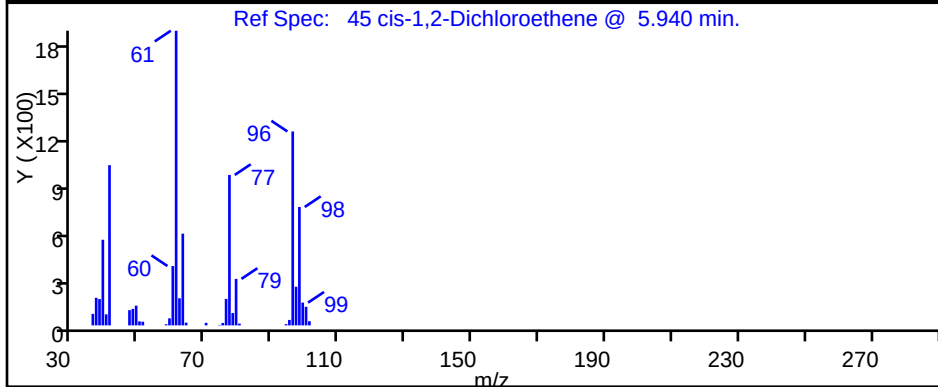
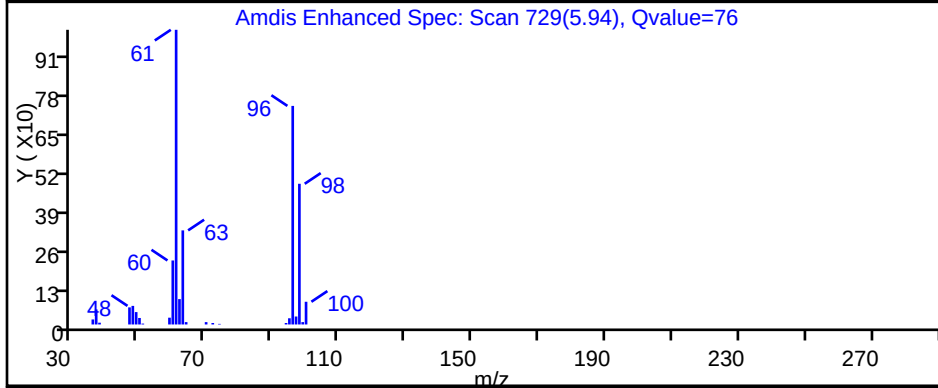
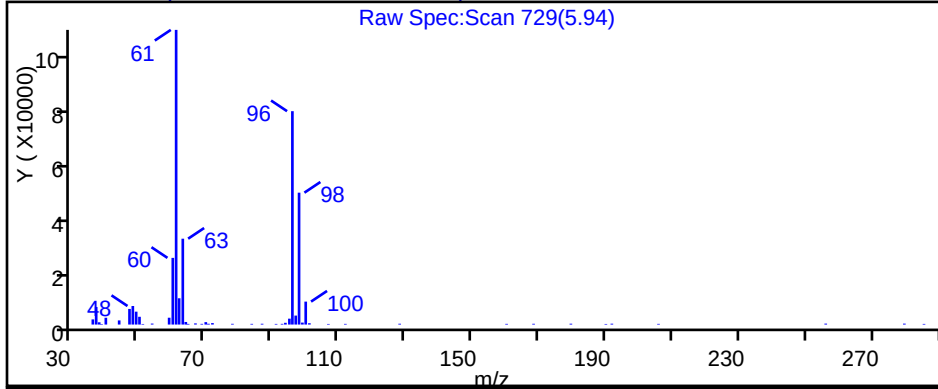
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310024.D

Injection Date: 10-Mar-2015 21:02:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-4

Lab Sample ID: 180-41613-4

Client ID: HD-MW-50S-0/1-0

Operator ID: 001562

ALS Bottle#: 24

Worklist Smp#: 24

Purge Vol: 5.000 mL

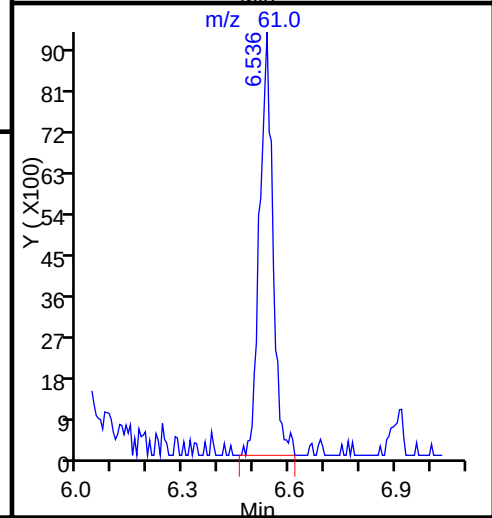
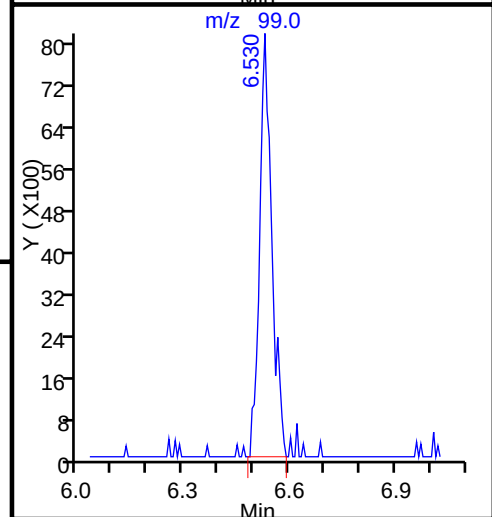
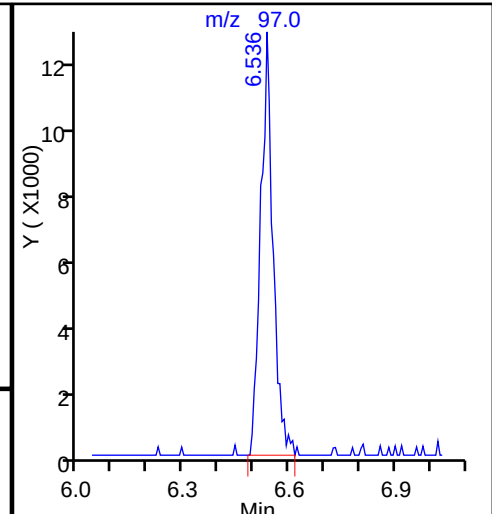
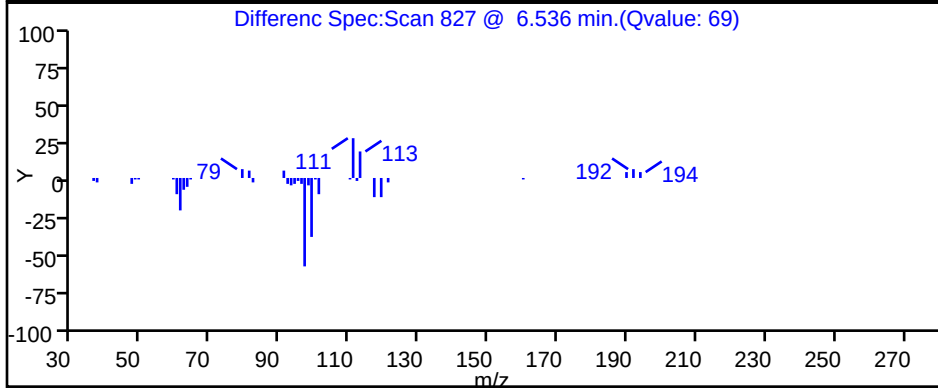
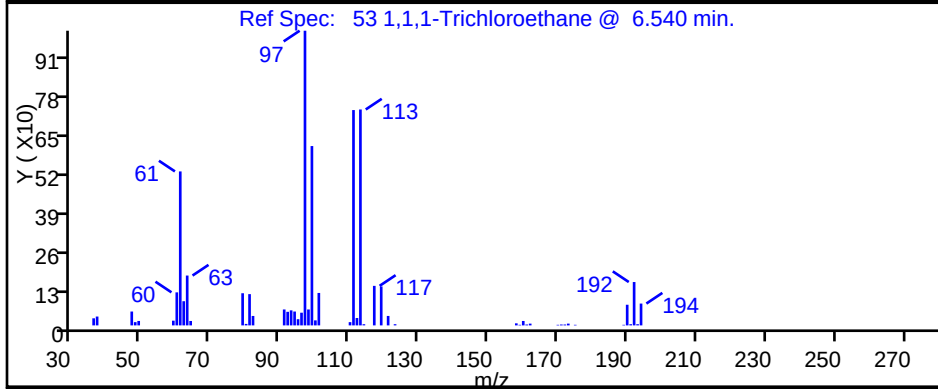
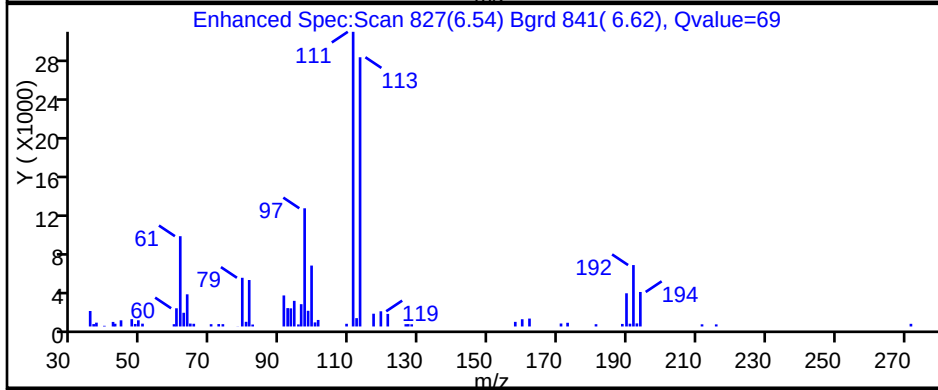
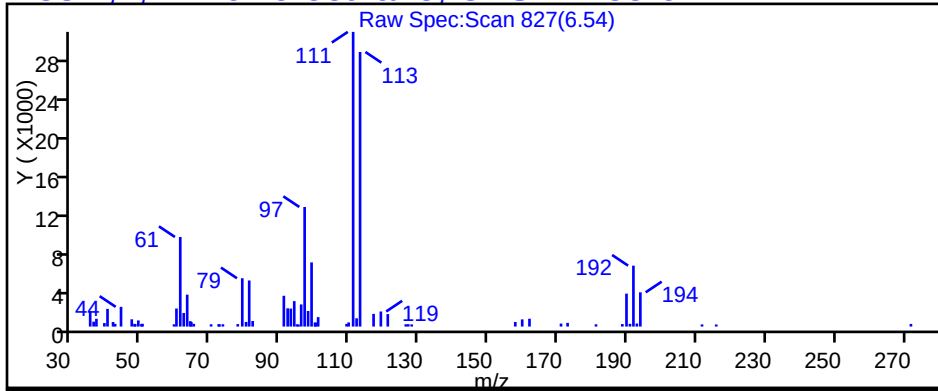
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

53 1,1,1-Trichloroethane, CAS: 71-55-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310024.D

Injection Date: 10-Mar-2015 21:02:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-4

Lab Sample ID: 180-41613-4

Client ID: HD-MW-50S-0/1-0

Operator ID: 001562

ALS Bottle#: 24

Worklist Smp#: 24

Purge Vol: 5.000 mL

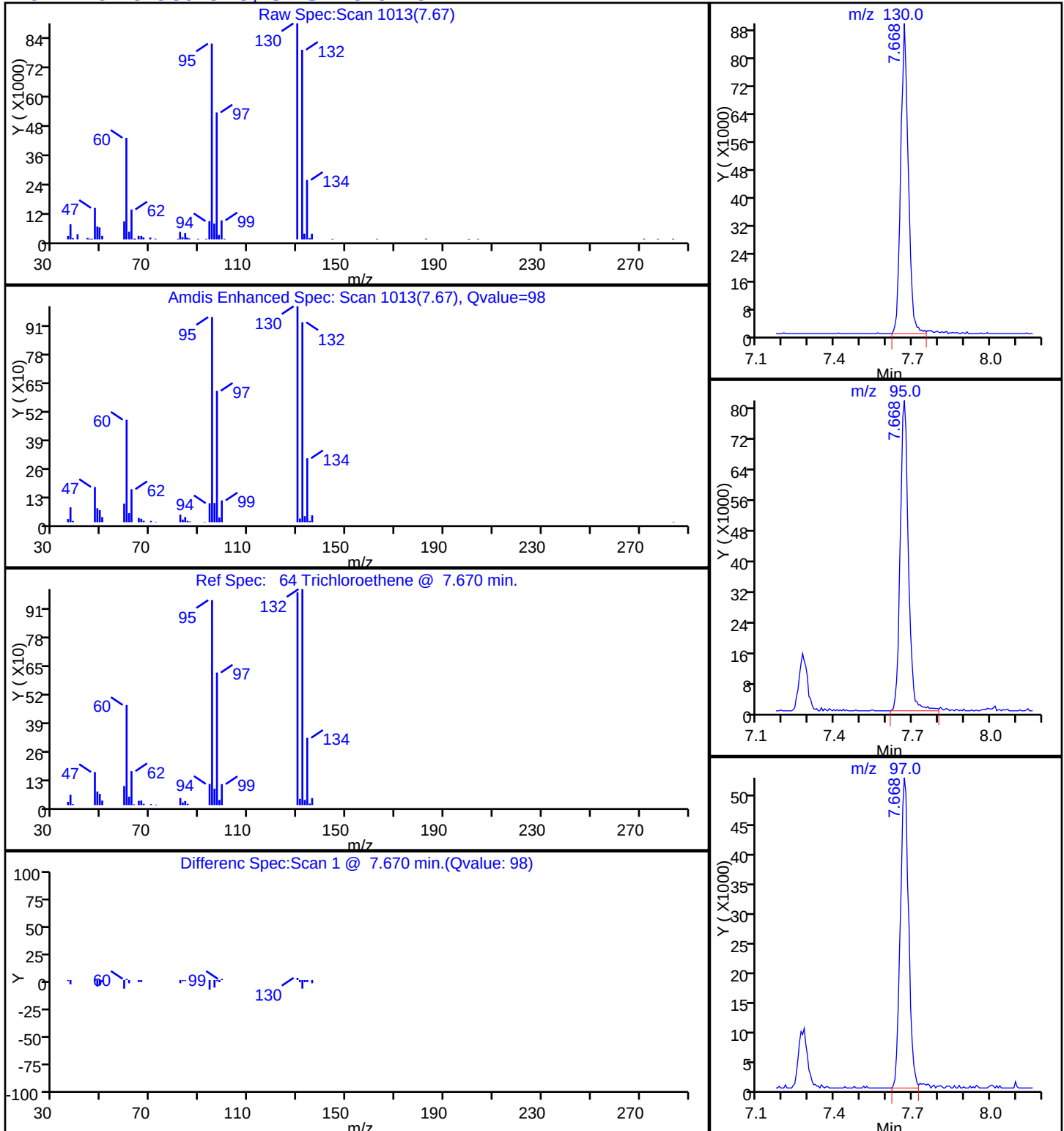
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310024.D

Injection Date: 10-Mar-2015 21:02:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-4

Lab Sample ID: 180-41613-4

Client ID: HD-MW-50S-0/1-0

Operator ID: 001562

ALS Bottle#: 24

Worklist Smp#: 24

Purge Vol: 5.000 mL

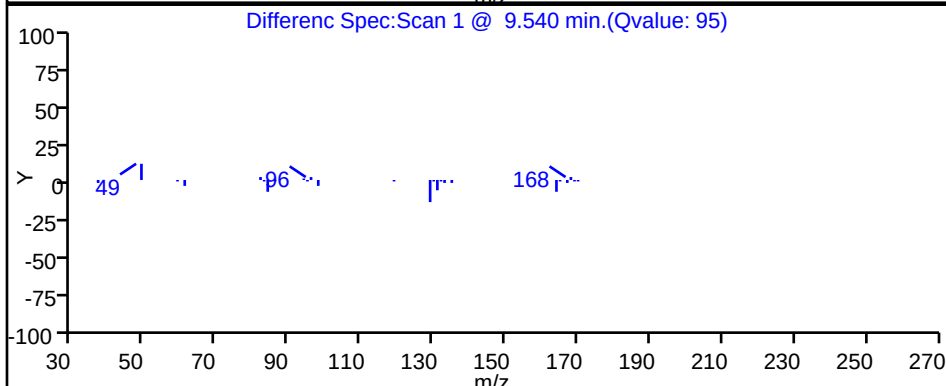
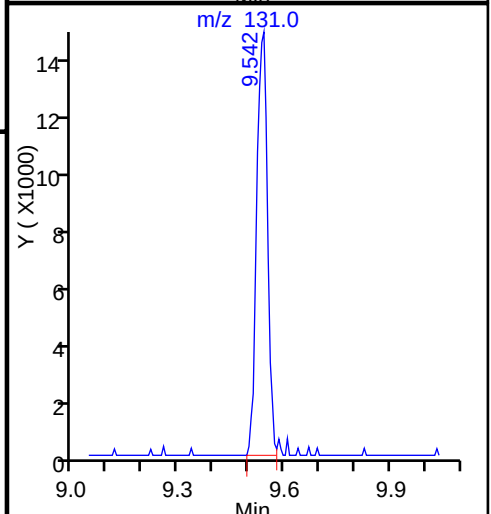
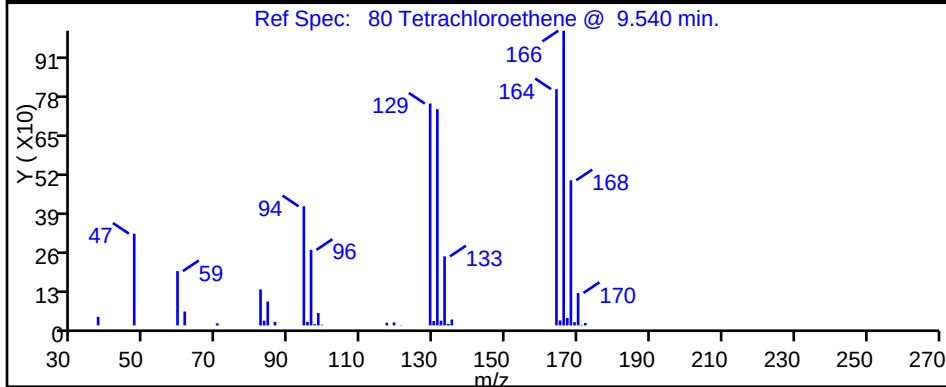
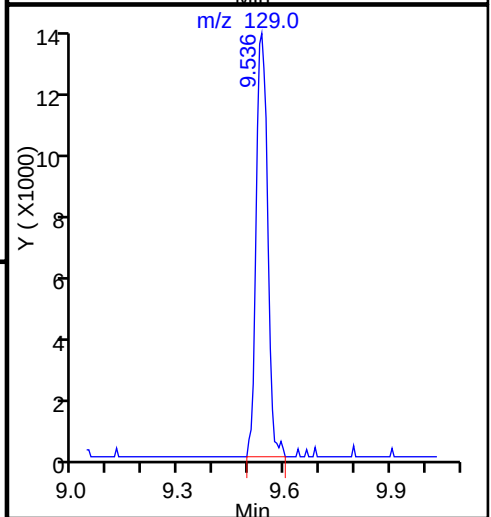
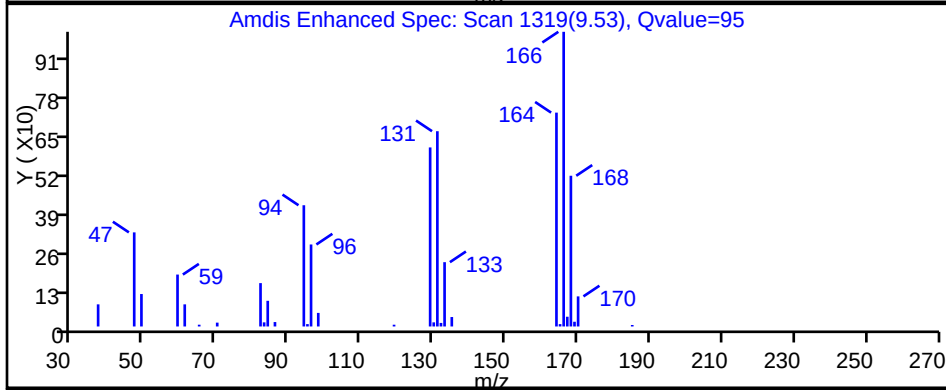
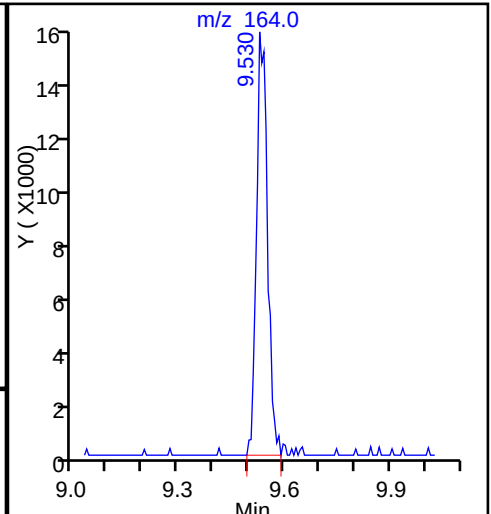
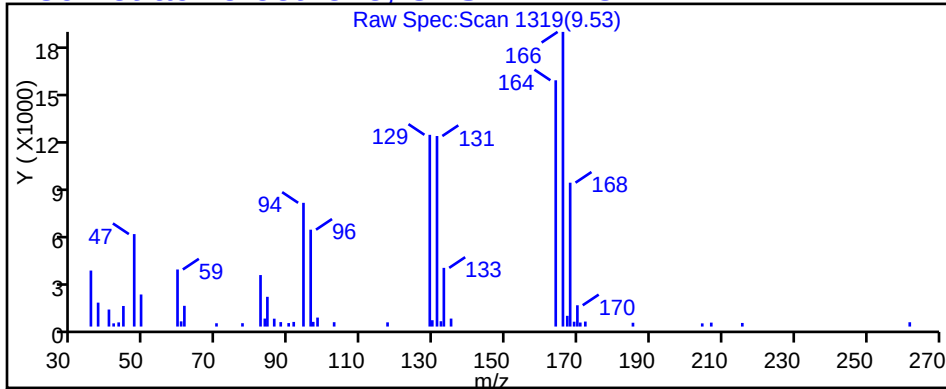
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-MW-51D-0/1-0 Lab Sample ID: 180-41613-5

Matrix: Water Lab File ID: 50310025.D

Analysis Method: 8260C Date Collected: 02/27/2015 10:05

Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 21:26

Soil Aliquot Vol: _____ Dilution Factor: 50

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	50	U	50	14
75-01-4	Vinyl chloride	50	U	50	11
74-83-9	Bromomethane	50	U	50	16
75-00-3	Chloroethane	50	U	50	11
75-35-4	1,1-Dichloroethene	120		50	15
67-64-1	Acetone	250	U	250	130
75-15-0	Carbon disulfide	50	U	50	11
75-09-2	Methylene Chloride	50	U	50	6.3
156-60-5	trans-1,2-Dichloroethene	50	U	50	8.5
1634-04-4	Methyl tert-butyl ether	50	U	50	9.2
75-34-3	1,1-Dichloroethane	56		50	5.8
156-59-2	cis-1,2-Dichloroethene	520		50	12
74-97-5	Bromochloromethane	50	U	50	9.0
78-93-3	2-Butanone (MEK)	250	U	250	27
67-66-3	Chloroform	50	U	50	8.5
71-55-6	1,1,1-Trichloroethane	35	J	50	14
56-23-5	Carbon tetrachloride	50	U	50	6.8
71-43-2	Benzene	50	U	50	5.3
107-06-2	1,2-Dichloroethane	50	U	50	11
79-01-6	Trichloroethene	1000		50	7.2
78-87-5	1,2-Dichloropropane	50	U	50	4.7
75-27-4	Bromodichloromethane	50	U	50	6.5
10061-01-5	cis-1,3-Dichloropropene	50	U *	50	9.3
108-10-1	4-Methyl-2-pentanone (MIBK)	250	U	250	26
108-88-3	Toluene	50	U	50	7.5
10061-02-6	trans-1,3-Dichloropropene	50	U *	50	7.4
79-00-5	1,1,2-Trichloroethane	50	U	50	10
127-18-4	Tetrachloroethene	69		50	7.4
591-78-6	2-Hexanone	250	U	250	8.0
124-48-1	Dibromochloromethane	50	U	50	6.8
106-93-4	1,2-Dibromoethane (EDB)	50	U	50	9.0
108-90-7	Chlorobenzene	50	U	50	6.8
630-20-6	1,1,1,2-Tetrachloroethane	50	U	50	14
100-41-4	Ethylbenzene	50	U	50	11
1330-20-7	Xylenes, Total	150	U	150	24
100-42-5	Styrene	50	U	50	4.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-MW-51D-0/1-0 Lab Sample ID: 180-41613-5
 Matrix: Water Lab File ID: 50310025.D
 Analysis Method: 8260C Date Collected: 02/27/2015 10:05
 Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 21:26
 Soil Aliquot Vol: _____ Dilution Factor: 50
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	50	U	50	9.6
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	10
107-13-1	Acrylonitrile	1000	U	1000	27
123-91-1	1,4-Dioxane	10000	U	10000	1700

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-135
2037-26-5	Toluene-d8 (Surr)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	103		70-118
1868-53-7	Dibromofluoromethane (Surr)	99		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310025.D
 Lims ID: 180-41613-D-5 Lab Sample ID: 180-41613-5
 Client ID: HD-MW-51D-0/1-0
 Sample Type: Client
 Inject. Date: 10-Mar-2015 21:26:30 ALS Bottle#: 25 Worklist Smp#: 25
 Purge Vol: 5.000 mL Dil. Factor: 50.0000
 Sample Info: 180-41613-D-5, 50x
 Misc. Info.: 180-0005958-025
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 09:20:39 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 09:20:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.294	4.296	-0.002	82	65910	1000.0	
* 2 Fluorobenzene (IS)	96	7.275	7.271	0.004	99	385353	50.0	
* 3 Chlorobenzene-d5	119	10.359	10.367	-0.008	94	87710	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.683	12.685	-0.002	99	135450	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.526	6.529	-0.003	57	81658	49.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.898	6.900	-0.002	98	105447	51.7	
\$ 7 Toluene-d8 (Surr)	98	8.923	8.926	-0.003	100	352430	51.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.533	11.529	0.004	95	130531	51.3	
12 Chloromethane	50		1.771				ND	
13 Vinyl chloride	62		1.899				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.374				ND	
22 1,1-Dichloroethene	96	3.387	3.371	0.016	96	26021	11.6	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.651				ND	
31 Methylene Chloride	84		4.126				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.552				ND	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63	5.188	5.166	0.022	99	25134	5.62	
45 cis-1,2-Dichloroethene	96	5.942	5.933	0.010	75	129353	51.6	
46 2-Butanone (MEK)	43		5.981				ND	
49 Chlorobromomethane	128		6.218				ND	
52 Chloroform	83		6.340				ND	
53 1,1,1-Trichloroethane	97	6.539	6.523	0.016	57	8445	3.49	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.955				ND	
59 1,2-Dichloroethane	62		6.979				ND	
64 Trichloroethene	130	7.670	7.660	0.010	98	228116	99.5	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.068				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.196				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.224				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.538	9.540	-0.002	93	11582	6.93	
82 2-Hexanone	43		9.662				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				ND	
87 Chlorobenzene	112		10.392				ND	
89 1,1,1,2-Tetrachloroethane	131		10.471				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310025.D

Injection Date: 10-Mar-2015 21:26:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-D-5

Lab Sample ID: 180-41613-5

Worklist Smp#: 25

Client ID: HD-MW-51D-0/1-0

Purge Vol: 5.000 mL

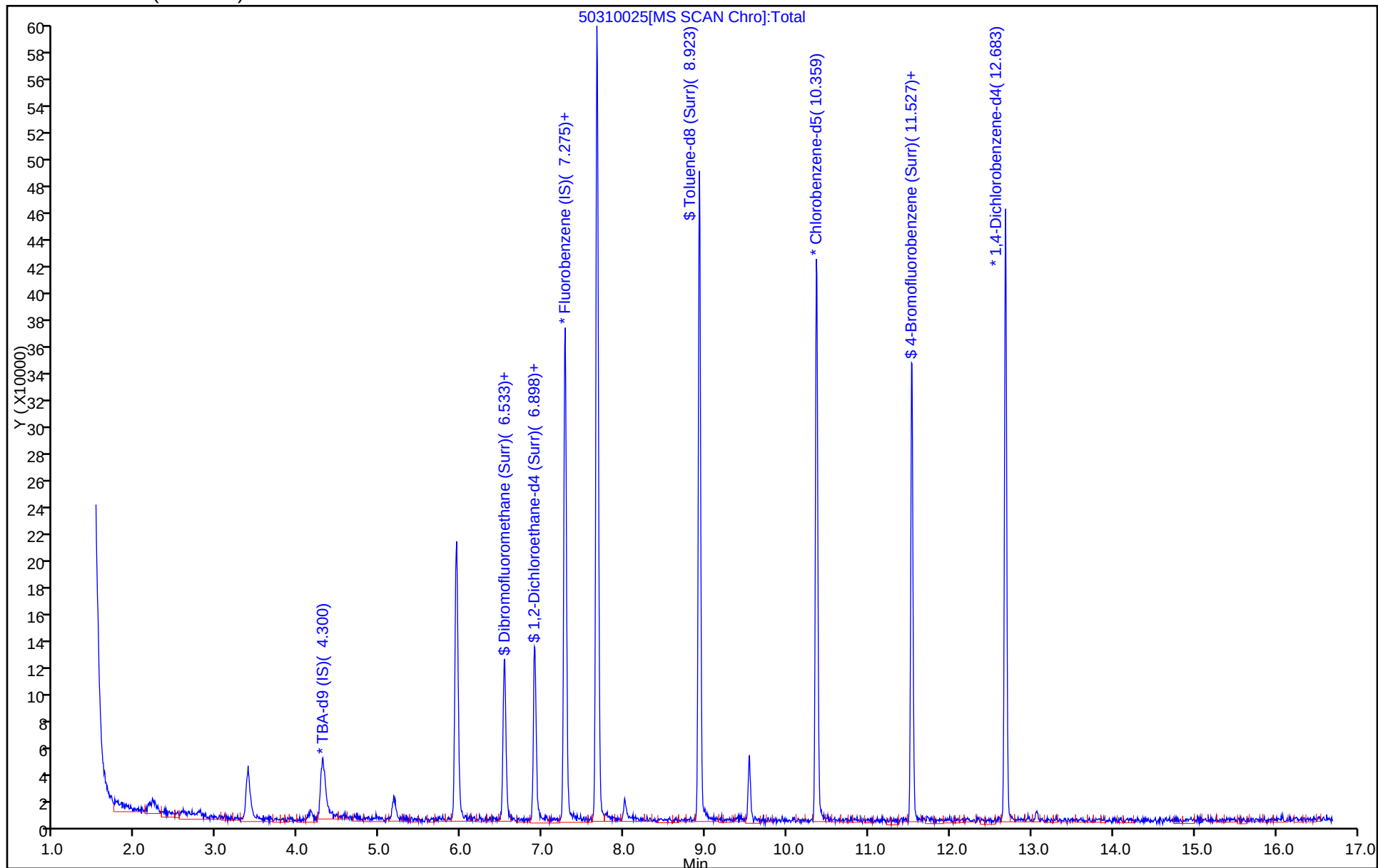
Dil. Factor: 50.0000

ALS Bottle#: 25

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310025.D

Injection Date: 10-Mar-2015 21:26:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-5

Lab Sample ID: 180-41613-5

Client ID: HD-MW-51D-0/1-0

Operator ID: 001562

ALS Bottle#: 25

Worklist Smp#: 25

Purge Vol: 5.000 mL

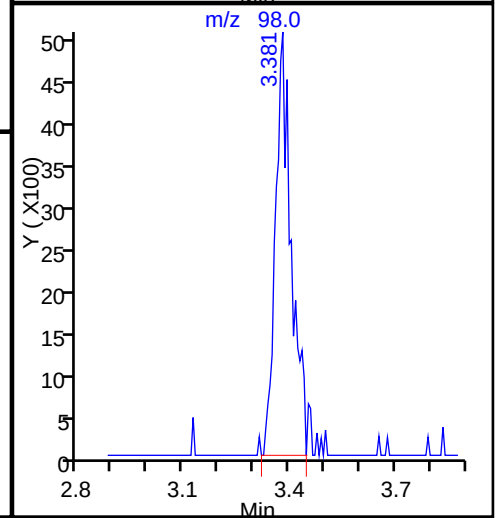
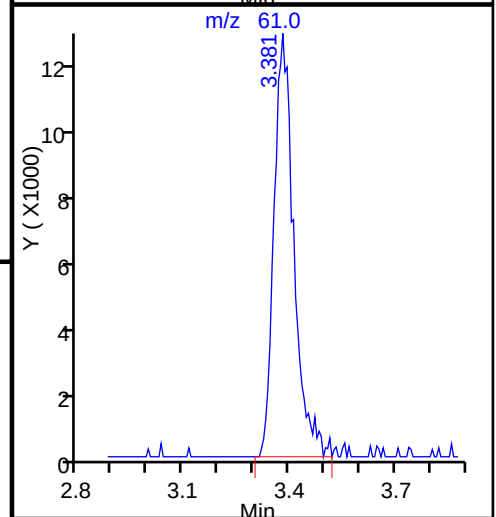
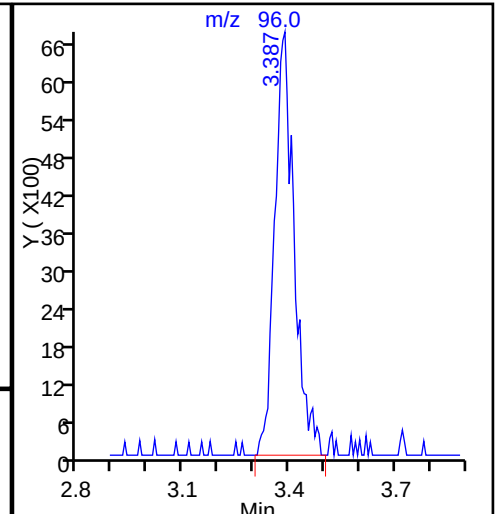
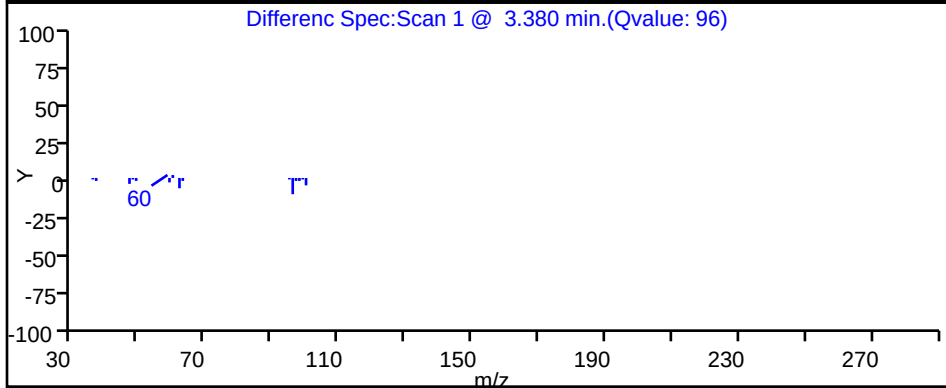
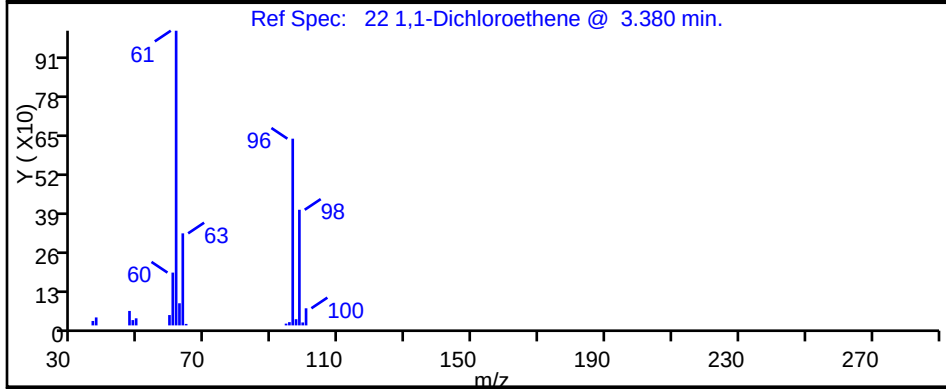
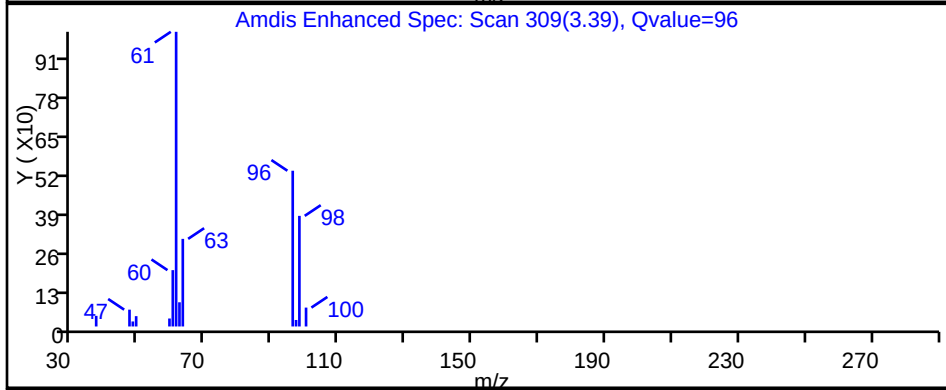
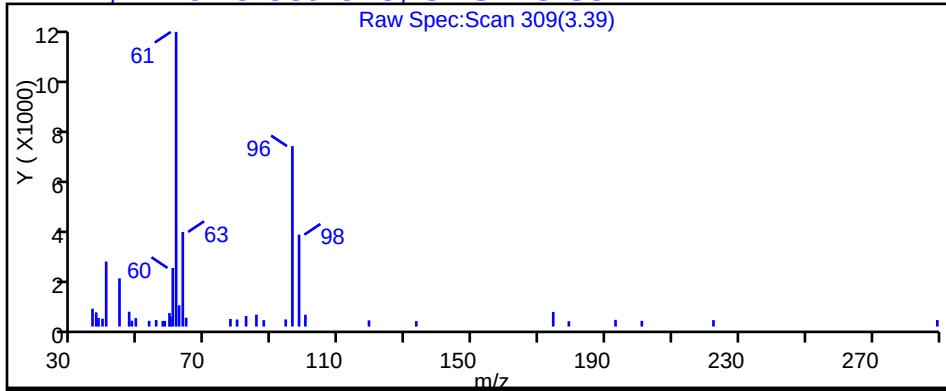
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310025.D

Injection Date: 10-Mar-2015 21:26:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-5

Lab Sample ID: 180-41613-5

Client ID: HD-MW-51D-0/1-0

Operator ID: 001562

ALS Bottle#: 25

Worklist Smp#: 25

Purge Vol: 5.000 mL

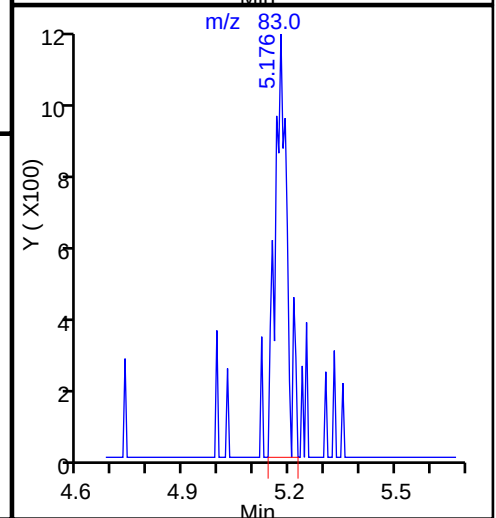
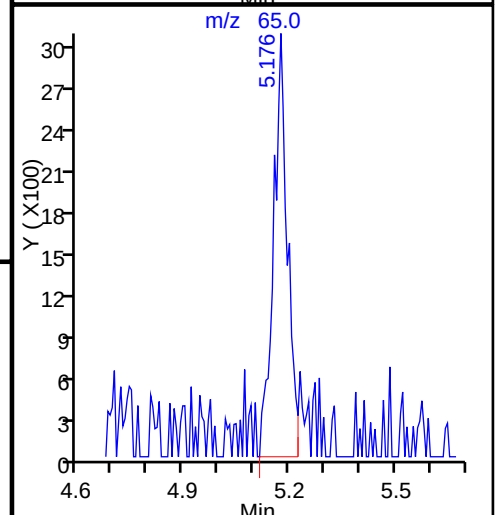
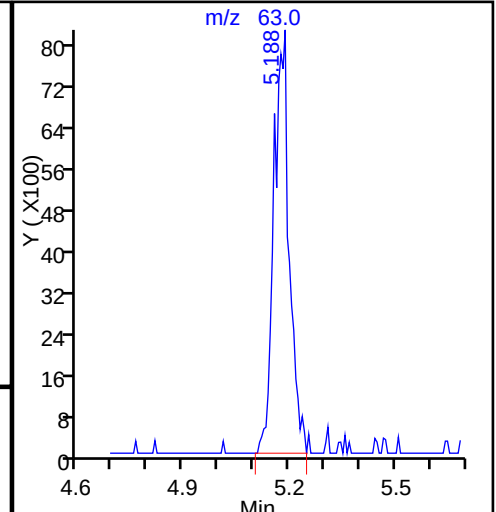
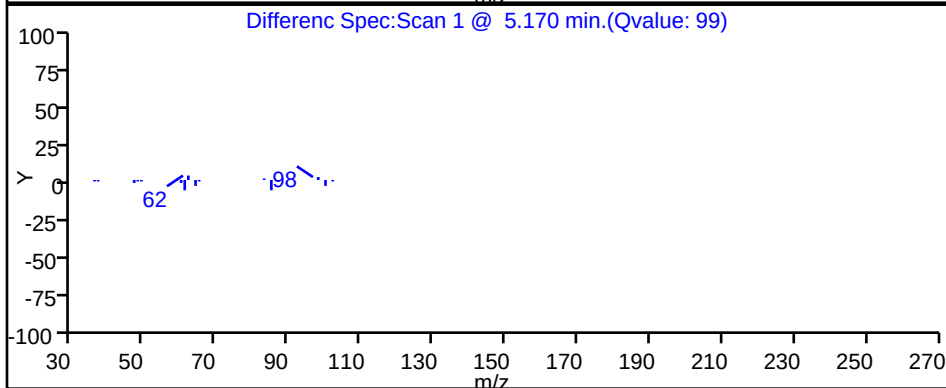
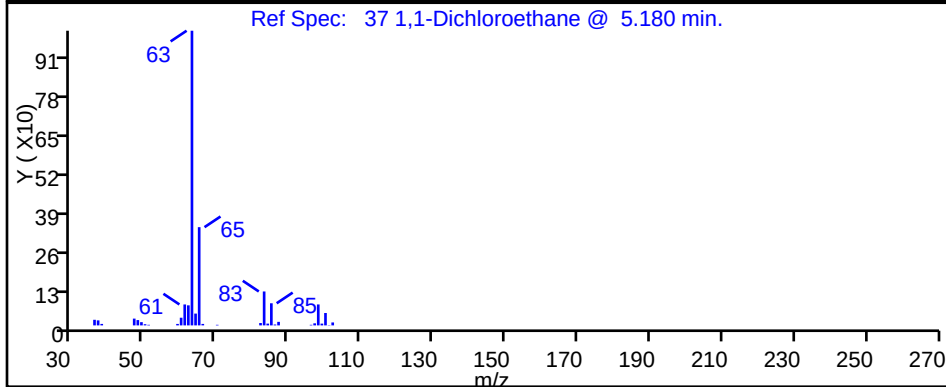
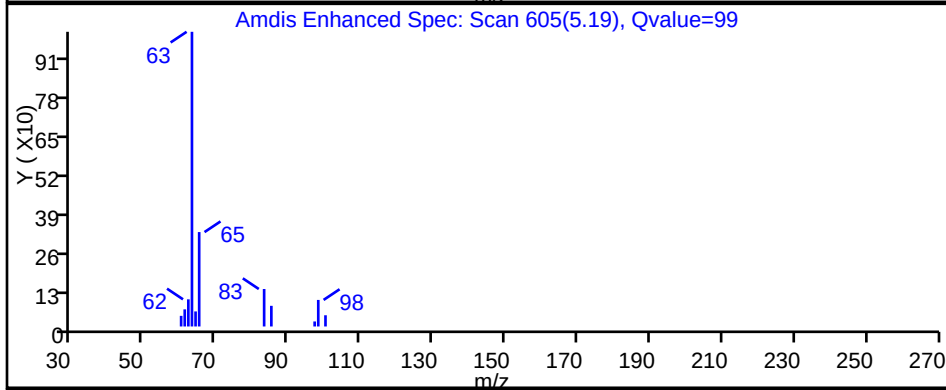
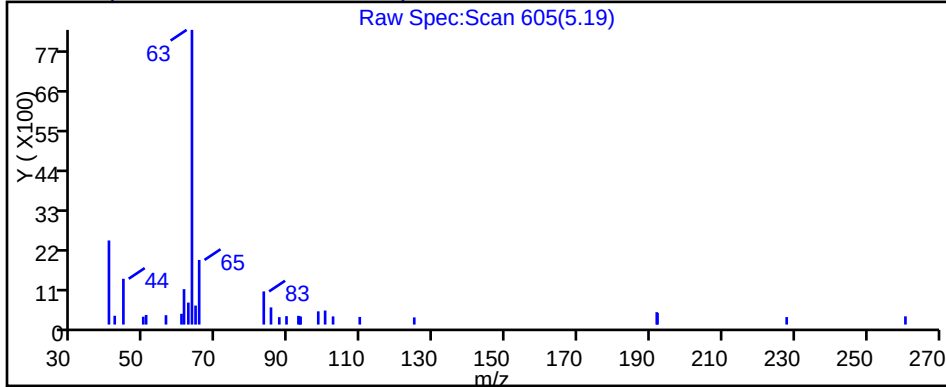
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310025.D

Injection Date: 10-Mar-2015 21:26:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-5

Lab Sample ID: 180-41613-5

Client ID: HD-MW-51D-0/1-0

Operator ID: 001562

ALS Bottle#: 25

Worklist Smp#: 25

Purge Vol: 5.000 mL

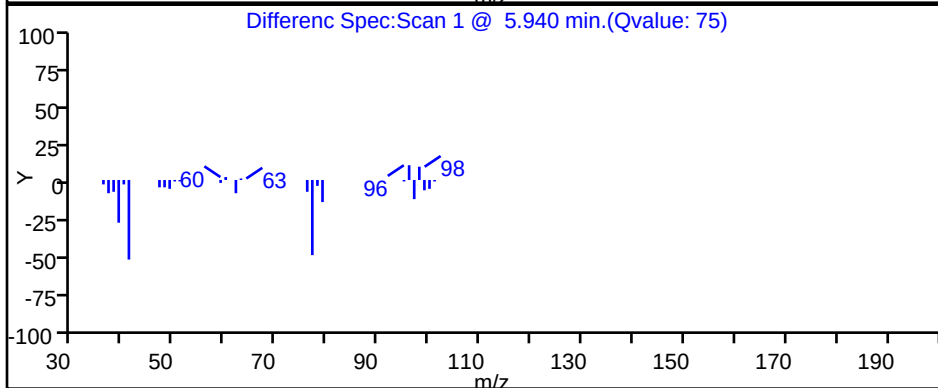
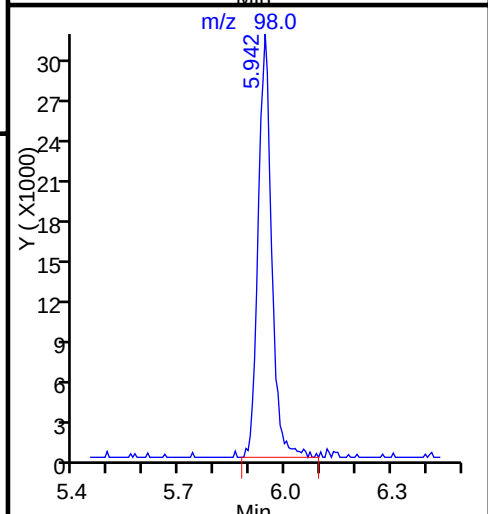
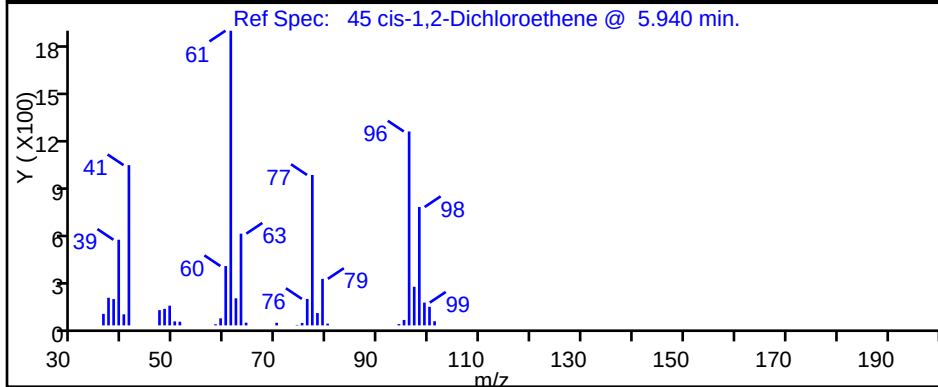
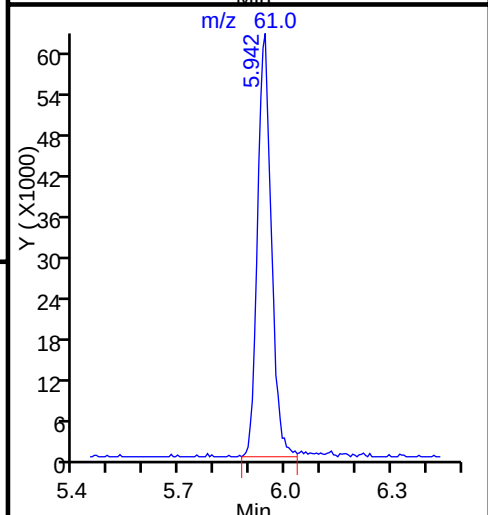
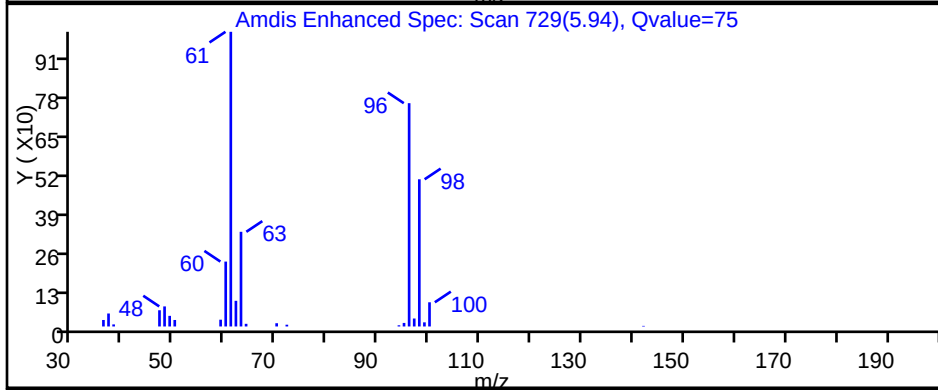
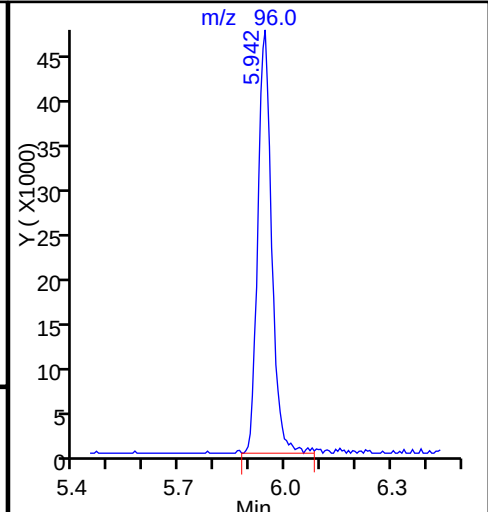
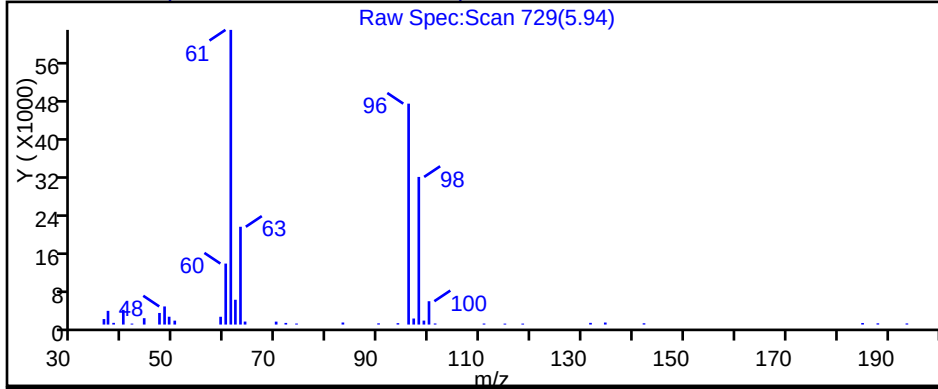
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310025.D

Injection Date: 10-Mar-2015 21:26:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-5

Lab Sample ID: 180-41613-5

Client ID: HD-MW-51D-0/1-0

Operator ID: 001562

ALS Bottle#: 25

Worklist Smp#: 25

Purge Vol: 5.000 mL

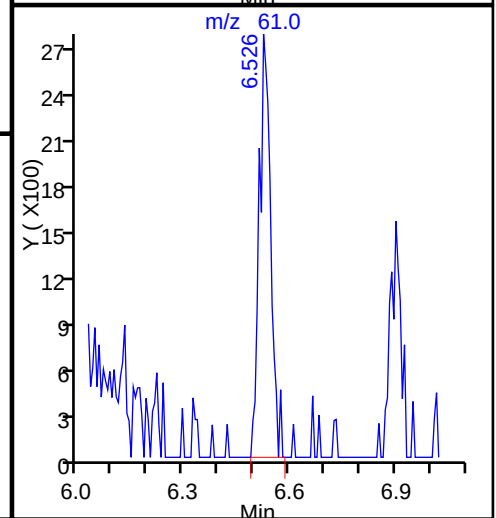
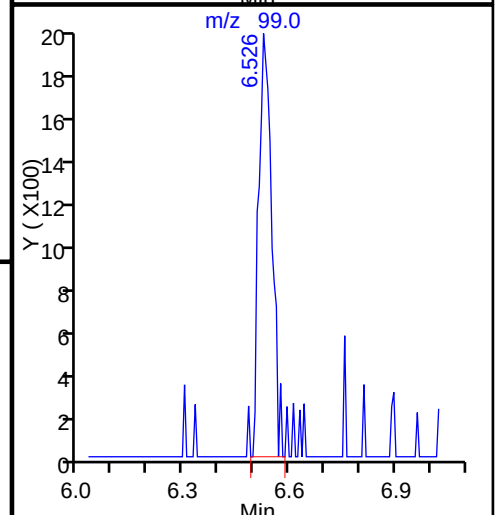
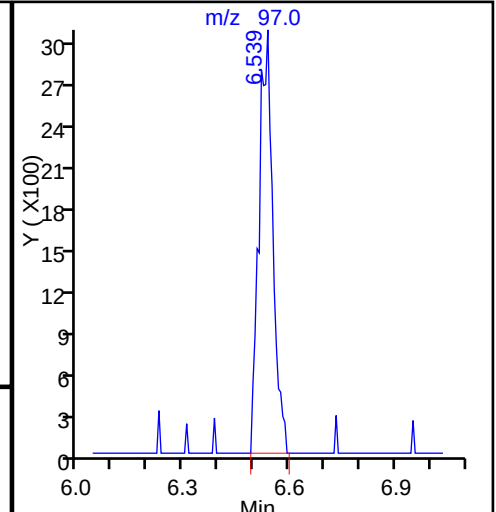
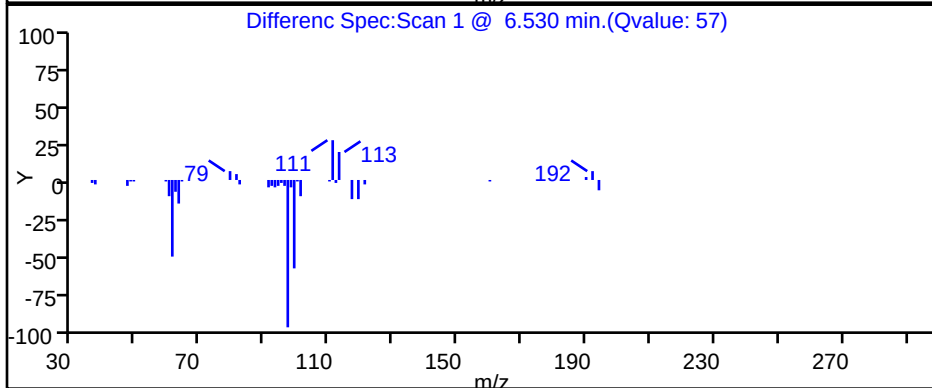
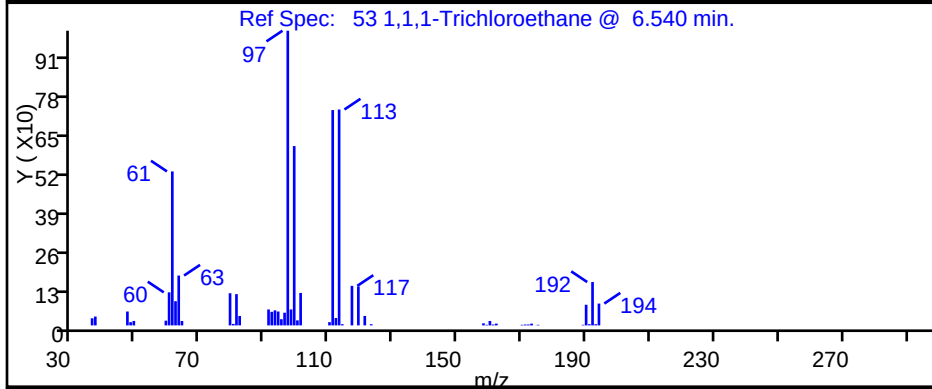
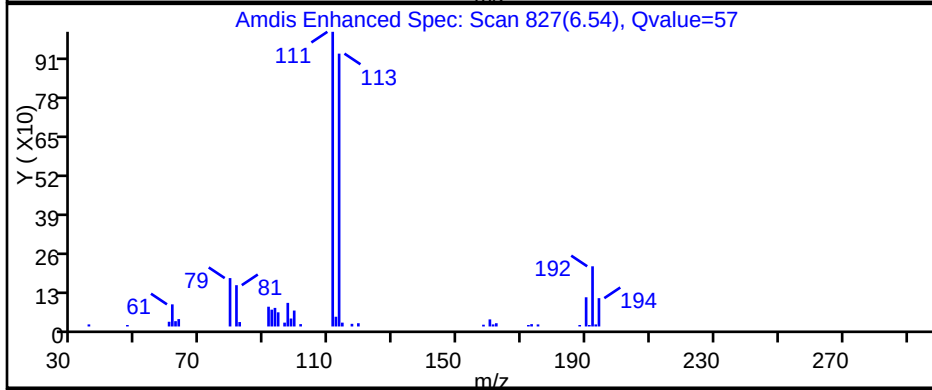
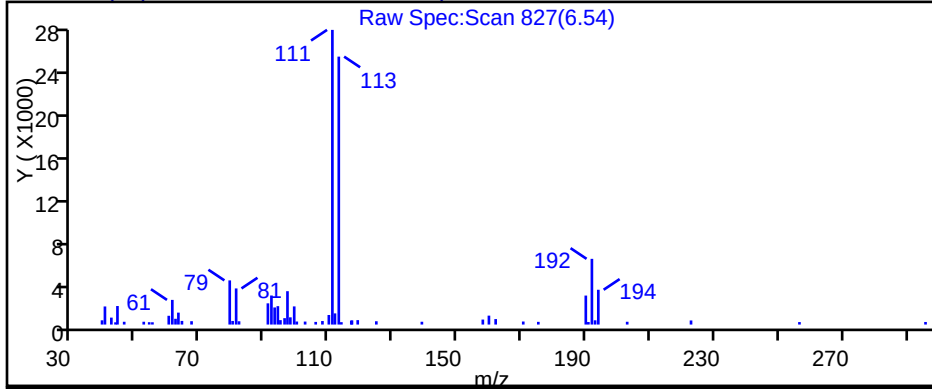
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

53 1,1,1-Trichloroethane, CAS: 71-55-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310025.D

Injection Date: 10-Mar-2015 21:26:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-5

Lab Sample ID: 180-41613-5

Client ID: HD-MW-51D-0/1-0

Operator ID: 001562

ALS Bottle#: 25

Worklist Smp#: 25

Purge Vol: 5.000 mL

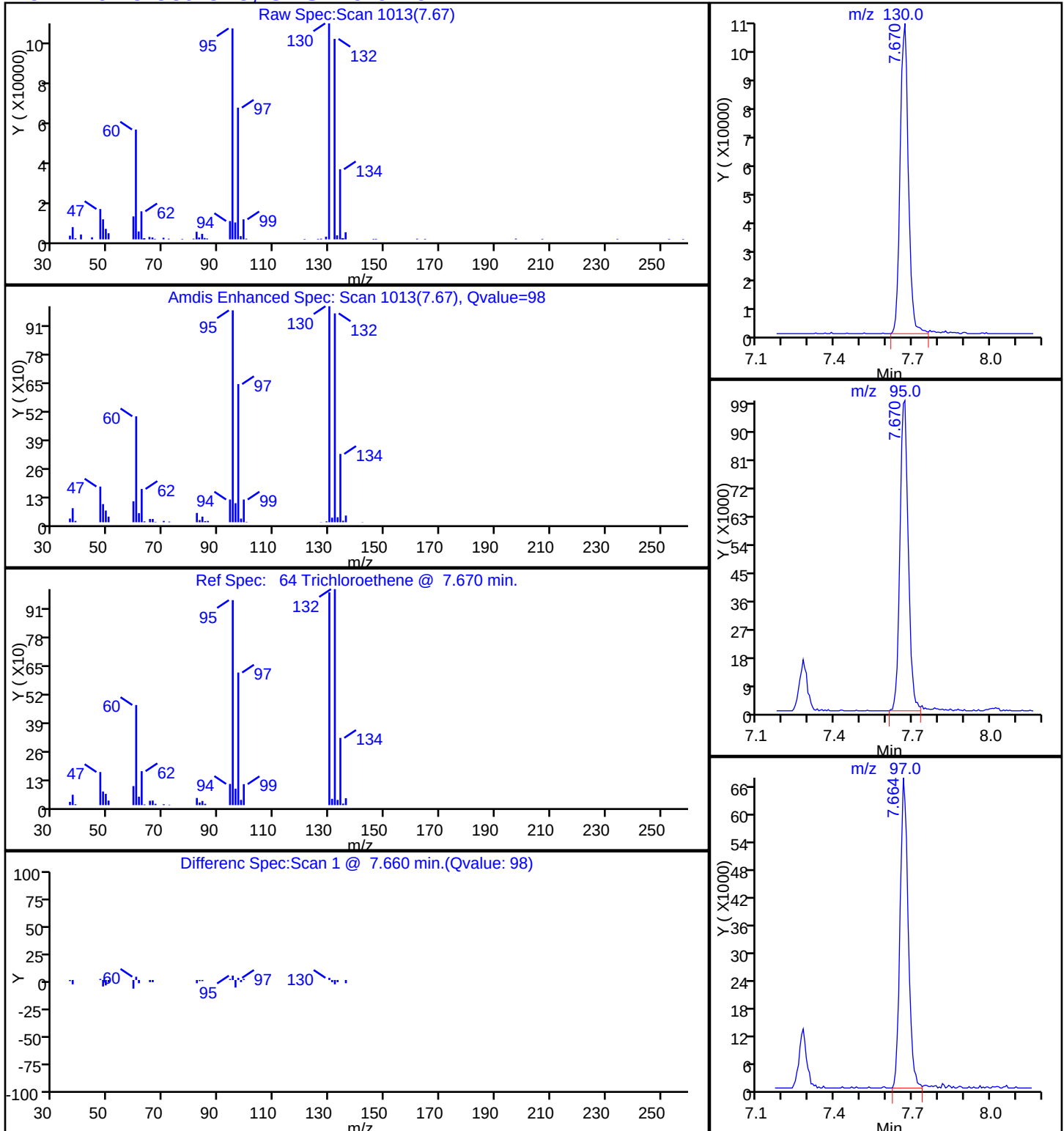
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310025.D

Injection Date: 10-Mar-2015 21:26:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-5

Lab Sample ID: 180-41613-5

Client ID: HD-MW-51D-0/1-0

Operator ID: 001562

ALS Bottle#: 25

Worklist Smp#: 25

Purge Vol: 5.000 mL

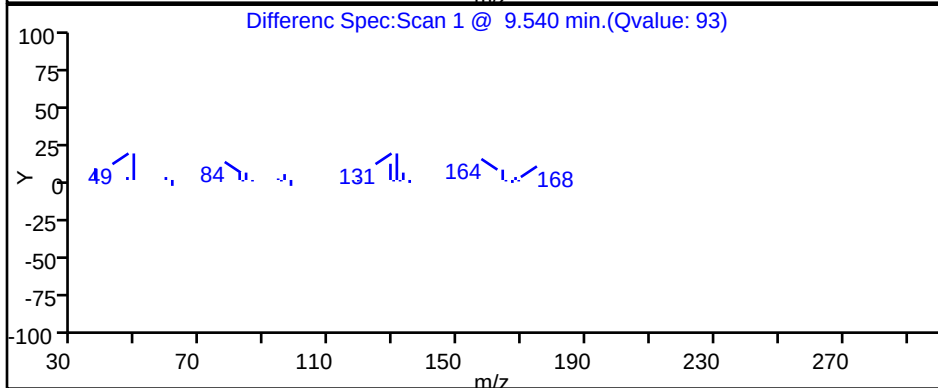
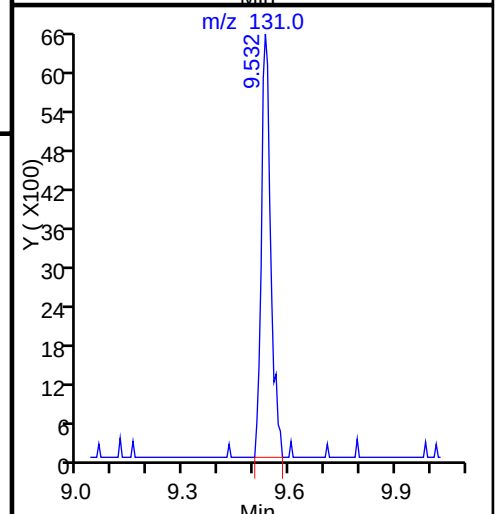
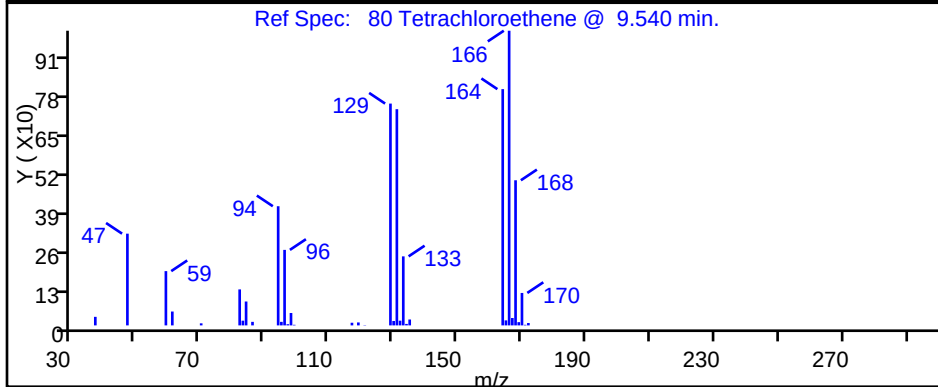
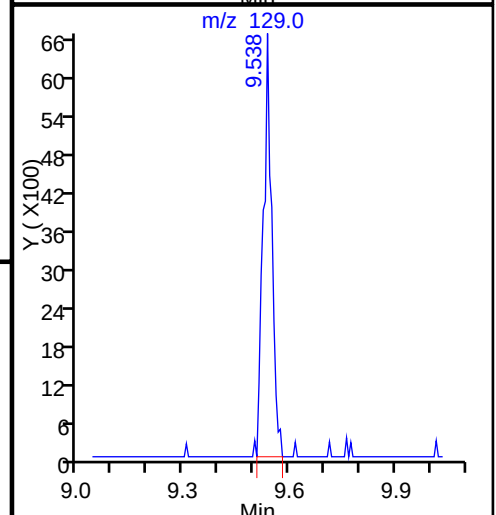
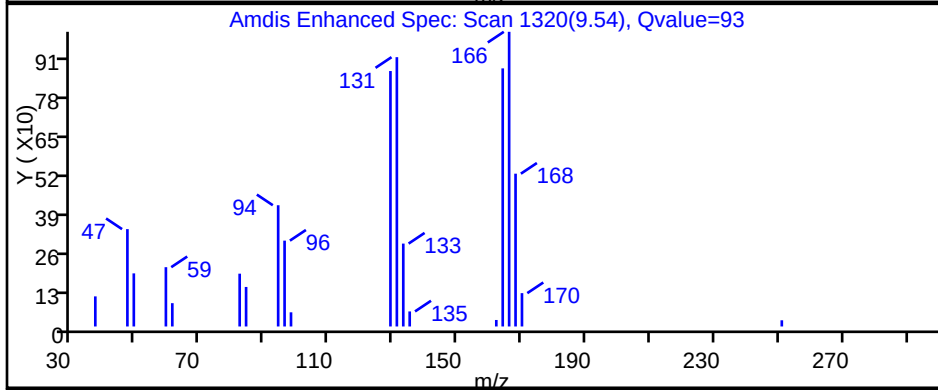
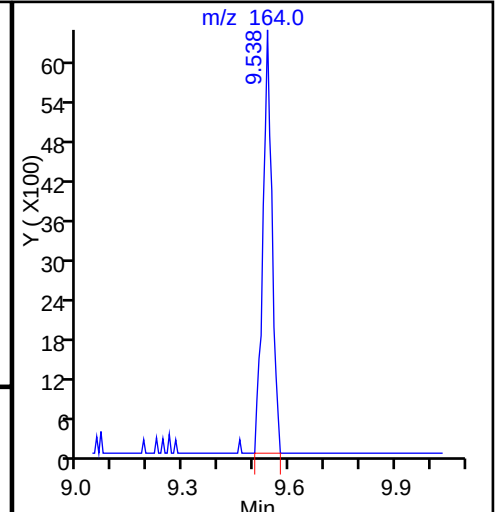
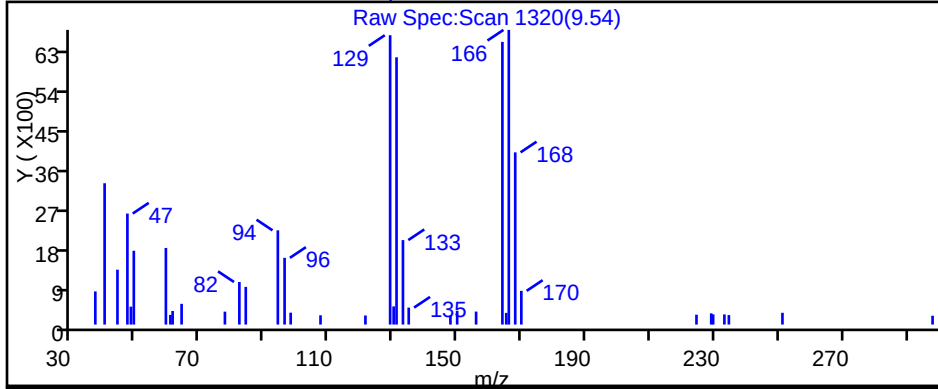
Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-MW-127-0/1-0 Lab Sample ID: 180-41613-6

Matrix: Water Lab File ID: 50310027.D

Analysis Method: 8260C Date Collected: 02/27/2015 09:35

Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 22:14

Soil Aliquot Vol: _____ Dilution Factor: 12.5

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	13	U	13	3.5
75-01-4	Vinyl chloride	13	U	13	2.8
74-83-9	Bromomethane	13	U	13	3.9
75-00-3	Chloroethane	13	U	13	2.7
75-35-4	1,1-Dichloroethene	5.4	J	13	3.7
67-64-1	Acetone	63	U	63	31
75-15-0	Carbon disulfide	13	U	13	2.7
75-09-2	Methylene Chloride	13	U	13	1.6
156-60-5	trans-1,2-Dichloroethene	13	U	13	2.1
1634-04-4	Methyl tert-butyl ether	13	U	13	2.3
75-34-3	1,1-Dichloroethane	2.5	J	13	1.5
156-59-2	cis-1,2-Dichloroethene	290		13	3.0
74-97-5	Bromochloromethane	13	U	13	2.3
78-93-3	2-Butanone (MEK)	63	U	63	6.8
67-66-3	Chloroform	13	U	13	2.1
71-55-6	1,1,1-Trichloroethane	4.9	J	13	3.6
56-23-5	Carbon tetrachloride	13	U	13	1.7
71-43-2	Benzene	13	U	13	1.3
107-06-2	1,2-Dichloroethane	13	U	13	2.6
79-01-6	Trichloroethene	120		13	1.8
78-87-5	1,2-Dichloropropane	13	U	13	1.2
75-27-4	Bromodichloromethane	13	U	13	1.6
10061-01-5	cis-1,3-Dichloropropene	13	U *	13	2.3
108-10-1	4-Methyl-2-pentanone (MIBK)	63	U	63	6.6
108-88-3	Toluene	13	U	13	1.9
10061-02-6	trans-1,3-Dichloropropene	13	U *	13	1.9
79-00-5	1,1,2-Trichloroethane	13	U	13	2.5
127-18-4	Tetrachloroethene	14		13	1.9
591-78-6	2-Hexanone	63	U	63	2.0
124-48-1	Dibromochloromethane	13	U	13	1.7
106-93-4	1,2-Dibromoethane (EDB)	13	U	13	2.3
108-90-7	Chlorobenzene	13	U	13	1.7
630-20-6	1,1,1,2-Tetrachloroethane	13	U	13	3.5
100-41-4	Ethylbenzene	13	U	13	2.8
1330-20-7	Xylenes, Total	38	U	38	6.1
100-42-5	Styrene	13	U	13	1.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-MW-127-0/1-0 Lab Sample ID: 180-41613-6
 Matrix: Water Lab File ID: 50310027.D
 Analysis Method: 8260C Date Collected: 02/27/2015 09:35
 Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 22:14
 Soil Aliquot Vol: _____ Dilution Factor: 12.5
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	13	U	13	2.4
79-34-5	1,1,2,2-Tetrachloroethane	13	U	13	2.5
107-13-1	Acrylonitrile	250	U	250	6.8
123-91-1	1,4-Dioxane	2500	U	2500	430

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		64-135
2037-26-5	Toluene-d8 (Surr)	105		71-118
460-00-4	4-Bromofluorobenzene (Surr)	100		70-118
1868-53-7	Dibromofluoromethane (Surr)	98		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310027.D
 Lims ID: 180-41613-E-6 Lab Sample ID: 180-41613-6
 Client ID: HD-MW-127-0/1-0
 Sample Type: Client
 Inject. Date: 10-Mar-2015 22:14:30 ALS Bottle#: 27 Worklist Smp#: 27
 Purge Vol: 5.000 mL Dil. Factor: 12.5000
 Sample Info: 180-41613-E-6, 12.5x
 Misc. Info.: 180-0005958-027
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 09:24:49 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 09:24:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.303	4.296	0.007	73	55478	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.271	0.006	99	357405	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	100	82150	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.685	-0.005	99	127289	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.529	0.000	54	74713	48.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	99	93737	49.6	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.926	0.000	100	336532	52.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.529	0.001	93	118908	49.9	
12 Chloromethane	50		1.771				ND	
13 Vinyl chloride	62		1.899				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.374				ND	
22 1,1-Dichloroethene	96	3.384	3.371	0.013	46	4518	2.17	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.651				ND	
31 Methylene Chloride	84		4.126				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96	4.552	4.552	0.000	22	1337	0.6144	M
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63	5.166	5.166	0.000	45	4223	1.02	
45 cis-1,2-Dichloroethene	96	5.939	5.933	0.007	76	272813	117.3	
46 2-Butanone (MEK)	43		5.981				ND	
49 Chlorobromomethane	128		6.218				ND	
52 Chloroform	83		6.340				ND	
53 1,1,1-Trichloroethane	97	6.529	6.523	0.006	54	4411	1.96	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.955				ND	
59 1,2-Dichloroethane	62		6.979				ND	
64 Trichloroethene	130	7.673	7.660	0.013	99	103721	48.8	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.068				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.196				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.224				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.540	9.540	0.000	95	8758	5.60	
82 2-Hexanone	43		9.662				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				ND	
87 Chlorobenzene	112		10.392				ND	
89 1,1,1,2-Tetrachloroethane	131		10.471				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310027.D

Injection Date: 10-Mar-2015 22:14:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-E-6

Lab Sample ID: 180-41613-6

Worklist Smp#: 27

Client ID: HD-MW-127-0/1-0

Purge Vol: 5.000 mL

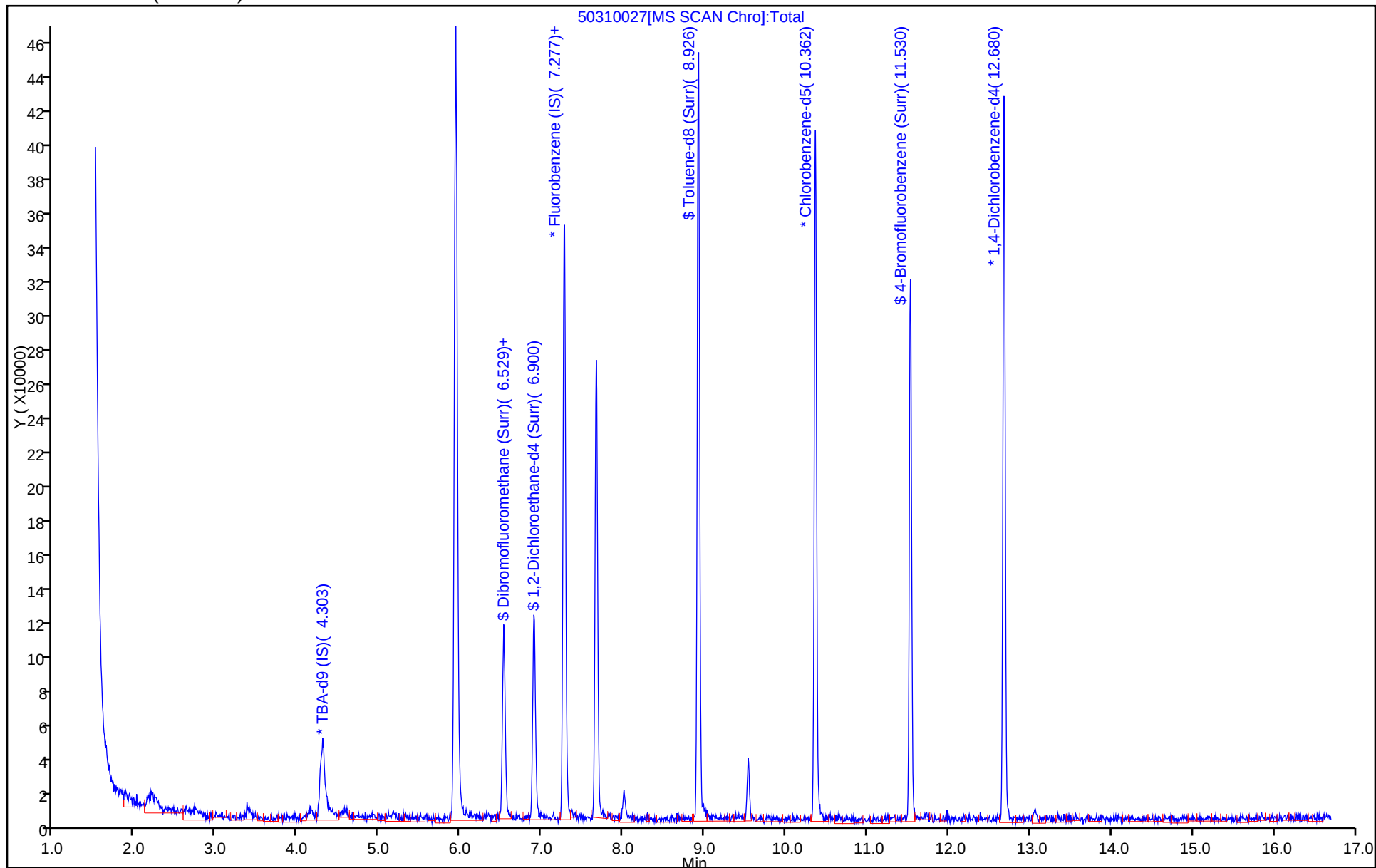
Dil. Factor: 12.5000

ALS Bottle#: 27

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310027.D

Injection Date: 10-Mar-2015 22:14:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-6

Lab Sample ID: 180-41613-6

Client ID: HD-MW-127-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

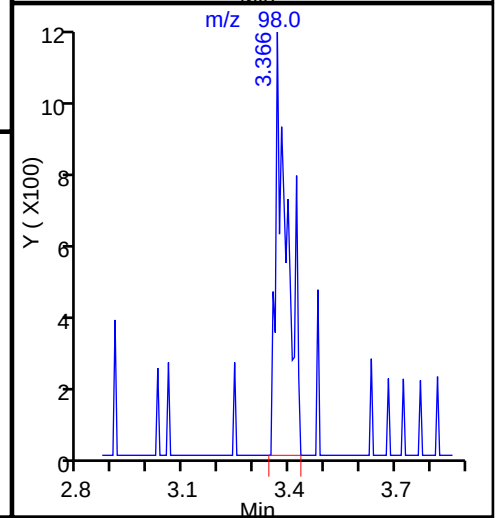
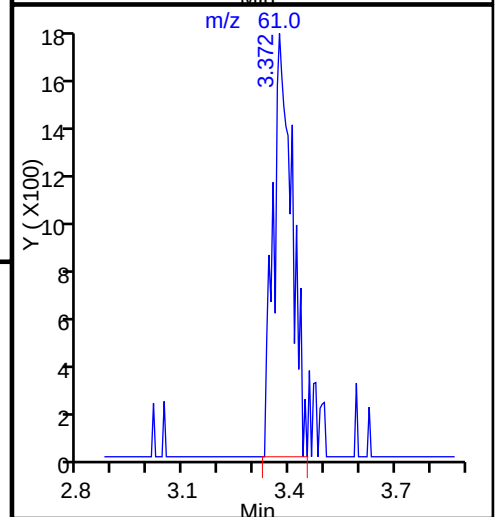
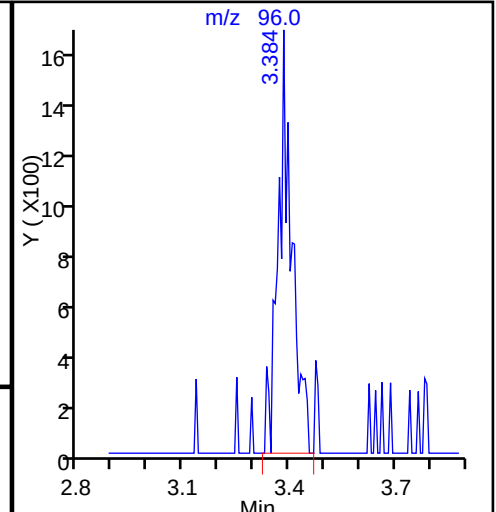
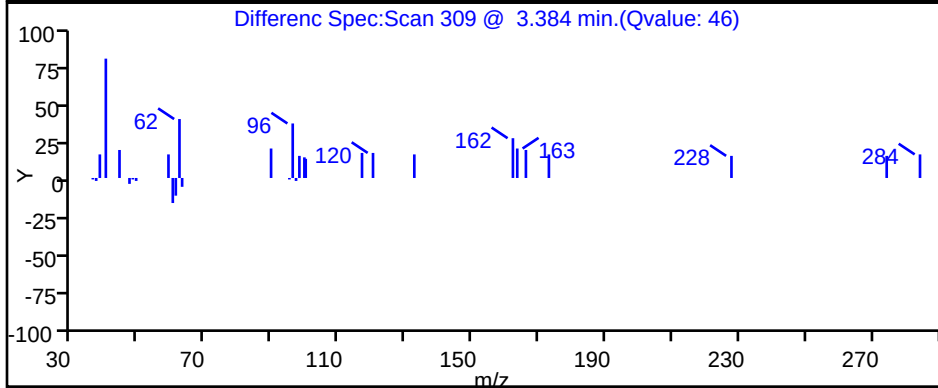
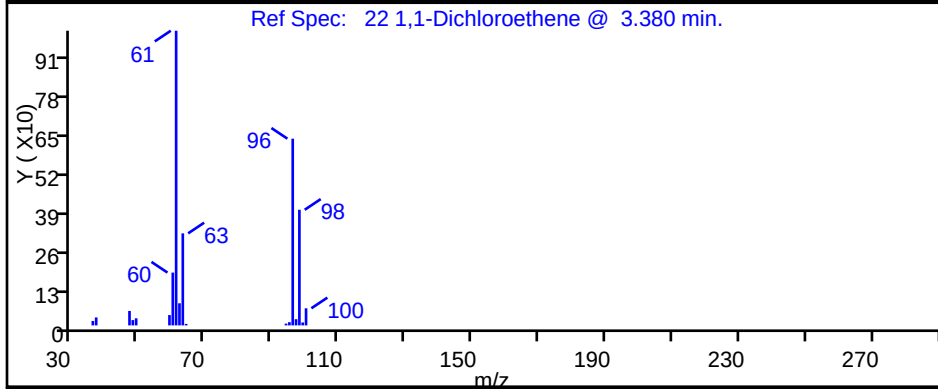
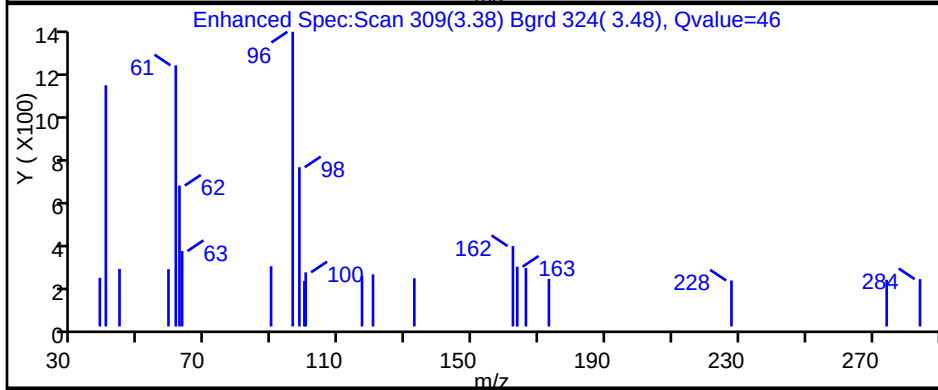
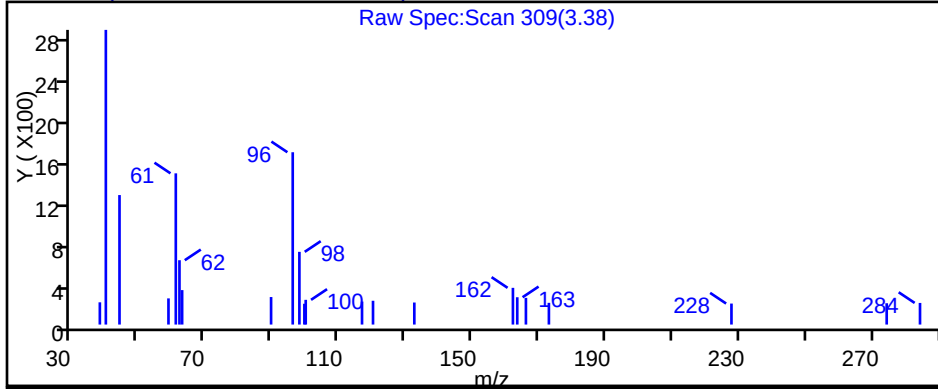
Dil. Factor: 12.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310027.D

Injection Date: 10-Mar-2015 22:14:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-6

Lab Sample ID: 180-41613-6

Client ID: HD-MW-127-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

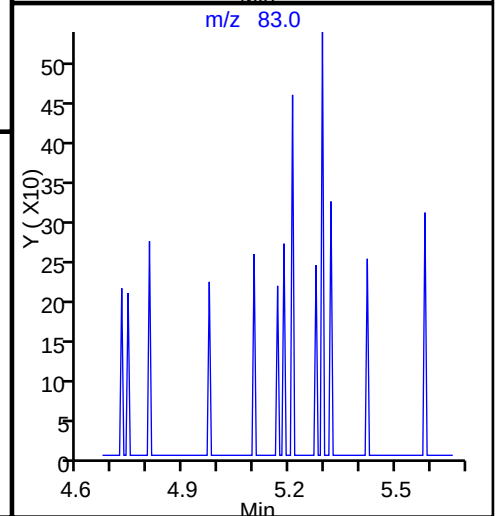
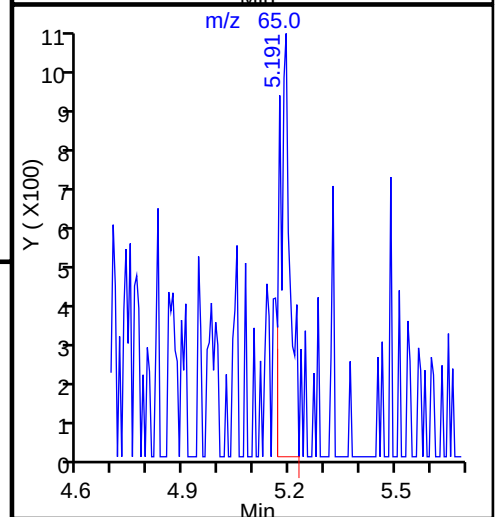
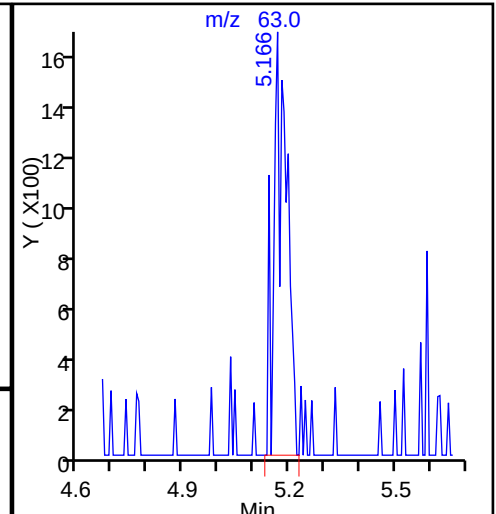
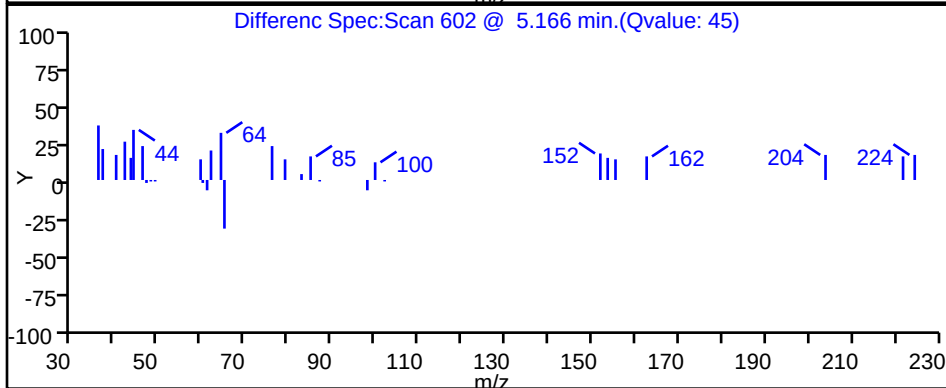
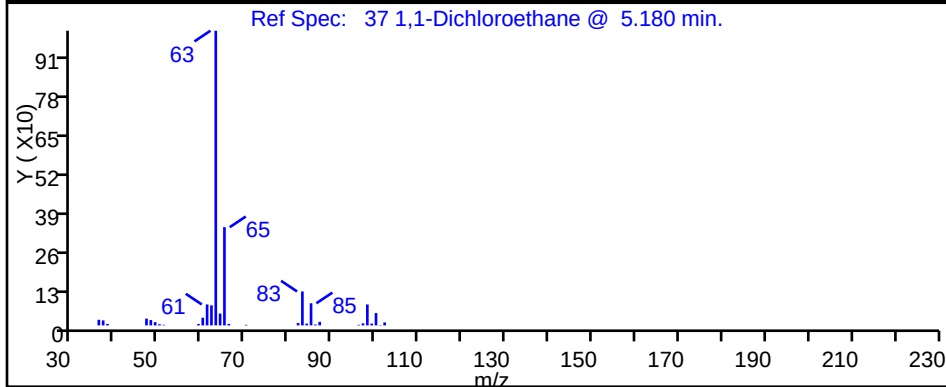
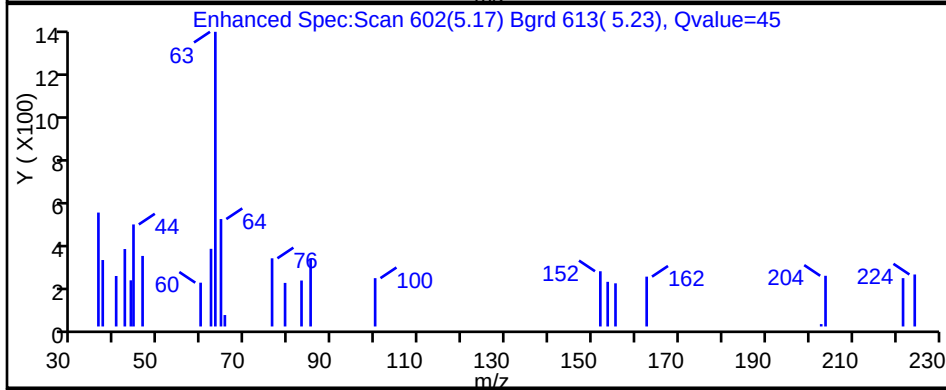
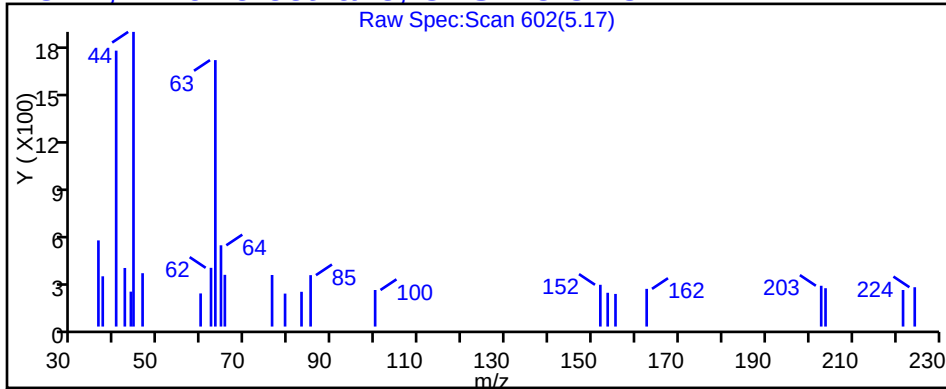
Dil. Factor: 12.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310027.D

Injection Date: 10-Mar-2015 22:14:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-6

Lab Sample ID: 180-41613-6

Client ID: HD-MW-127-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

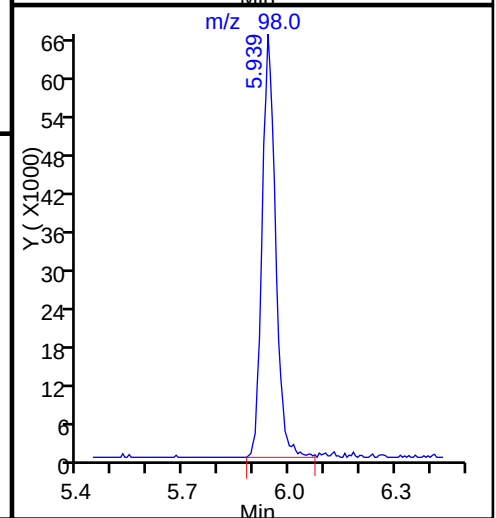
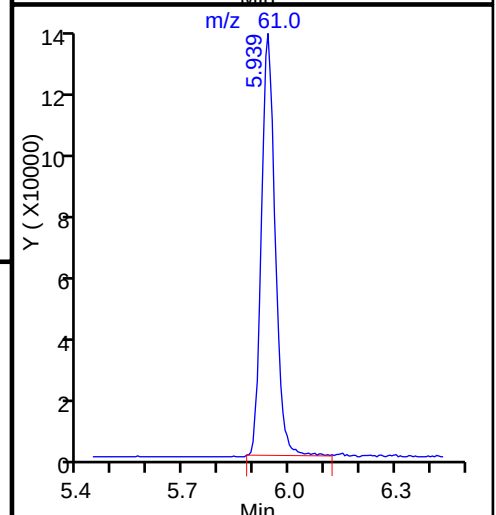
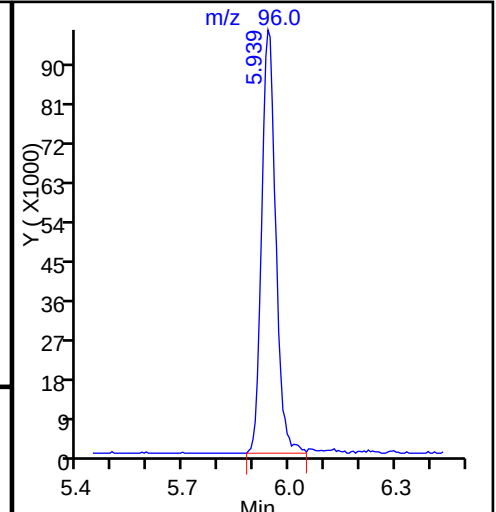
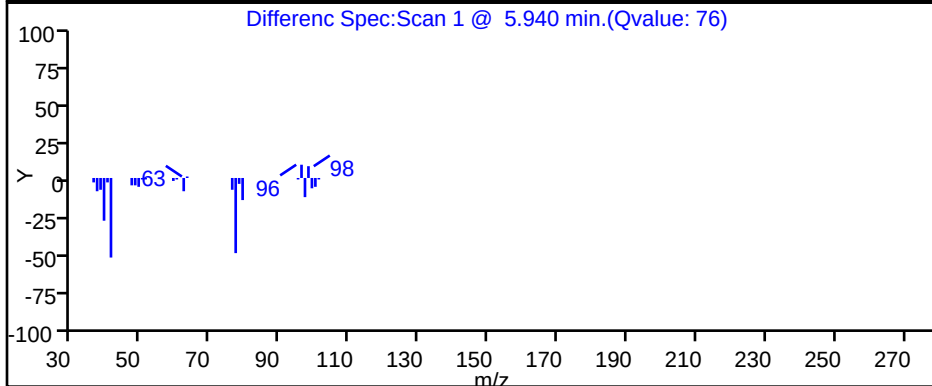
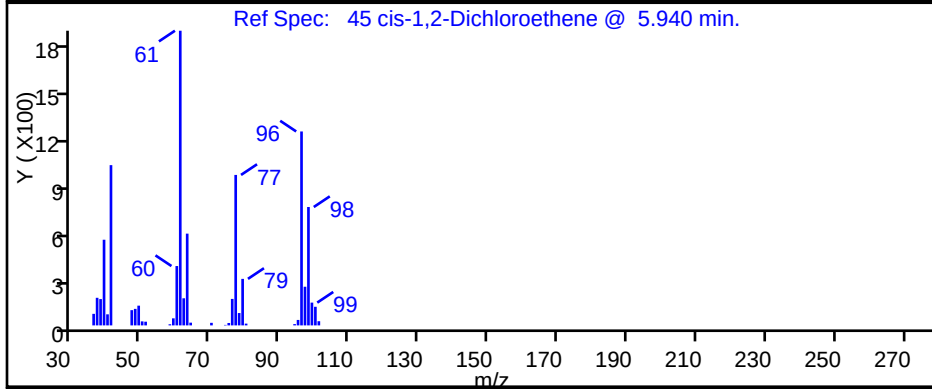
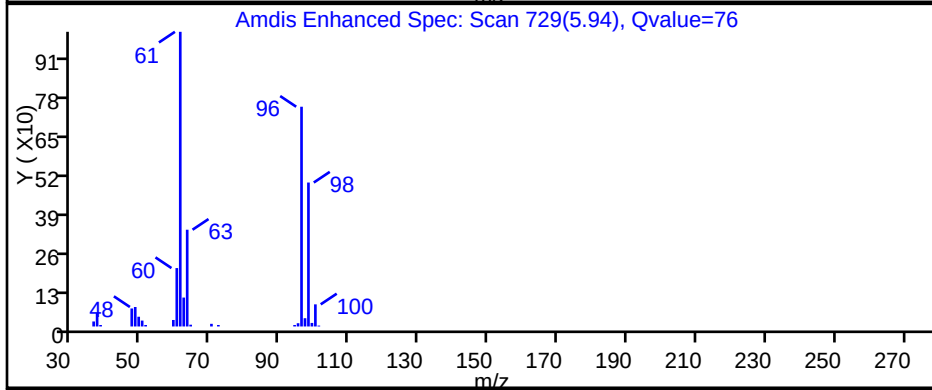
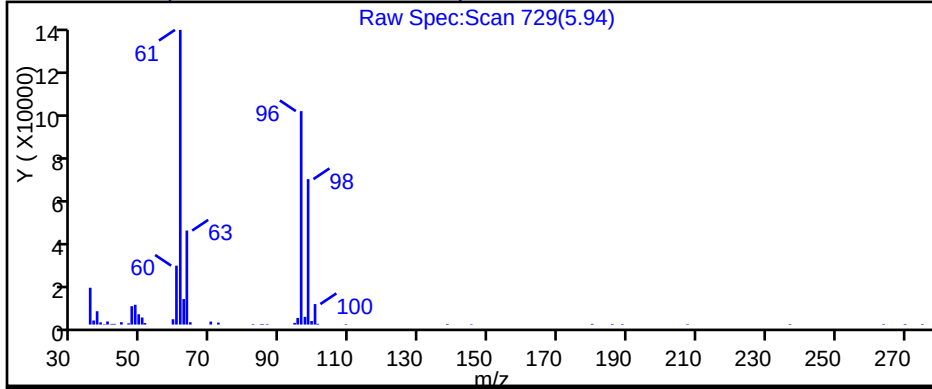
Dil. Factor: 12.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310027.D

Injection Date: 10-Mar-2015 22:14:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-6

Lab Sample ID: 180-41613-6

Client ID: HD-MW-127-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

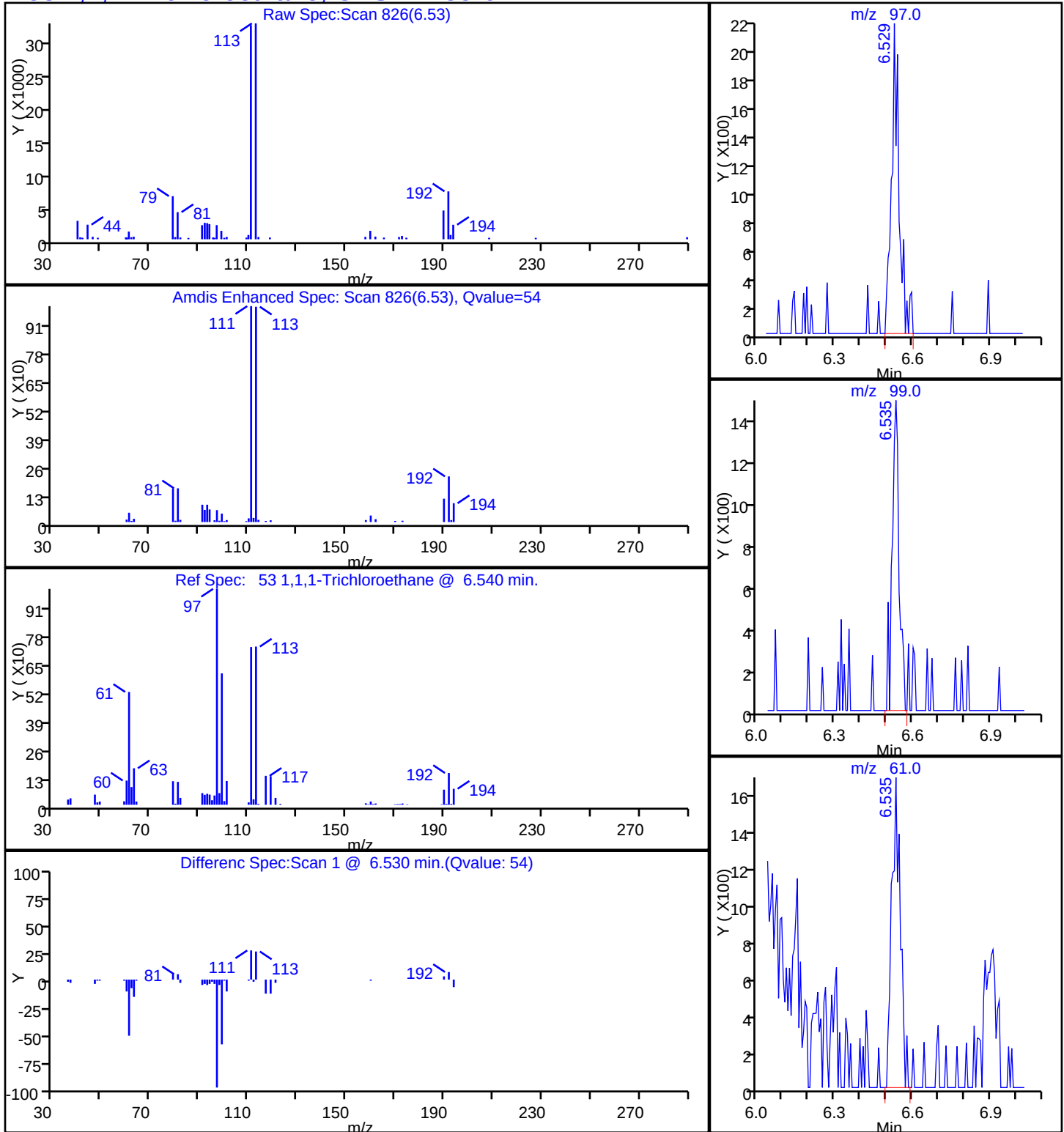
Dil. Factor: 12.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

53 1,1,1-Trichloroethane, CAS: 71-55-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310027.D

Injection Date: 10-Mar-2015 22:14:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-6

Lab Sample ID: 180-41613-6

Client ID: HD-MW-127-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

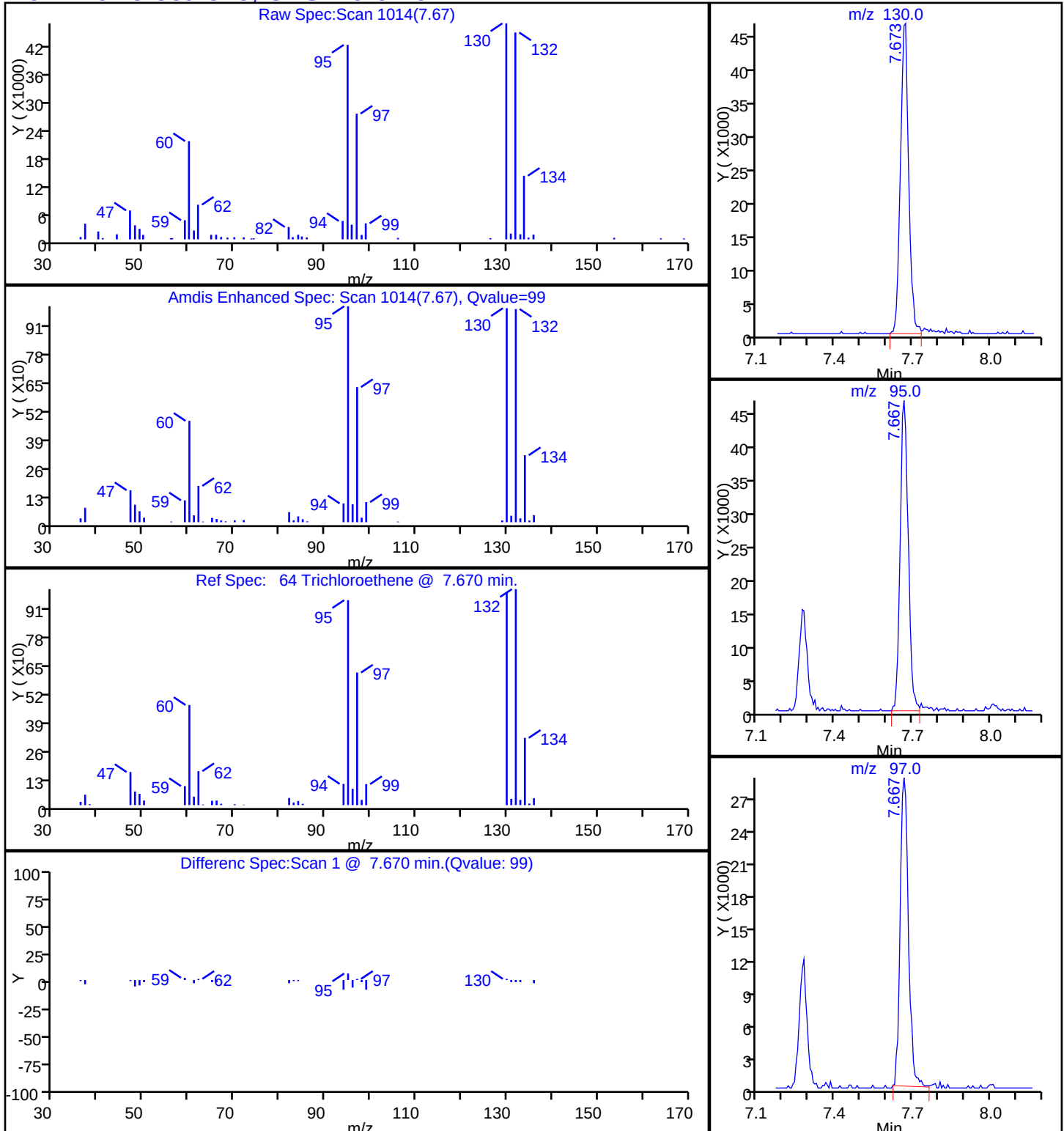
Dil. Factor: 12.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310027.D

Injection Date: 10-Mar-2015 22:14:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-6

Lab Sample ID: 180-41613-6

Client ID: HD-MW-127-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

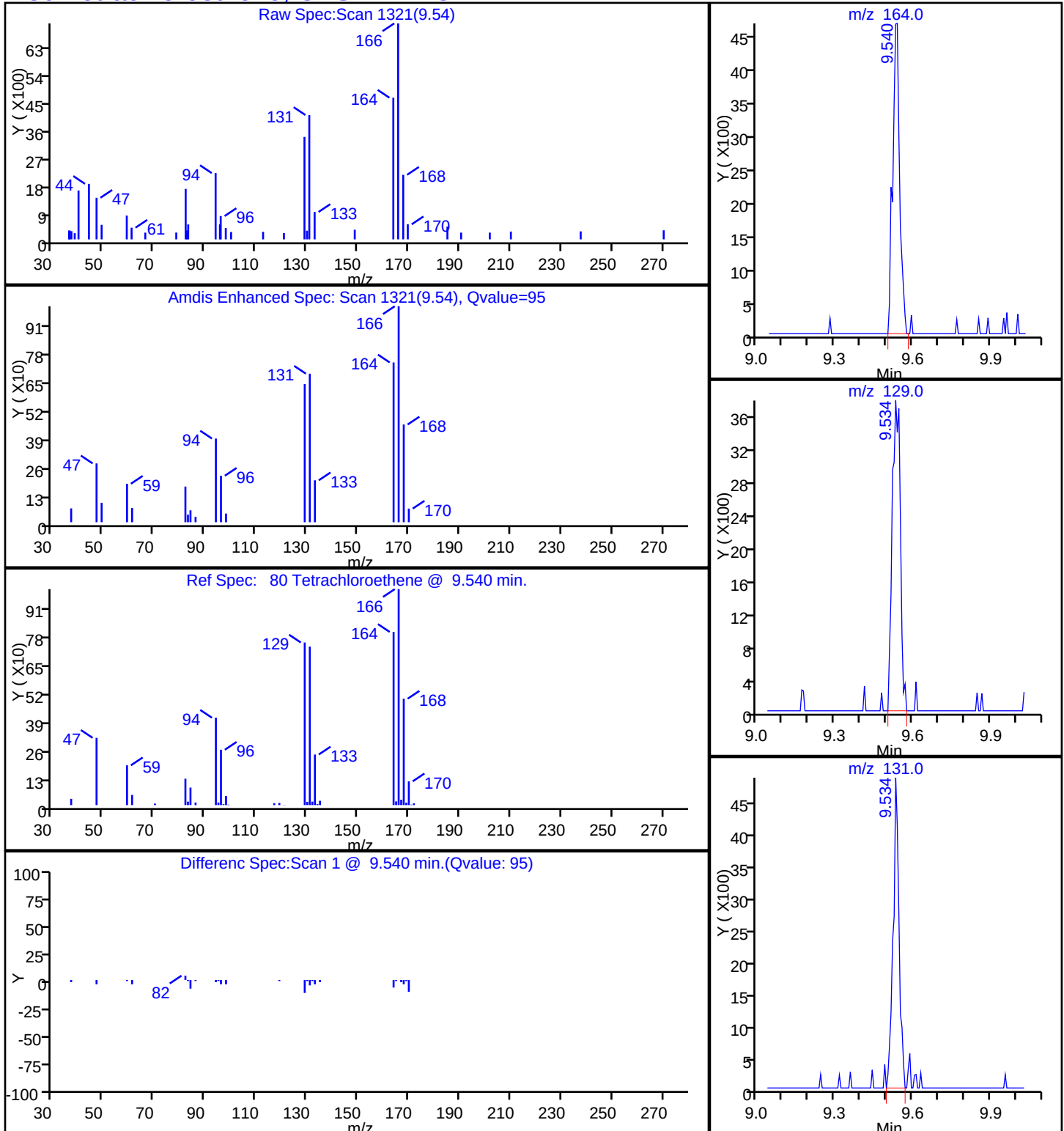
Dil. Factor: 12.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

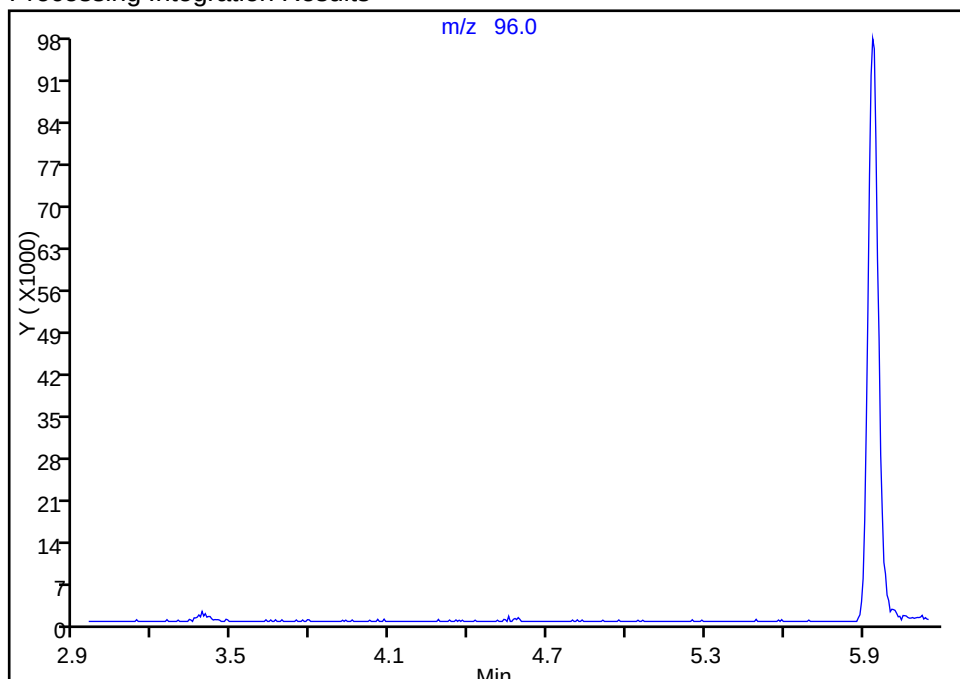
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310027.D		
Injection Date:	10-Mar-2015 22:14:30	Instrument ID:	CHHP5
Lims ID:	180-41613-E-6	Lab Sample ID:	180-41613-6
Client ID:	HD-MW-127-0/1-0		
Operator ID:	001562	ALS Bottle#:	27
Purge Vol:	5.000 mL	Dil. Factor:	12.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector:	MS SCAN
		Worklist Smp#:	27

34 trans-1,2-Dichloroethene, CAS: 156-60-5

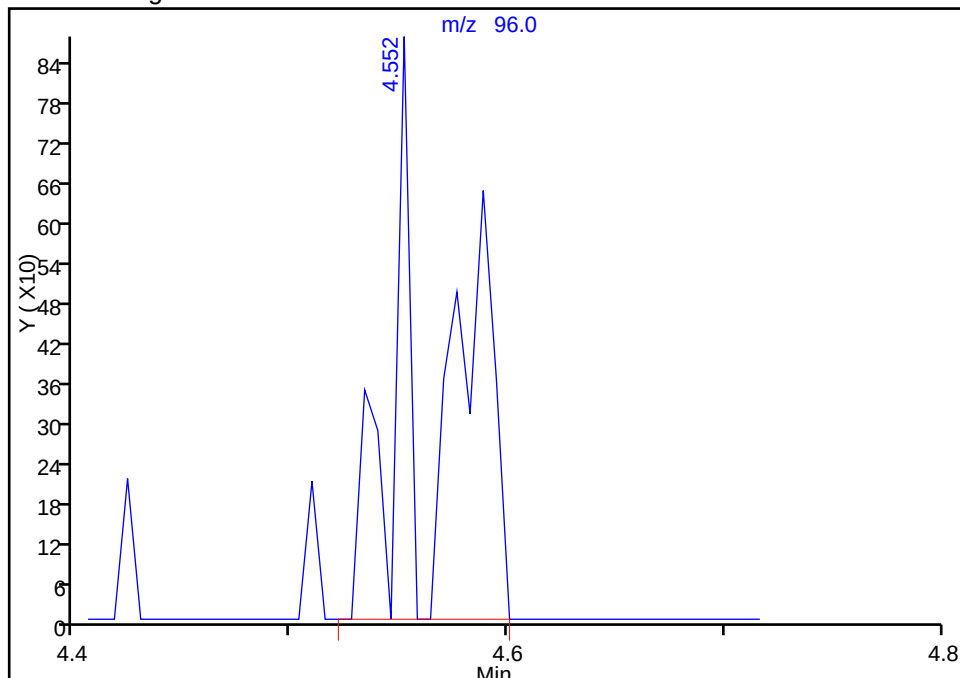
Not Detected
Expected RT: 4.55

Processing Integration Results



RT: 4.55
Area: 1337
Amount: 0.614436
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 11-Mar-2015 09:24:49
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-MW-132-0/1-0 Lab Sample ID: 180-41613-7

Matrix: Water Lab File ID: 50311027.D

Analysis Method: 8260C Date Collected: 02/27/2015 09:40

Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 21:36

Soil Aliquot Vol: _____ Dilution Factor: 2.5

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	2.5	U	2.5	0.71
75-01-4	Vinyl chloride	2.5	U	2.5	0.57
74-83-9	Bromomethane	2.5	U *	2.5	0.78
75-00-3	Chloroethane	2.5	U *	2.5	0.54
75-35-4	1,1-Dichloroethene	19		2.5	0.74
67-64-1	Acetone	13	U	13	6.3
75-15-0	Carbon disulfide	2.5	U	2.5	0.53
75-09-2	Methylene Chloride	2.5	U	2.5	0.31
156-60-5	trans-1,2-Dichloroethene	3.0		2.5	0.42
1634-04-4	Methyl tert-butyl ether	2.5	U	2.5	0.46
75-34-3	1,1-Dichloroethane	13		2.5	0.29
156-59-2	cis-1,2-Dichloroethene	530	E	2.5	0.59
74-97-5	Bromochloromethane	2.5	U	2.5	0.45
78-93-3	2-Butanone (MEK)	13	U	13	1.4
67-66-3	Chloroform	2.5	U	2.5	0.43
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	0.72
56-23-5	Carbon tetrachloride	2.5	U	2.5	0.34
71-43-2	Benzene	2.5	U	2.5	0.26
107-06-2	1,2-Dichloroethane	2.5	U	2.5	0.53
79-01-6	Trichloroethene	440	E	2.5	0.36
78-87-5	1,2-Dichloropropane	2.5	U	2.5	0.24
75-27-4	Bromodichloromethane	2.5	U	2.5	0.33
10061-01-5	cis-1,3-Dichloropropene	2.5	U *	2.5	0.47
108-10-1	4-Methyl-2-pentanone (MIBK)	13	U	13	1.3
108-88-3	Toluene	2.5	U	2.5	0.38
10061-02-6	trans-1,3-Dichloropropene	2.5	U *	2.5	0.37
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	0.50
127-18-4	Tetrachloroethene	1.8	J	2.5	0.37
591-78-6	2-Hexanone	13	U	13	0.40
124-48-1	Dibromochloromethane	2.5	U	2.5	0.34
106-93-4	1,2-Dibromoethane (EDB)	2.5	U	2.5	0.45
108-90-7	Chlorobenzene	2.5	U	2.5	0.34
630-20-6	1,1,1,2-Tetrachloroethane	2.5	U	2.5	0.69
100-41-4	Ethylbenzene	2.5	U	2.5	0.57
1330-20-7	Xylenes, Total	7.5	U	7.5	1.2
100-42-5	Styrene	2.5	U	2.5	0.24

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-MW-132-0/1-0 Lab Sample ID: 180-41613-7
 Matrix: Water Lab File ID: 50311027.D
 Analysis Method: 8260C Date Collected: 02/27/2015 09:40
 Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 21:36
 Soil Aliquot Vol: _____ Dilution Factor: 2.5
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	2.5	U	2.5	0.48
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.50
107-13-1	Acrylonitrile	50	U	50	1.4
123-91-1	1,4-Dioxane	500	U	500	86

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		64-135
2037-26-5	Toluene-d8 (Surr)	105		71-118
460-00-4	4-Bromofluorobenzene (Surr)	105		70-118
1868-53-7	Dibromofluoromethane (Surr)	105		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311027.D
 Lims ID: 180-41613-E-7 Lab Sample ID: 180-41613-7
 Client ID: HD-MW-132-0/1-0
 Sample Type: Client
 Inject. Date: 11-Mar-2015 21:36:30 ALS Bottle#: 27 Worklist Smp#: 27
 Purge Vol: 5.000 mL Dil. Factor: 2.5000
 Sample Info: 180-41613-E-7, 2.5x
 Misc. Info.: 180-0005976-027
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 12-Mar-2015 08:26:51 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: fergusond

Date: 12-Mar-2015 08:26:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.305	-0.009	81	78530	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.268	0.003	99	464847	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.364	-0.002	99	106492	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.682	-0.002	98	167761	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.526	0.003	52	104681	52.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	95	137436	55.9	
\$ 7 Toluene-d8 (Surr)	98	8.920	8.923	-0.003	100	435778	52.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	94	162259	52.5	
12 Chloromethane	50		1.768				ND	
13 Vinyl chloride	62		1.902				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.371				ND	
22 1,1-Dichloroethene	96	3.390	3.368	0.022	99	100576	37.2	
24 Acetone	43	3.506	3.496	0.010	33	1914	1.96	
26 Carbon disulfide	76		3.648				ND	
31 Methylene Chloride	84		4.135				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96	4.582	4.555	0.027	38	17104	6.04	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63	5.179	5.163	0.016	100	140585	26.1	
45 cis-1,2-Dichloroethene	96	5.939	5.930	0.009	74	3191405	1054.6	E
46 2-Butanone (MEK)	43		5.990				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	M
53 1,1,1-Trichloroethane	97		6.532				ND	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62	6.979	6.982	-0.003	0	1454	0.4287	
64 Trichloroethene	130	7.667	7.663	0.004	95	2420702	875.4	E
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88	8.062	8.059	0.003	10	1501	54.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.215				ND	
79 1,1,2-Trichloroethane	97	9.401	9.397	0.004	17	1955	0.9736	
80 Tetrachloroethene	164	9.540	9.531	0.009	93	7475	3.69	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311027.D

Injection Date: 11-Mar-2015 21:36:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-E-7

Lab Sample ID: 180-41613-7

Worklist Smp#: 27

Client ID: HD-MW-132-0/1-0

Purge Vol: 5.000 mL

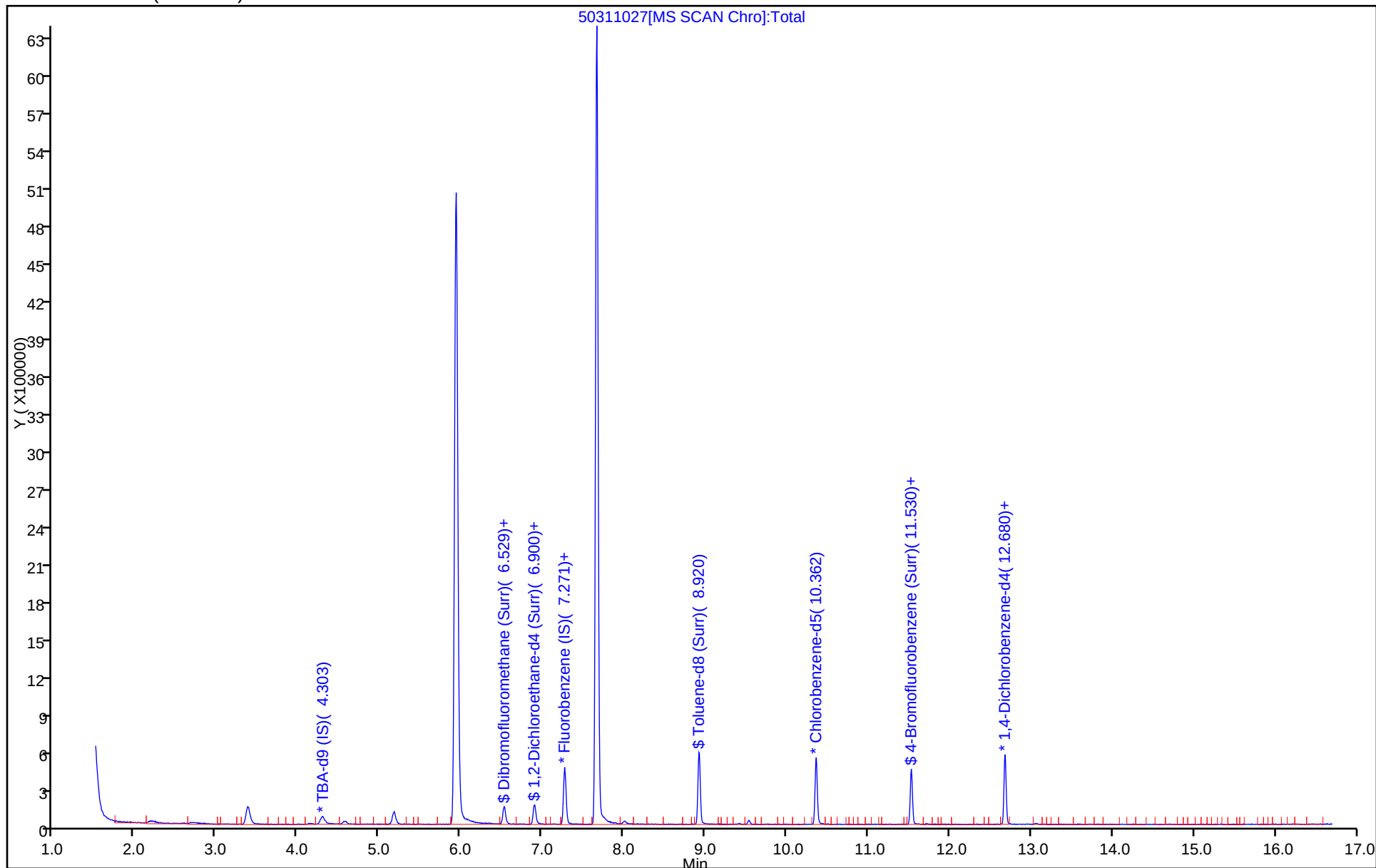
Dil. Factor: 2.5000

ALS Bottle#: 27

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311027.D

Injection Date: 11-Mar-2015 21:36:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

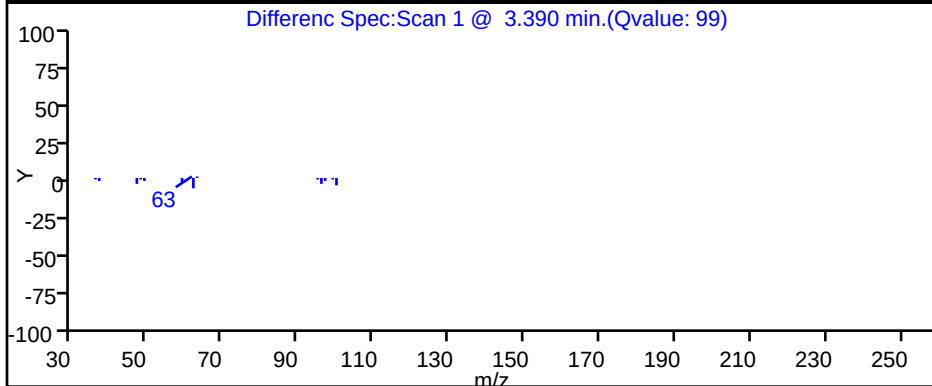
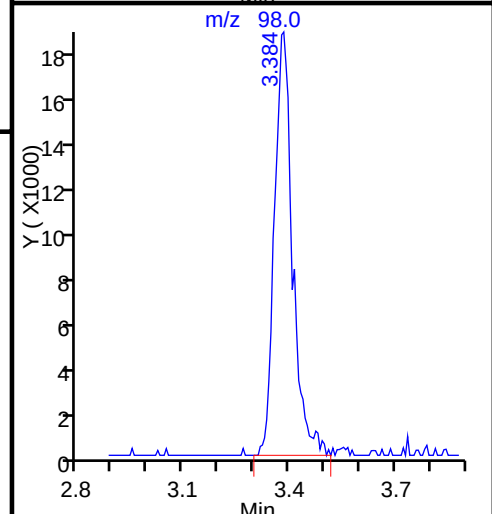
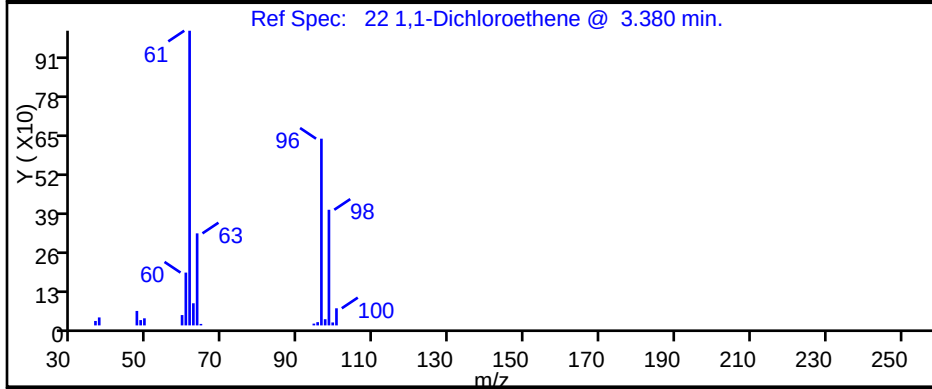
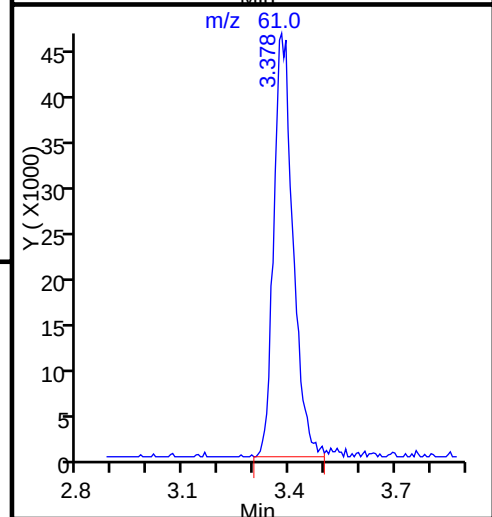
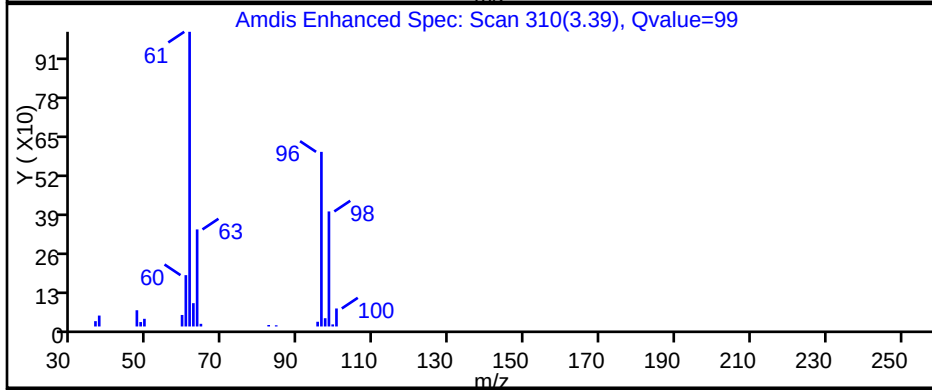
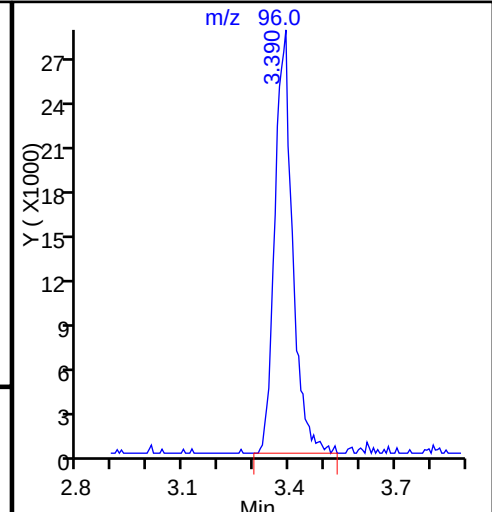
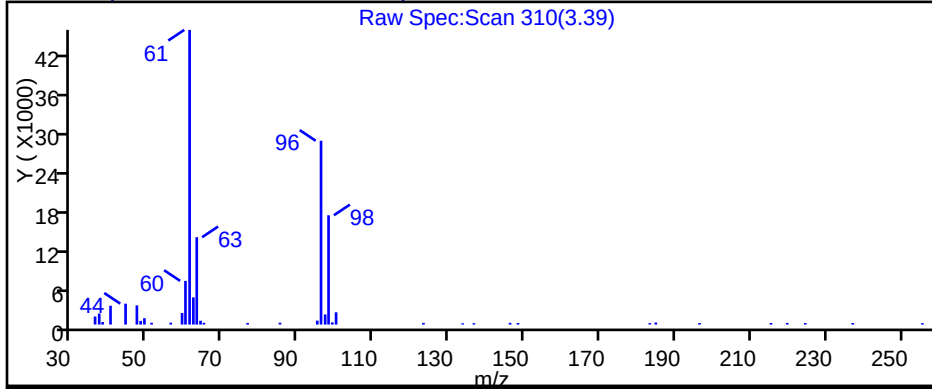
Dil. Factor: 2.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311027.D

Injection Date: 11-Mar-2015 21:36:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

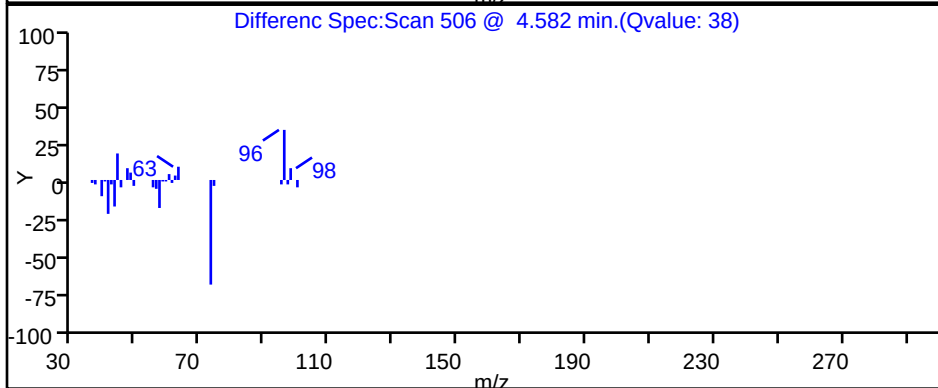
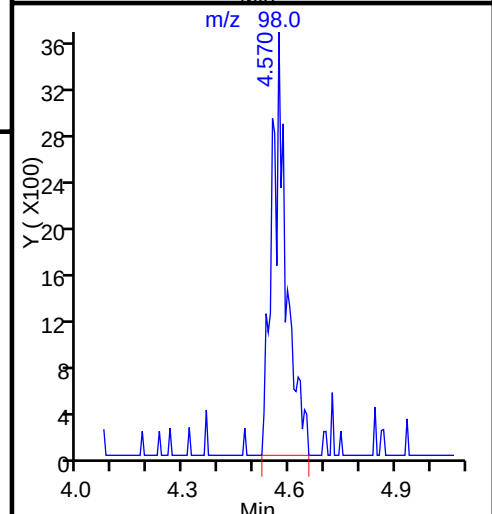
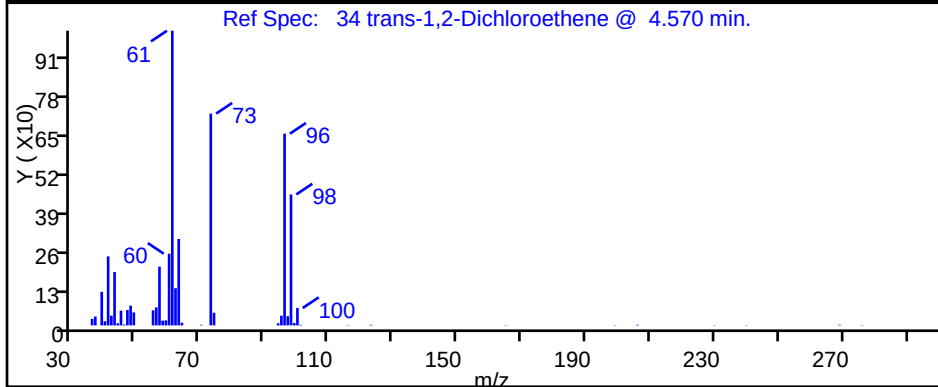
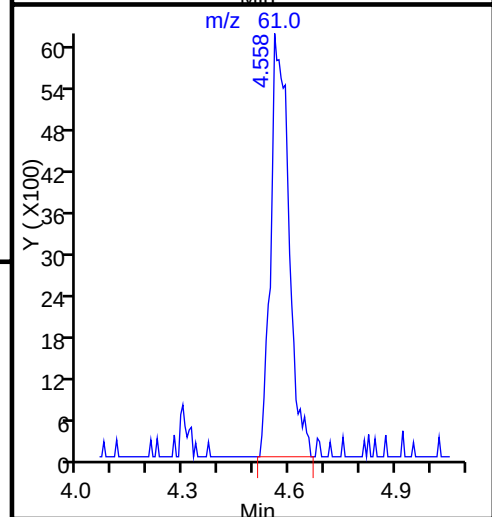
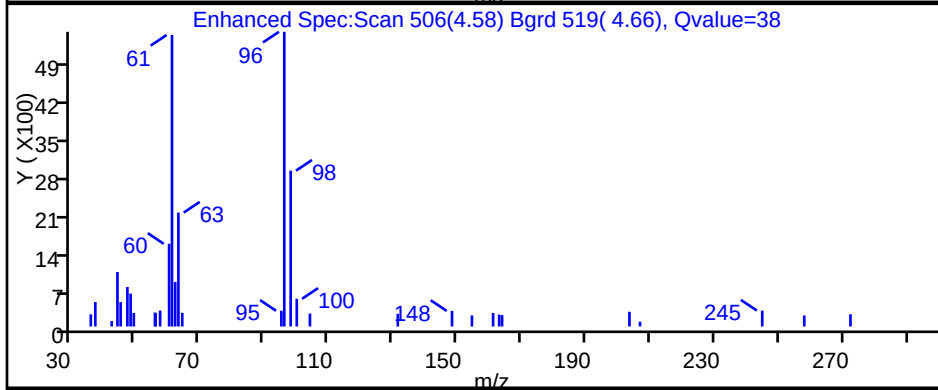
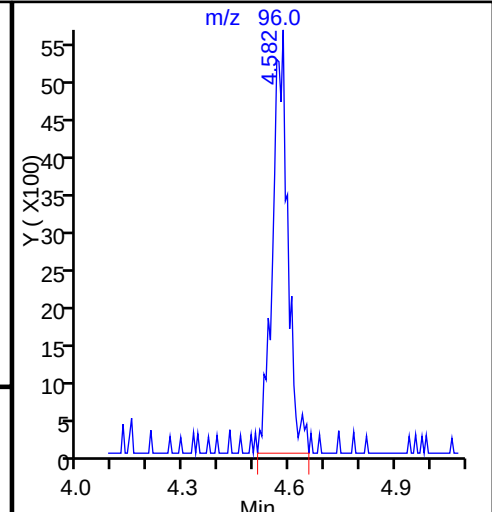
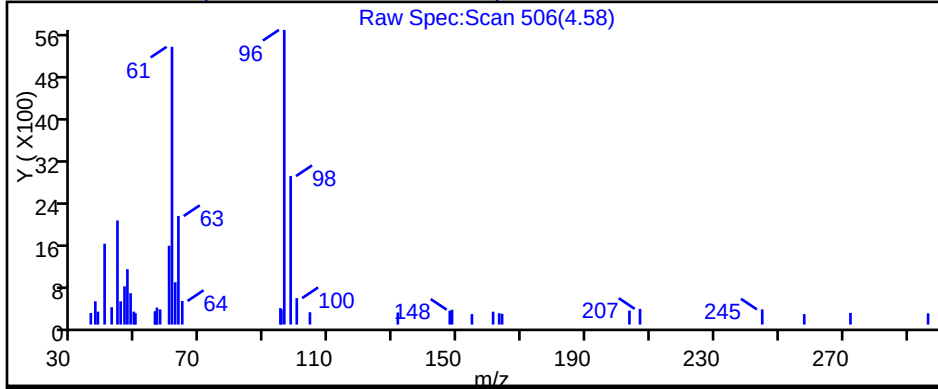
Dil. Factor: 2.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311027.D

Injection Date: 11-Mar-2015 21:36:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

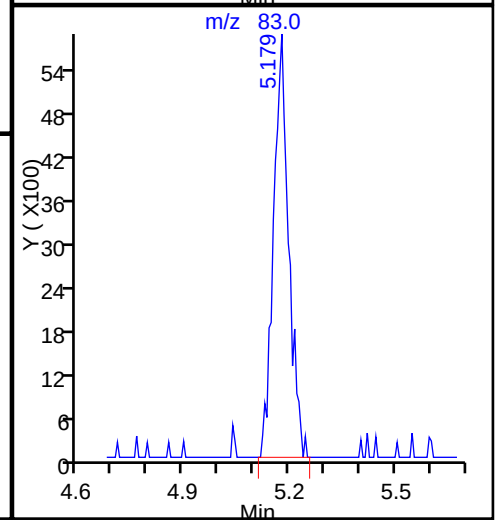
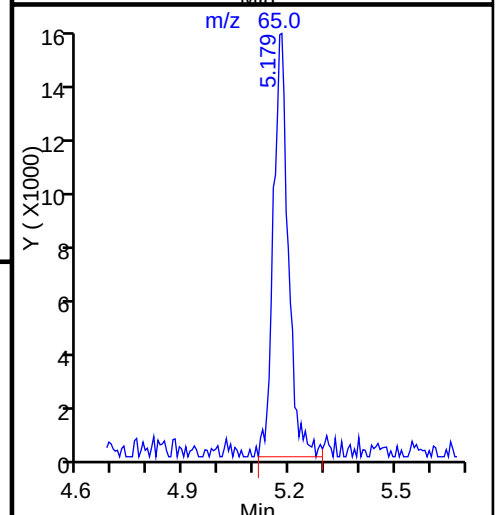
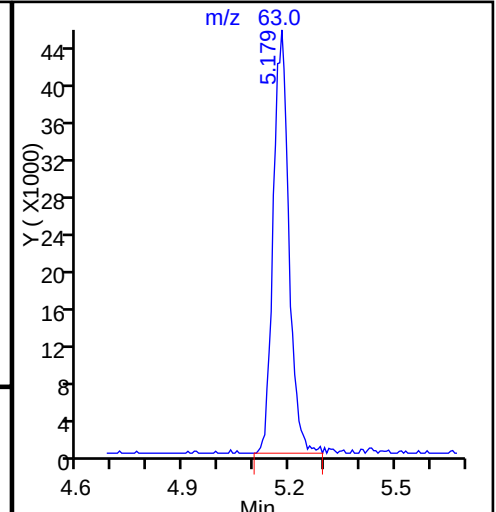
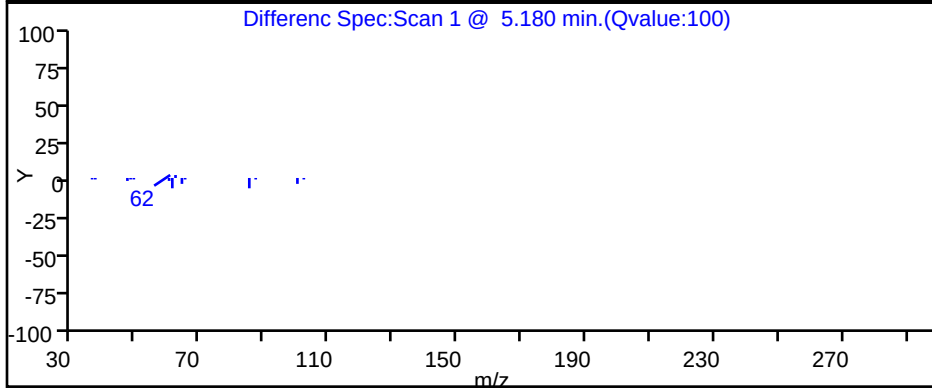
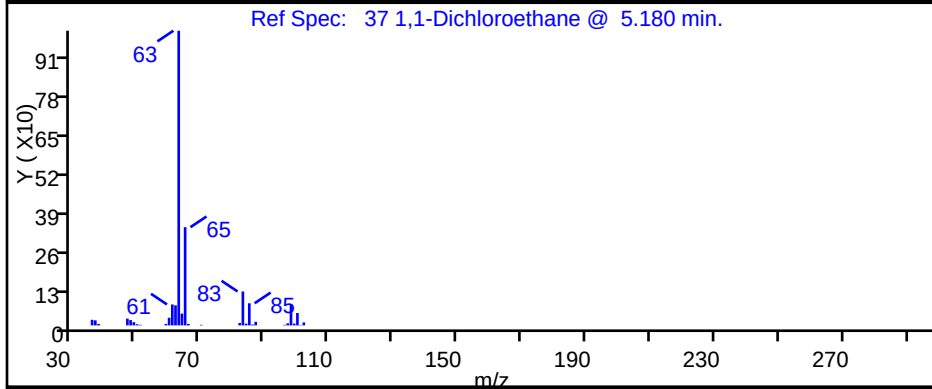
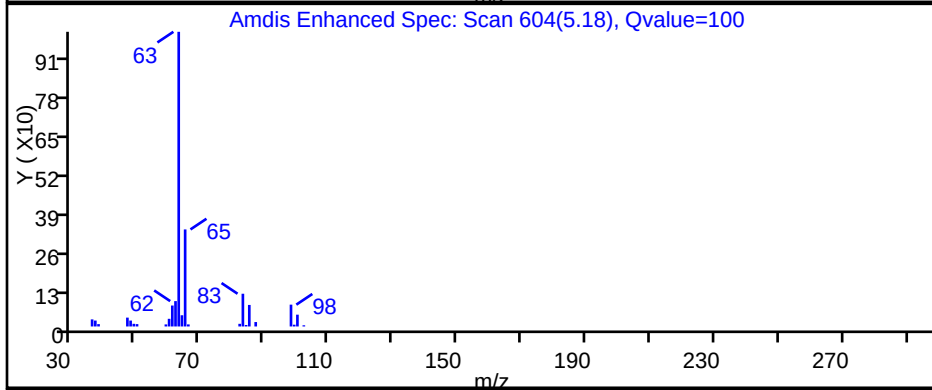
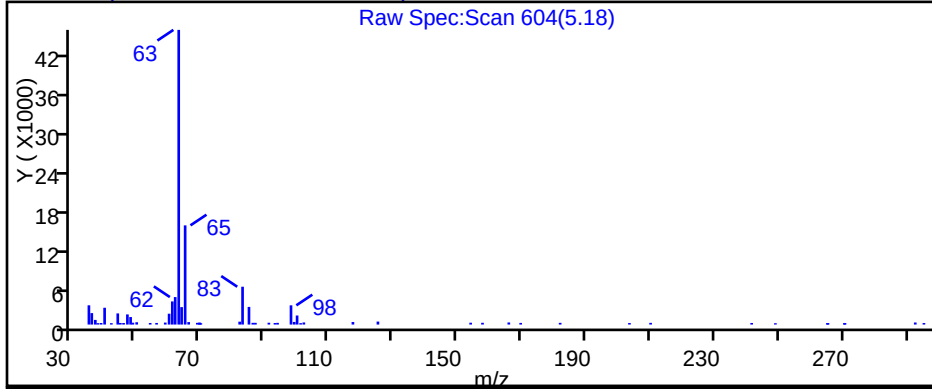
Dil. Factor: 2.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311027.D

Injection Date: 11-Mar-2015 21:36:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

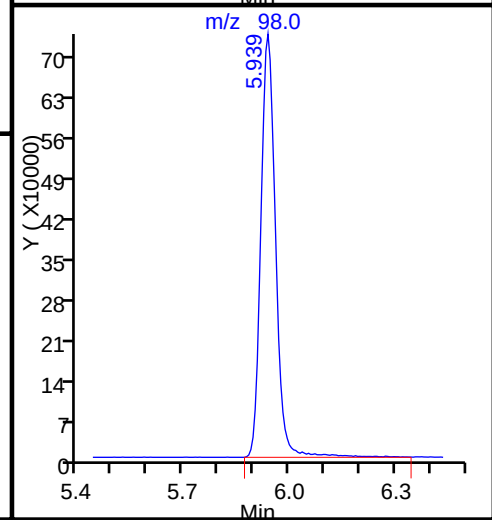
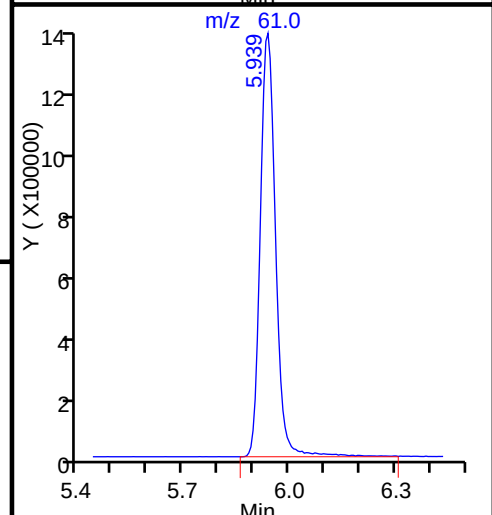
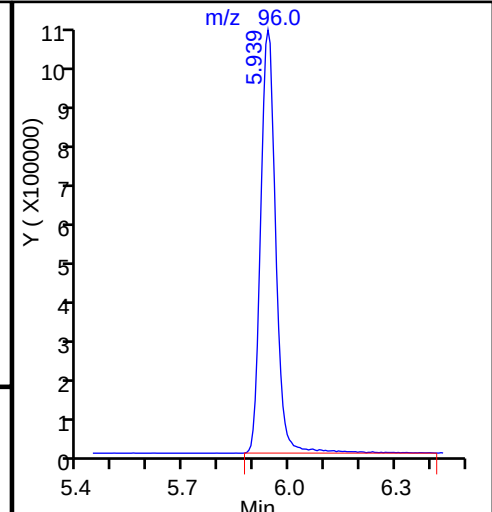
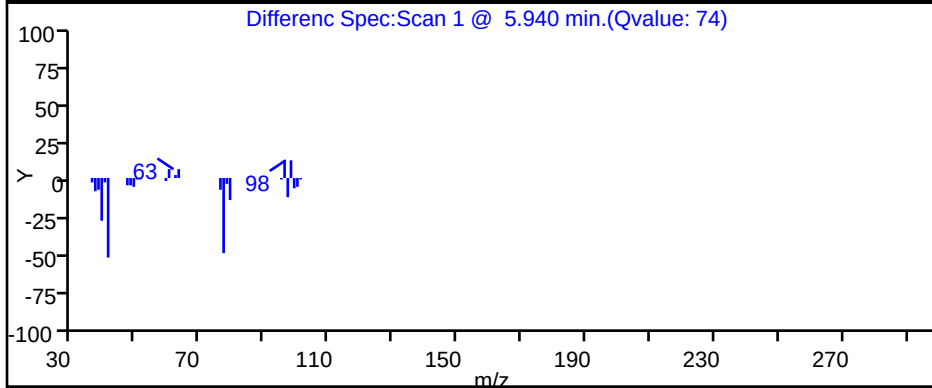
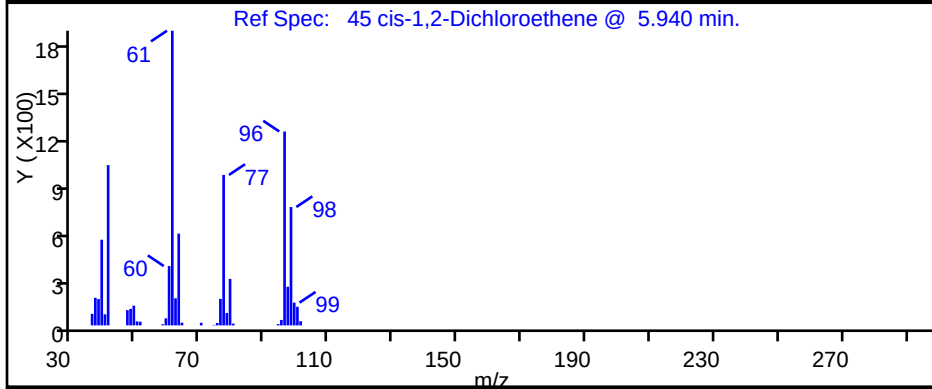
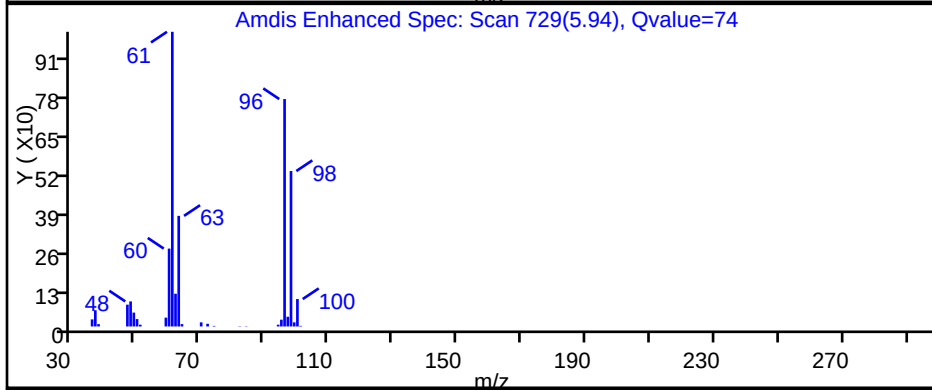
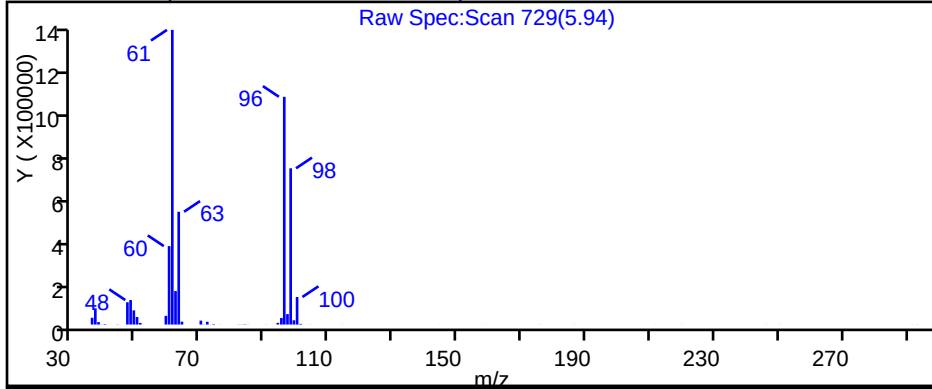
Dil. Factor: 2.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311027.D

Injection Date: 11-Mar-2015 21:36:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

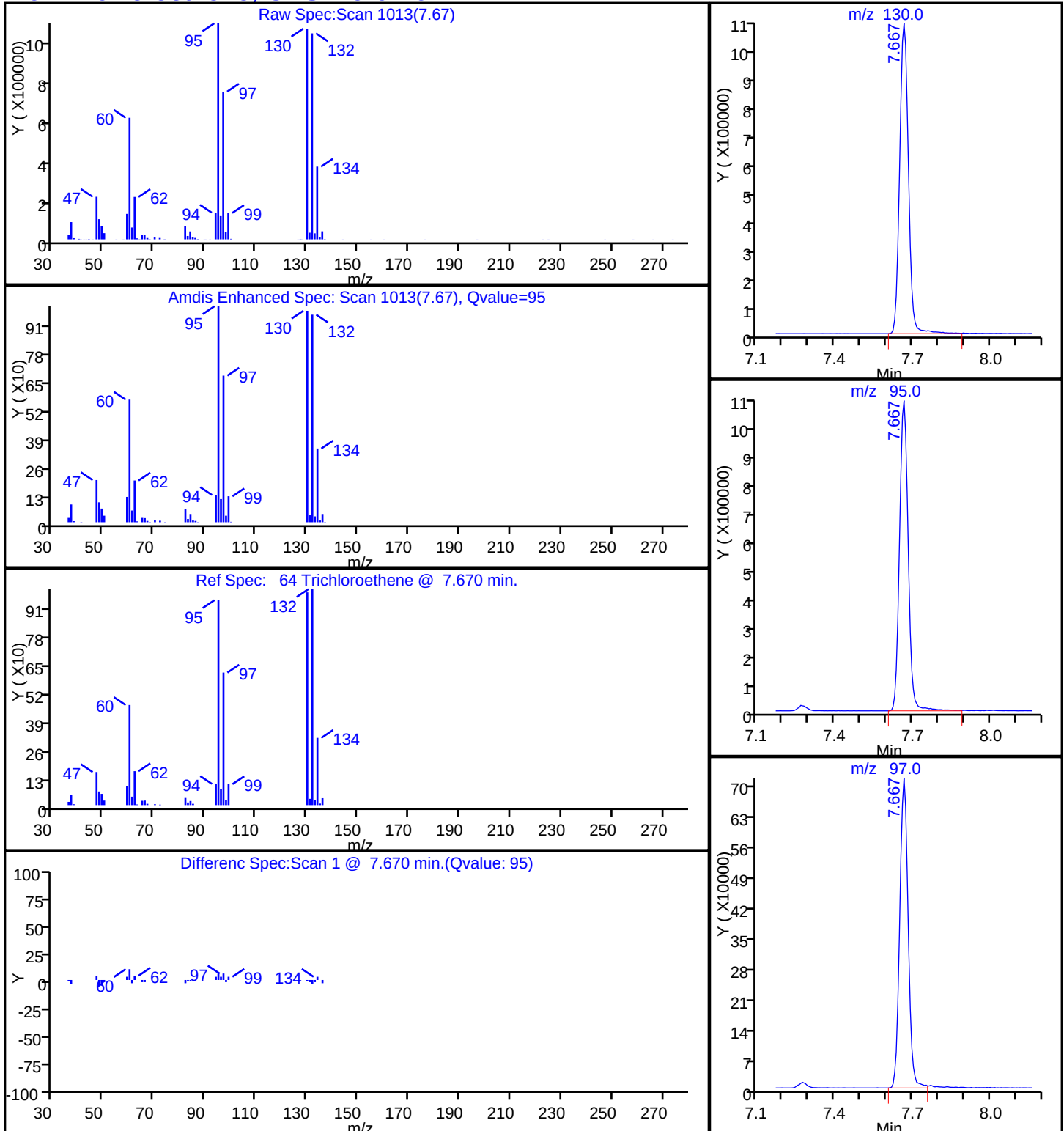
Dil. Factor: 2.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\503111027.D

Injection Date: 11-Mar-2015 21:36:30

Instrument ID: CHHP5

Lims ID: 180-41613-E-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 27

Worklist Smp#: 27

Purge Vol: 5.000 mL

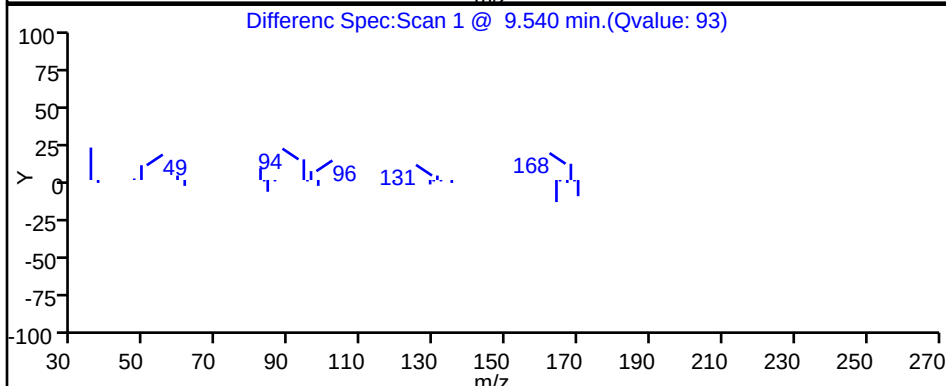
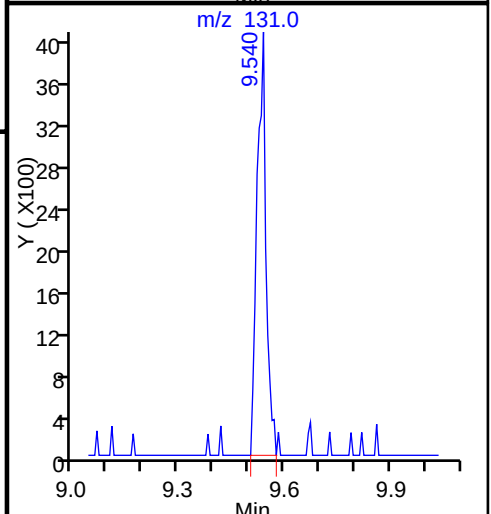
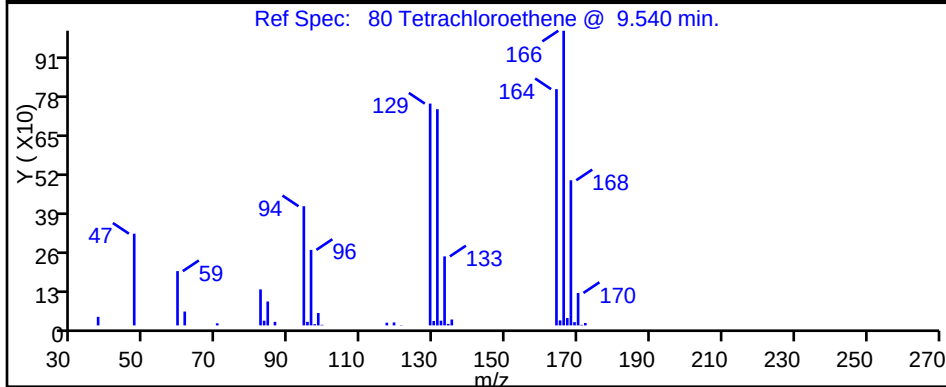
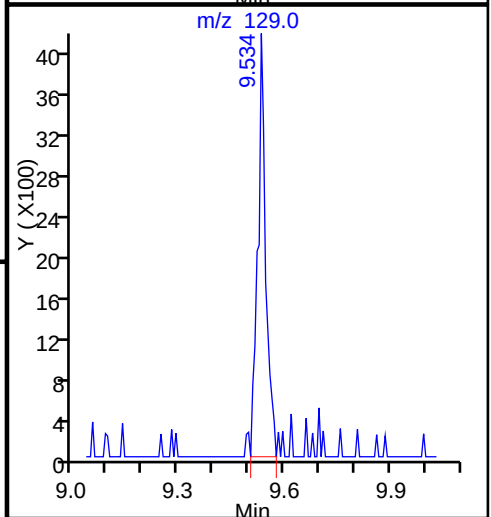
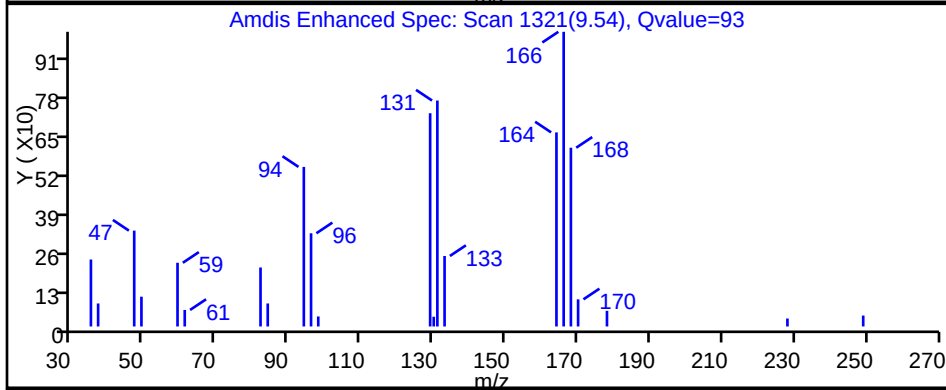
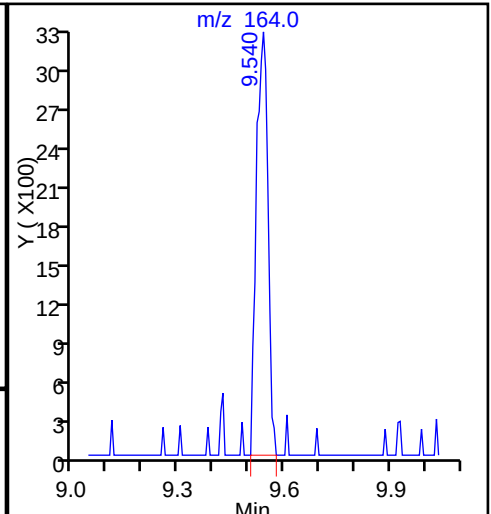
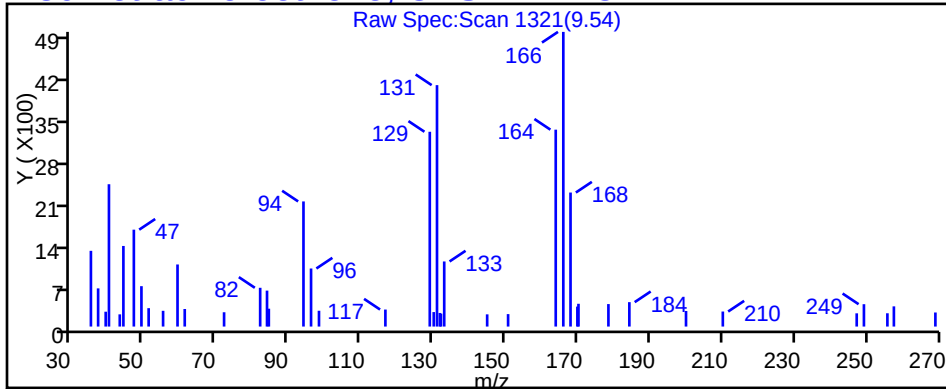
Dil. Factor: 2.5000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-MW-132-0/1-0 DL Lab Sample ID: 180-41613-7 DL

Matrix: Water Lab File ID: 50311015.D

Analysis Method: 8260C Date Collected: 02/27/2015 09:40

Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 16:46

Soil Aliquot Vol: _____ Dilution Factor: 25

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	25	U	25	7.1
75-01-4	Vinyl chloride	25	U	25	5.7
74-83-9	Bromomethane	25	U *	25	7.8
75-00-3	Chloroethane	25	U *	25	5.4
75-35-4	1,1-Dichloroethene	21	J	25	7.4
67-64-1	Acetone	130	U	130	63
75-15-0	Carbon disulfide	25	U	25	5.3
75-09-2	Methylene Chloride	25	U	25	3.1
156-60-5	trans-1,2-Dichloroethene	25	U	25	4.2
1634-04-4	Methyl tert-butyl ether	25	U	25	4.6
75-34-3	1,1-Dichloroethane	13	J	25	2.9
156-59-2	cis-1,2-Dichloroethene	590		25	5.9
74-97-5	Bromochloromethane	25	U	25	4.5
78-93-3	2-Butanone (MEK)	130	U	130	14
67-66-3	Chloroform	25	U	25	4.3
71-55-6	1,1,1-Trichloroethane	25	U	25	7.2
56-23-5	Carbon tetrachloride	25	U	25	3.4
71-43-2	Benzene	25	U	25	2.6
107-06-2	1,2-Dichloroethane	25	U	25	5.3
79-01-6	Trichloroethene	500		25	3.6
78-87-5	1,2-Dichloropropane	25	U	25	2.4
75-27-4	Bromodichloromethane	25	U	25	3.3
10061-01-5	cis-1,3-Dichloropropene	25	U *	25	4.7
108-10-1	4-Methyl-2-pentanone (MIBK)	130	U	130	13
108-88-3	Toluene	25	U	25	3.8
10061-02-6	trans-1,3-Dichloropropene	25	U *	25	3.7
79-00-5	1,1,2-Trichloroethane	25	U	25	5.0
127-18-4	Tetrachloroethene	25	U	25	3.7
591-78-6	2-Hexanone	130	U	130	4.0
124-48-1	Dibromochloromethane	25	U	25	3.4
106-93-4	1,2-Dibromoethane (EDB)	25	U	25	4.5
108-90-7	Chlorobenzene	25	U	25	3.4
630-20-6	1,1,1,2-Tetrachloroethane	25	U	25	6.9
100-41-4	Ethylbenzene	25	U	25	5.7
1330-20-7	Xylenes, Total	75	U	75	12
100-42-5	Styrene	25	U	25	2.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-MW-132-0/1-0 DL Lab Sample ID: 180-41613-7 DL
 Matrix: Water Lab File ID: 50311015.D
 Analysis Method: 8260C Date Collected: 02/27/2015 09:40
 Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 16:46
 Soil Aliquot Vol: _____ Dilution Factor: 25
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	25	U	25	4.8
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	5.0
107-13-1	Acrylonitrile	500	U	500	14
123-91-1	1,4-Dioxane	5000	U	5000	860

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		64-135
2037-26-5	Toluene-d8 (Surr)	102		71-118
460-00-4	4-Bromofluorobenzene (Surr)	105		70-118
1868-53-7	Dibromofluoromethane (Surr)	99		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311015.D
 Lims ID: 180-41613-D-7 Lab Sample ID: 180-41613-7
 Client ID: HD-MW-132-0/1-0
 Sample Type: Client
 Inject. Date: 11-Mar-2015 16:46:30 ALS Bottle#: 15 Worklist Smp#: 15
 Purge Vol: 5.000 mL Dil. Factor: 25.0000
 Sample Info: 180-41613-D-7, 25x
 Misc. Info.: 180-0005976-015
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 12-Mar-2015 08:26:51 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: fergusond

Date: 12-Mar-2015 08:07:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.302	4.305	-0.003	84	93248	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.268	0.009	99	502673	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.364	-0.003	98	116733	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	98	175856	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.526	0.003	51	106326	49.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	97	143010	53.8	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	100	463146	50.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	96	176913	52.3	
12 Chloromethane	50		1.768				ND	
13 Vinyl chloride	62		1.902				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.371				ND	
22 1,1-Dichloroethene	96	3.390	3.368	0.022	98	12088	4.13	
24 Acetone	43		3.496				ND	
26 Carbon disulfide	76		3.648				ND	
31 Methylene Chloride	84		4.135				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96	4.552	4.555	-0.003	1	1820	0.5947	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63	5.178	5.163	0.015	98	15236	2.61	
45 cis-1,2-Dichloroethene	96	5.939	5.930	0.009	75	385833	117.9	
46 2-Butanone (MEK)	43		5.990				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.532				ND	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.666	7.663	0.003	97	301876	101.0	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.059				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.215				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.540	9.531	0.009	17	911	0.4098	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311015.D

Injection Date: 11-Mar-2015 16:46:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-D-7

Lab Sample ID: 180-41613-7

Worklist Smp#: 15

Client ID: HD-MW-132-0/1-0

Purge Vol: 5.000 mL

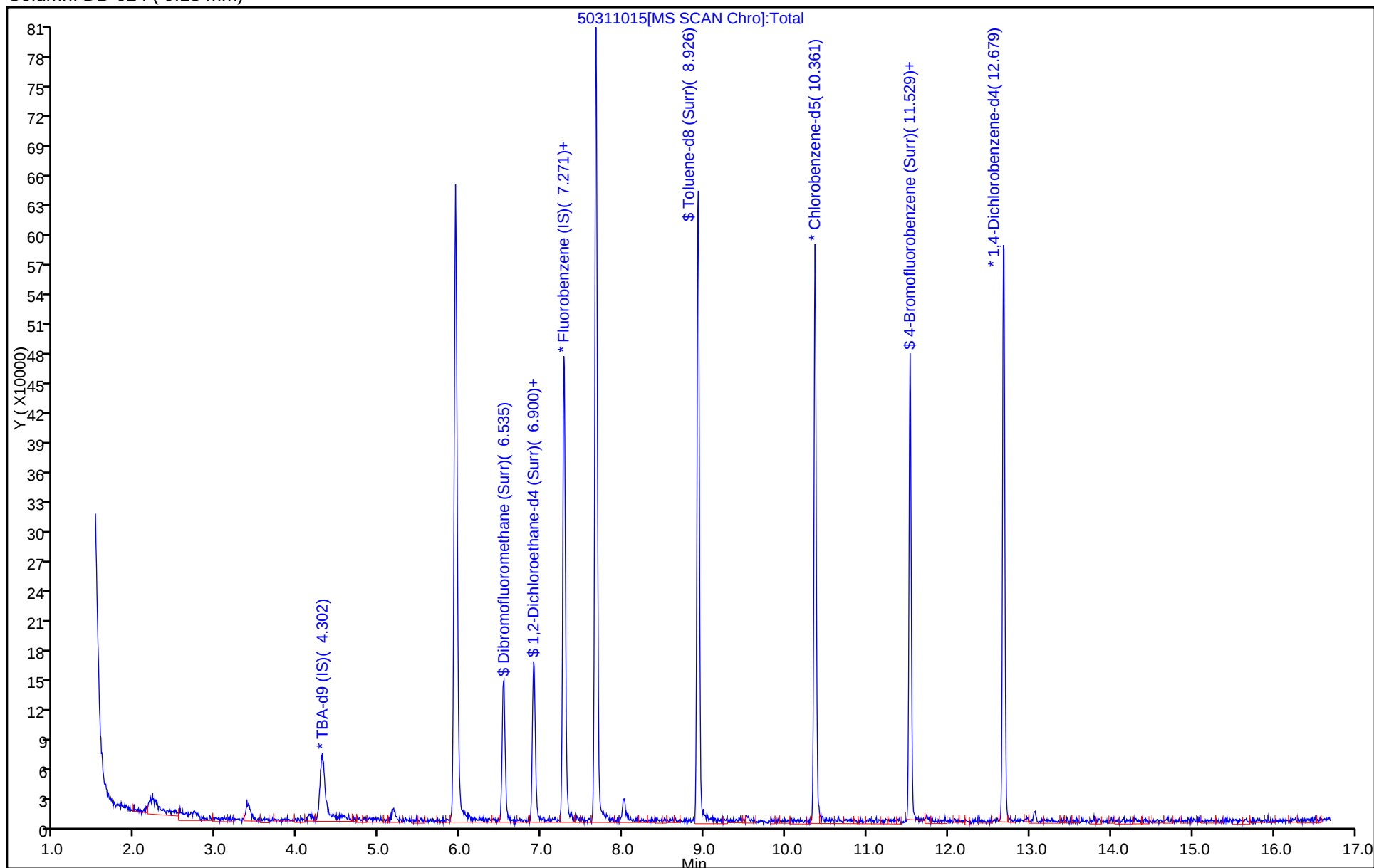
Dil. Factor: 25.0000

ALS Bottle#: 15

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311015.D

Injection Date: 11-Mar-2015 16:46:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

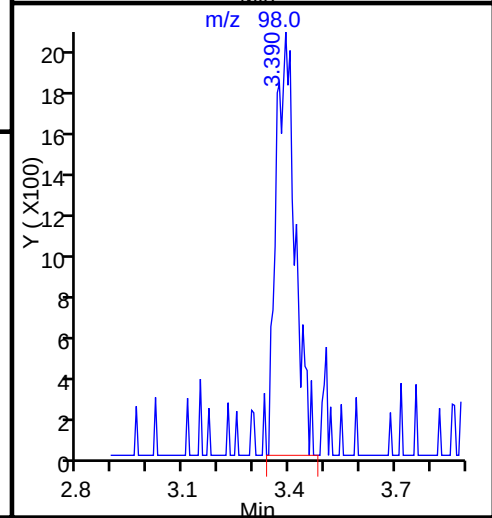
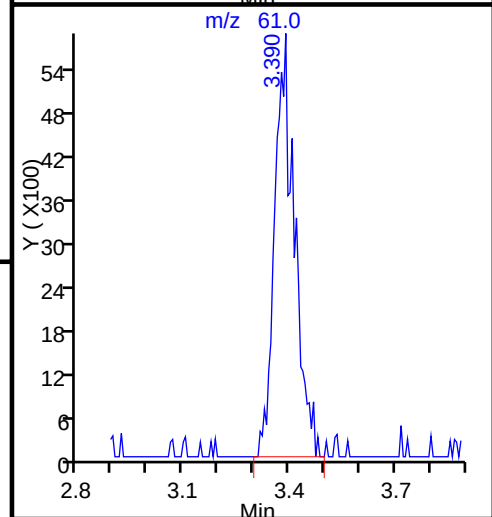
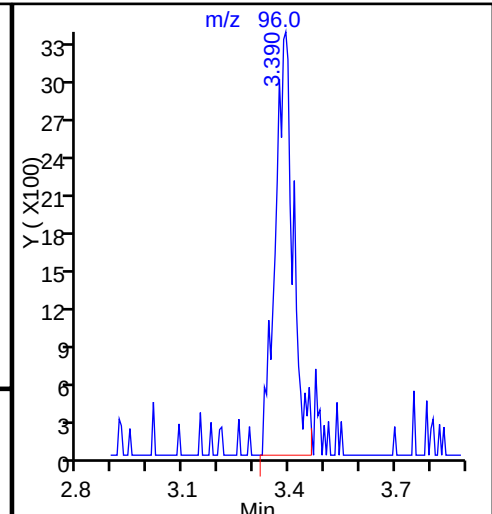
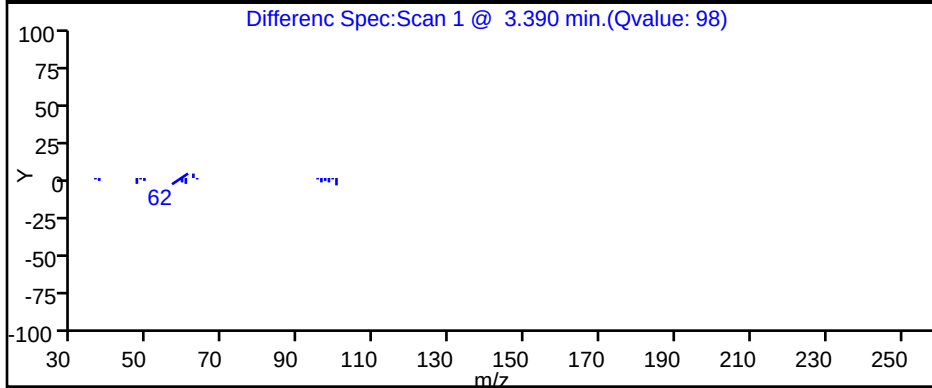
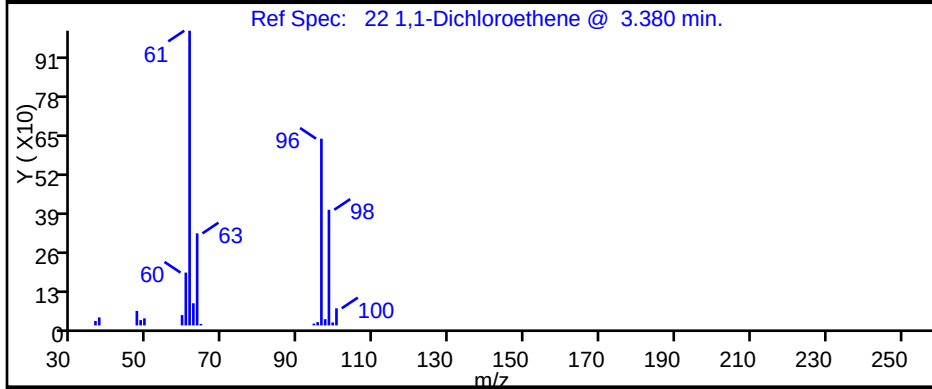
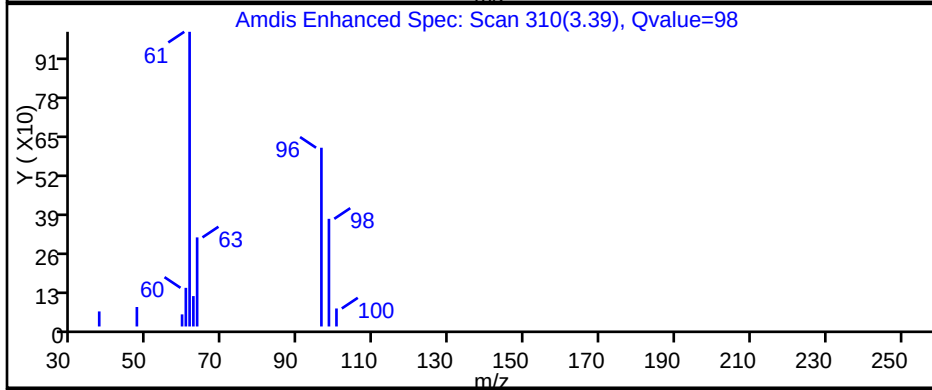
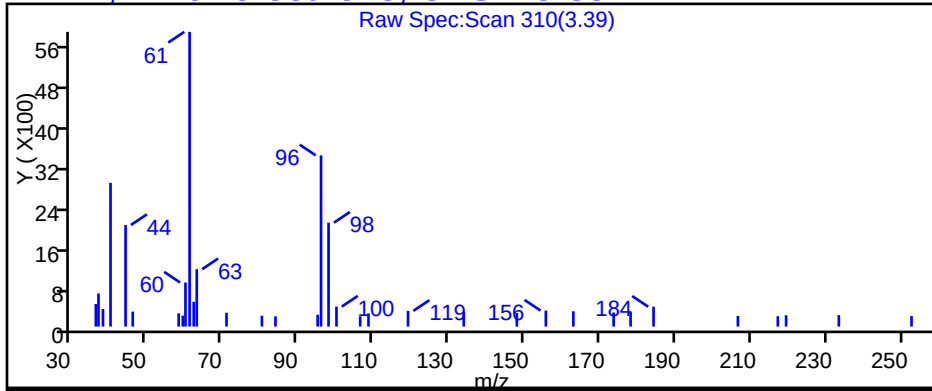
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311015.D

Injection Date: 11-Mar-2015 16:46:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

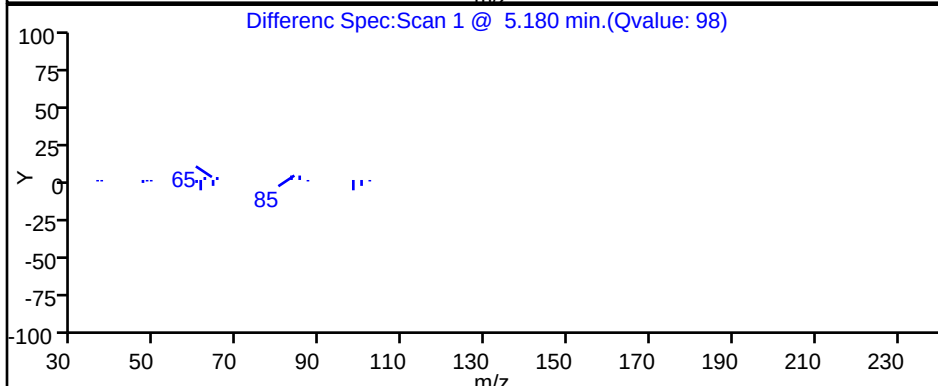
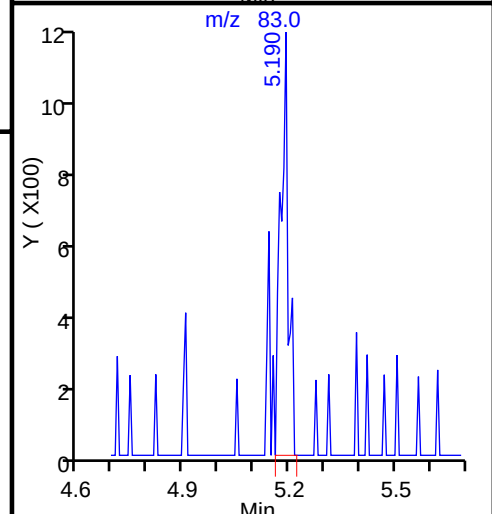
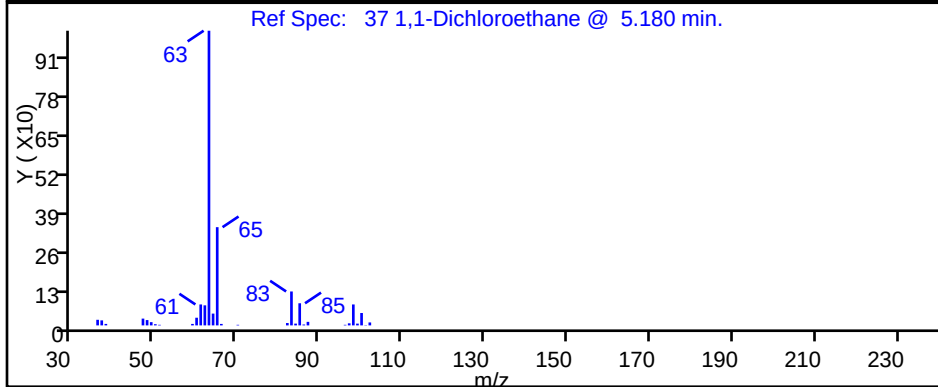
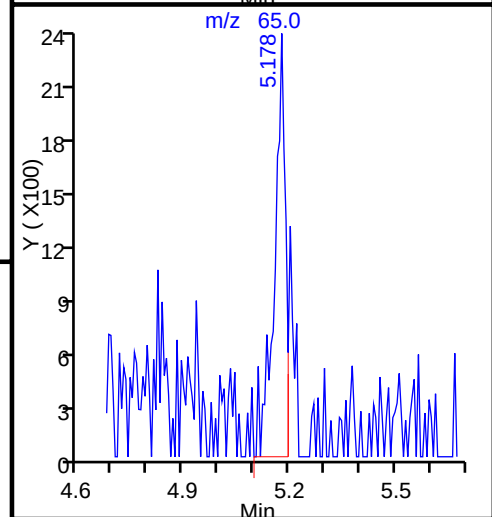
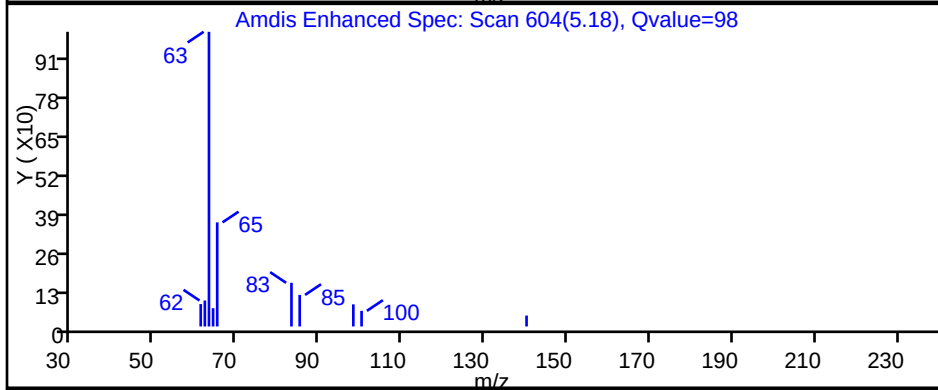
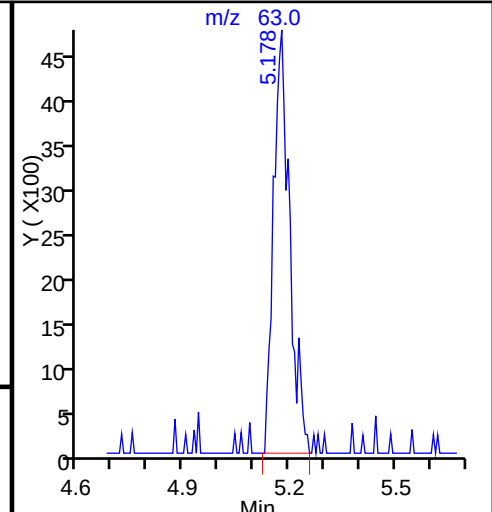
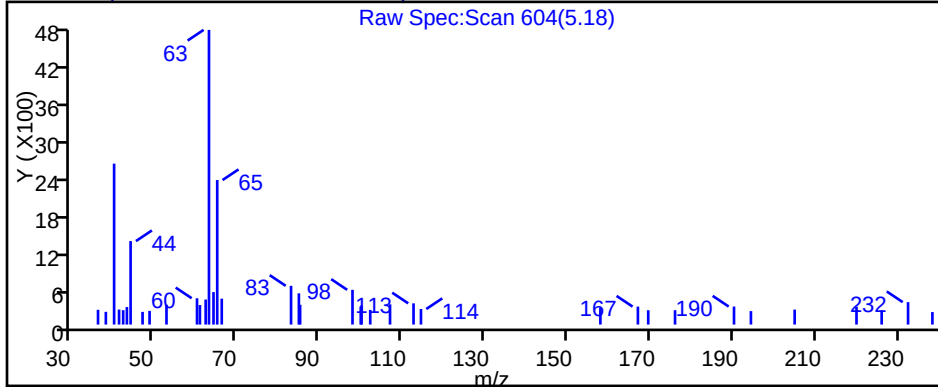
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311015.D

Injection Date: 11-Mar-2015 16:46:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

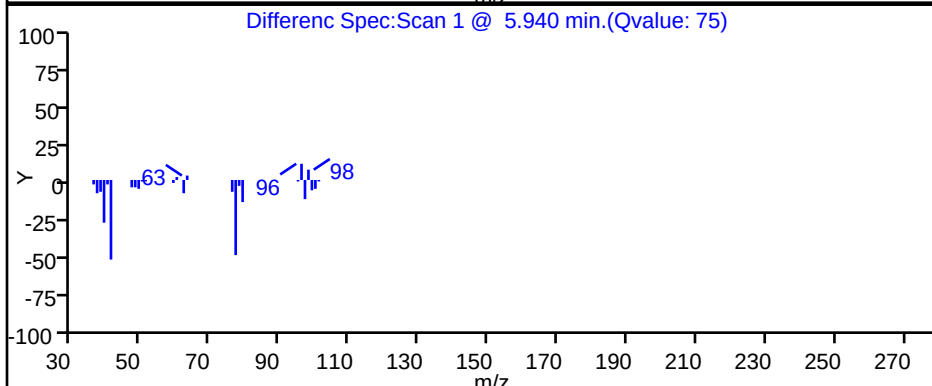
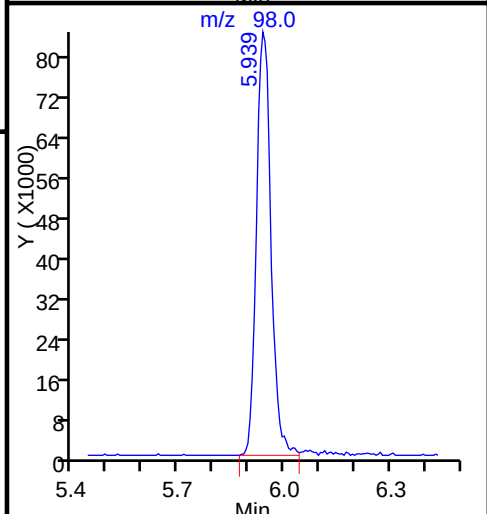
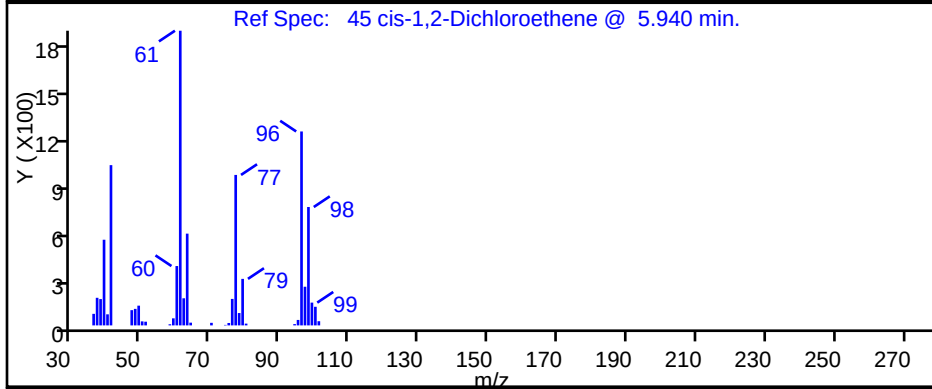
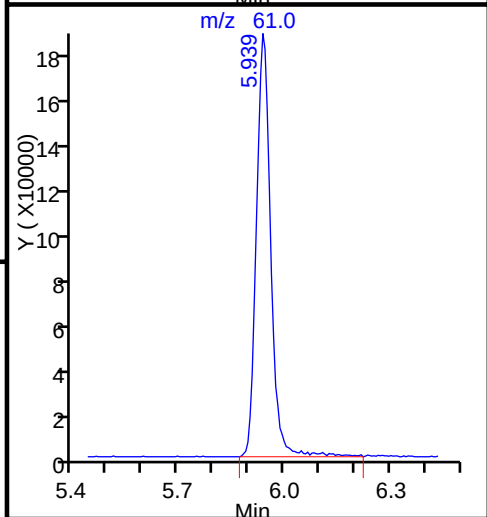
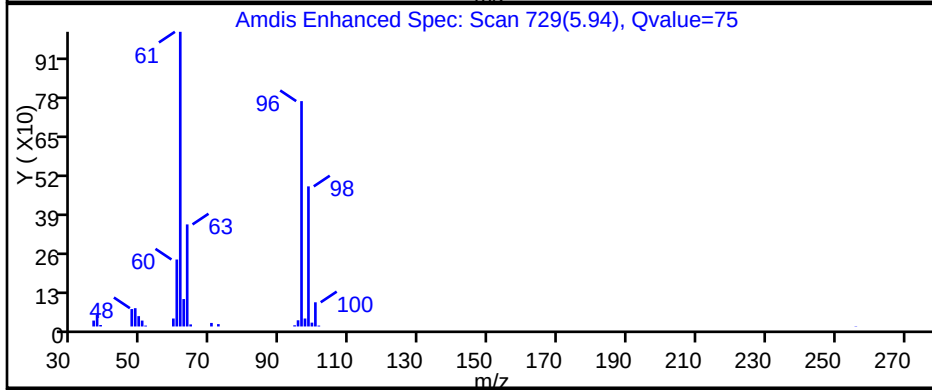
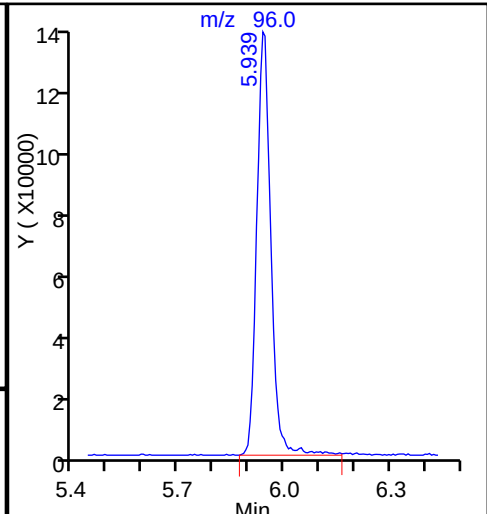
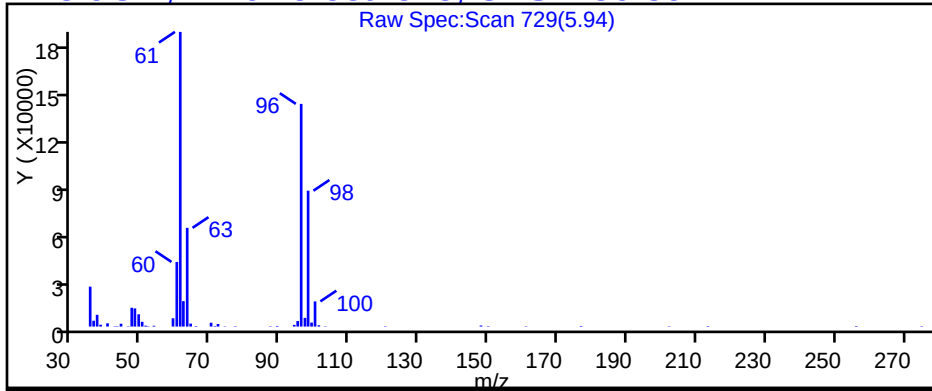
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\503111015.D

Injection Date: 11-Mar-2015 16:46:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-7

Lab Sample ID: 180-41613-7

Client ID: HD-MW-132-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

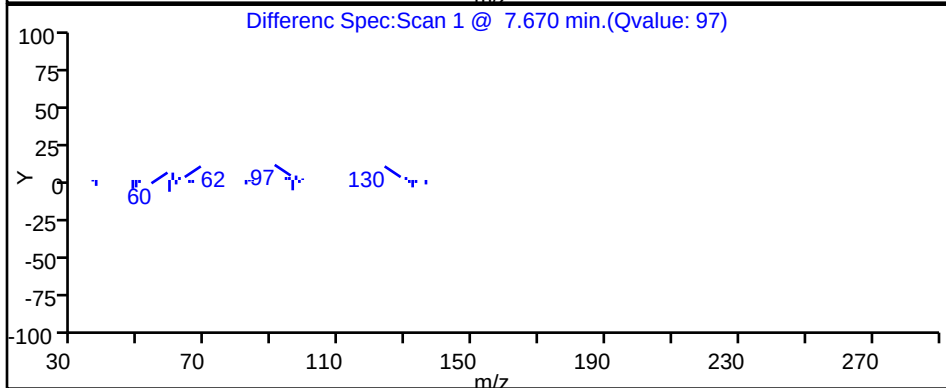
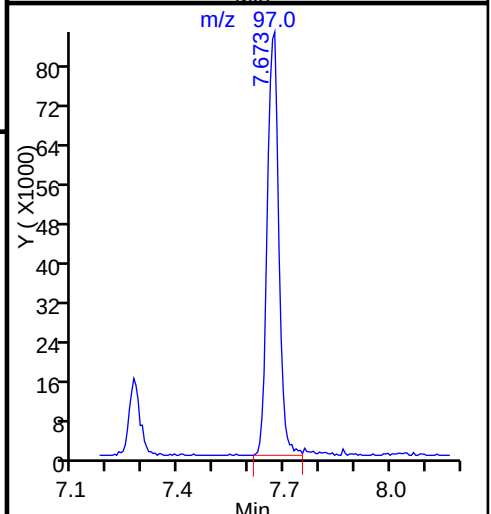
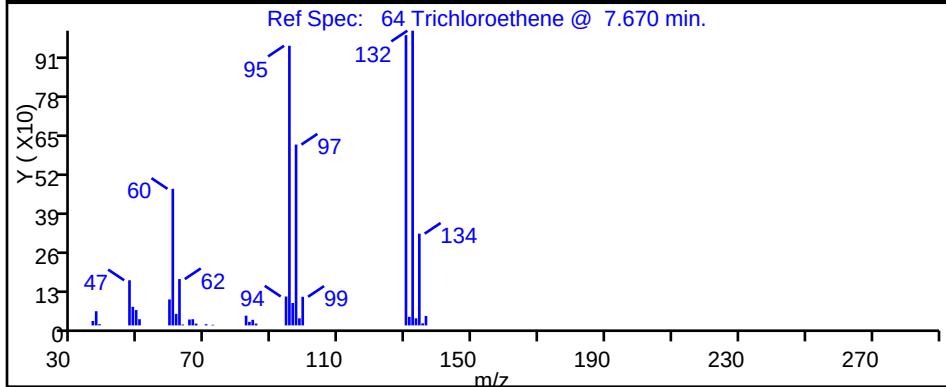
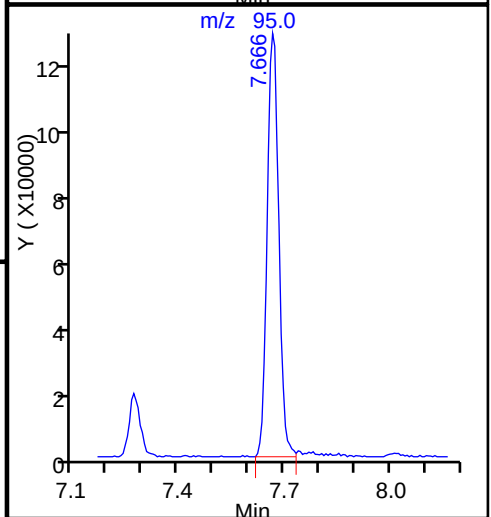
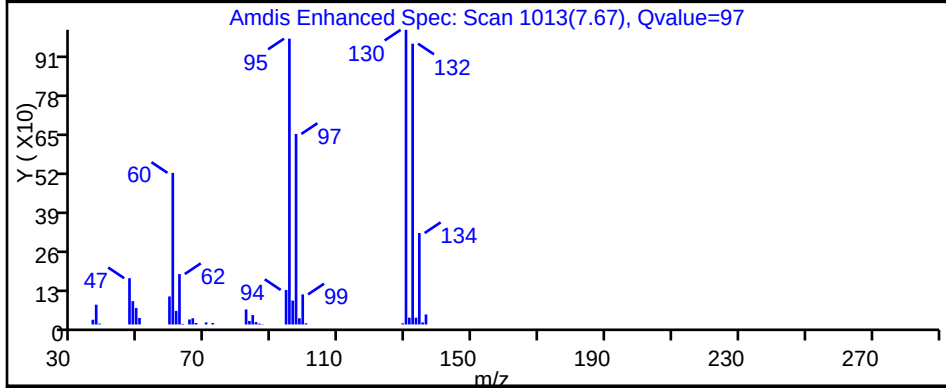
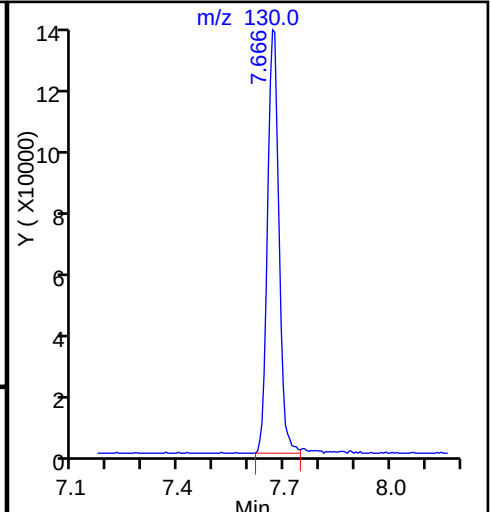
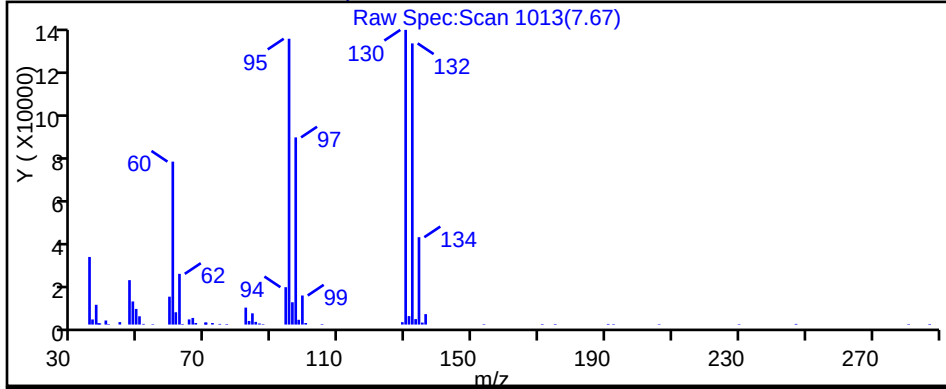
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-MW-95-0/1-0 Lab Sample ID: 180-41613-8

Matrix: Water Lab File ID: 50311016.D

Analysis Method: 8260C Date Collected: 02/27/2015 11:00

Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 17:10

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U *	1.0	0.31
75-00-3	Chloroethane	1.0	U *	1.0	0.21
75-35-4	1,1-Dichloroethene	0.30	J	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	0.29	J	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	6.1		1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	0.46	J	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	4.3		1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U *	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U *	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	4.3		1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-MW-95-0/1-0 Lab Sample ID: 180-41613-8
 Matrix: Water Lab File ID: 50311016.D
 Analysis Method: 8260C Date Collected: 02/27/2015 11:00
 Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 17:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		64-135
2037-26-5	Toluene-d8 (Surr)	106		71-118
460-00-4	4-Bromofluorobenzene (Surr)	108		70-118
1868-53-7	Dibromofluoromethane (Surr)	100		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311016.D
 Lims ID: 180-41613-D-8 Lab Sample ID: 180-41613-8
 Client ID: HD-MW-95-0/1-0
 Sample Type: Client
 Inject. Date: 11-Mar-2015 17:10:30 ALS Bottle#: 16 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-41613-D-8
 Misc. Info.: 180-0005976-016
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 12-Mar-2015 08:08:45 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: fergusond

Date: 12-Mar-2015 08:08:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.308	4.305	0.003	83	100116	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.268	0.009	99	502263	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.364	-0.003	99	114206	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	98	176368	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.528	6.526	0.002	55	107952	50.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.897	0.009	97	149450	56.2	
\$ 7 Toluene-d8 (Surr)	98	8.925	8.923	0.002	100	470106	52.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	97	178557	53.9	
12 Chloromethane	50		1.768				ND	
13 Vinyl chloride	62		1.902				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.371				ND	
22 1,1-Dichloroethene	96	3.389	3.368	0.021	46	4321	1.48	
24 Acetone	43	3.505	3.496	0.009	26	3687	3.50	
26 Carbon disulfide	76		3.648				ND	
31 Methylene Chloride	84		4.135				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.555				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63	5.184	5.163	0.021	70	8553	1.47	
45 cis-1,2-Dichloroethene	96	5.938	5.930	0.008	75	99047	30.3	
46 2-Butanone (MEK)	43		5.990				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97	6.528	6.532	-0.004	55	7183	2.28	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.672	7.663	0.009	95	64839	21.7	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.059				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.215				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.540	9.531	0.009	95	46248	21.3	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311016.D

Injection Date: 11-Mar-2015 17:10:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-D-8

Lab Sample ID: 180-41613-8

Worklist Smp#: 16

Client ID: HD-MW-95-0/1-0

Purge Vol: 5.000 mL

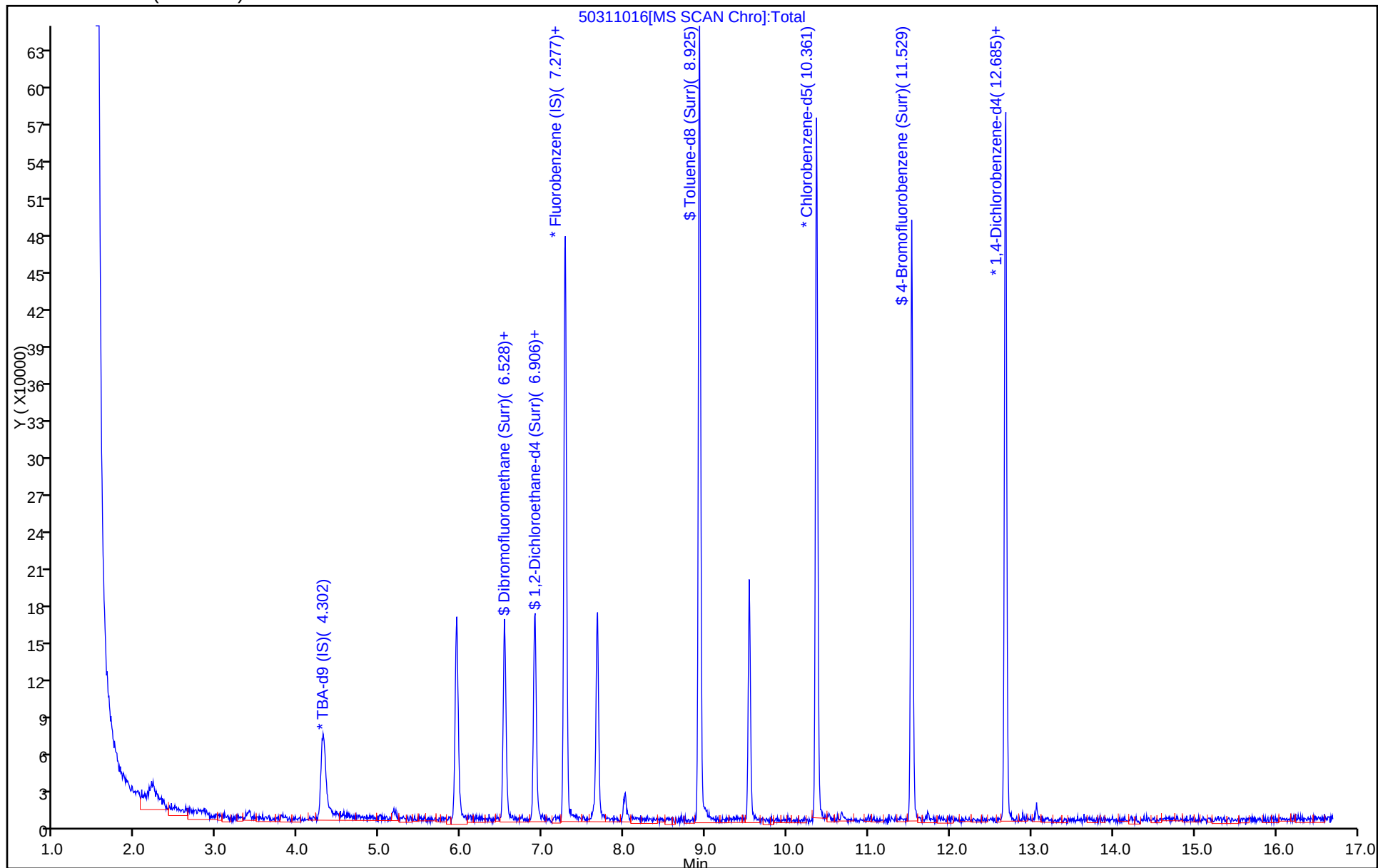
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311016.D

Injection Date: 11-Mar-2015 17:10:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-8

Lab Sample ID: 180-41613-8

Client ID: HD-MW-95-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

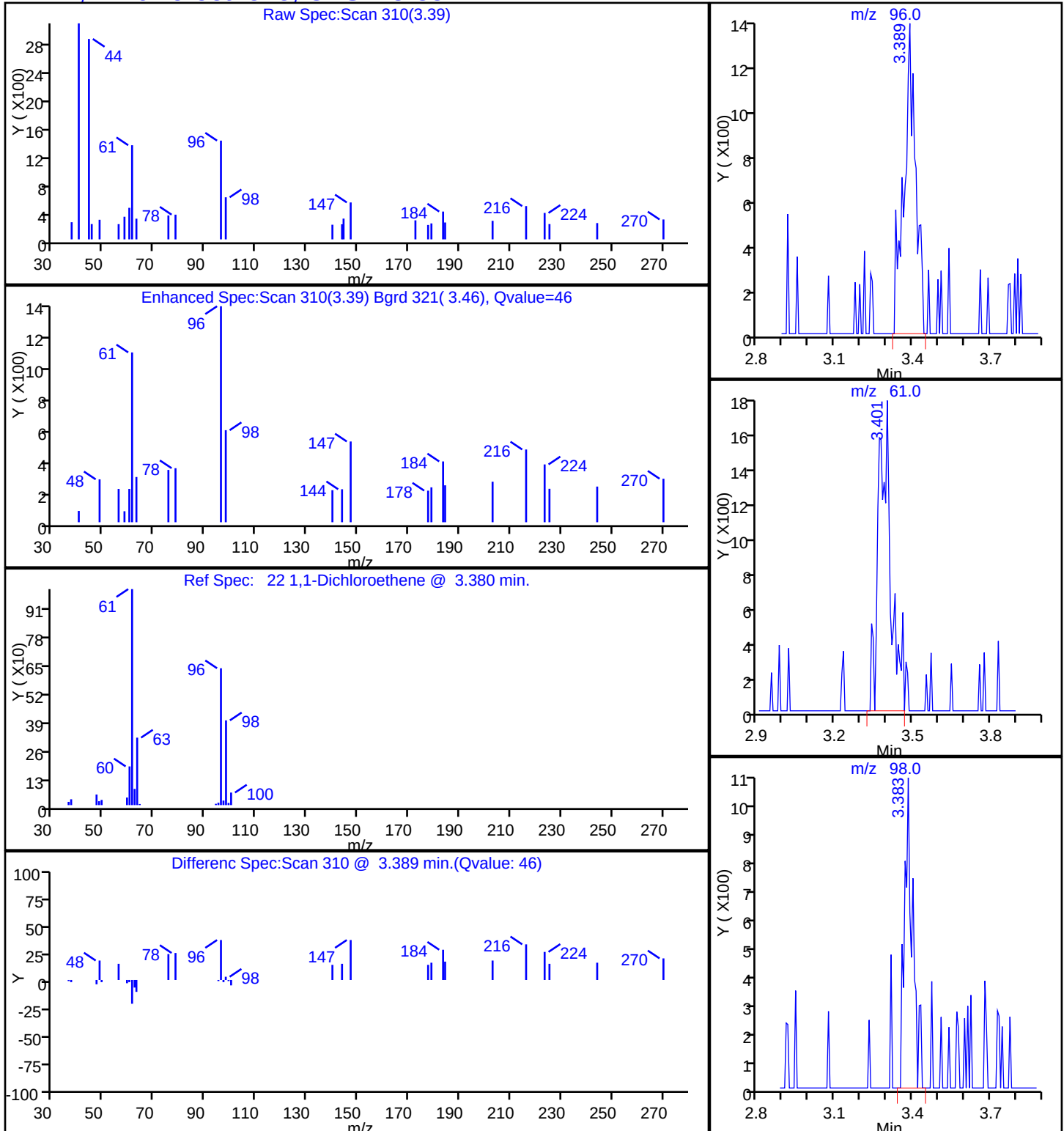
Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311016.D

Injection Date: 11-Mar-2015 17:10:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-8

Lab Sample ID: 180-41613-8

Client ID: HD-MW-95-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

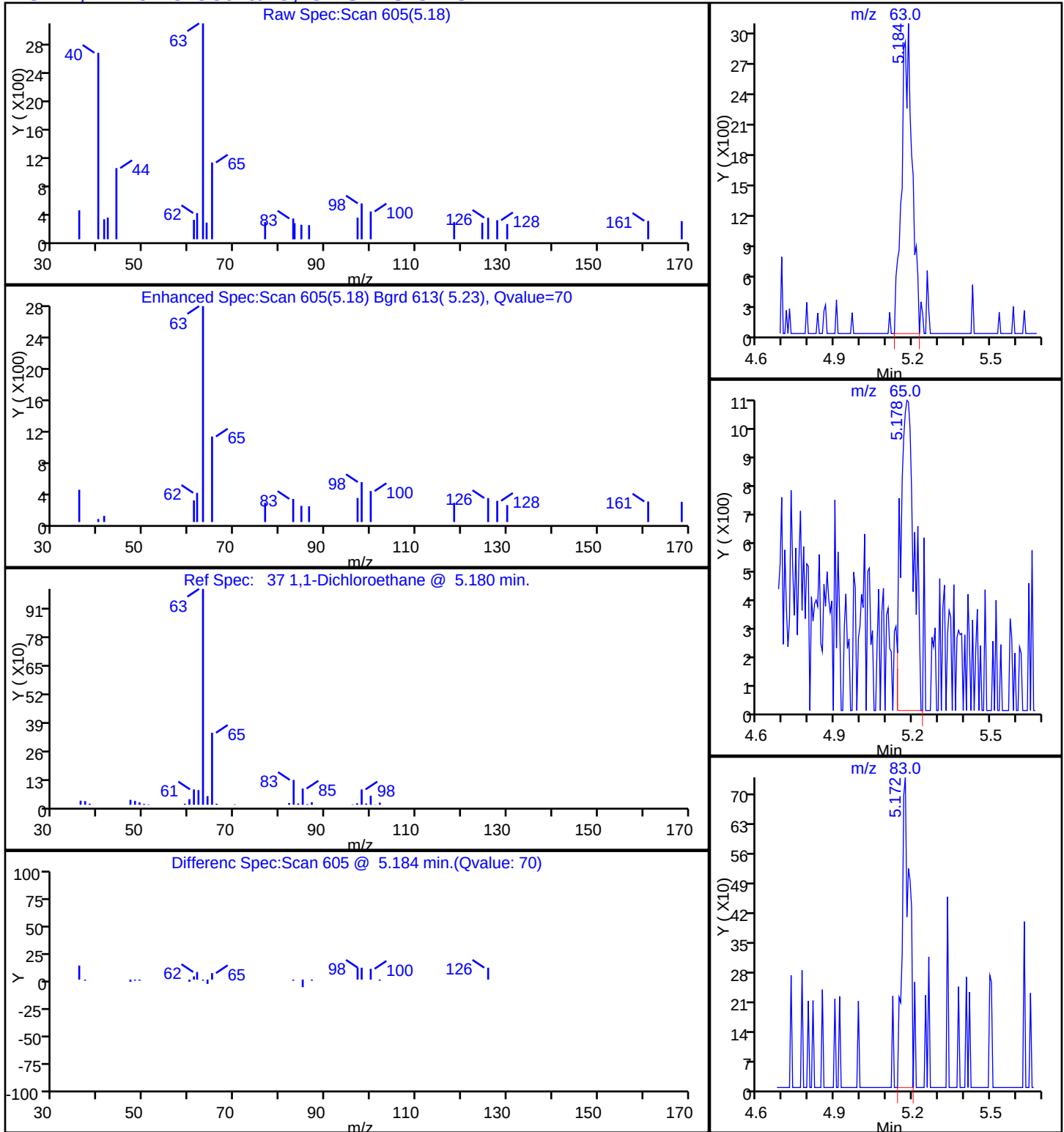
Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311016.D

Injection Date: 11-Mar-2015 17:10:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-8

Lab Sample ID: 180-41613-8

Client ID: HD-MW-95-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

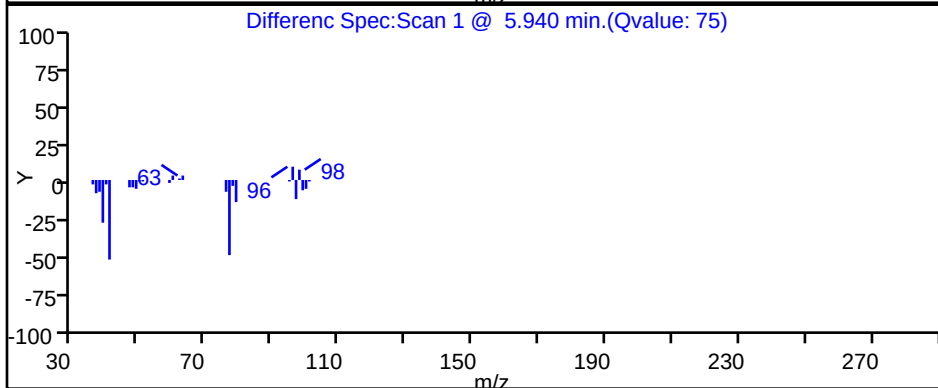
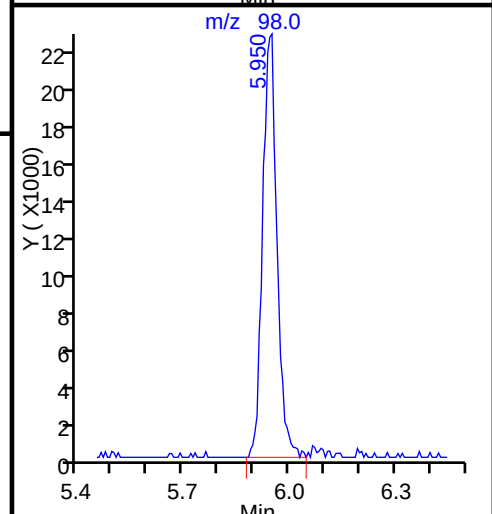
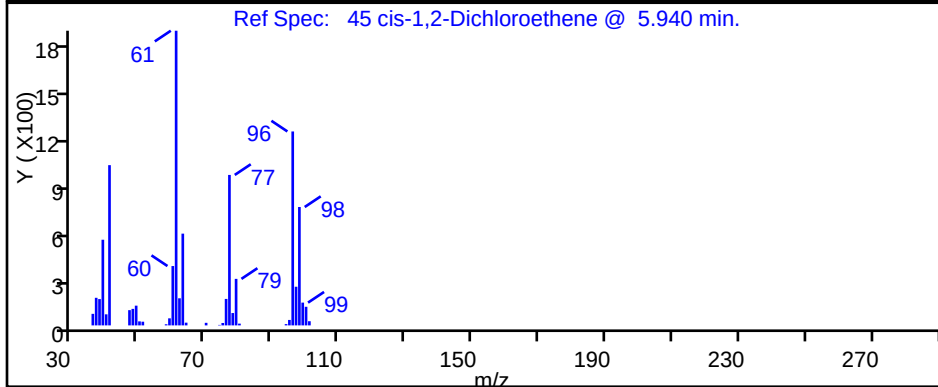
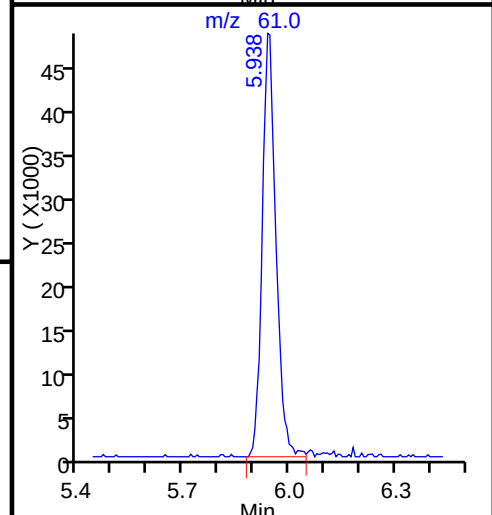
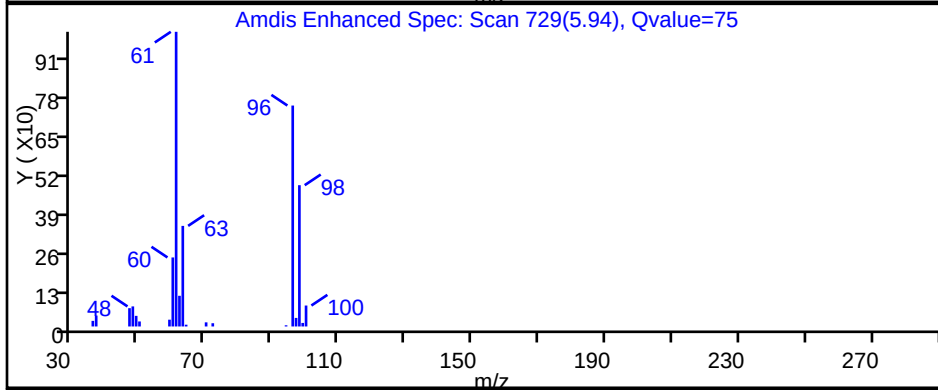
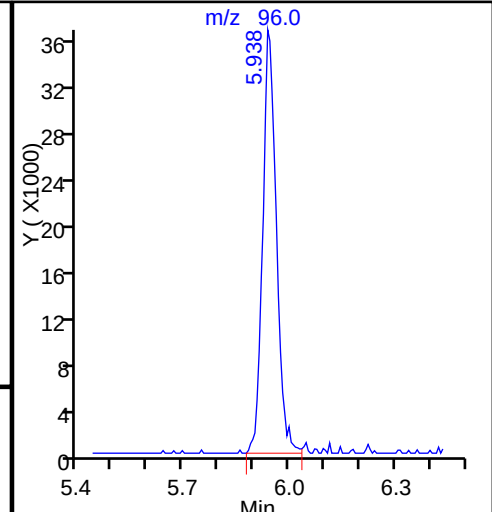
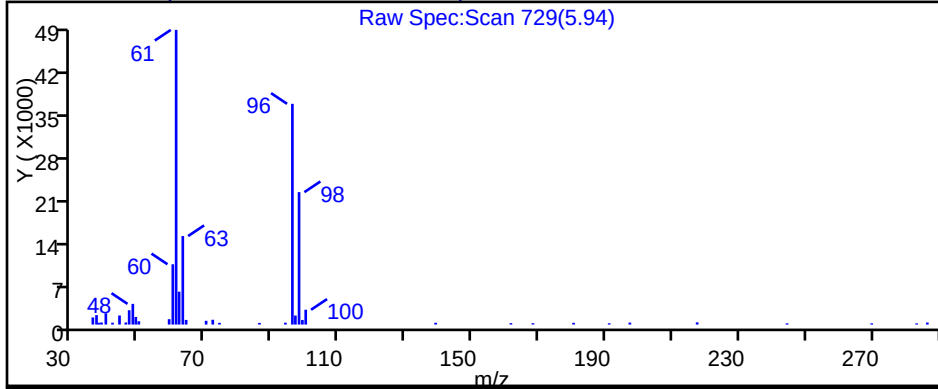
Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311016.D

Injection Date: 11-Mar-2015 17:10:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-8

Lab Sample ID: 180-41613-8

Client ID: HD-MW-95-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

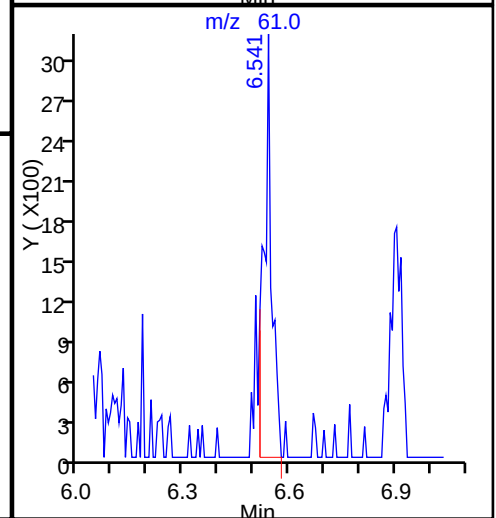
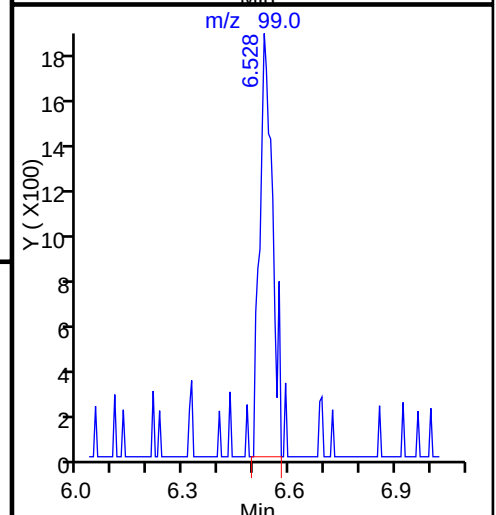
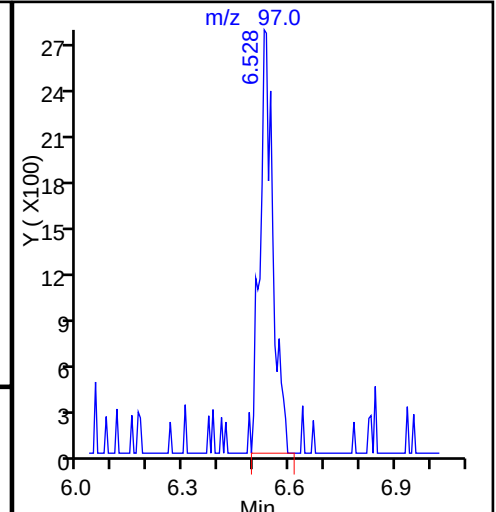
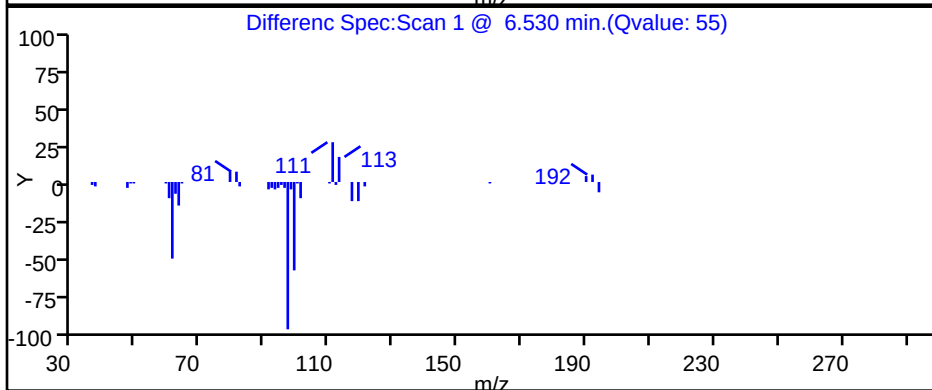
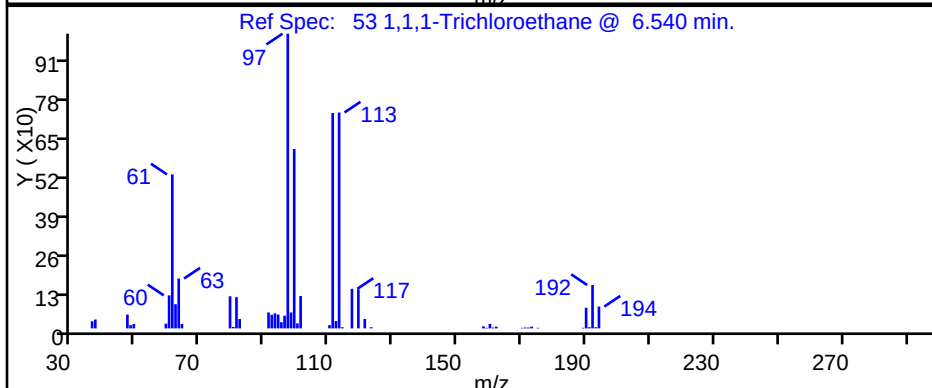
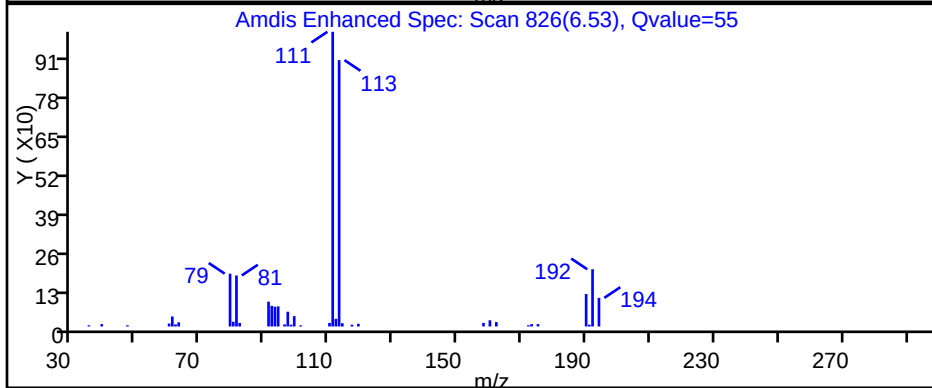
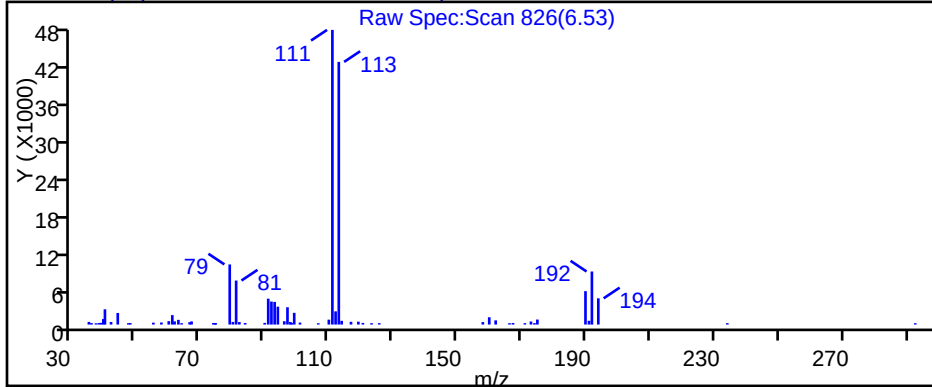
Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

53 1,1,1-Trichloroethane, CAS: 71-55-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\503111016.D

Injection Date: 11-Mar-2015 17:10:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-8

Lab Sample ID: 180-41613-8

Client ID: HD-MW-95-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

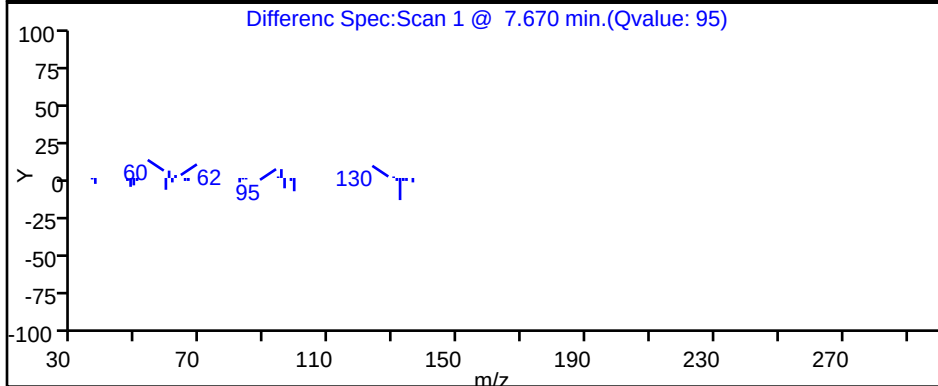
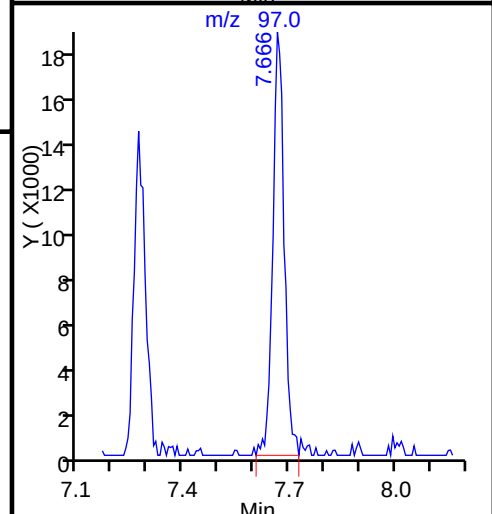
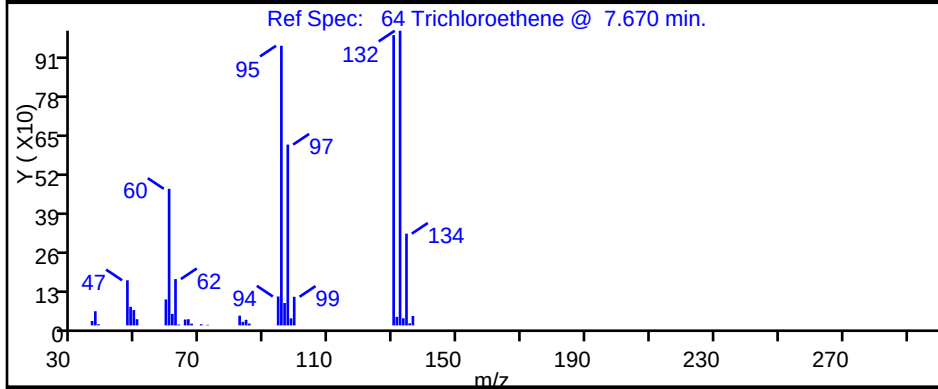
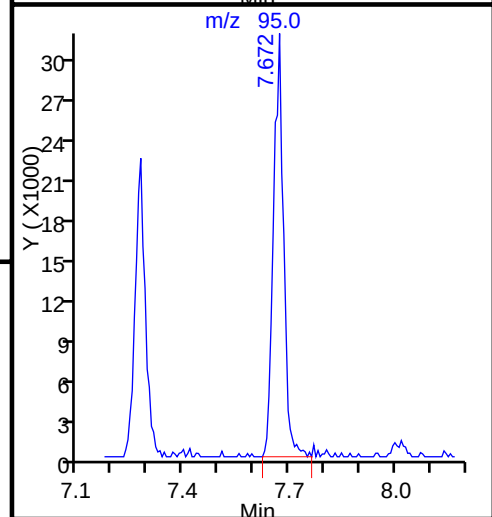
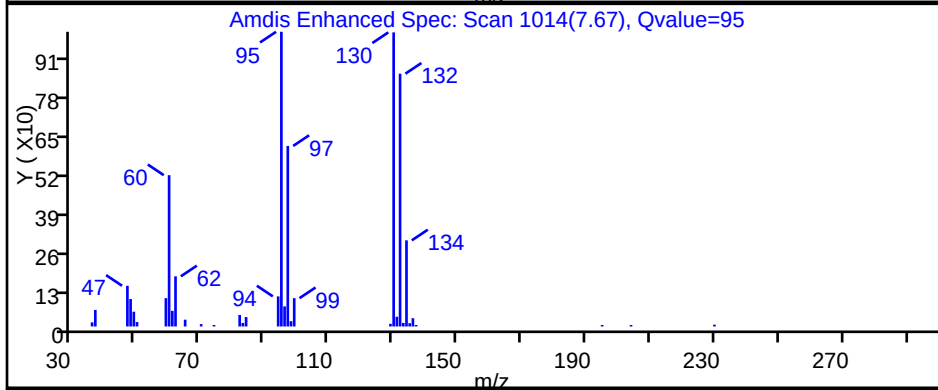
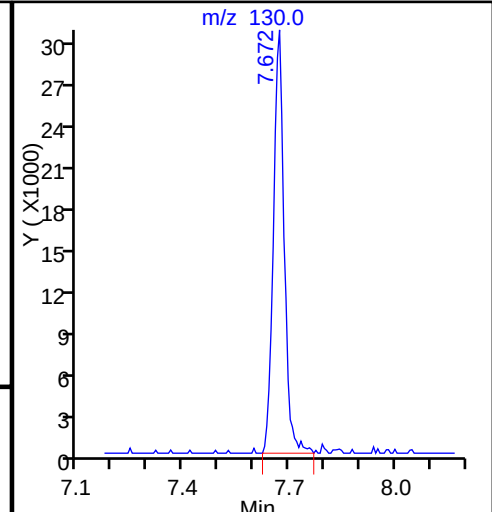
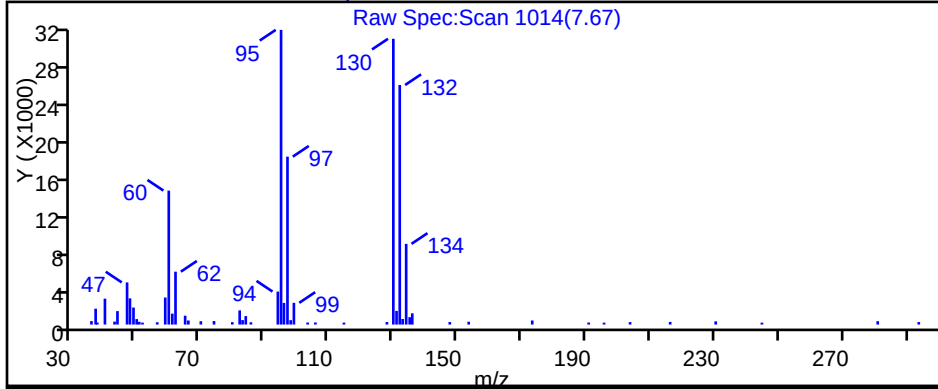
Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311016.D

Injection Date: 11-Mar-2015 17:10:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-8

Lab Sample ID: 180-41613-8

Client ID: HD-MW-95-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

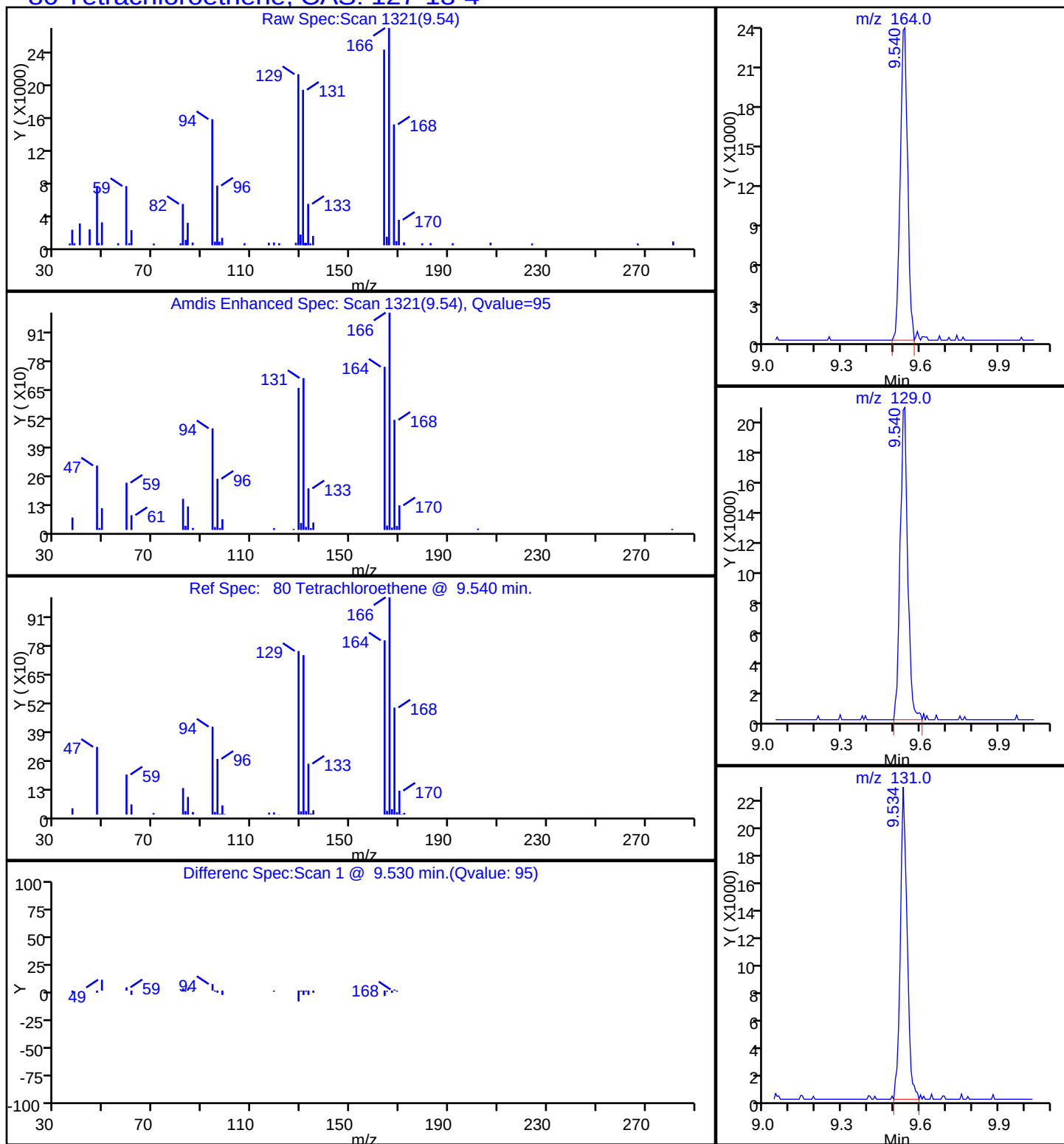
Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: HD-MW-97-0/1-0 Lab Sample ID: 180-41613-9

Matrix: Water Lab File ID: 50311017.D

Analysis Method: 8260C Date Collected: 02/27/2015 10:45

Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 17:35

Soil Aliquot Vol: _____ Dilution Factor: 25

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	25	U	25	7.1
75-01-4	Vinyl chloride	8.2	J	25	5.7
74-83-9	Bromomethane	25	U *	25	7.8
75-00-3	Chloroethane	25	U *	25	5.4
75-35-4	1,1-Dichloroethene	9.2	J	25	7.4
67-64-1	Acetone	130	U	130	63
75-15-0	Carbon disulfide	25	U	25	5.3
75-09-2	Methylene Chloride	25	U	25	3.1
156-60-5	trans-1,2-Dichloroethene	25	U	25	4.2
1634-04-4	Methyl tert-butyl ether	25	U	25	4.6
75-34-3	1,1-Dichloroethane	5.2	J	25	2.9
156-59-2	cis-1,2-Dichloroethene	470		25	5.9
74-97-5	Bromochloromethane	25	U	25	4.5
78-93-3	2-Butanone (MEK)	130	U	130	14
67-66-3	Chloroform	25	U	25	4.3
71-55-6	1,1,1-Trichloroethane	8.8	J	25	7.2
56-23-5	Carbon tetrachloride	25	U	25	3.4
71-43-2	Benzene	25	U	25	2.6
107-06-2	1,2-Dichloroethane	25	U	25	5.3
79-01-6	Trichloroethene	610		25	3.6
78-87-5	1,2-Dichloropropane	25	U	25	2.4
75-27-4	Bromodichloromethane	25	U	25	3.3
10061-01-5	cis-1,3-Dichloropropene	25	U *	25	4.7
108-10-1	4-Methyl-2-pentanone (MIBK)	130	U	130	13
108-88-3	Toluene	25	U	25	3.8
10061-02-6	trans-1,3-Dichloropropene	25	U *	25	3.7
79-00-5	1,1,2-Trichloroethane	25	U	25	5.0
127-18-4	Tetrachloroethene	85		25	3.7
591-78-6	2-Hexanone	130	U	130	4.0
124-48-1	Dibromochloromethane	25	U	25	3.4
106-93-4	1,2-Dibromoethane (EDB)	25	U	25	4.5
108-90-7	Chlorobenzene	25	U	25	3.4
630-20-6	1,1,1,2-Tetrachloroethane	25	U	25	6.9
100-41-4	Ethylbenzene	25	U	25	5.7
1330-20-7	Xylenes, Total	75	U	75	12
100-42-5	Styrene	25	U	25	2.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: HD-MW-97-0/1-0 Lab Sample ID: 180-41613-9
 Matrix: Water Lab File ID: 50311017.D
 Analysis Method: 8260C Date Collected: 02/27/2015 10:45
 Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 17:35
 Soil Aliquot Vol: _____ Dilution Factor: 25
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	25	U	25	4.8
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	5.0
107-13-1	Acrylonitrile	500	U	500	14
123-91-1	1,4-Dioxane	5000	U	5000	860

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		64-135
2037-26-5	Toluene-d8 (Surr)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	107		70-118
1868-53-7	Dibromofluoromethane (Surr)	102		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311017.D
 Lims ID: 180-41613-D-9 Lab Sample ID: 180-41613-9
 Client ID: HD-MW-97-0/1-0
 Sample Type: Client
 Inject. Date: 11-Mar-2015 17:35:30 ALS Bottle#: 17 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 25.0000
 Sample Info: 180-41613-D-9, 25x
 Misc. Info.: 180-0005976-017
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 12-Mar-2015 08:10:47 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: fergusond

Date: 12-Mar-2015 08:10:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.305	-0.009	79	87998	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.268	0.003	99	469282	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.364	-0.002	99	109591	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.682	0.004	98	167552	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.523	6.526	-0.003	53	102863	51.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	97	139504	56.2	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	100	441588	51.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	97	170766	53.7	
12 Chloromethane	50		1.768				ND	
13 Vinyl chloride	62	1.900	1.902	-0.002	70	5961	1.65	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.371				ND	
22 1,1-Dichloroethene	96	3.402	3.368	0.034	35	5038	1.84	
24 Acetone	43		3.496				ND	
26 Carbon disulfide	76		3.648				ND	
31 Methylene Chloride	84		4.135				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.555				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63	5.191	5.163	0.028	38	5633	1.03	
45 cis-1,2-Dichloroethene	96	5.939	5.930	0.009	75	287469	94.1	
46 2-Butanone (MEK)	43		5.990				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97	6.529	6.532	-0.003	39	5160	1.75	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.667	7.663	0.004	96	342794	122.8	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.059				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.215				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.528	9.531	-0.003	96	35431	17.0	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311017.D

Injection Date: 11-Mar-2015 17:35:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-41613-D-9

Lab Sample ID: 180-41613-9

Worklist Smp#: 17

Client ID: HD-MW-97-0/1-0

Purge Vol: 5.000 mL

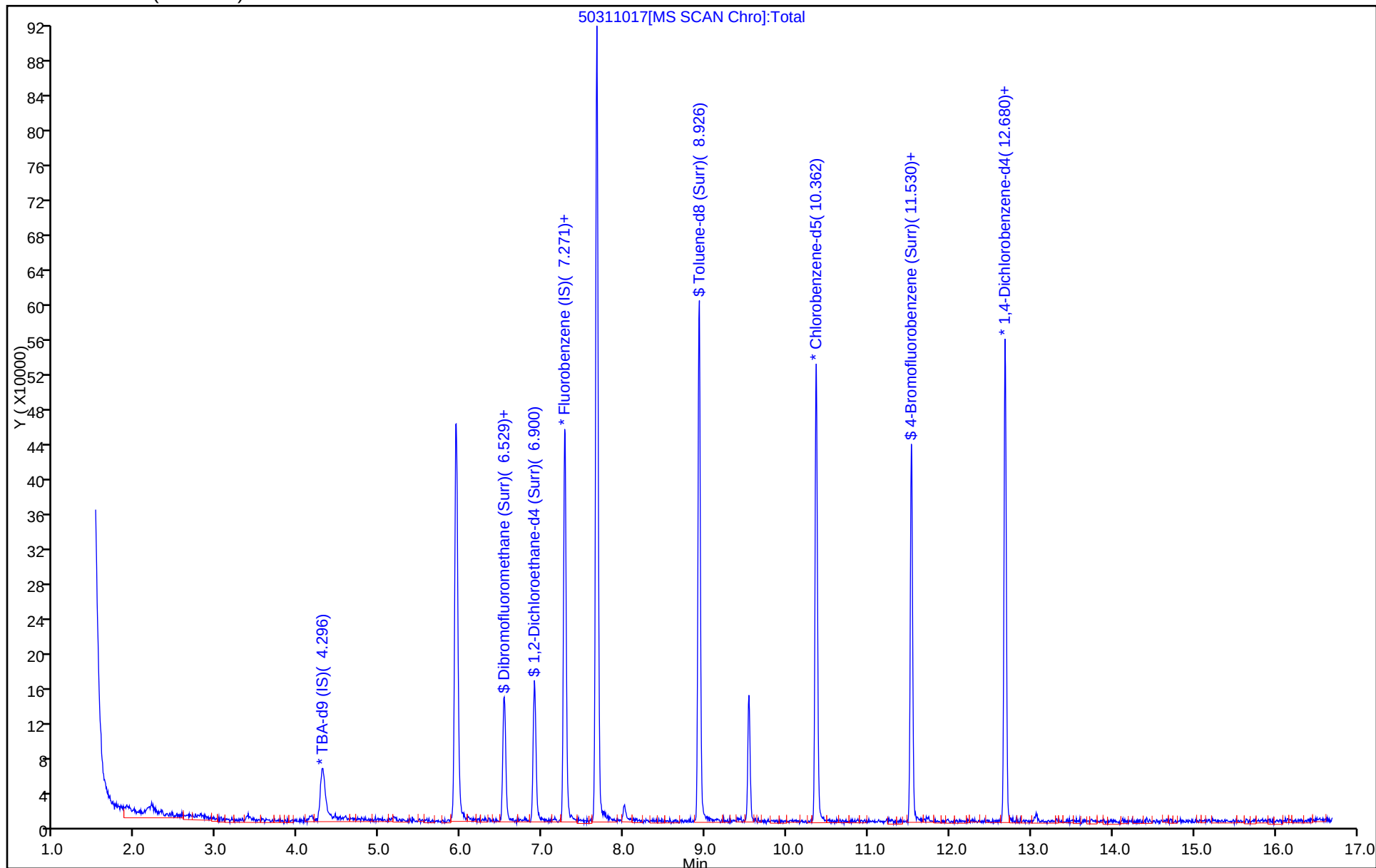
Dil. Factor: 25.0000

ALS Bottle#: 17

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311017.D

Injection Date: 11-Mar-2015 17:35:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-9

Lab Sample ID: 180-41613-9

Client ID: HD-MW-97-0/1-0

Operator ID: 001562

ALS Bottle#: 17

Worklist Smp#: 17

Purge Vol: 5.000 mL

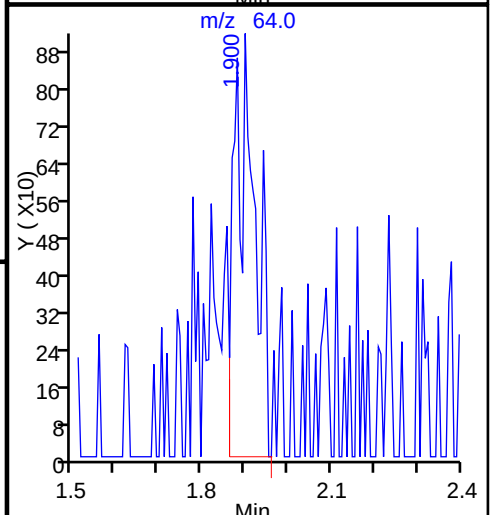
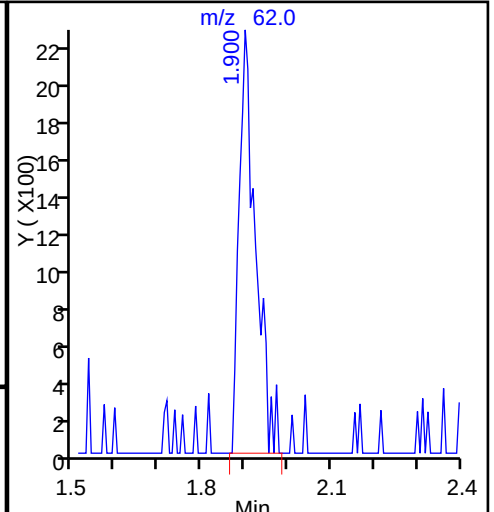
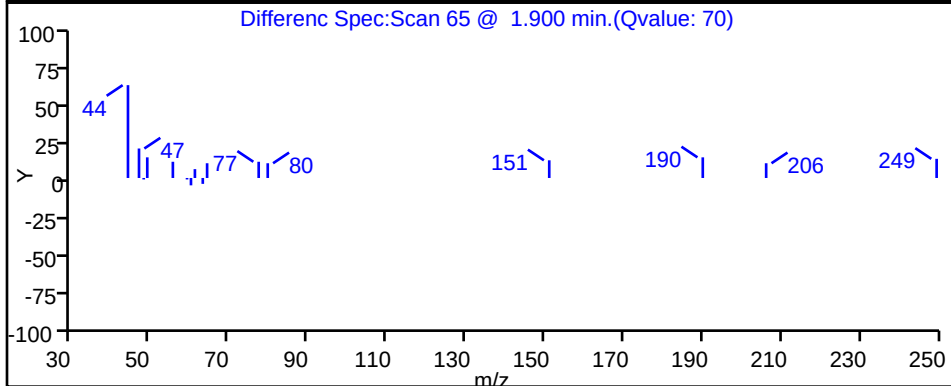
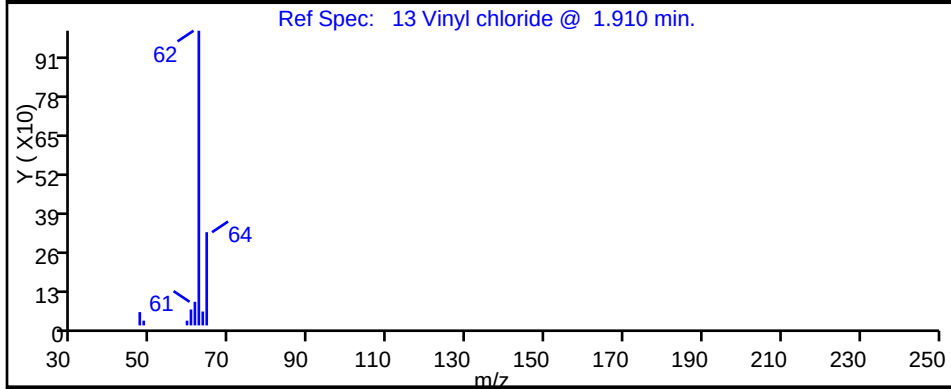
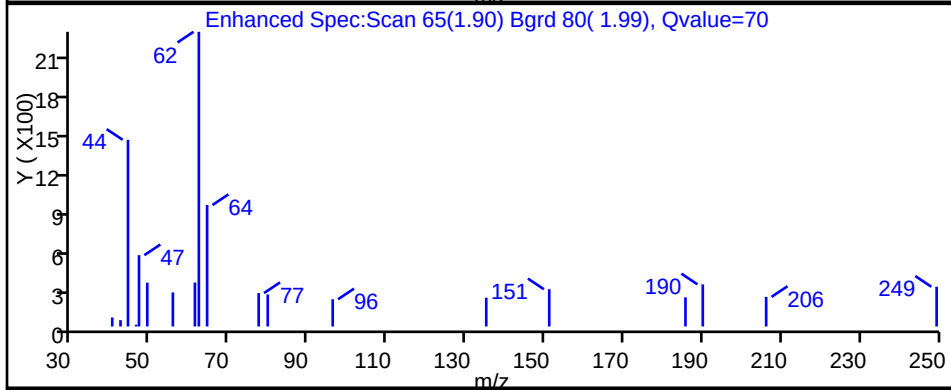
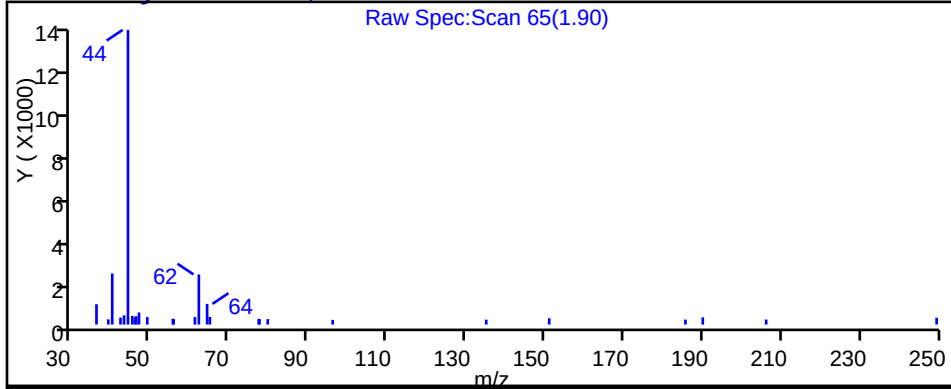
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

13 Vinyl chloride, CAS: 75-01-4

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311017.D

Injection Date: 11-Mar-2015 17:35:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-9

Lab Sample ID: 180-41613-9

Client ID: HD-MW-97-0/1-0

Operator ID: 001562

ALS Bottle#: 17

Worklist Smp#: 17

Purge Vol: 5.000 mL

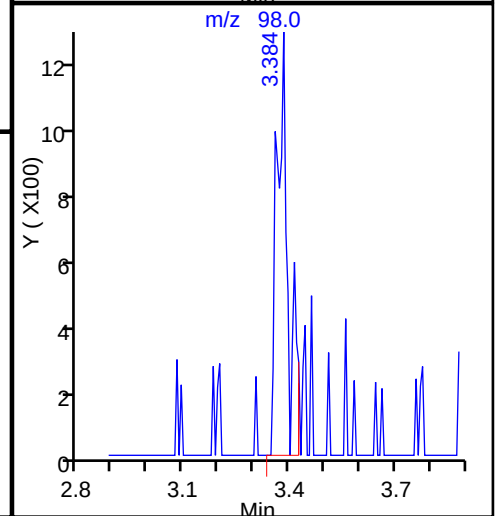
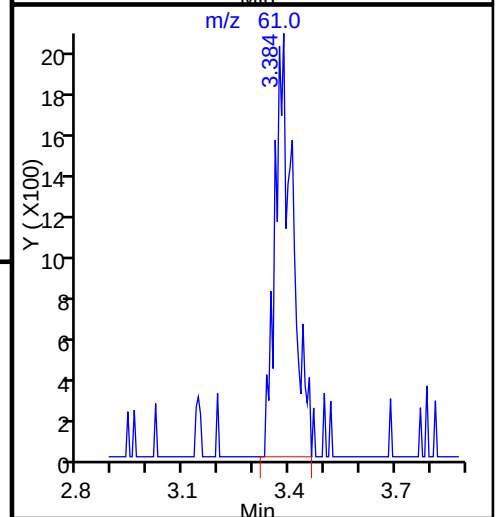
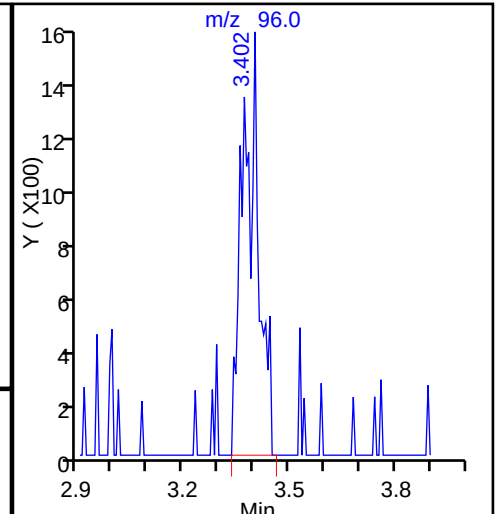
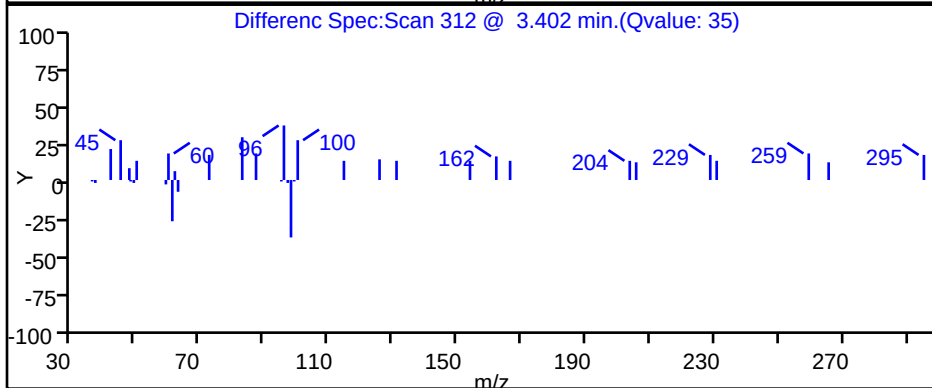
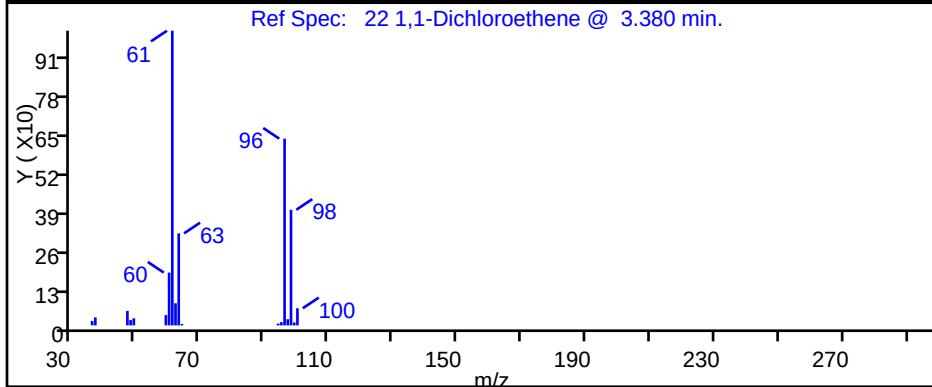
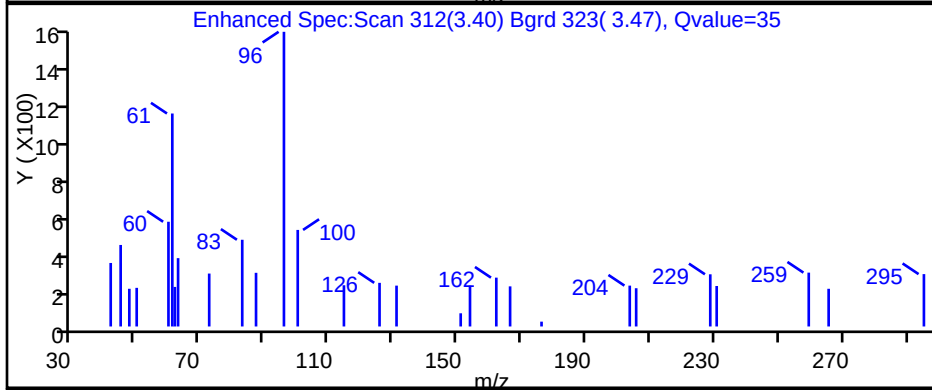
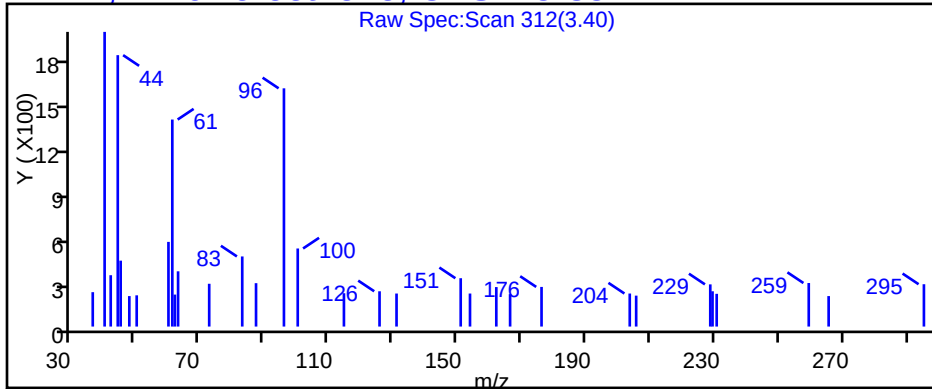
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311017.D

Injection Date: 11-Mar-2015 17:35:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-9

Lab Sample ID: 180-41613-9

Client ID: HD-MW-97-0/1-0

Operator ID: 001562

ALS Bottle#: 17

Worklist Smp#: 17

Purge Vol: 5.000 mL

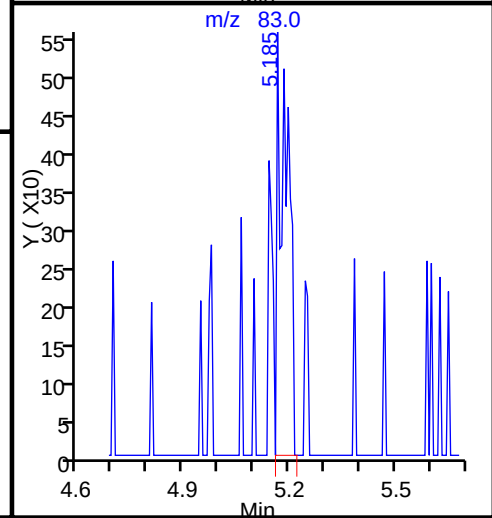
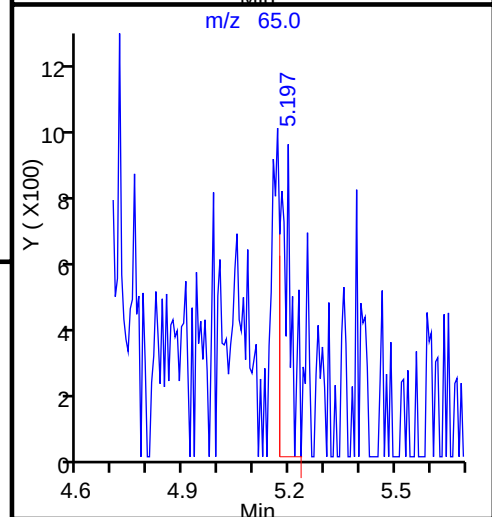
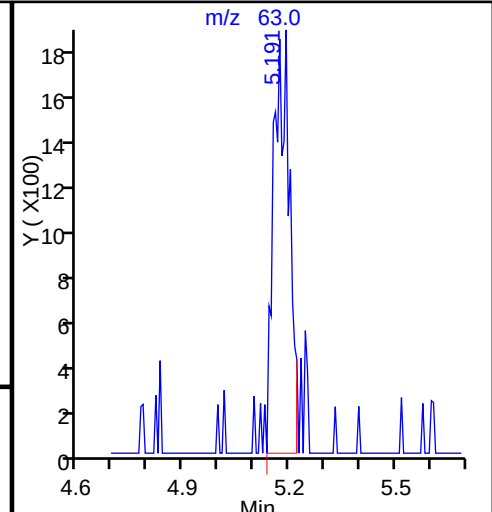
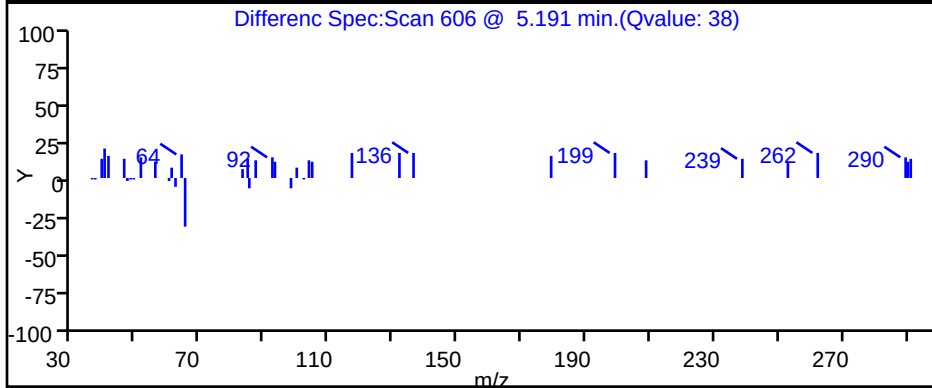
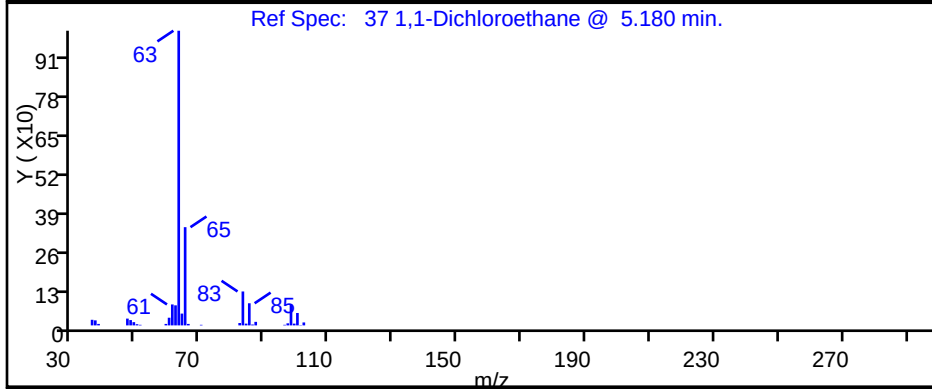
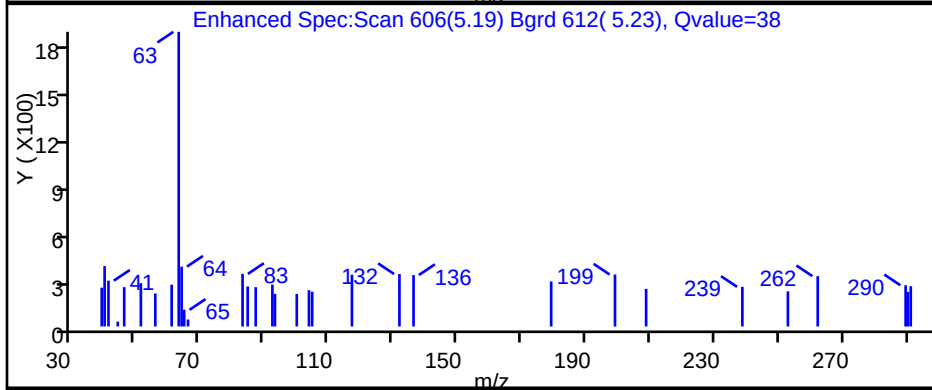
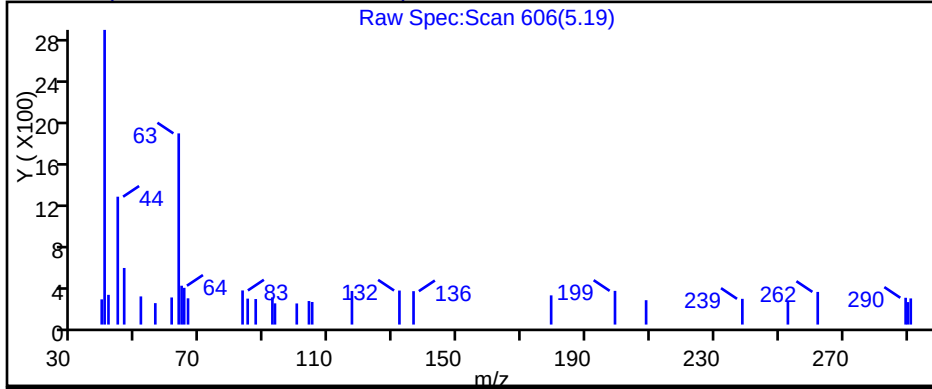
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311017.D

Injection Date: 11-Mar-2015 17:35:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-9

Lab Sample ID: 180-41613-9

Client ID: HD-MW-97-0/1-0

Operator ID: 001562

ALS Bottle#: 17

Worklist Smp#: 17

Purge Vol: 5.000 mL

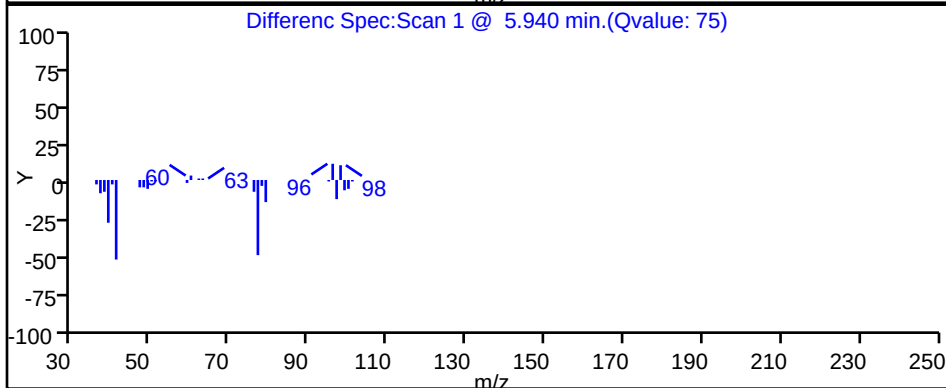
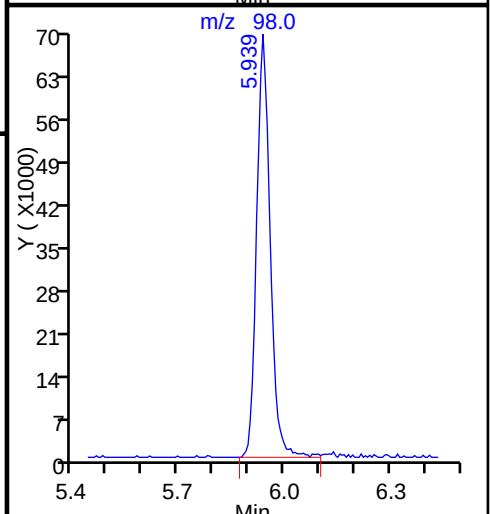
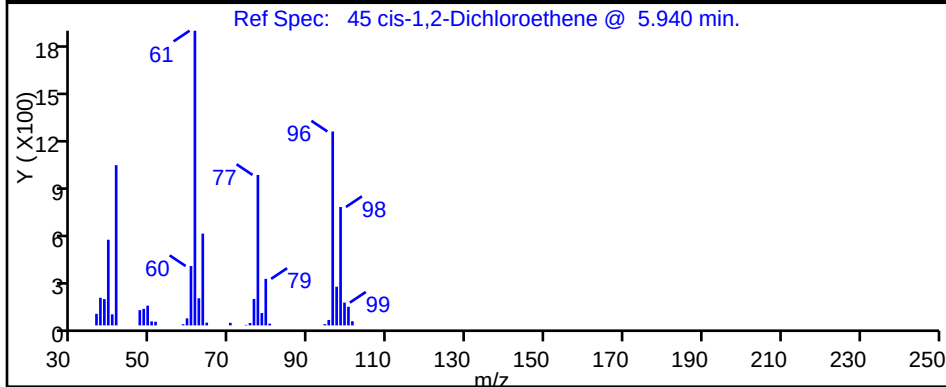
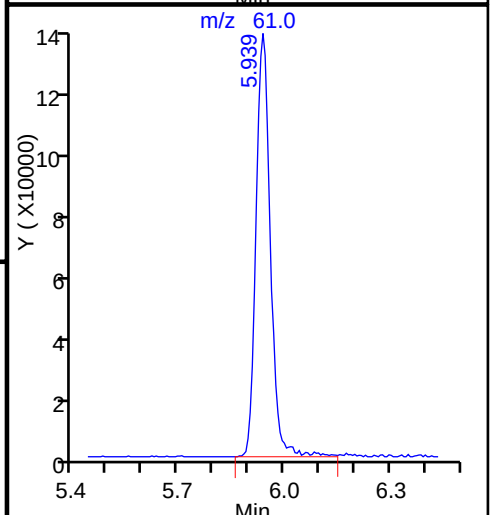
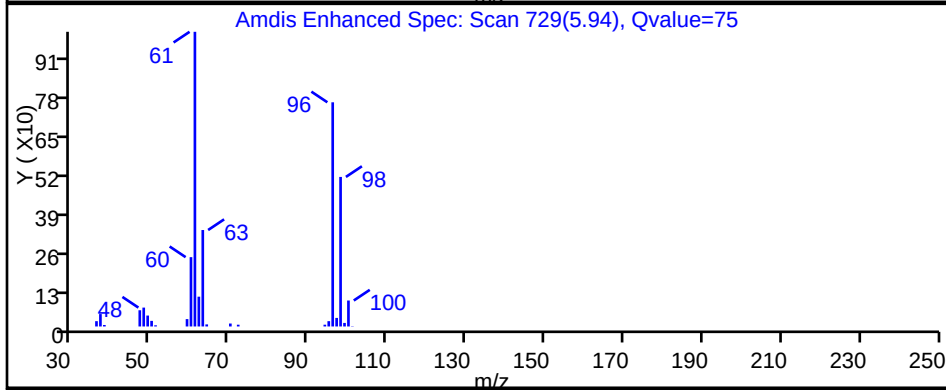
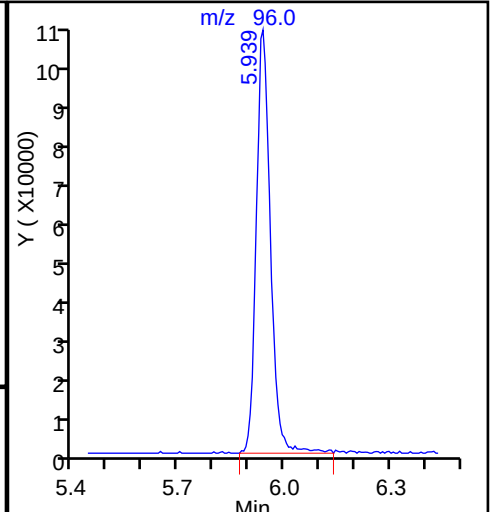
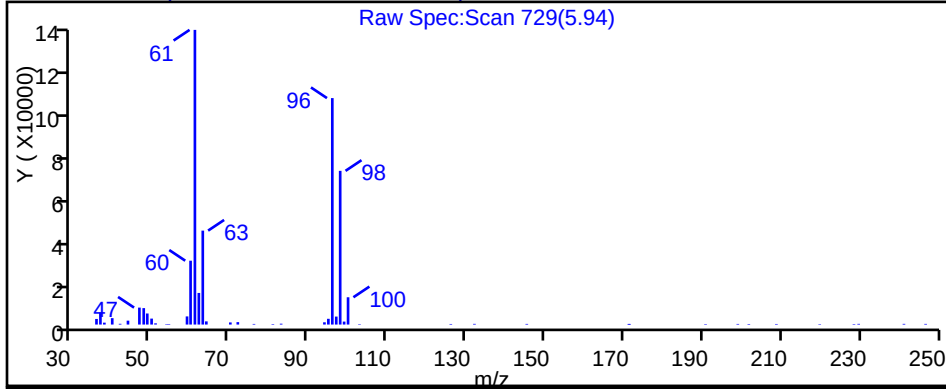
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311017.D

Injection Date: 11-Mar-2015 17:35:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-9

Lab Sample ID: 180-41613-9

Client ID: HD-MW-97-0/1-0

Operator ID: 001562

ALS Bottle#: 17

Worklist Smp#: 17

Purge Vol: 5.000 mL

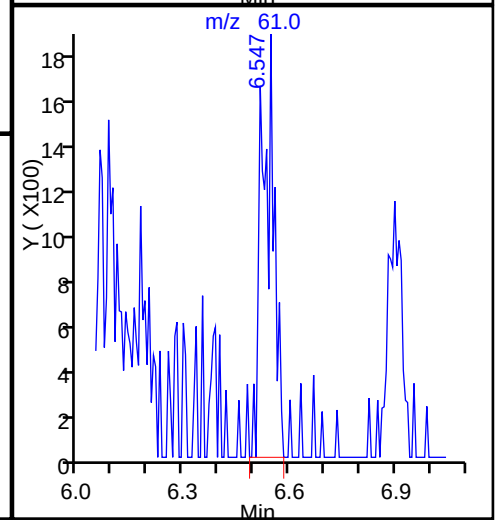
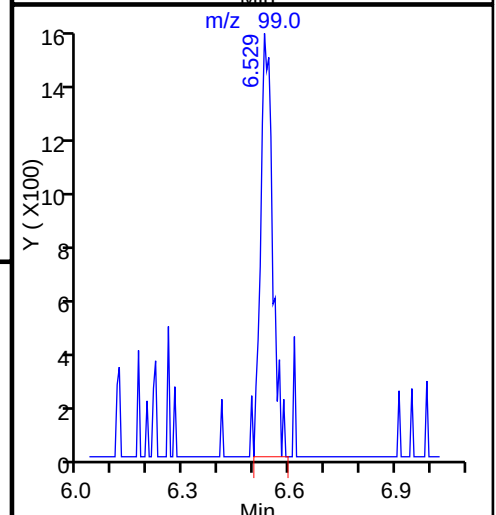
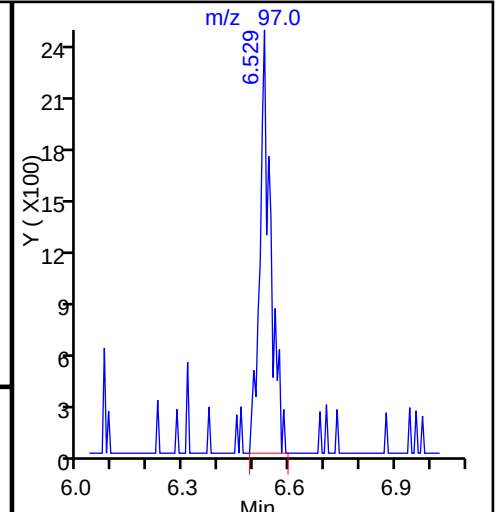
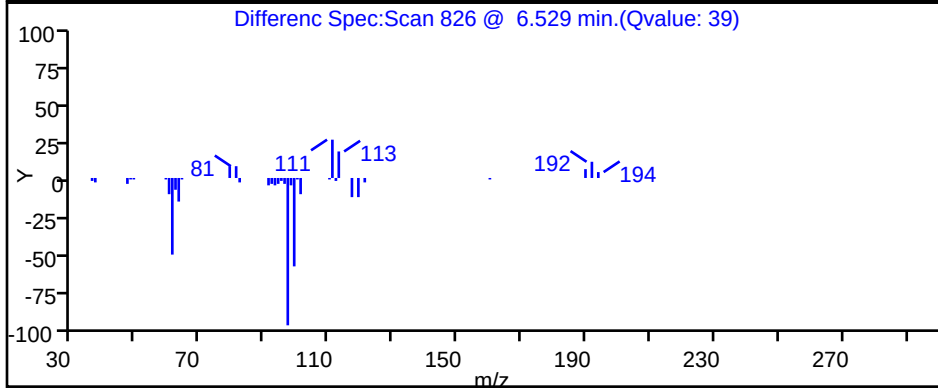
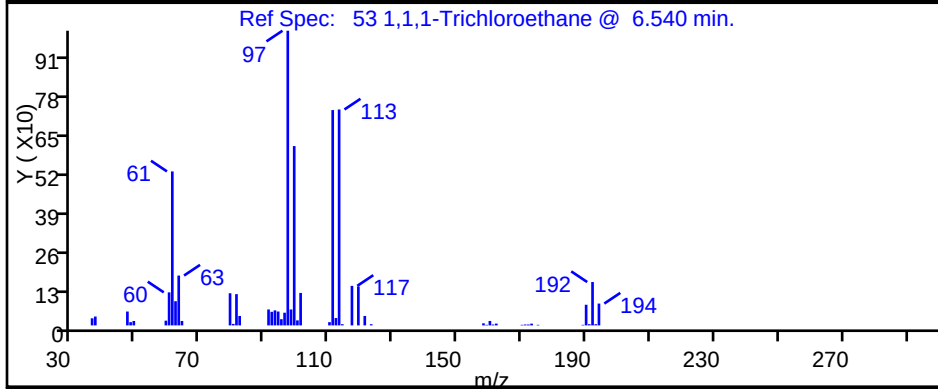
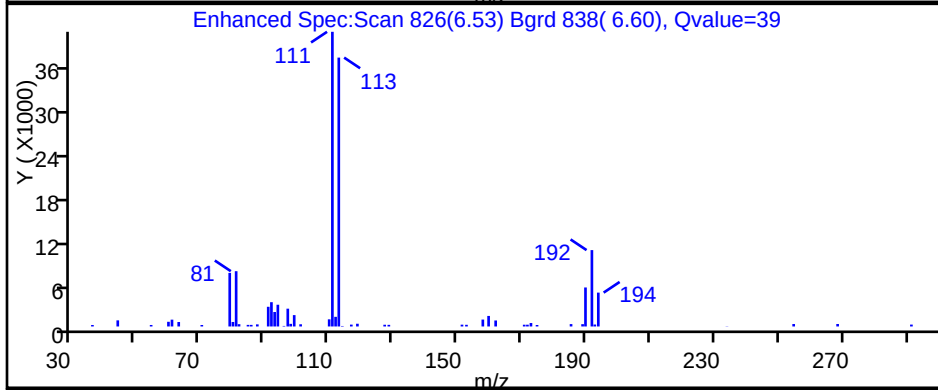
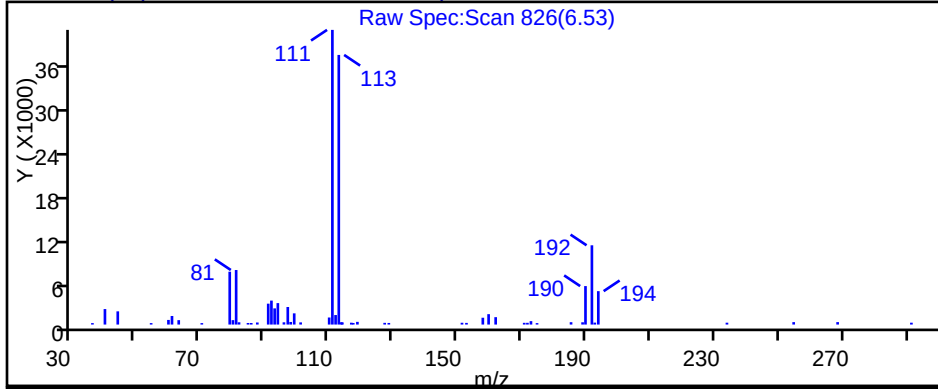
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

53 1,1,1-Trichloroethane, CAS: 71-55-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311017.D

Injection Date: 11-Mar-2015 17:35:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-9

Lab Sample ID: 180-41613-9

Client ID: HD-MW-97-0/1-0

Operator ID: 001562

ALS Bottle#: 17

Worklist Smp#: 17

Purge Vol: 5.000 mL

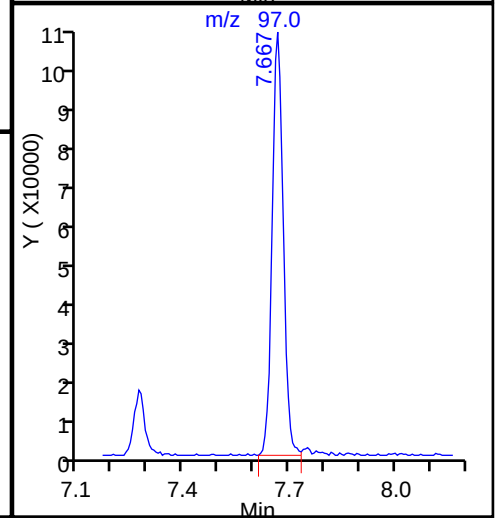
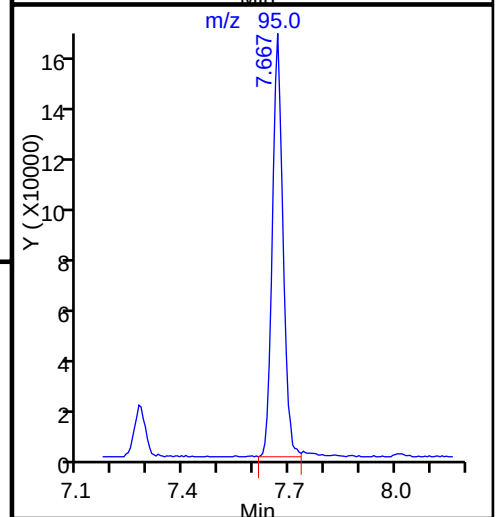
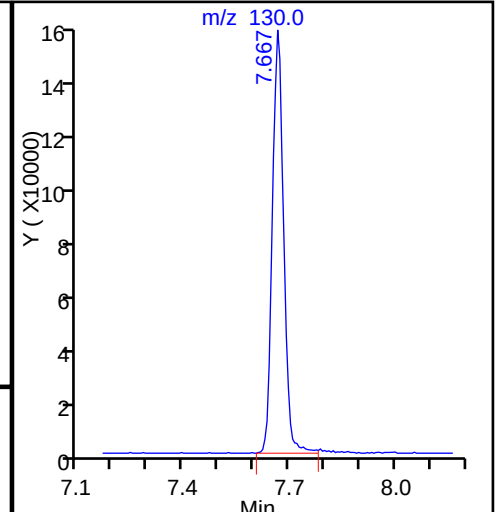
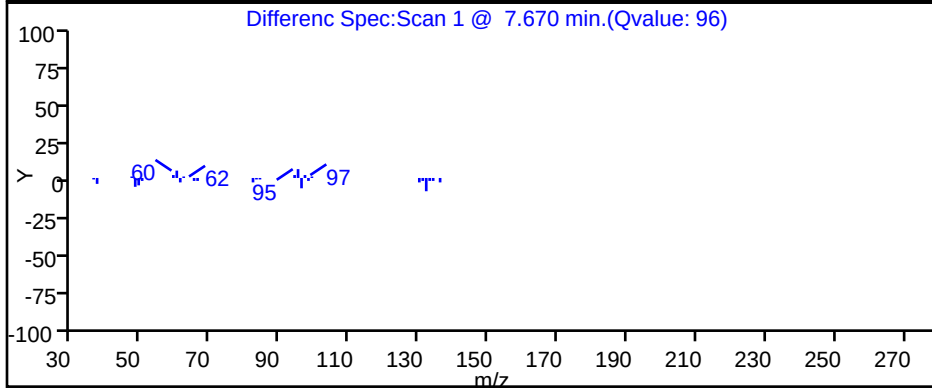
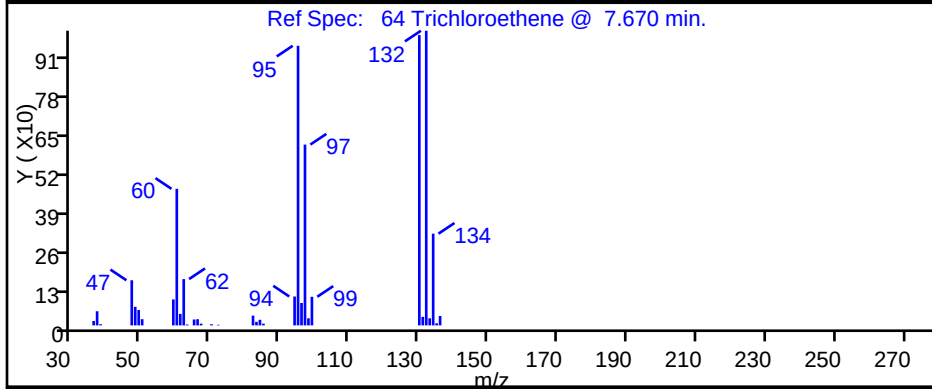
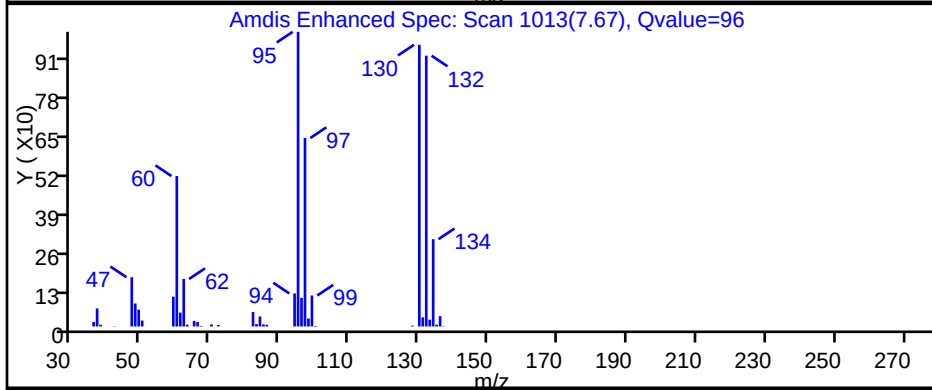
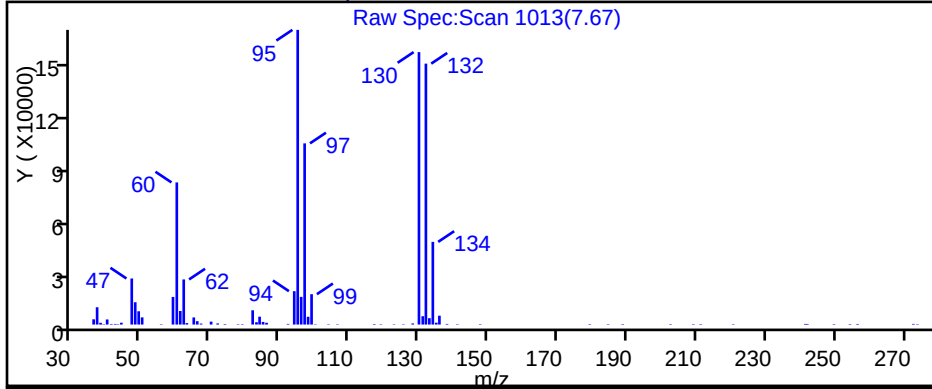
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311017.D

Injection Date: 11-Mar-2015 17:35:30

Instrument ID: CHHP5

Lims ID: 180-41613-D-9

Lab Sample ID: 180-41613-9

Client ID: HD-MW-97-0/1-0

Operator ID: 001562

ALS Bottle#: 17

Worklist Smp#: 17

Purge Vol: 5.000 mL

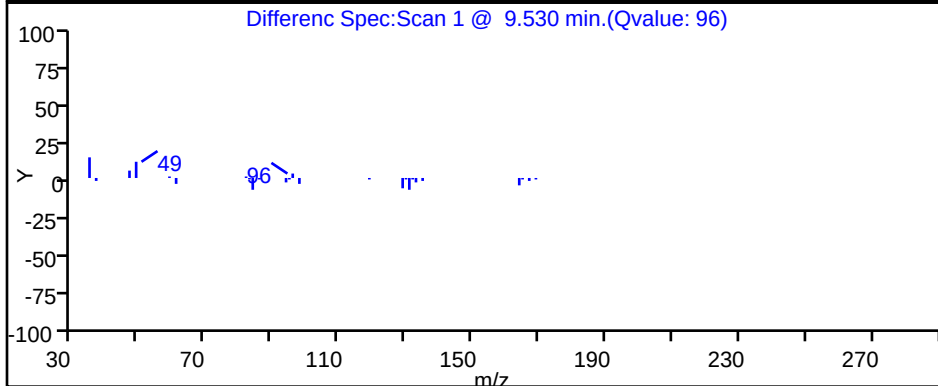
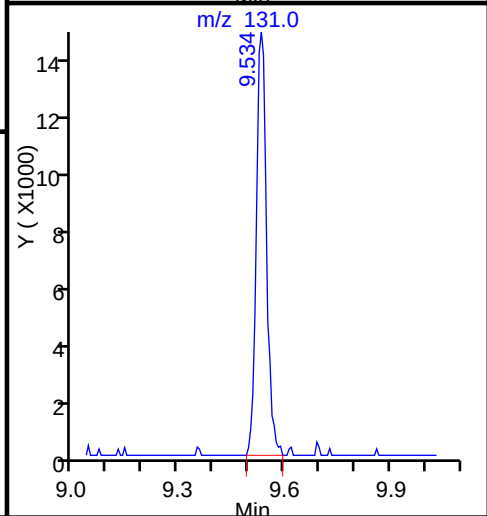
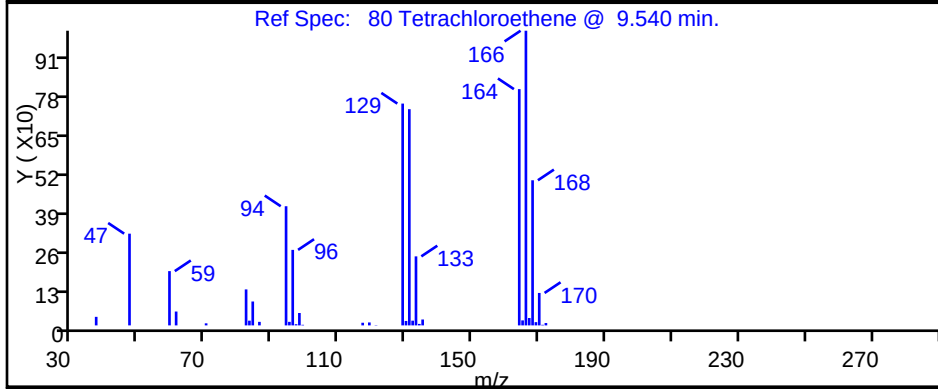
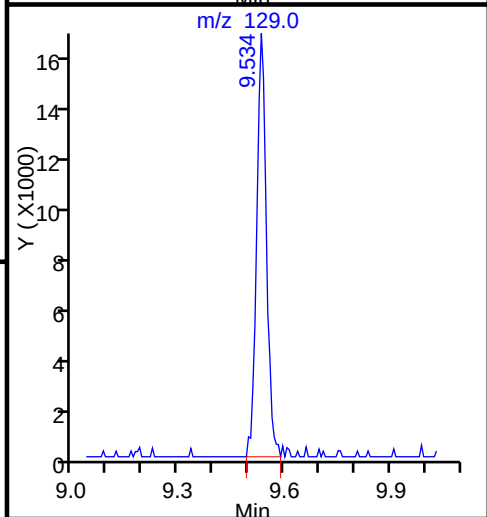
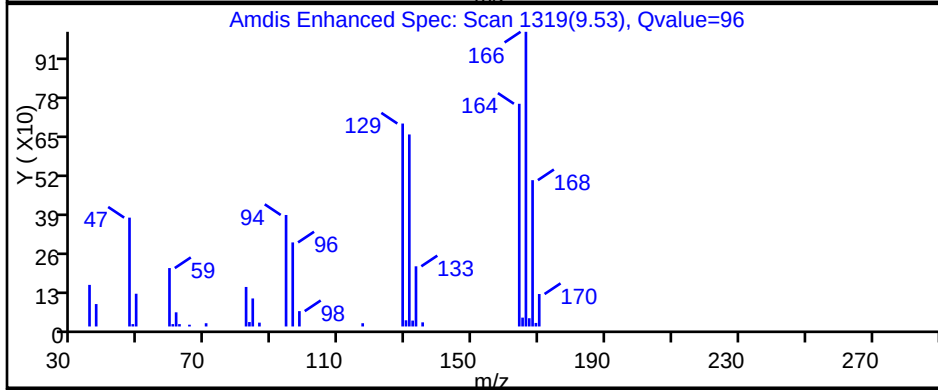
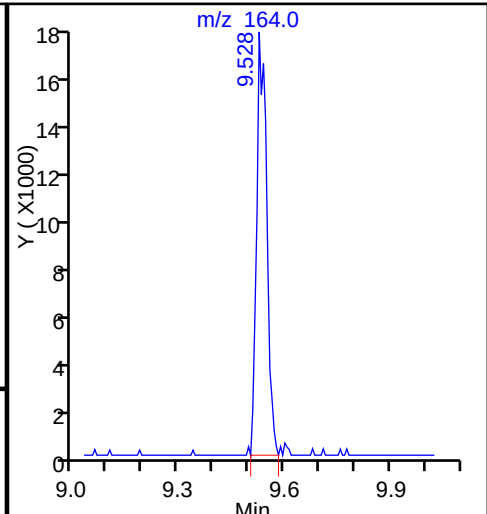
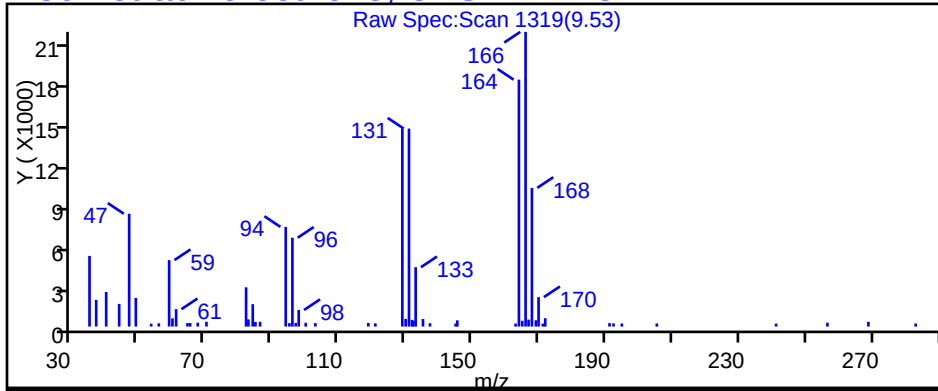
Dil. Factor: 25.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-134613/18	50303018.D
Level 2	IC 180-134613/8	50303008.D
Level 3	ICIS 180-134613/9	50303009.D
Level 4	IC 180-134613/10	50303010.D
Level 5	IC 180-134613/11	50303011.D
Level 6	IC 180-134613/12	50303012.D
Level 7	IC 180-134613/13	50303013.D
Level 8	IC 180-134613/14	50303014.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8														
Dichlorodifluoromethane	0.2690 0.2315	0.2475 0.2504	0.2293 0.2519	0.2623	0.2680	Ave		0.2512			0.1000	6.0		20.0			
Chloromethane	0.4680 0.3696	0.3882 0.4086	0.3655 0.4050	0.4008	0.4067	Ave		0.4015			0.1000	7.9		20.0			
Vinyl chloride	0.4208 0.3539	0.3727 0.3911	0.3674 0.3929	0.3892	0.3994	Ave		0.3859			0.1000	5.4		20.0			
1,3-Butadiene	0.5877 0.3874	0.4356 0.4336	0.4089 0.4363	0.4396	0.4507	Ave		0.4475			0.0100	13.0		20.0			
Bromomethane	0.2102 0.0967	0.1328 0.1105	0.1305 0.0997	0.1176	0.1084	Lin2	0.5322	0.1060			0.0500				0.9930		0.9900
Chloroethane	0.2042 0.1423	0.1531 0.1639	0.1454 0.1403	0.1542	0.1526	Ave		0.1570			0.0500	13.0		20.0			
Dichlorofluoromethane	0.4250 0.3125	0.3499 0.3829	0.3794 0.3280	0.3555	0.3456	Ave		0.3598			0.0100	9.8		20.0			
Trichlorofluoromethane	0.3357 0.2560	0.2761 0.3432	0.3149 0.2839	0.2982	0.2961	Ave		0.3005			0.1000	9.9		20.0			
Ethyl ether	0.3462 0.2756	0.2799 0.2862	0.2559 0.3022	0.2863	0.2877	Ave		0.2900			0.0100	9.0		20.0			
Acrolein	0.0381 0.0352	0.0397 0.0387	0.0353 0.0396	0.0401	0.0397	Ave		0.0383			0.0100	5.1		20.0			
1,1-Dichloroethene	0.3310 0.2752	0.2698 0.2934	0.2608 0.2973	0.2971	0.3045	Ave		0.2911			0.1000	7.7		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3119 0.2752	0.2867 0.3077	0.2648 0.2991	0.3034	0.3054	Ave		0.2943			0.1000	5.8		20.0			
Acetone	0.1272 0.0999	0.1070 0.0981	0.0956 0.1093	0.1023	0.1006	Ave		0.1050			0.0500	9.5		20.0			
Iodomethane	0.4701 0.3888	0.3781 0.4191	0.3659 0.4254	0.4071	0.4219	Ave		0.4096			0.0100	8.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	0.7278 0.6896	0.6311 0.7798	0.6350 0.7889	0.7235	0.7569	Ave		0.7166			0.1000	8.5		20.0			
Allyl chloride	0.1767 0.1804	0.1687 0.1929	0.1597 0.2039	0.1828	0.1896	Ave		0.1818			0.0100	7.7		20.0			
Methyl acetate	0.3135 0.2835	0.2688 0.2970	0.2547 0.3078	0.2918	0.2933	Ave		0.2888			0.1000	6.7		20.0			
Methylene Chloride	0.5303 0.3048	0.3340 0.3171	0.3002 0.3296	0.3199	0.3150	Lin2	1.1200	0.3021			0.1000				0.9970		0.9900
tert-Butyl alcohol	1.0728 1.1874	1.1850 1.2108	1.0775 1.3423	1.2805	1.2306	Ave		1.1984			0.0100	7.7		20.0			
Acrylonitrile	0.1522 0.1402	0.1370 0.1445	0.1317 0.1514	0.1426	0.1458	Ave		0.1432			0.0100	4.8		20.0			
trans-1,2-Dichloroethene	0.3284 0.2932	0.2930 0.3077	0.2772 0.3241	0.3005	0.3112	Ave		0.3044			0.1000	5.6		20.0			
Methyl tert-butyl ether	0.8077 0.7491	0.7066 0.7930	0.6816 0.8220	0.7507	0.7733	Ave		0.7605			0.1000	6.4		20.0			
Hexane	0.6242 0.5039	0.5149 0.5384	0.5008 0.5460	0.5396	0.5552	Ave		0.5404			0.0100	7.3		20.0			
1,1-Dichloroethane	0.6587 0.5578	0.5463 0.5868	0.5240 0.6027	0.5806	0.5849	Ave		0.5802			0.2000	7.0		20.0			
Vinyl acetate	0.1554 0.2042	0.1712 0.2248	0.1846 0.2374	0.1922	0.2159	Ave		0.1982			0.0100	14.0		20.0			
2,2-Dichloropropane	0.2089 0.2094	0.1923 0.2380	0.1918 0.2406	0.2153	0.2221	Ave		0.2148			0.0100	8.5		20.0			
cis-1,2-Dichloroethene	0.3752 0.3124	0.3118 0.3268	0.2893 0.3375	0.3247	0.3263	Ave		0.3255			0.1000	7.6		20.0			
2-Butanone (MEK)	0.1805 0.1692	0.1656 0.1804	0.1533 0.1823	0.1632	0.1743	Ave		0.1711			0.0500	5.9		20.0			
Bromochloromethane	0.1602 0.1300	0.1227 0.1367	0.1187 0.1453	0.1320	0.1397	Ave		0.1357			0.0100	9.7		20.0			
Tetrahydrofuran	0.1465 0.1140	0.1197 0.1221	0.1051 0.1283	0.1156	0.1227	Ave		0.1218			0.0100	10.0		20.0			
Chloroform	0.5305 0.4435	0.4372 0.4691	0.4040 0.4864	0.4580	0.4705	Ave		0.4624			0.2000	8.1		20.0			
1,1,1-Trichloroethane	0.3408 0.3041	0.2781 0.3311	0.2786 0.3337	0.3135	0.3326	Ave		0.3141			0.1000	8.0		20.0			
Cyclohexane	0.7553 0.6547	0.7067 0.7163	0.6518 0.7113	0.7195	0.7234	Ave		0.7049			0.1000	5.0		20.0			
Carbon tetrachloride	0.2188 0.2137	0.1783 0.2421	0.1756 0.2456	0.2093	0.2208	Ave		0.2130			0.1000	12.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.4190 0.3837	0.3836 0.4120	0.3653 0.4171	0.4094	0.4159	Ave		0.4007			0.0100	5.1		20.0			
Isobutyl alcohol	0.0062 0.0076	0.0051 0.0082	0.0049 0.0094	0.0062	0.0072	Ave		0.0069		*	0.0100	23.0	*	20.0			
Benzene	1.4277 1.1958	1.2285 1.2459	1.1487 1.2779	1.2764	1.3023	Ave		1.2629			0.5000	6.6		20.0			
1,2-Dichloroethane	0.3936 0.3555	0.3377 0.3701	0.3255 0.4002	0.3674	0.3684	Ave		0.3648			0.1000	6.9		20.0			
n-Heptane	0.5428 0.4760	0.4383 0.5130	0.4485 0.5151	0.4948	0.4996	Ave		0.4910			0.0100	7.2		20.0			
Trichloroethene	0.2973 0.2860	0.2875 0.3057	0.2716 0.3157	0.3042	0.3116	Ave		0.2974			0.2000	5.0		20.0			
Methylcyclohexane	0.5952 0.5306	0.5402 0.5732	0.5146 0.5770	0.5673	0.5970	Ave		0.5619			0.1000	5.4		20.0			
1,2-Dichloropropane	0.3666 0.3252	0.3035 0.3418	0.2998 0.3537	0.3291	0.3338	Ave		0.3317			0.1000	6.9		20.0			
Dibromomethane	0.1544 0.1493	0.1379 0.1557	0.1316 0.1667	0.1493	0.1534	Ave		0.1498			0.0100	7.3		20.0			
1,4-Dioxane	0.0032 0.0032	0.0026 0.0030	0.0024 0.0034	0.0029	0.0030	Ave		0.0030		*	0.0100	11.0		20.0			
Bromodichloromethane	0.2516 0.2918	0.2511 0.3052	0.2361 0.3279	0.2772	0.2930	Ave		0.2792			0.2000	11.0		20.0			
cis-1,3-Dichloropropene	0.3080 0.3953	0.3071 0.4172	0.3282 0.4415	0.3733	0.3881	Ave		0.3698			0.2000	14.0		20.0			
4-Methyl-2-pentanone (MIBK)	1.5509 1.4938	1.5302 1.5109	1.3735 1.4677	1.5874	1.5632	Ave		1.5097			0.1000	4.4		20.0			
Toluene	6.2344 4.6779	5.4647 4.8614	4.8117 4.5935	5.3452	5.2977	Ave		5.1608			0.4000	11.0		20.0			
trans-1,3-Dichloropropene	0.9390 1.1640	0.9614 1.2251	0.9301 1.2704	1.0789	1.1369	Ave		1.0882			0.1000	12.0		20.0			
Ethyl methacrylate	1.1441 1.2928	0.9998 1.3638	1.0308 1.3853	1.2627	1.3088	Ave		1.2235			0.0100	12.0		20.0			
1,1,2-Trichloroethane	1.0940 0.8884	0.9633 0.9132	0.8597 0.9115	0.9757	0.9363	Ave		0.9428			0.1000	7.6		20.0			
Tetrachloroethene	1.1157 0.8701	0.9938 0.9281	0.8738 0.8743	0.9857	0.9770	Ave		0.9523			0.2000	8.9		20.0			
1,3-Dichloropropane	1.9802 1.6858	1.8629 1.7187	1.6343 1.6897	1.8293	1.7741	Ave		1.7719			0.0100	6.4		20.0			
2-Hexanone	1.0477 1.0339	1.0431 1.0684	0.9679 1.0449	1.1247	1.1004	Ave		1.0539			0.1000	4.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dibromochloromethane	0.5658 0.6599	0.5280 0.7119	0.5067 0.7217	0.6199	0.6460	Ave		0.6200			0.1000	13.0		20.0			
1,2-Dibromoethane (EDB)	0.9524 0.9044	0.8836 0.9137	0.8153 0.9237	0.9263	0.9441	Ave		0.9079			0.1000	4.8		20.0			
3-Chlorobenzotrifluoride	1.9226 1.4974	1.6501 1.5076	1.5454 1.3370	1.6222	1.5811	Ave		1.5829			0.0100	11.0		20.0			
Chlorobenzene	4.0215 3.0327	3.4837 3.1544	3.0203 3.0023	3.3643	3.3626	Ave		3.3052			0.5000	10.0		20.0			
4-Chlorobenzotrifluoride	1.7532 1.4334	1.5607 1.4283	1.5227 1.2996	1.5809	1.5247	Ave		1.5129			0.0100	8.8		20.0			
1,1,1,2-Tetrachloroethane	0.8054 0.7937	0.6270 0.8576	0.6290 0.8548	0.7520	0.7784	Ave		0.7622			0.0100	12.0		20.0			
Ethylbenzene	2.1162 1.8003	1.9583 1.8639	1.7671 1.7871	1.9934	2.0020	Ave		1.9111			0.1000	6.6		20.0			
m-Xylene & p-Xylene	2.6982 2.2243	2.3435 2.3081	2.1594 2.2145	2.4436	2.4413	Ave		2.3541			0.1000	7.4		20.0			
o-Xylene	2.6404 2.1191	2.3559 2.2160	2.1315 2.1144	2.3759	2.3231	Ave		2.2845			0.3000	7.9		20.0			
Styrene	4.3797 3.4898	3.7333 3.6111	3.4486 3.4638	3.9065	3.8442	Ave		3.7346			0.3000	8.4		20.0			
Bromoform	0.2653 0.3657	0.2684 0.4014	0.2412 0.4171	0.3168	0.3442	Ave		0.3275			0.1000	20.0		20.0			
2-Chlorobenzotrifluoride	1.8187 1.4793	1.6992 1.5053	1.5228 1.3486	1.6018	1.5787	Ave		1.5693			0.0100	9.1		20.0			
Isopropylbenzene	6.6841 5.0501	5.9488 5.3239	5.2815 4.8448	5.9350	5.7977	Ave		5.6082			0.1000	11.0		20.0			
1,1,2,2-Tetrachloroethane	1.2994 1.2807	1.3075 1.3493	1.2094 1.3104	1.3458	1.3524	Ave		1.3069			0.3000	3.6		20.0			
Bromobenzene	1.0162 0.8475	0.8667 0.8518	0.8177 0.8692	0.8652	0.8533	Ave		0.8735			0.0100	6.9		20.0			
1,2,3-Trichloropropane	0.3627 0.2773	0.2931 0.2821	0.2728 0.2922	0.2800	0.2812	Ave		0.2927			0.0100	10.0		20.0			
trans-1,4-Dichloro-2-butene	0.2945 0.2859	0.2754 0.3162	0.2472 0.3267	0.2688	0.2602	Ave		0.2844			0.0100	9.6		20.0			
N-Propylbenzene	1.2166 1.1118	1.1732 1.1670	1.1362 1.1460	1.1729	1.1590	Ave		1.1604			0.0100	2.7		20.0			
2-Chlorotoluene	1.1065 0.9256	0.9581 0.9475	0.8975 0.9360	0.9513	0.9430	Ave		0.9582			0.0100	6.6		20.0			
3-Chlorotoluene	1.1820 0.9566	0.9980 0.9593	0.9643 0.9127	0.9261	0.9364	Ave		0.9794			0.0100	8.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,3,5-Trimethylbenzene	3.6478 3.0305	3.2397 3.1239	3.1299 3.0311	3.2594	3.2246	Ave		3.2109			0.0100	6.2		20.0			
4-Chlorotoluene	1.1560 0.9823	0.9826 1.0361	0.9918 1.0330	1.0376	1.0526	Ave		1.0340			0.0100	5.5		20.0			
tert-Butylbenzene	3.1191 2.5612	2.8481 2.6780	2.7134 2.6395	2.8302	2.7808	Ave		2.7713			0.0100	6.2		20.0			
1,2,4-Trimethylbenzene	3.6951 3.1036	3.3863 3.2221	3.2100 3.1692	3.3631	3.3623	Ave		3.3140			0.0100	5.6		20.0			
3,4-Dichlorobenzotrifluoride	0.7760 0.7222	0.8131 0.7485	0.7548 0.6963	0.7399	0.7344	Ave		0.7482			0.0100	4.7		20.0			
sec-Butylbenzene	4.7250 3.6615	4.1212 3.7973	3.8832 3.6388	4.0747	4.0112	Ave		3.9891			0.0100	8.7		20.0			
1,3-Dichlorobenzene	2.0686 1.6213	1.7447 1.6705	1.6238 1.6741	1.6987	1.7072	Ave		1.7261			0.6000	8.4		20.0			
4-Isopropyltoluene	3.7034 3.0652	3.3375 3.2100	3.1450 3.0900	3.3337	3.2665	Ave		3.2689			0.0100	6.2		20.0			
1,4-Dichlorobenzene	2.0020 1.6465	1.7449 1.6908	1.6438 1.7119	1.7346	1.7242	Ave		1.7373			0.5000	6.5		20.0			
2,4-Dichlorobenzotrifluoride	0.7973 0.6761	0.7429 0.6931	0.7301 0.6448	0.6927	0.7117	Ave		0.7111			0.0100	6.5		20.0			
2,5-Dichlorobenzotrifluoride	0.8019 0.7607	0.8189 0.7865	0.7792 0.7420	0.7522	0.7608	Ave		0.7753			0.0100	3.4		20.0			
n-Butylbenzene	3.2542 2.7311	2.9123 2.8828	2.7781 2.8096	2.9485	2.9341	Ave		2.9063			0.0100	5.5		20.0			
1,2-Dichlorobenzene	1.8289 1.5040	1.5633 1.5462	1.4970 1.5487	1.5655	1.5779	Ave		1.5789			0.4000	6.7		20.0			
1,2-Dibromo-3-Chloropropane	0.0849 0.1157	0.0814 0.1305	0.0843 0.1353	0.0954	0.1047	Ave		0.1040			0.0500	20.0		20.0			
1,2,4-Trichlorobenzene	0.8675 0.7733	0.7499 0.7923	0.7387 0.7989	0.8082	0.7890	Ave		0.7897			0.2000	5.0		20.0			
Hexachlorobutadiene	0.3817 0.3102	0.3469 0.3430	0.3138 0.3383	0.3301	0.3340	Ave		0.3373			0.0100	6.6		20.0			
Naphthalene	2.5167 2.2552	2.2494 2.2646	2.0797 2.3040	2.3468	2.3135	Ave		2.2912			0.0100	5.3		20.0			
1,2,3-Trichlorobenzene	0.7593 0.6559	0.6685 0.6729	0.5998 0.6937	0.6946	0.6725	Ave		0.6771			0.0100	6.6		20.0			
2,4,5-Trichlorotoluene	0.4218 0.3329	0.3284 0.3441	0.3044 0.3502	0.3314	0.3274	Ave		0.3426			0.0100	10.0		20.0			
2,3,6-Trichlorotoluene	0.3897 0.3029	0.3072 0.3055	0.2791 0.3183	0.3175	0.3065	Ave		0.3158			0.0100	10.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8														
Dibromofluoromethane (Surr)	0.2143 0.2131	0.2130 0.2223	0.2086 0.2061	0.2196	0.2156	Ave		0.2141				2.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2838 0.2624	0.2484 0.2700	0.2554 0.2655	0.2610	0.2699	Ave		0.2646				4.0		20.0			
Toluene-d8 (Surr)	4.5146 3.6171	4.2502 3.7635	3.8828 3.1038	4.0750	3.9724	Ave		3.8974				11.0		20.0			
4-Bromofluorobenzene (Surr)	1.7106 1.3934	1.4785 1.4322	1.3831 1.2832	1.4890	1.4299	Ave		1.4500				8.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-134613/18	50303018.D
Level 2	IC 180-134613/8	50303008.D
Level 3	ICIS 180-134613/9	50303009.D
Level 4	IC 180-134613/10	50303010.D
Level 5	IC 180-134613/11	50303011.D
Level 6	IC 180-134613/12	50303012.D
Level 7	IC 180-134613/13	50303013.D
Level 8	IC 180-134613/14	50303014.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	11738 392329	61161 459101	120251 555245	186155	248600	5.00 175	25.0 200	50.0 250	75.0	100
Chloromethane	FB	Ave	20422 626420	95934 749194	191737 892689	284435	377346	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl chloride	FB	Ave	18364 599809	92094 717244	192697 866068	276203	370529	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Butadiene	FB	Ave	25646 656586	107650 795057	214505 961606	311986	418091	5.00 175	25.0 200	50.0 250	75.0	100
Bromomethane	FB	Lin2	9174 163842	32814 202557	68450 219710	83485	100603	5.00 175	25.0 200	50.0 250	75.0	100
Chloroethane	FB	Ave	8910 241114	37829 300539	76259 309302	109418	141570	5.00 175	25.0 200	50.0 250	75.0	100
Dichlorofluoromethane	FB	Ave	18545 529735	86469 702217	199002 722968	252307	320590	5.00 175	25.0 200	50.0 250	75.0	100
Trichlorofluoromethane	FB	Ave	14651 433936	68228 629405	165171 625870	211640	274680	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl ether	FB	Ave	15110 467174	69164 524790	134232 666037	203184	266877	5.00 175	25.0 200	50.0 250	75.0	100
Acrolein	FB	Ave	33215 76799	49025 88701	55616 95898	66477	73636	100 225	125 250	150 275	175	200
1,1-Dichloroethene	FB	Ave	14445 466370	66672 537938	136777 655372	210842	282447	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	13613 466462	70857 564199	138904 659263	215323	283308	5.00 175	25.0 200	50.0 250	75.0	100
Acetone	FB	Ave	27756 338711	52872 359769	100332 482030	145165	186722	25.0 350	50.0 400	100 500	150	200
Iodomethane	FB	Ave	20517 658969	93450 768602	191906 937612	288929	391404	5.00 175	25.0 200	50.0 250	75.0	100
Carbon disulfide	FB	Ave	31759 1168823	155959 1429882	333091 1738988	513502	702207	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Allyl chloride	FB	Ave	7709 305734	41688 353770	83771 449430	129734	175910	5.00 175	25.0 200	50.0 250	75.0	100
Methyl acetate	FB	Ave	68405 2402270	332118 2723193	667992 3392163	1035670	1360573	25.0 875	125 1000	250 1250	375	500
Methylene Chloride	FB	Lin2	23143 516693	82531 581573	157472 726477	227072	292219	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butyl alcohol	TBA	Ave	8526 407341	47518 473360	88451 611565	166475	219266	50.0 1750	250 2000	500 2500	750	1000
Acrylonitrile	FB	Ave	66409 2376546	338546 2649598	691056 3337128	1012388	1352445	50.0 1750	250 2000	500 2500	750	1000
trans-1,2-Dichloroethene	FB	Ave	14331 496919	72412 564166	145422 714392	213264	288749	5.00 175	25.0 200	50.0 250	75.0	100
Methyl tert-butyl ether	FB	Ave	35247 1269630	174611 1454209	357516 1811989	532783	717429	5.00 175	25.0 200	50.0 250	75.0	100
Hexane	FB	Ave	27239 854071	127250 987257	262665 1203451	382955	515034	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloroethane	FB	Ave	28747 945361	134994 1076133	274871 1328543	412070	542610	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl acetate	FB	Ave	6783 346138	42316 412211	96814 523307	136421	200290	5.00 175	25.0 200	50.0 250	75.0	100
2,2-Dichloropropane	FB	Ave	9115 354872	47512 436442	100580 530241	152789	206033	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,2-Dichloroethene	FB	Ave	16372 529478	77048 599342	151771 743970	230462	302735	5.00 175	25.0 200	50.0 250	75.0	100
2-Butanone (MEK)	FB	Ave	39378 573542	81869 661664	160864 803658	231681	323375	25.0 350	50.0 400	100 500	150	200
Bromochloromethane	FB	Ave	6992 220291	30321 250607	62252 320382	93661	129587	5.00 175	25.0 200	50.0 250	75.0	100
Tetrahydrofuran	FB	Ave	12789 386544	59174 447707	110296 565784	164028	227621	10.0 350	50.0 400	100 500	150	200
Chloroform	FB	Ave	23149 751712	108043 860226	211933 1072109	325101	436474	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1-Trichloroethane	FB	Ave	14873 515456	68728 607230	146155 735465	222478	308574	5.00 175	25.0 200	50.0 250	75.0	100
Cyclohexane	FB	Ave	32962 1109737	174651 1313560	341881 1567791	510634	671150	5.00 175	25.0 200	50.0 250	75.0	100
Carbon tetrachloride	FB	Ave	9550 362211	44069 443952	92122 541326	148555	204809	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloropropene	FB	Ave	18284 650285	94793 755478	191632 919340	290552	385796	5.00 175	25.0 200	50.0 250	75.0	100
Isobutyl alcohol	FB	Ave	6766 324042	31713 374911	64264 519953	110778	166120	125 4375	625 5000	1250 6250	1875	2500

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Benzene	FB	Ave	62303 2026853	303591 2284771	602514 2816860	905954	1208197	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane	FB	Ave	17175 602602	83451 678619	170712 882169	260776	341780	5.00 175	25.0 200	50.0 250	75.0	100
n-Heptane	FB	Ave	23686 806729	108328 940701	235230 1135342	351211	463470	5.00 175	25.0 200	50.0 250	75.0	100
Trichloroethene	FB	Ave	12976 484743	71046 560499	142439 695890	215876	289114	5.00 175	25.0 200	50.0 250	75.0	100
Methylcyclohexane	FB	Ave	25976 899256	133492 1051065	269904 1271791	402645	553839	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloropropane	FB	Ave	15999 551216	75001 626785	157237 779651	233558	309721	5.00 175	25.0 200	50.0 250	75.0	100
Dibromomethane	FB	Ave	6736 252976	34073 285467	69033 367478	105949	142348	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dioxane	FB	Ave	2785 107243	12787 108953	25299 148650	41693	56031	100 3500	500 4000	1000 5000	1500	2000
Bromodichloromethane	FB	Ave	10980 494496	62048 559625	123848 722661	196712	271870	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,3-Dichloropropene	FB	Ave	13441 670035	75900 764955	172126 973151	264977	360087	5.00 175	25.0 200	50.0 250	75.0	100
4-Methyl-2-pentanone (MIBK)	CBZ	Ave	75647 1293845	171096 1424348	349805 1780762	535170	716953	25.0 350	50.0 400	100 500	150	200
Toluene	CBZ	Ave	60820 2025808	305509 2291440	612731 2786685	901036	1214867	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,3-Dichloropropene	CBZ	Ave	9160 504089	53750 577469	118446 770673	181868	260722	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl methacrylate	CBZ	Ave	11161 559868	55893 642835	131269 840399	212852	300128	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloroethane	CBZ	Ave	10673 384751	53855 430453	109481 552961	164474	214719	5.00 175	25.0 200	50.0 250	75.0	100
Tetrachloroethene	CBZ	Ave	10884 376799	55560 437446	111273 530396	166159	224037	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichloropropane	CBZ	Ave	19318 730064	104148 810109	208110 1025068	308357	406834	5.00 175	25.0 200	50.0 250	75.0	100
2-Hexanone	CBZ	Ave	51105 895448	116636 1007219	246507 1267784	379170	504684	25.0 350	50.0 400	100 500	150	200
Dibromochloromethane	CBZ	Ave	5520 285792	29519 335537	64530 437822	104491	148140	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromoethane (EDB)	CBZ	Ave	9291 391652	49397 430697	103819 560401	156151	216491	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorobenzotrifluoride	CBZ	Ave	18756 648455	92250 710605	196791 811123	273444	362586	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Chlorobenzene	CBZ	Ave	39232 1313352	194761 1486822	384609 1821377	567114	771107	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorobenzotrifluoride	CBZ	Ave	17103 620760	87255 673239	193901 788386	266494	349632	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1,2-Tetrachloroethane	CBZ	Ave	7857 343717	35053 404254	80096 518562	126760	178500	5.00 175	25.0 200	50.0 250	75.0	100
Ethylbenzene	CBZ	Ave	20645 779624	109479 878562	225030 1084192	336025	459104	5.00 175	25.0 200	50.0 250	75.0	100
m-Xylene & p-Xylene	CBZ	Ave	26322 963277	131016 1087938	274985 1343425	411920	559842	5.00 175	25.0 200	50.0 250	75.0	100
o-Xylene	CBZ	Ave	25758 917689	131707 1044535	271432 1282744	400497	532728	5.00 175	25.0 200	50.0 250	75.0	100
Styrene	CBZ	Ave	42726 1511299	208713 1702135	439152 2101328	658511	881546	5.00 175	25.0 200	50.0 250	75.0	100
Bromoform	CBZ	Ave	2588 158386	15007 189179	30710 253039	53409	78926	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorobenzotrifluoride	CBZ	Ave	17742 640624	94998 709528	193920 818132	270017	362034	5.00 175	25.0 200	50.0 250	75.0	100
Isopropylbenzene	CBZ	Ave	65207 2186986	332572 2509471	672554 2939157	1000450	1329527	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2,2-Tetrachloroethane	CBZ	Ave	12676 554635	73095 635984	154009 794942	226865	310127	5.00 175	25.0 200	50.0 250	75.0	100
Bromobenzene	DCB	Ave	14051 509283	68608 564181	141042 712137	214072	285408	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichloropropane	DCB	Ave	5015 166640	23201 186872	47052 239368	69273	94067	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,4-Dichloro-2-butene	DCB	Ave	4072 171777	21797 209408	42637 267698	66494	87031	5.00 175	25.0 200	50.0 250	75.0	100
N-Propylbenzene	DCB	Ave	16822 668080	92868 772940	195976 938881	290195	387657	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorotoluene	DCB	Ave	15299 556210	75841 627560	154797 766804	235369	315400	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorotoluene	DCB	Ave	16343 574840	78996 635360	166326 747748	229133	313196	5.00 175	25.0 200	50.0 250	75.0	100
1,3,5-Trimethylbenzene	DCB	Ave	50437 1821042	256444 2069067	539843 2483271	806423	1078510	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorotoluene	DCB	Ave	15984 590273	77780 686264	171070 846300	256729	352063	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butylbenzene	DCB	Ave	43127 1538995	225443 1773732	468002 2162487	700240	930079	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trimethylbenzene	DCB	Ave	51091 1864947	268049 2134132	553643 2596483	832074	1124585	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
3,4-Dichlorobenzotrifluoride	DCB	Ave	10729 433987	64362 495775	130185 570450	183065	245627	5.00 175	25.0 200	50.0 250	75.0	100
sec-Butylbenzene	DCB	Ave	65330 2200188	326221 2515133	669756 2981190	1008135	1341600	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichlorobenzene	DCB	Ave	28602 974213	138101 1106407	280066 1371526	420272	570988	5.00 175	25.0 200	50.0 250	75.0	100
4-Isopropyltoluene	DCB	Ave	51205 1841892	264184 2126114	542443 2531591	824816	1092513	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dichlorobenzene	DCB	Ave	27681 989384	138120 1119886	283523 1402521	429154	576692	5.00 175	25.0 200	50.0 250	75.0	100
2,4-Dichlorobenzotrifluoride	DCB	Ave	11024 406260	58806 459072	125921 528265	171372	238033	5.00 175	25.0 200	50.0 250	75.0	100
2,5-Dichlorobenzotrifluoride	DCB	Ave	11088 457073	64824 520914	134395 607921	186097	254456	5.00 175	25.0 200	50.0 250	75.0	100
n-Butylbenzene	DCB	Ave	44994 1641091	230526 1909418	479164 2301855	729499	981363	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichlorobenzene	DCB	Ave	25288 903766	123743 1024132	258190 1268840	387327	527759	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromo-3-Chloropropane	DCB	Ave	1174 69537	6441 86409	14541 110818	23597	35031	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trichlorobenzene	DCB	Ave	11994 464683	59357 524775	127415 654550	199956	263899	5.00 175	25.0 200	50.0 250	75.0	100
Hexachlorobutadiene	DCB	Ave	5277 186416	27458 227215	54129 277147	81675	111717	5.00 175	25.0 200	50.0 250	75.0	100
Naphthalene	DCB	Ave	34798 1355121	178051 1499909	358706 1887643	580632	773789	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichlorobenzene	DCB	Ave	10498 394157	52915 445662	103456 568326	171850	224922	5.00 175	25.0 200	50.0 250	75.0	100
2,4,5-Trichlorotoluene	DCB	Ave	5832 200009	25992 227883	52505 286878	81997	109488	5.00 175	25.0 200	50.0 250	75.0	100
2,3,6-Trichlorotoluene	DCB	Ave	5388 182005	24319 202347	48130 260759	78544	102526	5.00 175	25.0 200	50.0 250	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	9351 361120	52645 407623	109435 454279	155860	199995	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	12383 444667	61392 495199	133978 585333	185233	250369	5.00 175	25.0 200	50.0 250	75.0	100
Toluene-d8 (Surr)	CBZ	Ave	44042 1566428	237614 1773929	494434 1882951	686909	910944	5.00 175	25.0 200	50.0 250	75.0	100
4-Bromofluorobenzene (Surr)	CBZ	Ave	16688 603450	82659 675059	176122 778464	251005	327893	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 134613

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

Curve Type Legend:

Ave = Average ISTD Lin2 = Linear 1/conc^2 ISTD

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303008.D
 Lims ID: IC VSTD5
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 03-Mar-2015 14:28:30 ALS Bottle#: 6 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: IC VSTD5
 Misc. Info.: 180-0005873-008
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 04-Mar-2015 10:13:04 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK006

First Level Reviewer: fergusond

Date: 03-Mar-2015 15:51:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.314	4.321	-0.007	94	160393	1000.0	1000.0	M
* 2 Fluorobenzene (IS)	96	7.277	7.278	-0.001	98	494254	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.368	-0.001	96	111812	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.691	12.686	0.005	96	158312	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.528	6.535	-0.007	84	52645	25.0	24.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.907	-0.007	95	61392	25.0	23.5	
\$ 7 Toluene-d8 (Surr)	98	8.931	8.926	0.005	94	237614	25.0	27.3	
\$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.536	-0.001	88	82659	25.0	25.5	
11 Dichlorodifluoromethane	85	1.625	1.626	-0.001	98	61161	25.0	24.6	
12 Chloromethane	50	1.777	1.772	0.005	99	95934	25.0	24.2	
13 Vinyl chloride	62	1.899	1.906	-0.007	98	92094	25.0	24.1	
14 Butadiene	39	1.941	1.948	-0.007	97	107650	25.0	24.3	
15 Bromomethane	94	2.252	2.253	-0.001	92	32814	25.0	26.3	
16 Chloroethane	64	2.379	2.386	-0.007	97	37829	25.0	24.4	
17 Dichlorofluoromethane	67	2.653	2.654	-0.001	97	86469	25.0	24.3	
18 Trichlorofluoromethane	101	2.720	2.709	0.011	95	68228	25.0	23.0	
20 Ethyl ether	59	3.085	3.098	-0.013	94	69164	25.0	24.1	
21 Acrolein	56	3.261	3.263	-0.001	98	49025	125.0	129.5	
22 1,1-Dichloroethene	96	3.371	3.384	-0.013	96	66672	25.0	23.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.420	3.427	-0.007	94	70857	25.0	24.4	
24 Acetone	43	3.493	3.500	-0.007	98	52872	50.0	50.9	
25 Iodomethane	142	3.584	3.585	-0.001	98	93450	25.0	23.1	
26 Carbon disulfide	76	3.663	3.664	-0.001	99	155959	25.0	22.0	
28 3-Chloro-1-propene	76	3.943	3.950	-0.007	90	41688	25.0	23.2	
30 Methyl acetate	43	4.022	4.023	-0.001	99	332118	125.0	116.3	
31 Methylene Chloride	84	4.150	4.151	-0.001	99	82531	25.0	23.9	
32 2-Methyl-2-propanol	59	4.454	4.437	0.017	96	47518	250.0	247.2	
33 Acrylonitrile	53	4.557	4.558	-0.001	98	338546	250.0	239.2	
34 trans-1,2-Dichloroethene	96	4.569	4.577	-0.008	56	72412	25.0	24.1	
35 Methyl tert-butyl ether	73	4.600	4.601	-0.001	98	174611	25.0	23.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.989	4.990	-0.001	96	127250	25.0	23.8	
37 1,1-Dichloroethane	63	5.178	5.179	-0.001	96	134994	25.0	23.5	
38 Vinyl acetate	43	5.299	5.307	-0.008	96	42316	25.0	21.6	
44 2,2-Dichloropropane	77	5.926	5.933	-0.007	77	47512	25.0	22.4	
45 cis-1,2-Dichloroethene	96	5.938	5.939	-0.001	83	77048	25.0	23.9	
46 2-Butanone (MEK)	43	5.993	5.994	-0.001	99	81869	50.0	48.4	
49 Chlorobromomethane	128	6.230	6.231	-0.001	92	30321	25.0	22.6	
51 Tetrahydrofuran	42	6.297	6.298	-0.001	95	59174	50.0	49.2	
52 Chloroform	83	6.340	6.347	-0.007	97	108043	25.0	23.6	
53 1,1,1-Trichloroethane	97	6.534	6.541	-0.007	96	68728	25.0	22.1	
54 Cyclohexane	56	6.589	6.596	-0.007	92	174651	25.0	25.1	
56 Carbon tetrachloride	117	6.723	6.724	-0.001	58	44069	25.0	20.9	
55 1,1-Dichloropropene	75	6.729	6.730	-0.001	92	94793	25.0	23.9	
57 Isobutyl alcohol	41	6.954	6.955	-0.001	36	31713	625.0	467.5	
58 Benzene	78	6.960	6.961	-0.001	98	303591	25.0	24.3	
59 1,2-Dichloroethane	62	6.991	6.992	-0.001	95	83451	25.0	23.1	
62 n-Heptane	43	7.283	7.284	-0.001	96	108328	25.0	22.3	
64 Trichloroethene	130	7.672	7.673	-0.001	97	71046	25.0	24.2	
66 Methylcyclohexane	83	7.867	7.868	-0.001	94	133492	25.0	24.0	
67 1,2-Dichloropropane	63	7.909	7.910	-0.001	91	75001	25.0	22.9	
68 Dibromomethane	93	8.025	8.026	-0.001	95	34073	25.0	23.0	
70 1,4-Dioxane	88	8.067	8.056	0.011	89	12787	500.0	437.5	M
71 Dichlorobromomethane	83	8.201	8.202	-0.001	97	62048	25.0	22.5	
74 cis-1,3-Dichloropropene	75	8.664	8.665	-0.001	91	75900	25.0	20.8	
75 4-Methyl-2-pentanone (MIBK)	43	8.828	8.829	-0.001	98	171096	50.0	50.7	
76 Toluene	91	8.992	8.993	-0.001	97	305509	25.0	26.5	
77 trans-1,3-Dichloropropene	75	9.223	9.224	-0.001	99	53750	25.0	22.1	
78 Ethyl methacrylate	69	9.321	9.322	-0.001	93	55893	25.0	20.4	
79 1,1,2-Trichloroethane	97	9.400	9.407	-0.007	91	53855	25.0	25.5	
80 Tetrachloroethene	164	9.540	9.541	-0.001	96	55560	25.0	26.1	
81 1,3-Dichloropropane	76	9.570	9.571	-0.001	98	104148	25.0	26.3	
82 2-Hexanone	43	9.661	9.662	-0.001	99	116636	50.0	49.5	
84 Chlorodibromomethane	129	9.795	9.796	-0.001	89	29519	25.0	21.3	
85 Ethylene Dibromide	107	9.905	9.906	-0.001	96	49397	25.0	24.3	
86 3-Chlorobenzotrifluoride	180	10.379	10.374	0.005	94	92250	25.0	26.1	
87 Chlorobenzene	112	10.397	10.398	-0.001	95	194761	25.0	26.4	
88 4-Chlorobenzotrifluoride	180	10.434	10.435	-0.001	94	87255	25.0	25.8	
89 1,1,1,2-Tetrachloroethane	131	10.483	10.477	0.006	86	35053	25.0	20.6	
90 Ethylbenzene	106	10.507	10.508	-0.001	98	109479	25.0	25.6	
91 m-Xylene & p-Xylene	106	10.622	10.624	-0.002	99	131016	25.0	24.9	
92 o-Xylene	106	11.018	11.013	0.005	96	131707	25.0	25.8	
93 Styrene	104	11.030	11.031	-0.001	95	208713	25.0	25.0	
94 Bromoform	173	11.219	11.214	0.005	96	15007	25.0	20.5	
96 2-Chlorobenzotrifluoride	180	11.279	11.274	0.005	97	94998	25.0	27.1	
97 Isopropylbenzene	105	11.383	11.384	-0.001	96	332572	25.0	26.5	
99 1,1,2,2-Tetrachloroethane	83	11.681	11.676	0.005	95	73095	25.0	25.0	
100 Bromobenzene	156	11.693	11.682	0.011	97	68608	25.0	24.8	
101 1,2,3-Trichloropropane	110	11.730	11.725	0.005	87	23201	25.0	25.0	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.737	-0.007	68	21797	25.0	24.2	
103 N-Propylbenzene	120	11.790	11.792	-0.002	99	92868	25.0	25.3	
104 2-Chlorotoluene	126	11.876	11.883	-0.007	96	75841	25.0	25.0	
105 3-Chlorotoluene	126	11.936	11.938	-0.002	95	78996	25.0	25.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.967	11.968	-0.001	95	256444	25.0	25.2	
107 4-Chlorotoluene	126	11.991	11.986	0.005	97	77780	25.0	23.8	
108 tert-Butylbenzene	119	12.289	12.290	-0.001	93	225443	25.0	25.7	
110 1,2,4-Trimethylbenzene	105	12.344	12.339	0.005	95	268049	25.0	25.5	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.406	-0.001	97	64362	25.0	27.2	
112 sec-Butylbenzene	105	12.514	12.509	0.005	94	326221	25.0	25.8	
113 1,3-Dichlorobenzene	146	12.624	12.625	-0.001	97	138101	25.0	25.3	
114 4-Isopropyltoluene	119	12.654	12.655	-0.001	97	264184	25.0	25.5	
115 1,4-Dichlorobenzene	146	12.715	12.710	0.005	95	138120	25.0	25.1	
116 2,4-Dichloro-1-(trifluorom	214	12.764	12.765	-0.001	96	58806	25.0	26.1	
118 2,5-Dichlorobenzotrifluori	214	12.813	12.807	0.005	97	64824	25.0	26.4	
120 n-Butylbenzene	91	13.068	13.069	-0.001	98	230526	25.0	25.1	
121 1,2-Dichlorobenzene	146	13.086	13.087	-0.001	95	123743	25.0	24.8	
122 1,2-Dibromo-3-Chloropropan	75	13.865	13.866	-0.001	63	6441	25.0	19.6	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.006	-0.001	98	259963	75.0	76.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.432	-0.001	99	168108	50.0	49.8	
126 1,2,4-Trichlorobenzene	180	14.698	14.693	0.005	94	59357	25.0	23.7	
127 Hexachlorobutadiene	225	14.869	14.870	-0.001	96	27458	25.0	25.7	
128 Naphthalene	128	14.948	14.943	0.005	97	178051	25.0	24.5	
129 1,2,3-Trichlorobenzene	180	15.191	15.186	0.005	95	52915	25.0	24.7	
131 2,4,5-Trichlorotoluene	159	15.970	15.971	-0.001	97	25992	25.0	24.0	
130 2,3,6-Trichlorotoluene	159	16.067	16.068	-0.001	97	24319	25.0	24.3	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		50.0	50.7	
S 134 1,2-Dichloroethene, Total	96				0		50.0	48.0	
S 135 1,3-Dichloropropene, Total	1				0		50.0	42.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added: 5.00	Units: uL	
VOA8260SURR_00031	Amount Added: 1.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added: 1.00	Units: uL	
voaWEEpri Res_00003	Amount Added: 1.00	Units: uL	
VOAVAPRI_00003	Amount Added: 1.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 1.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent

Report Date: 04-Mar-2015 10:13:04

Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303008.D

Injection Date: 03-Mar-2015 14:28:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD5

Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL

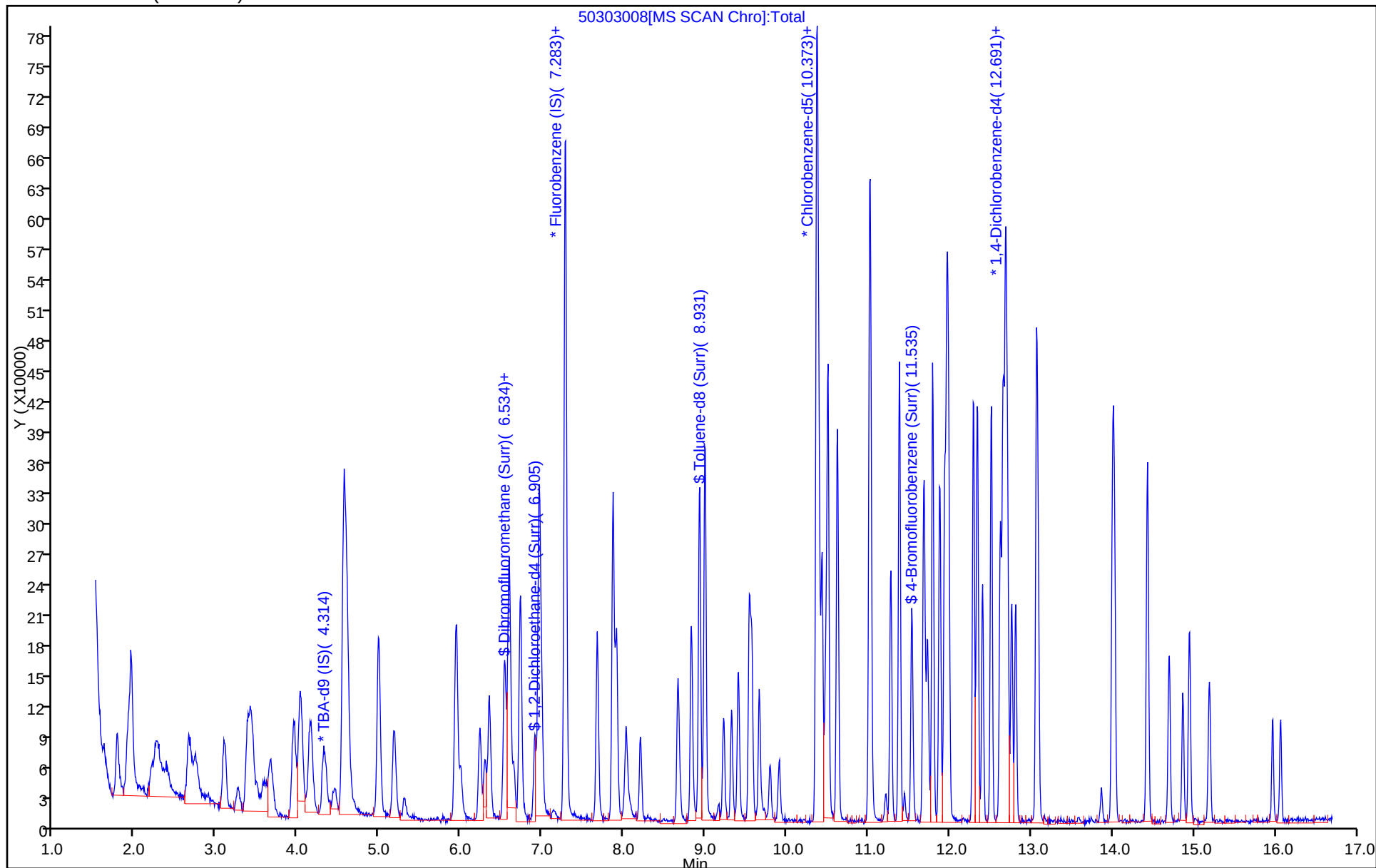
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303008.D

Injection Date: 03-Mar-2015 14:28:30

Instrument ID: CHHP5

Lims ID: IC VSTD5

Client ID:

Operator ID: 001562

ALS Bottle#:

6

Worklist Smp#: 8

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

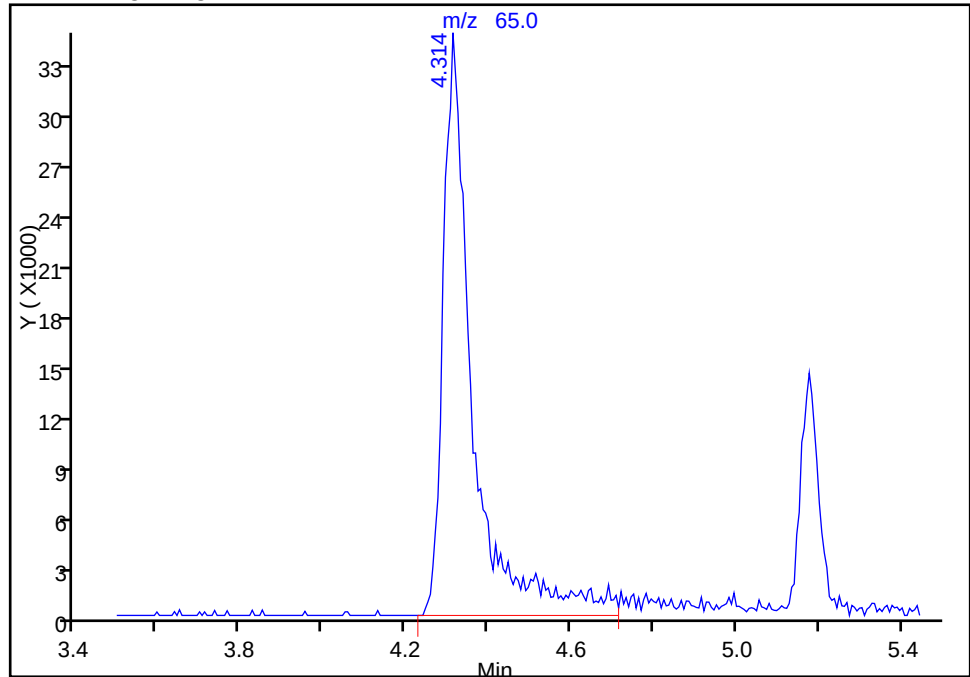
Column: DB-624 (0.18 mm)

Detector: MS SCAN

* 1 TBA-d9 (IS), CAS: 25725-11-5

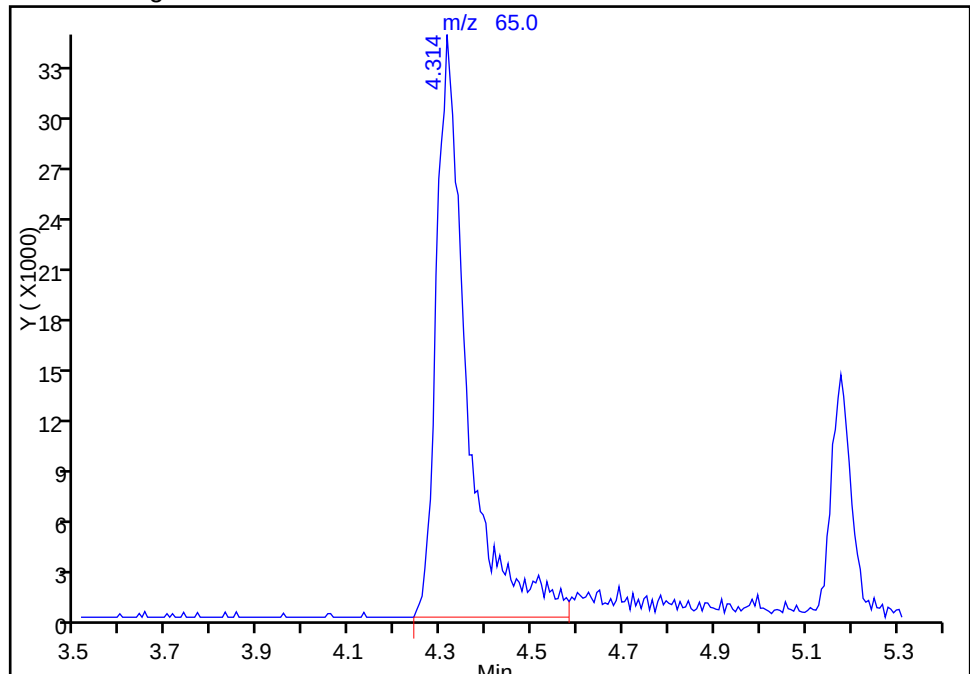
RT: 4.31
Area: 169293
Amount: 1000.0000
Amount Units: ng

Processing Integration Results



RT: 4.31
Area: 160393
Amount: 1000.0000
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:28:28

Audit Action: Manually Integrated

Audit Reason: Peak Tail

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303008.D

Injection Date: 03-Mar-2015 14:28:30

Instrument ID: CHHP5

Lims ID: IC VSTD5

Client ID:

Operator ID: 001562

ALS Bottle#:

6

Worklist Smp#: 8

Purge Vol: 5.000 mL

Dil. Factor:

1.0000

Method: MSVOA_LL_CHHP5

Limit Group:

VOA 8260C ICAL

Column: DB-624 (0.18 mm)

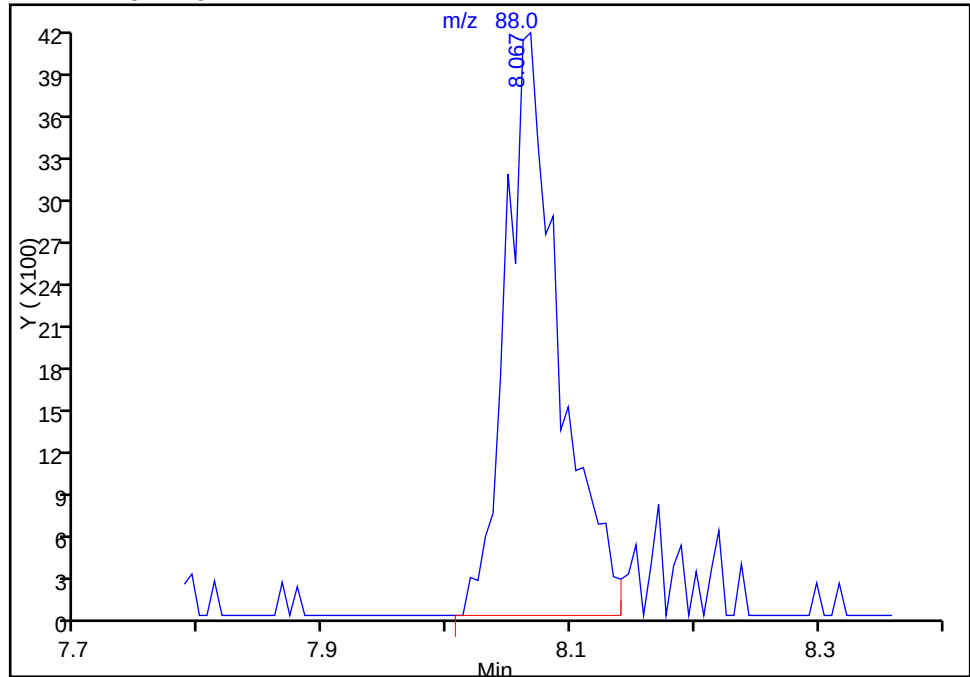
Detector

MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

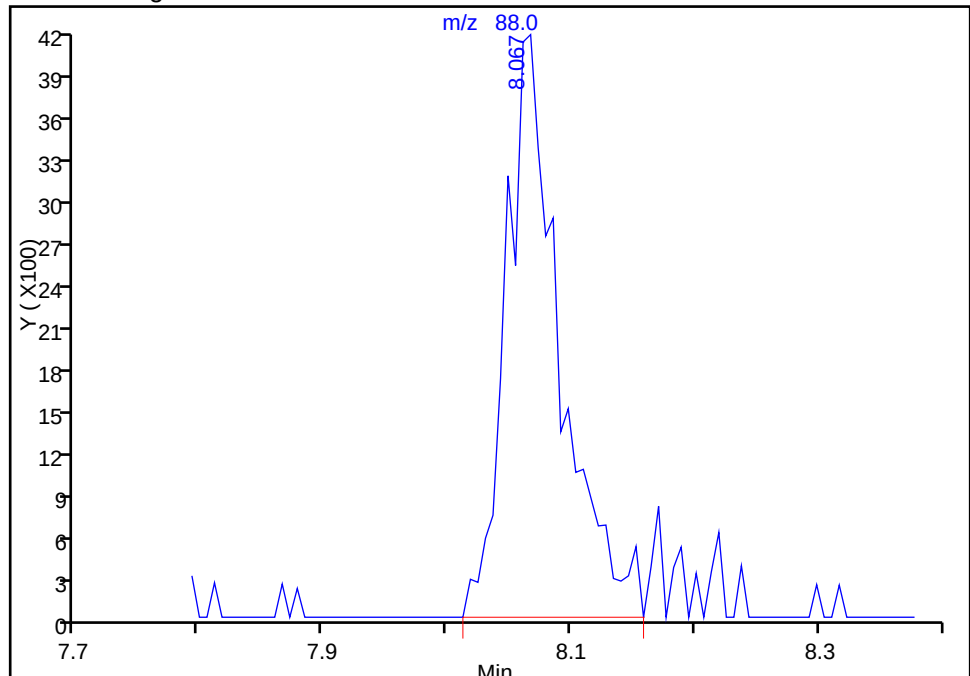
RT: 8.07
Area: 12493
Amount: 432.4578
Amount Units: ng

Processing Integration Results



RT: 8.07
Area: 12787
Amount: 437.5160
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:20:09

Audit Action: Manually Integrated

Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303009.D
 Lims ID: ICIS VSTD10
 Client ID:
 Sample Type: ICIS Calib Level: 3
 Inject. Date: 03-Mar-2015 14:52:30 ALS Bottle#: 7 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: ICIS VSTD10
 Misc. Info.: 180-0005873-009
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 04-Mar-2015 10:28:23 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK006

First Level Reviewer: fergusond

Date: 04-Mar-2015 10:28:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.321	4.321	0.000	75	164184	1000.0	1000.0	M
* 2 Fluorobenzene (IS)	96	7.278	7.278	0.000	95	524529	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	94	127341	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.686	0.000	92	172477	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.535	6.535	0.000	49	109435	50.0	48.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.907	6.907	0.000	67	133978	50.0	48.3	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.926	0.000	80	494434	50.0	49.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	89	176122	50.0	47.7	
11 Dichlorodifluoromethane	85	1.626	1.626	0.000	97	120251	50.0	45.6	
12 Chloromethane	50	1.772	1.772	0.000	87	191737	50.0	45.5	
13 Vinyl chloride	62	1.906	1.906	0.000	83	192697	50.0	47.6	
14 Butadiene	39	1.948	1.948	0.000	97	214505	50.0	45.7	
15 Bromomethane	94	2.253	2.253	0.000	89	68450	50.0	56.6	
16 Chloroethane	64	2.386	2.386	0.000	93	76259	50.0	46.3	
17 Dichlorofluoromethane	67	2.654	2.654	0.000	96	199002	50.0	52.7	
18 Trichlorofluoromethane	101	2.709	2.709	0.000	81	165171	50.0	52.4	
20 Ethyl ether	59	3.098	3.098	0.000	86	134232	50.0	44.1	
21 Acrolein	56	3.263	3.263	0.000	88	55616	150.0	138.4	
22 1,1-Dichloroethene	96	3.384	3.384	0.000	98	136777	50.0	44.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.427	3.427	0.000	93	138904	50.0	45.0	
24 Acetone	43	3.500	3.500	0.000	96	100332	100.0	91.1	
25 Iodomethane	142	3.585	3.585	0.000	94	191906	50.0	44.7	
26 Carbon disulfide	76	3.664	3.664	0.000	99	333091	50.0	44.3	
28 3-Chloro-1-propene	76	3.950	3.950	0.000	88	83771	50.0	43.9	
30 Methyl acetate	43	4.023	4.023	0.000	99	667992	250.0	220.5	
31 Methylene Chloride	84	4.151	4.151	0.000	92	157472	50.0	46.0	
32 2-Methyl-2-propanol	59	4.437	4.437	0.000	71	88451	500.0	449.6	
33 Acrylonitrile	53	4.558	4.558	0.000	100	691056	500.0	460.1	
34 trans-1,2-Dichloroethene	96	4.577	4.577	0.000	59	145422	50.0	45.5	
35 Methyl tert-butyl ether	73	4.601	4.601	0.000	92	357516	50.0	44.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.990	0.000	94	262665	50.0	46.3	
37 1,1-Dichloroethane	63	5.179	5.179	0.000	85	274871	50.0	45.2	
38 Vinyl acetate	43	5.307	5.307	0.000	96	96814	50.0	46.6	
44 2,2-Dichloropropane	77	5.933	5.933	0.000	63	100580	50.0	44.6	
45 cis-1,2-Dichloroethene	96	5.939	5.939	0.000	71	151771	50.0	44.4	
46 2-Butanone (MEK)	43	5.994	5.994	0.000	93	160864	100.0	89.6	
49 Chlorobromomethane	128	6.231	6.231	0.000	87	62252	50.0	43.7	
51 Tetrahydrofuran	42	6.298	6.298	0.000	92	110296	100.0	86.4	
52 Chloroform	83	6.347	6.347	0.000	84	211933	50.0	43.7	
53 1,1,1-Trichloroethane	97	6.541	6.541	0.000	89	146155	50.0	44.4	
54 Cyclohexane	56	6.596	6.596	0.000	94	341881	50.0	46.2	
56 Carbon tetrachloride	117	6.724	6.724	0.000	61	92122	50.0	41.2	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	90	191632	50.0	45.6	
57 Isobutyl alcohol	41	6.955	6.955	0.000	39	64264	1250.0	892.6	
58 Benzene	78	6.961	6.961	0.000	97	602514	50.0	45.5	
59 1,2-Dichloroethane	62	6.992	6.992	0.000	87	170712	50.0	44.6	
62 n-Heptane	43	7.284	7.284	0.000	71	235230	50.0	45.7	
64 Trichloroethene	130	7.673	7.673	0.000	93	142439	50.0	45.6	
66 Methylcyclohexane	83	7.868	7.868	0.000	92	269904	50.0	45.8	
67 1,2-Dichloropropane	63	7.910	7.910	0.000	90	157237	50.0	45.2	
68 Dibromomethane	93	8.026	8.026	0.000	91	69033	50.0	43.9	
70 1,4-Dioxane	88	8.056	8.056	0.000	94	25299	1000.0	815.7	M
71 Dichlorobromomethane	83	8.202	8.202	0.000	90	123848	50.0	42.3	
74 cis-1,3-Dichloropropene	75	8.665	8.665	0.000	90	172126	50.0	44.4	
75 4-Methyl-2-pentanone (MIBK)	43	8.829	8.829	0.000	96	349805	100.0	91.0	
76 Toluene	91	8.993	8.993	0.000	91	612731	50.0	46.6	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	82	118446	50.0	42.7	
78 Ethyl methacrylate	69	9.322	9.322	0.000	94	131269	50.0	42.1	
79 1,1,2-Trichloroethane	97	9.407	9.407	0.000	85	109481	50.0	45.6	
80 Tetrachloroethene	164	9.541	9.541	0.000	97	111273	50.0	45.9	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	95	208110	50.0	46.1	
82 2-Hexanone	43	9.662	9.662	0.000	98	246507	100.0	91.8	
84 Chlorodibromomethane	129	9.796	9.796	0.000	88	64530	50.0	40.9	
85 Ethylene Dibromide	107	9.906	9.906	0.000	99	103819	50.0	44.9	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	74	196791	50.0	48.8	
87 Chlorobenzene	112	10.398	10.398	0.000	90	384609	50.0	45.7	
88 4-Chlorobenzotrifluoride	180	10.435	10.435	0.000	78	193901	50.0	50.3	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	79	80096	50.0	41.3	
90 Ethylbenzene	106	10.508	10.508	0.000	98	225030	50.0	46.2	
91 m-Xylene & p-Xylene	106	10.624	10.624	0.000	99	274985	50.0	45.9	
92 o-Xylene	106	11.013	11.013	0.000	92	271432	50.0	46.7	
93 Styrene	104	11.031	11.031	0.000	91	439152	50.0	46.2	
94 Bromoform	173	11.214	11.214	0.000	69	30710	50.0	36.8	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	95	193920	50.0	48.5	
97 Isopropylbenzene	105	11.384	11.384	0.000	96	672554	50.0	47.1	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.676	0.000	76	154009	50.0	46.3	
100 Bromobenzene	156	11.682	11.682	0.000	94	141042	50.0	46.8	
101 1,2,3-Trichloropropane	110	11.725	11.725	0.000	57	47052	50.0	46.6	
102 trans-1,4-Dichloro-2-buten	53	11.737	11.737	0.000	60	42637	50.0	43.5	
103 N-Propylbenzene	120	11.792	11.792	0.000	93	195976	50.0	49.0	
104 2-Chlorotoluene	126	11.883	11.883	0.000	96	154797	50.0	46.8	
105 3-Chlorotoluene	126	11.938	11.938	0.000	55	166326	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.968	11.968	0.000	94	539843	50.0	48.7	
107 4-Chlorotoluene	126	11.986	11.986	0.000	98	171070	50.0	48.0	
108 tert-Butylbenzene	119	12.290	12.290	0.000	63	468002	50.0	49.0	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	98	553643	50.0	48.4	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	96	130185	50.0	50.4	
112 sec-Butylbenzene	105	12.509	12.509	0.000	94	669756	50.0	48.7	
113 1,3-Dichlorobenzene	146	12.625	12.625	0.000	82	280066	50.0	47.0	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	91	542443	50.0	48.1	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	92	283523	50.0	47.3	
116 2,4-Dichloro-1-(trifluorom	214	12.765	12.765	0.000	89	125921	50.0	51.3	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	97	134395	50.0	50.3	
120 n-Butylbenzene	91	13.069	13.069	0.000	95	479164	50.0	47.8	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	94	258190	50.0	47.4	
122 1,2-Dibromo-3-Chloropropan	75	13.866	13.866	0.000	51	14541	50.0	40.5	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.006	0.000	96	553886	150.0	148.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.432	14.432	0.000	98	360944	100.0	98.1	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	91	127415	50.0	46.8	
127 Hexachlorobutadiene	225	14.870	14.870	0.000	90	54129	50.0	46.5	
128 Naphthalene	128	14.943	14.943	0.000	97	358706	50.0	45.4	
129 1,2,3-Trichlorobenzene	180	15.186	15.186	0.000	95	103456	50.0	44.3	
131 2,4,5-Trichlorotoluene	159	15.971	15.971	0.000	93	52505	50.0	44.4	
130 2,3,6-Trichlorotoluene	159	16.068	16.068	0.000	94	48130	50.0	44.2	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	92.5	
S 134 1,2-Dichloroethene, Total	96				0		100.0	90.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	87.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added: 6.00	Units: uL	
VOA8260SURR_00031	Amount Added: 2.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added: 2.00	Units: uL	
voaWEEpri Res_00003	Amount Added: 2.00	Units: uL	
VOAVAPRI_00003	Amount Added: 2.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 2.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303009.D

Injection Date: 03-Mar-2015 14:52:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: ICIS VSTD10

Worklist Smp#: 9

Client ID:

Purge Vol: 5.000 mL

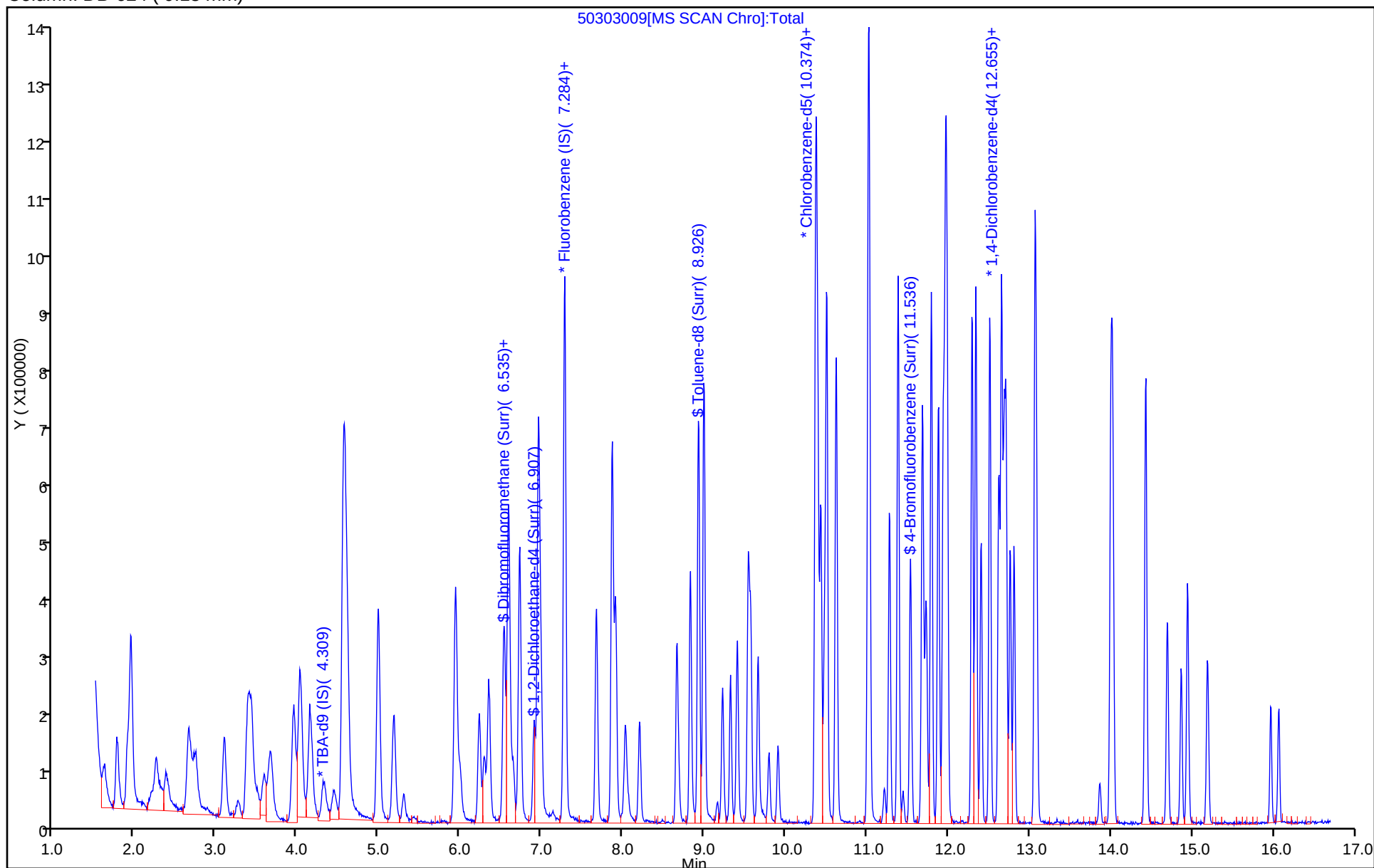
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



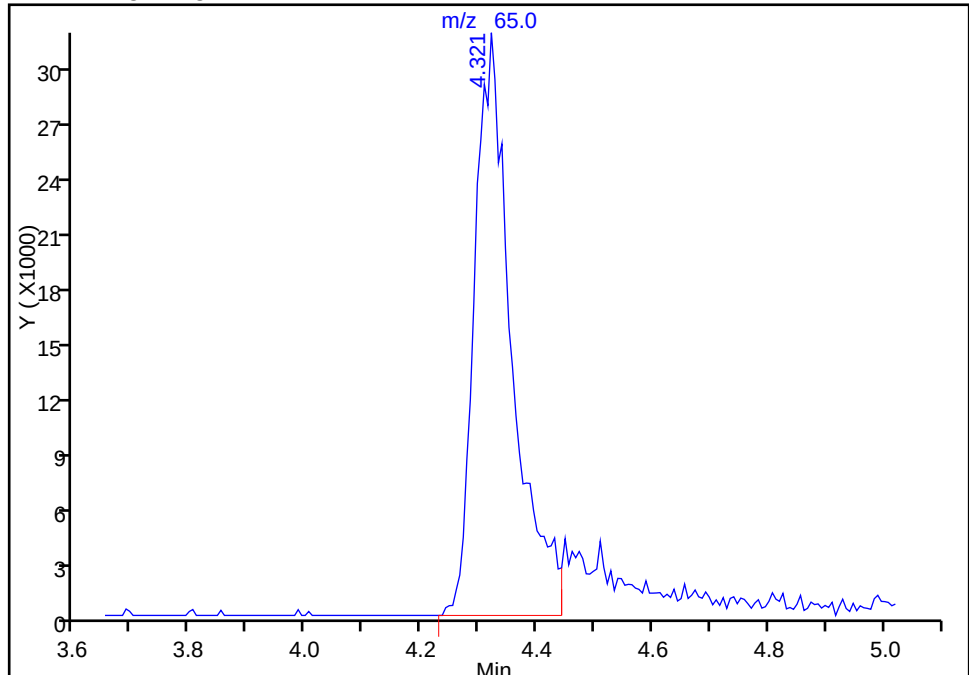
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303009.D
Injection Date: 03-Mar-2015 14:52:30 Instrument ID: CHHP5
Lims ID: ICIS VSTD10
Client ID:
Operator ID: 001562 ALS Bottle#: 7 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

* 1 TBA-d9 (IS), CAS: 25725-11-5

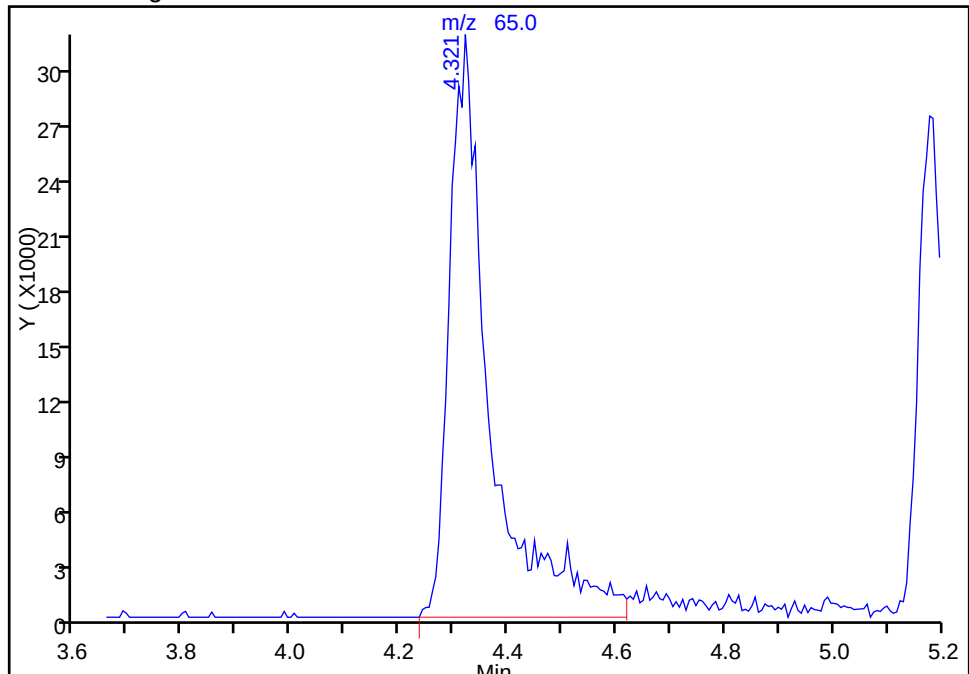
RT: 4.32
Area: 141522
Amount: 1000.0000
Amount Units: ng

Processing Integration Results



RT: 4.32
Area: 164184
Amount: 1000.0000
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:28:59
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303009.D

Injection Date: 03-Mar-2015 14:52:30

Instrument ID: CHHP5

Lims ID: ICIS VSTD10

Client ID:

Operator ID: 001562

ALS Bottle#:

7

Worklist Smp#: 9

Purge Vol: 5.000 mL

Dil. Factor:

1.0000

Method: MSVOA_LL_CHHP5

Limit Group:

VOA 8260C ICAL

Column: DB-624 (0.18 mm)

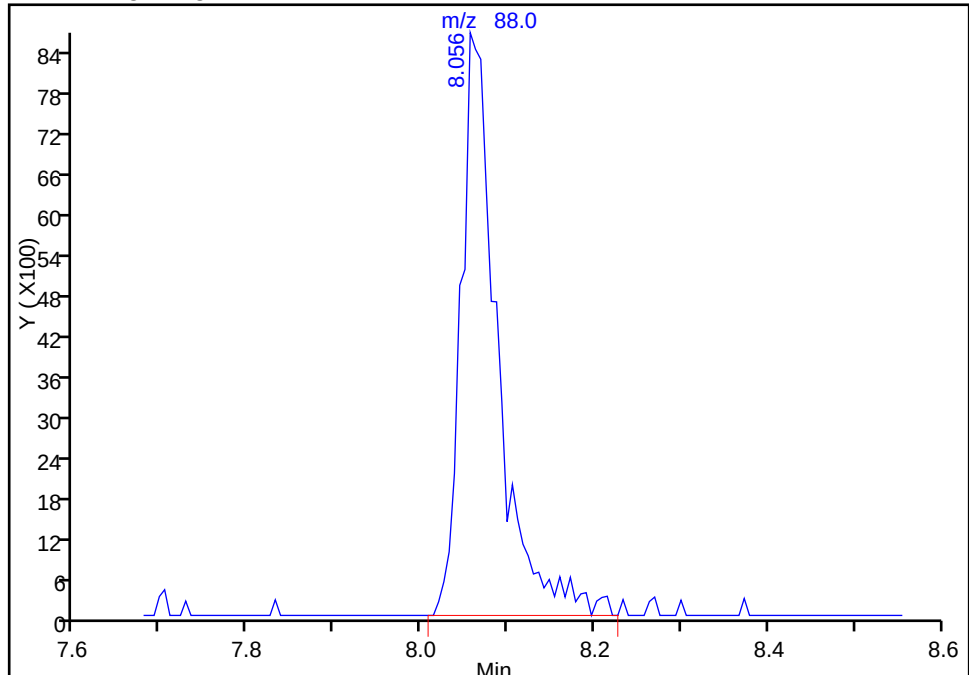
Detector

MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

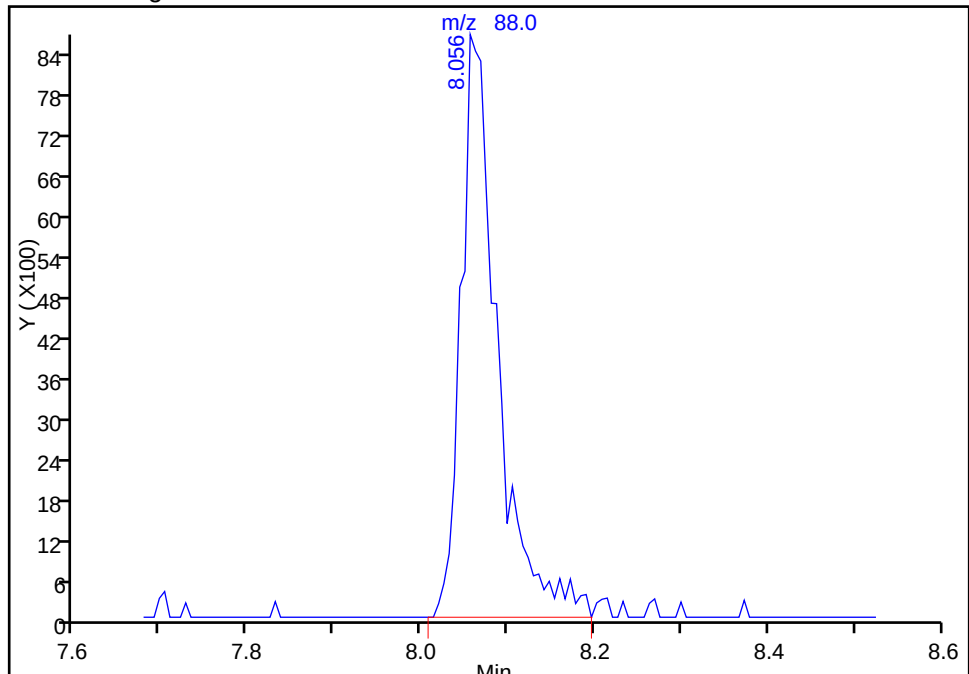
RT: 8.06
Area: 25579
Amount: 832.2190
Amount Units: ng

Processing Integration Results



RT: 8.06
Area: 25299
Amount: 815.6604
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:25:43

Audit Action: Manually Integrated

Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303010.D
 Lims ID: IC VSTD15
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 03-Mar-2015 15:16:30 ALS Bottle#: 8 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: IC VSTD15
 Misc. Info.: 180-0005873-010
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 04-Mar-2015 10:13:08 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK006

First Level Reviewer: fergusond

Date: 04-Mar-2015 09:26:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.321	4.321	0.000	94	173343	1000.0	1000.0	M
* 2 Fluorobenzene (IS)	96	7.277	7.277	0.000	96	473168	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	95	112379	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	95	164943	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.535	6.535	0.000	79	155860	75.0	76.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.912	6.912	0.000	96	185233	75.0	74.0	
\$ 7 Toluene-d8 (Surr)	98	8.932	8.932	0.000	94	686909	75.0	78.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	86	251005	75.0	77.0	
11 Dichlorodifluoromethane	85	1.620	1.620	0.000	98	186155	75.0	78.3	
12 Chloromethane	50	1.778	1.778	0.000	99	284435	75.0	74.9	
13 Vinyl chloride	62	1.912	1.912	0.000	98	276203	75.0	75.6	
14 Butadiene	39	1.948	1.948	0.000	98	311986	75.0	73.7	
15 Bromomethane	94	2.258	2.258	0.000	89	83485	75.0	78.2	
16 Chloroethane	64	2.380	2.380	0.000	97	109418	75.0	73.7	
17 Dichlorofluoromethane	67	2.648	2.648	0.000	97	252307	75.0	74.1	
18 Trichlorofluoromethane	101	2.708	2.708	0.000	97	211640	75.0	74.4	
20 Ethyl ether	59	3.092	3.092	0.000	100	203184	75.0	74.0	
21 Acrolein	56	3.274	3.274	0.000	100	66477	175.0	183.4	
22 1,1-Dichloroethene	96	3.384	3.384	0.000	100	210842	75.0	76.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.420	3.420	0.000	100	215323	75.0	77.3	
24 Acetone	43	3.505	3.505	0.000	100	145165	150.0	146.1	
25 Iodomethane	142	3.585	3.585	0.000	100	288929	75.0	74.5	
26 Carbon disulfide	76	3.664	3.664	0.000	100	513502	75.0	75.7	
28 3-Chloro-1-propene	76	3.956	3.956	0.000	100	129734	75.0	75.4	
30 Methyl acetate	43	4.029	4.029	0.000	100	1035670	375.0	378.9	
31 Methylene Chloride	84	4.150	4.150	0.000	100	227072	75.0	75.7	
32 2-Methyl-2-propanol	59	4.454	4.454	0.000	100	166475	750.0	801.4	
33 Acrylonitrile	53	4.564	4.564	0.000	100	1012388	750.0	747.2	
34 trans-1,2-Dichloroethene	96	4.576	4.576	0.000	100	213264	75.0	74.0	
35 Methyl tert-butyl ether	73	4.607	4.607	0.000	100	532783	75.0	74.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.990	0.000	100	382955	75.0	74.9	
37 1,1-Dichloroethane	63	5.178	5.178	0.000	100	412070	75.0	75.0	
38 Vinyl acetate	43	5.306	5.306	0.000	100	136421	75.0	72.7	
44 2,2-Dichloropropane	77	5.933	5.933	0.000	100	152789	75.0	75.2	
45 cis-1,2-Dichloroethene	96	5.945	5.945	0.000	100	230462	75.0	74.8	
46 2-Butanone (MEK)	43	6.000	6.000	0.000	100	231681	150.0	143.1	
49 Chlorobromomethane	128	6.237	6.237	0.000	100	93661	75.0	73.0	
51 Tetrahydrofuran	42	6.292	6.292	0.000	100	164028	150.0	142.4	
52 Chloroform	83	6.346	6.346	0.000	100	325101	75.0	74.3	
53 1,1,1-Trichloroethane	97	6.535	6.535	0.000	100	222478	75.0	74.9	
54 Cyclohexane	56	6.590	6.590	0.000	100	510634	75.0	76.6	
56 Carbon tetrachloride	117	6.724	6.724	0.000	100	148555	75.0	73.7	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	100	290552	75.0	76.6	
57 Isobutyl alcohol	41	6.949	6.949	0.000	100	110778	1875.0	1705.7	
58 Benzene	78	6.967	6.967	0.000	100	905954	75.0	75.8	
59 1,2-Dichloroethane	62	6.991	6.991	0.000	100	260776	75.0	75.5	
62 n-Heptane	43	7.283	7.283	0.000	100	351211	75.0	75.6	
64 Trichloroethene	130	7.673	7.673	0.000	100	215876	75.0	76.7	
66 Methylcyclohexane	83	7.867	7.867	0.000	100	402645	75.0	75.7	
67 1,2-Dichloropropane	63	7.910	7.910	0.000	100	233558	75.0	74.4	
68 Dibromomethane	93	8.025	8.025	0.000	100	105949	75.0	74.8	
70 1,4-Dioxane	88	8.068	8.068	0.000	100	41693	1500.0	1490.1	
71 Dichlorobromomethane	83	8.202	8.202	0.000	100	196712	75.0	74.4	
74 cis-1,3-Dichloropropene	75	8.664	8.664	0.000	100	264977	75.0	75.7	
75 4-Methyl-2-pentanone (MIBK)	43	8.828	8.828	0.000	100	535170	150.0	157.7	
76 Toluene	91	8.999	8.999	0.000	100	901036	75.0	77.7	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	100	181868	75.0	74.4	
78 Ethyl methacrylate	69	9.321	9.321	0.000	100	212852	75.0	77.4	
79 1,1,2-Trichloroethane	97	9.406	9.406	0.000	100	164474	75.0	77.6	
80 Tetrachloroethene	164	9.540	9.540	0.000	100	166159	75.0	77.6	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	100	308357	75.0	77.4	
82 2-Hexanone	43	9.662	9.662	0.000	100	379170	150.0	160.1	
84 Chlorodibromomethane	129	9.796	9.796	0.000	100	104491	75.0	75.0	
85 Ethylene Dibromide	107	9.905	9.905	0.000	100	156151	75.0	76.5	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	100	273444	75.0	76.9	
87 Chlorobenzene	112	10.398	10.398	0.000	100	567114	75.0	76.3	
88 4-Chlorobenzotrifluoride	180	10.428	10.428	0.000	100	266494	75.0	78.4	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	100	126760	75.0	74.0	
90 Ethylbenzene	106	10.508	10.508	0.000	100	336025	75.0	78.2	
91 m-Xylene & p-Xylene	106	10.623	10.623	0.000	100	411920	75.0	77.9	
92 o-Xylene	106	11.019	11.019	0.000	100	400497	75.0	78.0	
93 Styrene	104	11.031	11.031	0.000	100	658511	75.0	78.5	
94 Bromoform	173	11.213	11.213	0.000	100	53409	75.0	72.6	
96 2-Chlorobenzotrifluoride	180	11.280	11.280	0.000	100	270017	75.0	76.6	
97 Isopropylbenzene	105	11.384	11.384	0.000	100	1000450	75.0	79.4	
99 1,1,2,2-Tetrachloroethane	83	11.682	11.682	0.000	100	226865	75.0	77.2	
100 Bromobenzene	156	11.688	11.688	0.000	100	214072	75.0	74.3	
101 1,2,3-Trichloropropane	110	11.724	11.724	0.000	100	69273	75.0	71.7	
102 trans-1,4-Dichloro-2-buten	53	11.736	11.736	0.000	100	66494	75.0	70.9	
103 N-Propylbenzene	120	11.791	11.791	0.000	100	290195	75.0	75.8	
104 2-Chlorotoluene	126	11.882	11.882	0.000	100	235369	75.0	74.5	
105 3-Chlorotoluene	126	11.937	11.937	0.000	100	229133	75.0	70.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.968	11.968	0.000	100	806423	75.0	76.1	
107 4-Chlorotoluene	126	11.986	11.986	0.000	100	256729	75.0	75.3	
108 tert-Butylbenzene	119	12.296	12.296	0.000	100	700240	75.0	76.6	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	100	832074	75.0	76.1	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	100	183065	75.0	74.2	
112 sec-Butylbenzene	105	12.515	12.515	0.000	100	1008135	75.0	76.6	
113 1,3-Dichlorobenzene	146	12.625	12.625	0.000	100	420272	75.0	73.8	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	100	824816	75.0	76.5	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	100	429154	75.0	74.9	
116 2,4-Dichloro-1-(trifluorom	214	12.764	12.764	0.000	100	171372	75.0	73.1	
118 2,5-Dichlorobenzotrifluori	214	12.813	12.813	0.000	100	186097	75.0	72.8	
120 n-Butylbenzene	91	13.069	13.069	0.000	100	729499	75.0	76.1	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	100	387327	75.0	74.4	
122 1,2-Dibromo-3-Chloropropan	75	13.866	13.866	0.000	100	23597	75.0	68.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.012	14.012	0.000	100	813805	225.0	228.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.431	0.000	100	529936	150.0	150.7	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	100	199956	75.0	76.8	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	100	81675	75.0	73.4	
128 Naphthalene	128	14.942	14.942	0.000	100	580632	75.0	76.8	
129 1,2,3-Trichlorobenzene	180	15.192	15.192	0.000	100	171850	75.0	76.9	
131 2,4,5-Trichlorotoluene	159	15.970	15.970	0.000	100	81997	75.0	72.6	
130 2,3,6-Trichlorotoluene	159	16.068	16.068	0.000	100	78544	75.0	75.4	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		150.0	155.9	
S 134 1,2-Dichloroethene, Total	96				0		150.0	148.8	
S 135 1,3-Dichloropropene, Total	1				0		150.0	150.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

voaWKetpri Re_00003	Amount Added: 3.00	Units: uL	
VOA8260SURR_00031	Amount Added: 3.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added: 3.00	Units: uL	
voaWEEpri Res_00003	Amount Added: 3.00	Units: uL	
VOAVAPRI_00003	Amount Added: 3.00	Units: uL	
VOAACRPRI_00003	Amount Added: 7.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303010.D

Injection Date: 03-Mar-2015 15:16:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD15

Worklist Smp#: 10

Client ID:

Purge Vol: 5.000 mL

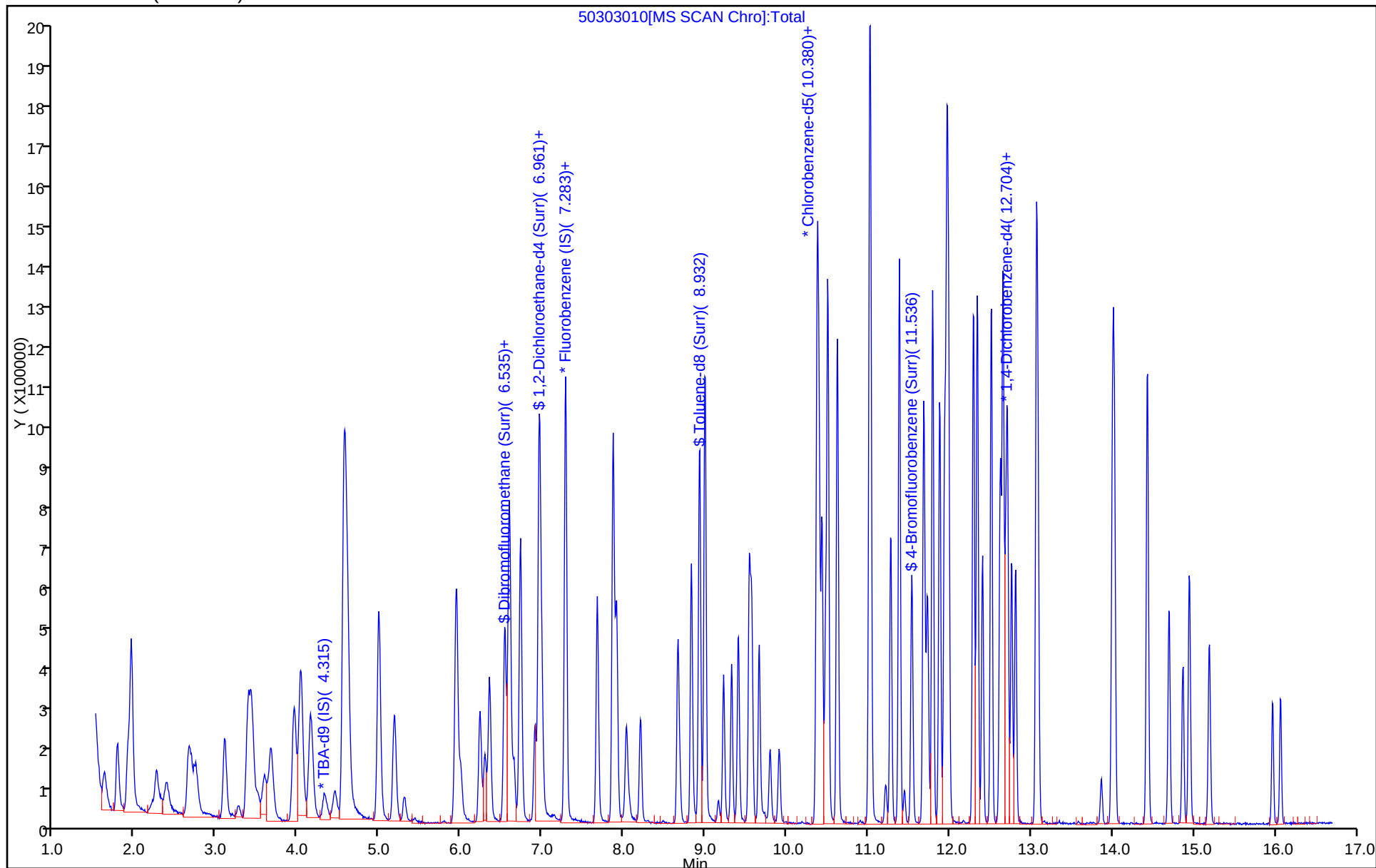
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303010.D

Injection Date: 03-Mar-2015 15:16:30

Instrument ID: CHHP5

Lims ID: IC VSTD15

Client ID:

Operator ID: 001562

ALS Bottle#:

8

Worklist Smp#: 10

Purge Vol: 5.000 mL

Dil. Factor:

1.0000

Method: MSVOA_LL_CHHP5

Limit Group:

VOA 8260C ICAL

Column: DB-624 (0.18 mm)

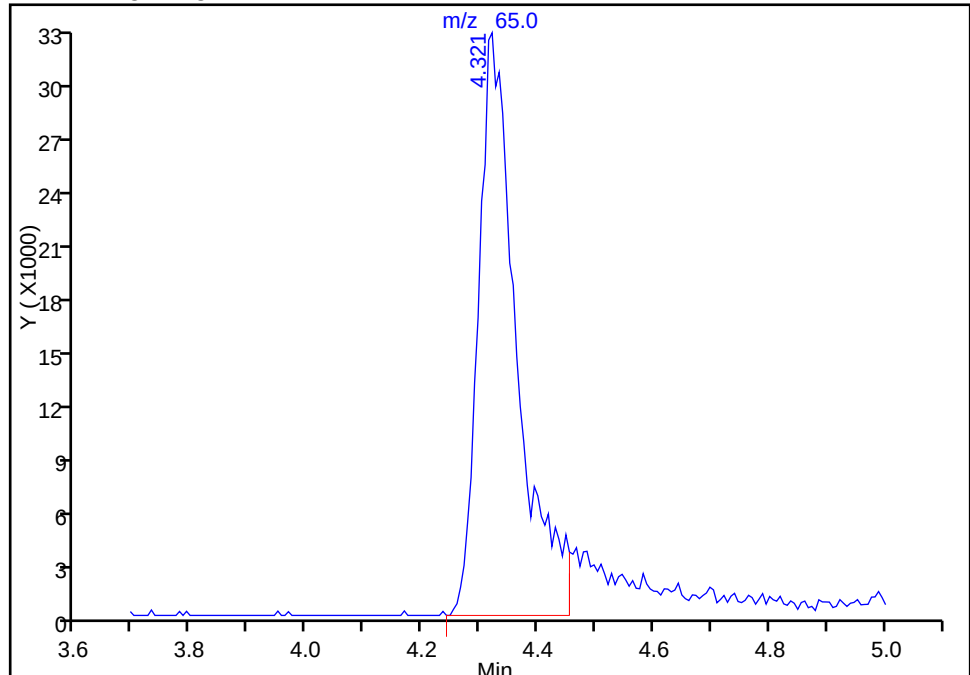
Detector

MS SCAN

* 1 TBA-d9 (IS), CAS: 25725-11-5

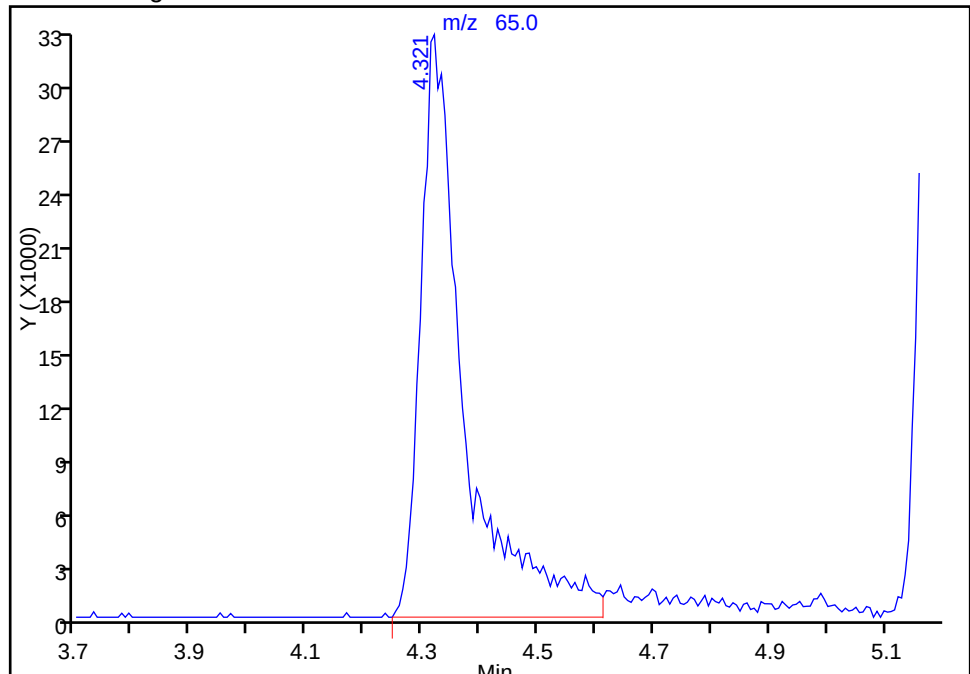
RT: 4.32
Area: 152021
Amount: 1000.0000
Amount Units: ng

Processing Integration Results



RT: 4.32
Area: 173343
Amount: 1000.0000
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:31:26

Audit Action: Manually Integrated

Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303011.D
 Lims ID: IC VSTD20
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 03-Mar-2015 15:40:30 ALS Bottle#: 9 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: IC VSTD20
 Misc. Info.: 180-0005873-011
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 04-Mar-2015 10:13:10 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK006

First Level Reviewer: fergusond

Date: 04-Mar-2015 09:33:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.321	4.321	0.000	95	178184	1000.0	1000.0	M
* 2 Fluorobenzene (IS)	96	7.277	7.277	0.000	90	463863	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	97	114659	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	96	167232	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.535	6.535	0.000	98	199995	100.0	100.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.912	-0.006	99	250369	100.0	102.0	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.932	-0.006	100	910944	100.0	101.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	99	327893	100.0	98.6	
11 Dichlorodifluoromethane	85	1.626	1.620	0.006	71	248600	100.0	106.7	
12 Chloromethane	50	1.778	1.778	0.000	94	377346	100.0	101.3	
13 Vinyl chloride	62	1.906	1.912	-0.006	100	370529	100.0	103.5	
14 Butadiene	39	1.948	1.948	0.000	98	418091	100.0	100.7	
15 Bromomethane	94	2.252	2.258	-0.006	70	100603	100.0	97.3	
16 Chloroethane	64	2.386	2.380	0.006	78	141570	100.0	97.2	
17 Dichlorofluoromethane	67	2.654	2.648	0.006	99	320590	100.0	96.0	
18 Trichlorofluoromethane	101	2.703	2.708	-0.005	97	274680	100.0	98.5	
20 Ethyl ether	59	3.092	3.092	0.000	99	266877	100.0	99.2	
21 Acrolein	56	3.262	3.274	-0.012	84	73636	200.0	207.2	
22 1,1-Dichloroethene	96	3.378	3.384	-0.006	99	282447	100.0	104.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.427	3.420	0.007	98	283308	100.0	103.8	
24 Acetone	43	3.506	3.505	0.001	99	186722	200.0	191.7	
25 Iodomethane	142	3.573	3.585	-0.012	96	391404	100.0	103.0	
26 Carbon disulfide	76	3.658	3.664	-0.006	100	702207	100.0	105.6	
28 3-Chloro-1-propene	76	3.944	3.956	-0.012	91	175910	100.0	104.3	
30 Methyl acetate	43	4.023	4.029	-0.006	100	1360573	500.0	507.8	
31 Methylene Chloride	84	4.144	4.150	-0.006	99	292219	100.0	100.5	
32 2-Methyl-2-propanol	59	4.449	4.454	-0.005	74	219266	1000.0	1026.9	M
33 Acrylonitrile	53	4.558	4.564	-0.006	99	1352445	1000.0	1018.2	
34 trans-1,2-Dichloroethene	96	4.564	4.576	-0.012	56	288749	100.0	102.2	
35 Methyl tert-butyl ether	73	4.607	4.607	0.000	100	717429	100.0	101.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.984	4.990	-0.006	99	515034	100.0	102.7	
37 1,1-Dichloroethane	63	5.173	5.178	-0.005	100	542610	100.0	100.8	
38 Vinyl acetate	43	5.300	5.306	-0.006	95	200290	100.0	108.9	
44 2,2-Dichloropropane	77	5.933	5.933	0.000	65	206033	100.0	103.4	
45 cis-1,2-Dichloroethene	96	5.945	5.945	0.000	92	302735	100.0	100.2	
46 2-Butanone (MEK)	43	5.994	6.000	-0.006	100	323375	200.0	203.7	
49 Chlorobromomethane	128	6.225	6.237	-0.012	79	129587	100.0	103.0	
51 Tetrahydrofuran	42	6.286	6.292	-0.006	98	227621	200.0	201.5	
52 Chloroform	83	6.347	6.346	0.001	98	436474	100.0	101.7	
53 1,1,1-Trichloroethane	97	6.535	6.535	0.000	75	308574	100.0	105.9	
54 Cyclohexane	56	6.590	6.590	0.000	83	671150	100.0	102.6	
56 Carbon tetrachloride	117	6.724	6.724	0.000	68	204809	100.0	103.6	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	96	385796	100.0	103.8	
57 Isobutyl alcohol	41	6.949	6.949	0.000	41	166120	2500.0	2609.2	
58 Benzene	78	6.961	6.967	-0.006	99	1208197	100.0	103.1	
59 1,2-Dichloroethane	62	6.985	6.991	-0.006	93	341780	100.0	101.0	
62 n-Heptane	43	7.284	7.283	0.001	96	463470	100.0	101.7	
64 Trichloroethene	130	7.673	7.673	0.000	98	289114	100.0	104.8	
66 Methylcyclohexane	83	7.868	7.867	0.001	95	553839	100.0	106.2	
67 1,2-Dichloropropane	63	7.910	7.910	0.000	99	309721	100.0	100.7	
68 Dibromomethane	93	8.026	8.025	0.001	98	142348	100.0	102.4	
70 1,4-Dioxane	88	8.062	8.068	-0.006	93	56031	2000.0	2042.7	
71 Dichlorobromomethane	83	8.202	8.202	0.000	99	271870	100.0	105.0	
74 cis-1,3-Dichloropropene	75	8.658	8.664	-0.006	99	360087	100.0	104.9	
75 4-Methyl-2-pentanone (MIBK)	43	8.829	8.828	0.001	72	716953	200.0	207.1	
76 Toluene	91	8.993	8.999	-0.006	98	1214867	100.0	102.7	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	80	260722	100.0	104.5	
78 Ethyl methacrylate	69	9.321	9.321	0.000	93	300128	100.0	107.0	
79 1,1,2-Trichloroethane	97	9.407	9.406	0.001	93	214719	100.0	99.3	
80 Tetrachloroethene	164	9.540	9.540	0.000	98	224037	100.0	102.6	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	94	406834	100.0	100.1	
82 2-Hexanone	43	9.662	9.662	0.000	99	504684	200.0	208.8	
84 Chlorodibromomethane	129	9.796	9.796	0.000	93	148140	100.0	104.2	
85 Ethylene Dibromide	107	9.905	9.905	0.000	98	216491	100.0	104.0	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	99	362586	100.0	99.9	
87 Chlorobenzene	112	10.392	10.398	-0.006	89	771107	100.0	101.7	
88 4-Chlorobenzotrifluoride	180	10.435	10.428	0.007	97	349632	100.0	100.8	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	96	178500	100.0	102.1	
90 Ethylbenzene	106	10.508	10.508	0.000	100	459104	100.0	104.8	
91 m-Xylene & p-Xylene	106	10.623	10.623	0.000	100	559842	100.0	103.7	
92 o-Xylene	106	11.013	11.019	-0.005	93	532728	100.0	101.7	
93 Styrene	104	11.031	11.031	0.000	96	881546	100.0	102.9	
94 Bromoform	173	11.213	11.213	0.000	90	78926	100.0	105.1	
96 2-Chlorobenzotrifluoride	180	11.280	11.280	0.000	96	362034	100.0	100.6	
97 Isopropylbenzene	105	11.384	11.384	0.000	97	1329527	100.0	103.4	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.682	-0.006	76	310127	100.0	103.5	
100 Bromobenzene	156	11.688	11.688	0.000	95	285408	100.0	97.7	
101 1,2,3-Trichloropropane	110	11.724	11.724	0.000	70	94067	100.0	96.1	
102 trans-1,4-Dichloro-2-buten	53	11.737	11.736	0.001	79	87031	100.0	91.5	
103 N-Propylbenzene	120	11.791	11.791	0.000	98	387657	100.0	99.9	
104 2-Chlorotoluene	126	11.877	11.882	-0.005	99	315400	100.0	98.4	
105 3-Chlorotoluene	126	11.937	11.937	0.000	75	313196	100.0	95.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.968	11.968	0.000	99	1078510	100.0	100.4	
107 4-Chlorotoluene	126	11.986	11.986	0.000	99	352063	100.0	101.8	
108 tert-Butylbenzene	119	12.290	12.296	-0.006	66	930079	100.0	100.3	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	100	1124585	100.0	101.5	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	98	245627	100.0	98.2	
112 sec-Butylbenzene	105	12.509	12.515	-0.006	92	1341600	100.0	100.6	
113 1,3-Dichlorobenzene	146	12.625	12.625	0.000	88	570988	100.0	98.9	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	99	1092513	100.0	99.9	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	97	576692	100.0	99.2	
116 2,4-Dichloro-1-(trifluorom	214	12.765	12.764	0.001	94	238033	100.0	100.1	
118 2,5-Dichlorobenzotrifluori	214	12.813	12.813	0.000	97	254456	100.0	98.1	
120 n-Butylbenzene	91	13.069	13.069	0.000	100	981363	100.0	101.0	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	99	527759	100.0	99.9	
122 1,2-Dibromo-3-Chloropropan	75	13.860	13.866	-0.006	94	35031	100.0	100.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.012	14.012	0.000	99	1079107	300.0	299.2	
125 2,3- & 3,4- Dichlorotoluen	125	14.426	14.431	-0.005	99	704089	200.0	197.4	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	98	263899	100.0	99.9	
127 Hexachlorobutadiene	225	14.864	14.869	-0.005	94	111717	100.0	99.0	
128 Naphthalene	128	14.943	14.942	0.001	100	773789	100.0	101.0	
129 1,2,3-Trichlorobenzene	180	15.192	15.192	0.000	98	224922	100.0	99.3	
131 2,4,5-Trichlorotoluene	159	15.971	15.970	0.001	96	109488	100.0	95.6	
130 2,3,6-Trichlorotoluene	159	16.062	16.068	-0.006	97	102526	100.0	97.1	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		200.0	205.4	
S 134 1,2-Dichloroethene, Total	96				0		200.0	202.5	
S 135 1,3-Dichloropropene, Total	1				0		200.0	209.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added: 8.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 4.00	Units: uL	
VOAVAPRI_00003	Amount Added: 4.00	Units: uL	
voaWEEpri Res_00003	Amount Added: 4.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added: 4.00	Units: uL	
VOA8260SURRE_00031	Amount Added: 4.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent

Report Date: 04-Mar-2015 10:13:10

Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303011.D

Injection Date: 03-Mar-2015 15:40:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD20

Worklist Smp#: 11

Client ID:

Purge Vol: 5.000 mL

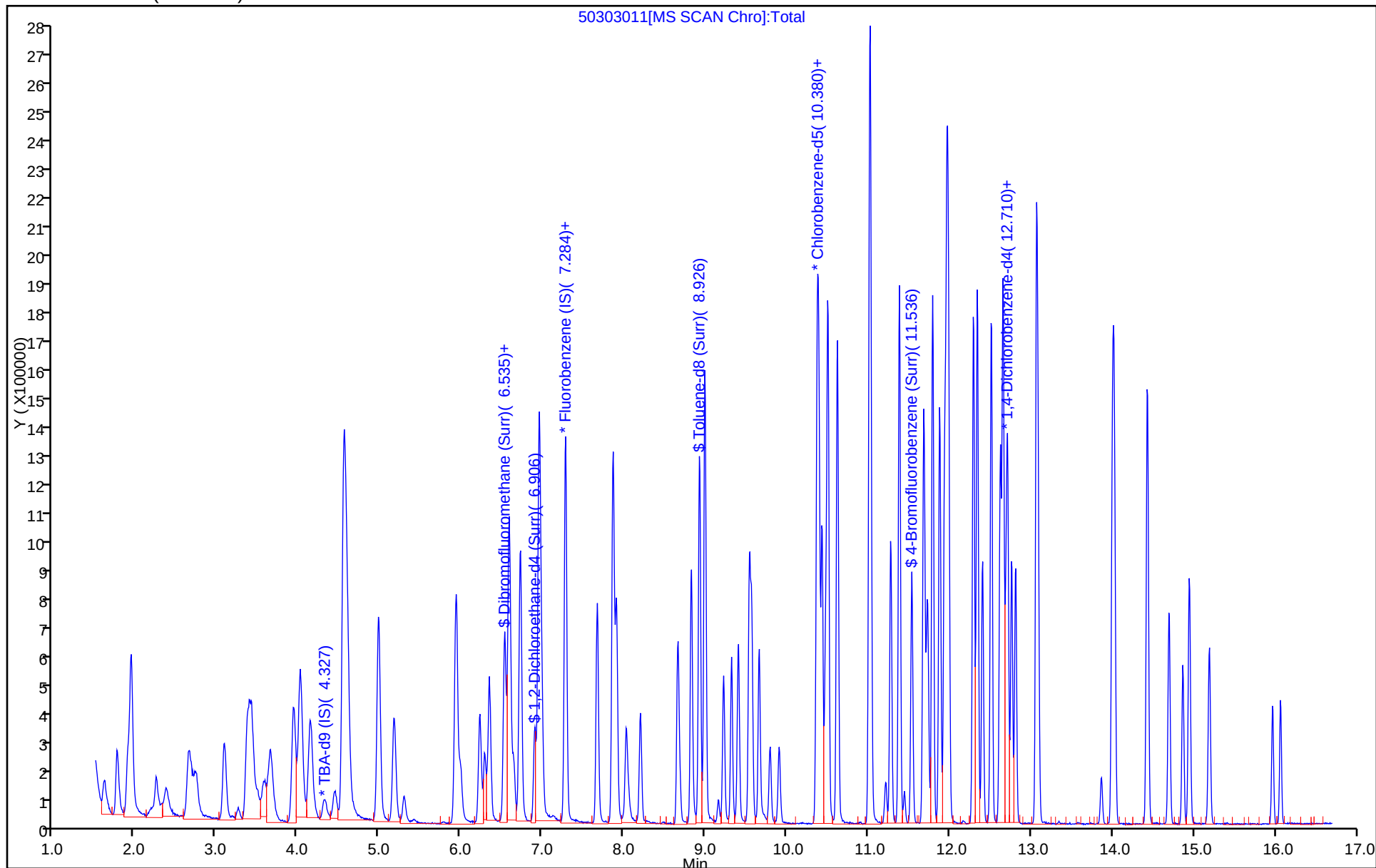
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303011.D

Injection Date: 03-Mar-2015 15:40:30

Instrument ID: CHHP5

Lims ID: IC VSTD20

Client ID:

Operator ID: 001562

ALS Bottle#:

9

Worklist Smp#: 11

Purge Vol: 5.000 mL

Dil. Factor:

1.0000

Method: MSVOA_LL_CHHP5

Limit Group:

VOA 8260C ICAL

Column: DB-624 (0.18 mm)

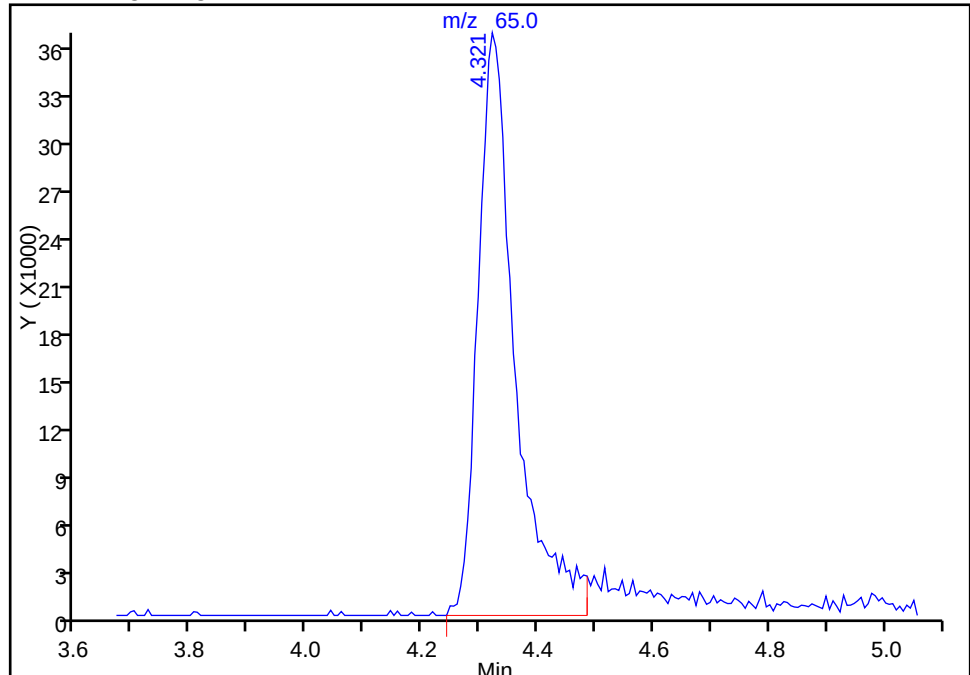
Detector

MS SCAN

* 1 TBA-d9 (IS), CAS: 25725-11-5

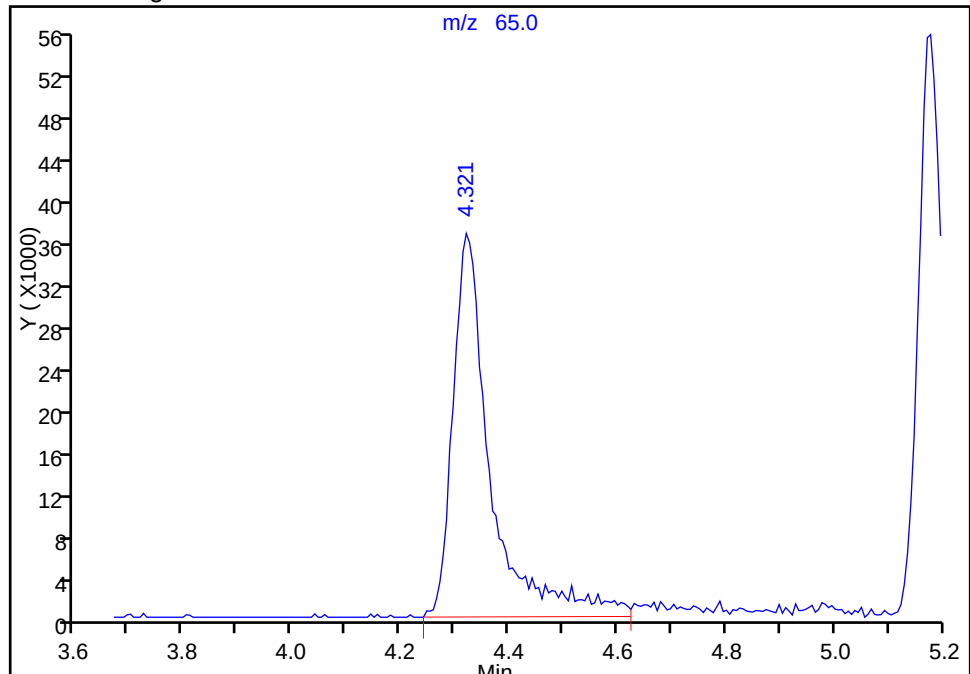
RT: 4.32
Area: 165569
Amount: 1000.0000
Amount Units: ng

Processing Integration Results



RT: 4.32
Area: 178184
Amount: 1000.0000
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:33:10

Audit Action: Manually Integrated

Audit Reason: Peak Tail

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303011.D

Injection Date: 03-Mar-2015 15:40:30

Instrument ID: CHHP5

Lims ID: IC VSTD20

Client ID:

Operator ID: 001562

ALS Bottle#:

9

Worklist Smp#: 11

Purge Vol: 5.000 mL

Dil. Factor:

1.0000

Method: MSVOA_LL_CHHP5

Limit Group:

VOA 8260C ICAL

Column: DB-624 (0.18 mm)

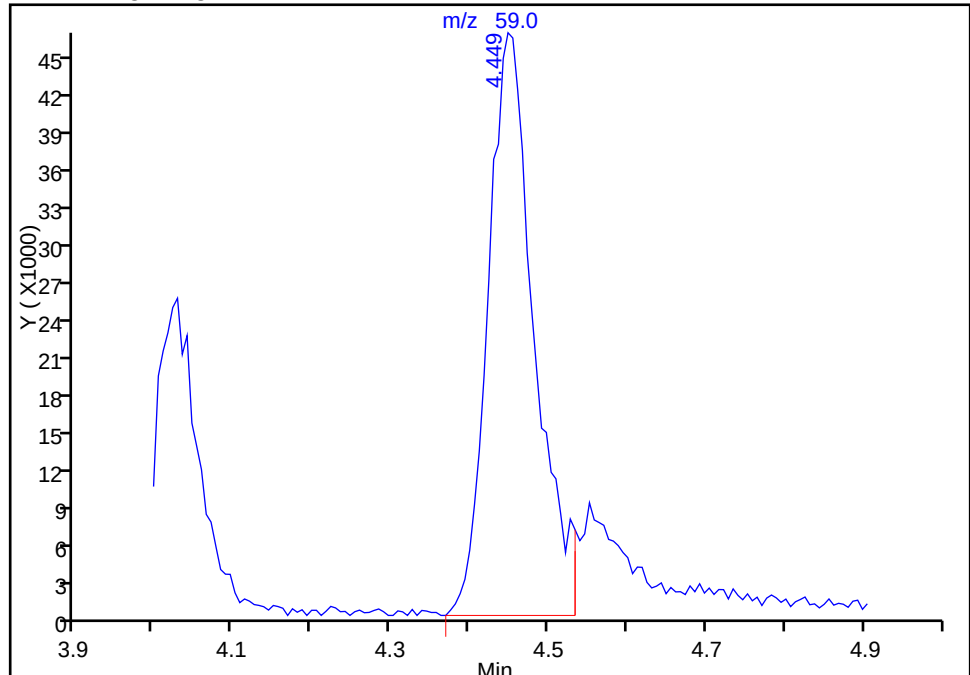
Detector

MS SCAN

32 2-Methyl-2-propanol, CAS: 75-65-0

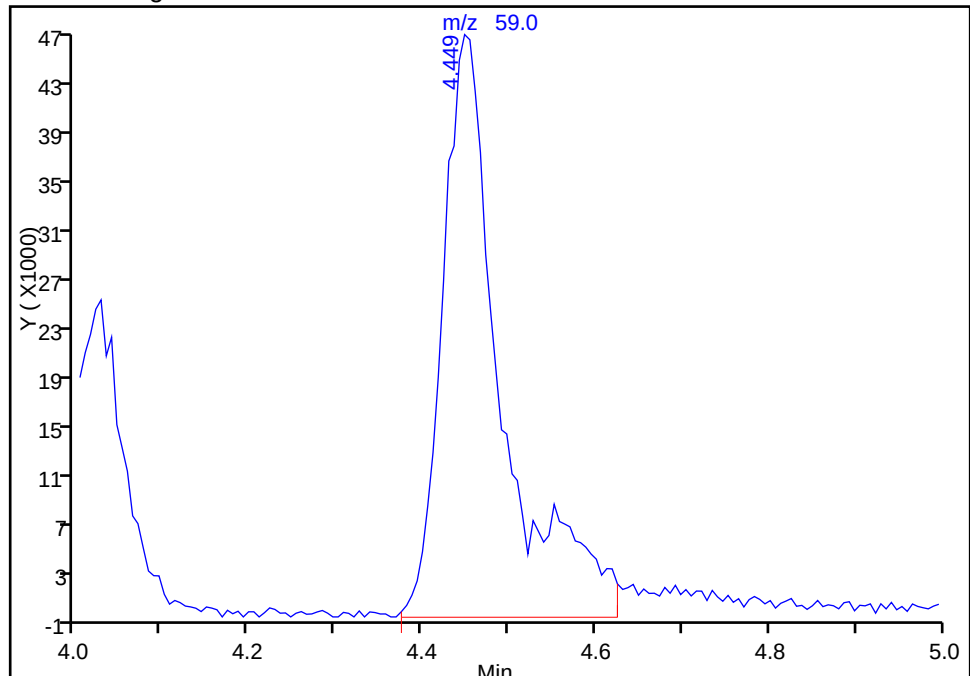
RT: 4.45
Area: 188329
Amount: 911.3747
Amount Units: ng

Processing Integration Results



RT: 4.45
Area: 219266
Amount: 1026.8689
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:35:16

Audit Action: Manually Integrated

Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303012.D
 Lims ID: IC VSTD35
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 03-Mar-2015 16:04:30 ALS Bottle#: 10 Worklist Smp#: 12
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: IC VSTD35
 Misc. Info.: 180-0005873-012
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 04-Mar-2015 10:13:11 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK006

First Level Reviewer: fergusond

Date: 04-Mar-2015 09:37:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.323	4.321	0.002	87	196024	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.280	7.277	0.003	72	484263	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.370	10.368	0.002	80	123732	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.688	12.685	0.003	94	171685	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.531	6.535	-0.004	98	361120	175.0	174.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.908	6.912	-0.004	99	444667	175.0	173.5	
\$ 7 Toluene-d8 (Surr)	98	8.928	8.932	-0.004	100	1566428	175.0	162.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.538	11.536	0.002	99	603450	175.0	168.2	
11 Dichlorodifluoromethane	85	1.622	1.620	0.002	98	392329	175.0	161.2	
12 Chloromethane	50	1.780	1.778	0.002	94	626420	175.0	161.1	
13 Vinyl chloride	62	1.908	1.912	-0.004	99	599809	175.0	160.5	
14 Butadiene	39	1.950	1.948	0.002	98	656586	175.0	151.5	
15 Bromomethane	94	2.255	2.258	-0.003	75	163842	175.0	154.6	
16 Chloroethane	64	2.376	2.380	-0.004	83	241114	175.0	158.6	
17 Dichlorofluoromethane	67	2.650	2.648	0.002	99	529735	175.0	152.0	
18 Trichlorofluoromethane	101	2.717	2.708	0.009	98	433936	175.0	149.1	
20 Ethyl ether	59	3.094	3.092	0.002	100	467174	175.0	166.3	
21 Acrolein	56	3.258	3.274	-0.016	81	76799	225.0	207.0	
22 1,1-Dichloroethene	96	3.374	3.384	-0.010	99	466370	175.0	165.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.429	3.420	0.009	98	466462	175.0	163.7	
24 Acetone	43	3.508	3.505	0.003	98	338711	350.0	333.0	
25 Iodomethane	142	3.581	3.585	-0.004	96	658969	175.0	166.1	
26 Carbon disulfide	76	3.654	3.664	-0.010	100	1168823	175.0	168.4	
28 3-Chloro-1-propene	76	3.946	3.956	-0.010	92	305734	175.0	173.6	
30 Methyl acetate	43	4.025	4.029	-0.004	100	2402270	875.0	858.8	
31 Methylene Chloride	84	4.147	4.150	-0.003	99	516693	175.0	172.9	
32 2-Methyl-2-propanol	59	4.451	4.454	-0.003	90	407341	1750.0	1734.0	M
33 Acrylonitrile	53	4.554	4.564	-0.010	98	2376546	1750.0	1713.8	
34 trans-1,2-Dichloroethene	96	4.566	4.576	-0.010	57	496919	175.0	168.5	
35 Methyl tert-butyl ether	73	4.609	4.607	0.002	100	1269630	175.0	172.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.986	4.990	-0.004	98	854071	175.0	163.2	
37 1,1-Dichloroethane	63	5.175	5.178	-0.003	100	945361	175.0	168.2	
38 Vinyl acetate	43	5.296	5.306	-0.010	98	346138	175.0	180.3	
44 2,2-Dichloropropane	77	5.929	5.933	-0.004	65	354872	175.0	170.6	
45 cis-1,2-Dichloroethene	96	5.941	5.945	-0.004	87	529478	175.0	167.9	
46 2-Butanone (MEK)	43	5.990	6.000	-0.010	100	573542	350.0	346.1	
49 Chlorobromomethane	128	6.227	6.237	-0.010	75	220291	175.0	167.7	
51 Tetrahydrofuran	42	6.288	6.292	-0.004	99	386544	350.0	327.8	
52 Chloroform	83	6.349	6.346	0.003	85	751712	175.0	167.8	
53 1,1,1-Trichloroethane	97	6.531	6.535	-0.004	98	515456	175.0	169.5	
54 Cyclohexane	56	6.592	6.590	0.002	94	1109737	175.0	162.6	
56 Carbon tetrachloride	117	6.720	6.724	-0.004	66	362211	175.0	175.6	
55 1,1-Dichloropropene	75	6.726	6.730	-0.004	96	650285	175.0	167.5	
57 Isobutyl alcohol	41	6.951	6.949	0.002	45	324042	4375.0	4875.2	
58 Benzene	78	6.963	6.967	-0.004	98	2026853	175.0	165.7	
59 1,2-Dichloroethane	62	6.994	6.991	0.003	98	602602	175.0	170.6	
62 n-Heptane	43	7.286	7.283	0.003	89	806729	175.0	169.6	
64 Trichloroethene	130	7.669	7.673	-0.004	99	484743	175.0	168.3	
66 Methylcyclohexane	83	7.864	7.867	-0.003	95	899256	175.0	165.2	
67 1,2-Dichloropropane	63	7.906	7.910	-0.004	95	551216	175.0	171.6	
68 Dibromomethane	93	8.028	8.025	0.003	98	252976	175.0	174.4	
70 1,4-Dioxane	88	8.064	8.068	-0.004	96	107243	3500.0	3745.1	
71 Dichlorobromomethane	83	8.204	8.202	0.002	100	494496	175.0	182.9	
74 cis-1,3-Dichloropropene	75	8.660	8.664	-0.004	100	670035	175.0	187.1	
75 4-Methyl-2-pentanone (MIBK)	43	8.825	8.828	-0.003	98	1293845	350.0	346.3	
76 Toluene	91	8.995	8.999	-0.004	98	2025808	175.0	158.6	
77 trans-1,3-Dichloropropene	75	9.226	9.224	0.002	93	504089	175.0	187.2	
78 Ethyl methacrylate	69	9.324	9.321	0.003	99	559868	175.0	184.9	
79 1,1,2-Trichloroethane	97	9.403	9.406	-0.003	98	384751	175.0	164.9	
80 Tetrachloroethene	164	9.543	9.540	0.003	99	376799	175.0	159.9	
81 1,3-Dichloropropane	76	9.567	9.571	-0.004	98	730064	175.0	166.5	
82 2-Hexanone	43	9.658	9.662	-0.004	99	895448	350.0	343.4	
84 Chlorodibromomethane	129	9.792	9.796	-0.004	96	285792	175.0	186.3	
85 Ethylene Dibromide	107	9.901	9.905	-0.004	99	391652	175.0	174.3	
86 3-Chlorobenzotrifluoride	180	10.376	10.374	0.002	90	648455	175.0	165.5	
87 Chlorobenzene	112	10.394	10.398	-0.004	98	1313352	175.0	160.6	
88 4-Chlorobenzotrifluoride	180	10.431	10.428	0.003	97	620760	175.0	165.8	
89 1,1,1,2-Tetrachloroethane	131	10.479	10.477	0.002	93	343717	175.0	182.2	
90 Ethylbenzene	106	10.504	10.508	-0.004	99	779624	175.0	164.9	
91 m-Xylene & p-Xylene	106	10.625	10.623	0.002	99	963277	175.0	165.4	
92 o-Xylene	106	11.015	11.019	-0.003	90	917689	175.0	162.3	
93 Styrene	104	11.027	11.031	-0.004	91	1511299	175.0	163.5	
94 Bromoform	173	11.216	11.213	0.003	91	158386	175.0	195.4	
96 2-Chlorobenzotrifluoride	180	11.276	11.280	-0.004	91	640624	175.0	165.0	
97 Isopropylbenzene	105	11.380	11.384	-0.004	99	2186986	175.0	157.6	
99 1,1,2,2-Tetrachloroethane	83	11.678	11.682	-0.004	69	554635	175.0	171.5	
100 Bromobenzene	156	11.684	11.688	-0.004	89	509283	175.0	169.8	
101 1,2,3-Trichloropropane	110	11.727	11.724	0.003	69	166640	175.0	165.8	
102 trans-1,4-Dichloro-2-buten	53	11.733	11.736	-0.003	84	171777	175.0	175.9	
103 N-Propylbenzene	120	11.793	11.791	0.002	98	668080	175.0	167.7	
104 2-Chlorotoluene	126	11.879	11.882	-0.003	98	556210	175.0	169.1	
105 3-Chlorotoluene	126	11.939	11.937	0.002	73	574840	175.0	170.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.964	11.968	-0.004	99	1821042	175.0	165.2	
107 4-Chlorotoluene	126	11.988	11.986	0.002	97	590273	175.0	166.2	
108 tert-Butylbenzene	119	12.292	12.296	-0.004	89	1538995	175.0	161.7	
110 1,2,4-Trimethylbenzene	105	12.341	12.339	0.002	98	1864947	175.0	163.9	
111 1,2-dichloro-4-(trifluorom	214	12.408	12.406	0.002	99	433987	175.0	168.9	
112 sec-Butylbenzene	105	12.511	12.515	-0.004	93	2200188	175.0	160.6	
113 1,3-Dichlorobenzene	146	12.621	12.625	-0.004	91	974213	175.0	164.4	
114 4-Isopropyltoluene	119	12.657	12.655	0.002	98	1841892	175.0	164.1	
115 1,4-Dichlorobenzene	146	12.712	12.710	0.002	97	989384	175.0	165.9	
116 2,4-Dichloro-1-(trifluorom	214	12.761	12.764	-0.003	93	406260	175.0	166.4	
118 2,5-Dichlorobenzotrifluori	214	12.809	12.813	-0.004	95	457073	175.0	171.7	
120 n-Butylbenzene	91	13.065	13.069	-0.004	99	1641091	175.0	164.4	
121 1,2-Dichlorobenzene	146	13.083	13.087	-0.004	98	903766	175.0	166.7	
122 1,2-Dibromo-3-Chloropropan	75	13.862	13.866	-0.004	92	69537	175.0	194.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.012	-0.004	99	1903055	525.0	514.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.431	-0.003	99	1260859	350.0	344.4	
126 1,2,4-Trichlorobenzene	180	14.695	14.693	0.002	98	464683	175.0	171.4	
127 Hexachlorobutadiene	225	14.866	14.869	-0.003	94	186416	175.0	161.0	
128 Naphthalene	128	14.945	14.942	0.003	100	1355121	175.0	172.2	
129 1,2,3-Trichlorobenzene	180	15.188	15.192	-0.004	99	394157	175.0	169.5	
131 2,4,5-Trichlorotoluene	159	15.967	15.970	-0.003	98	200009	175.0	170.0	
130 2,3,6-Trichlorotoluene	159	16.064	16.068	-0.004	97	182005	175.0	167.8	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		350.0	327.7	
S 134 1,2-Dichloroethene, Total	96				0		350.0	336.5	
S 135 1,3-Dichloropropene, Total	1				0		350.0	374.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00031	Amount Added: 7.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added: 7.00	Units: uL	
voaWEEpri Res_00003	Amount Added: 7.00	Units: uL	
VOAVAPRI_00003	Amount Added: 7.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 7.00	Units: uL	
VOAACRPRI_00003	Amount Added: 9.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent

Report Date: 04-Mar-2015 10:13:12

Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303012.D

Injection Date: 03-Mar-2015 16:04:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD35

Worklist Smp#: 12

Client ID:

Purge Vol: 5.000 mL

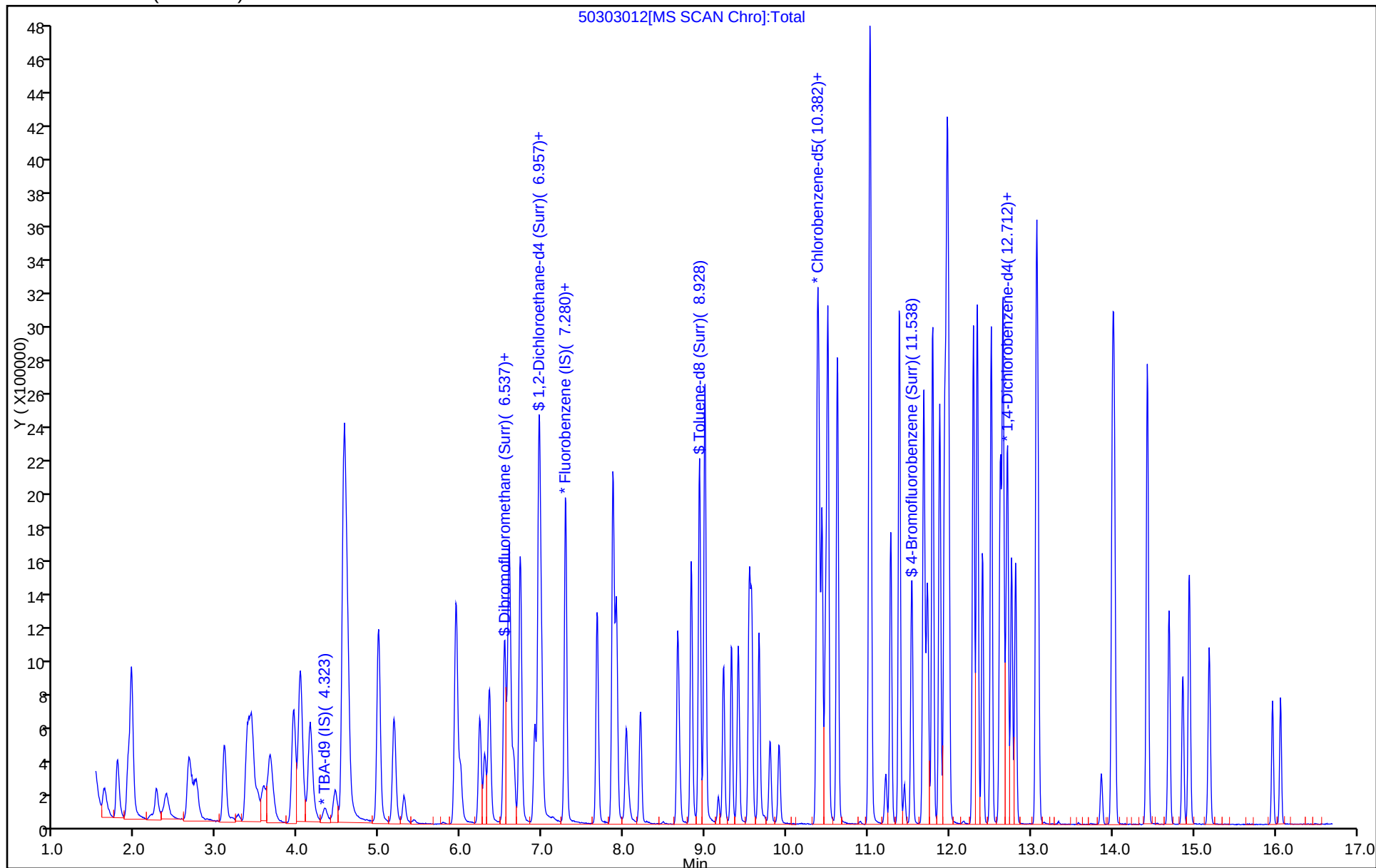
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303012.D

Injection Date: 03-Mar-2015 16:04:30

Instrument ID: CHHP5

Lims ID: IC VSTD35

Client ID:

Operator ID: 001562

ALS Bottle#:

10

Worklist Smp#: 12

Purge Vol: 5.000 mL

Dil. Factor:

1.0000

Method: MSVOA_LL_CHHP5

Limit Group:

VOA 8260C ICAL

Column: DB-624 (0.18 mm)

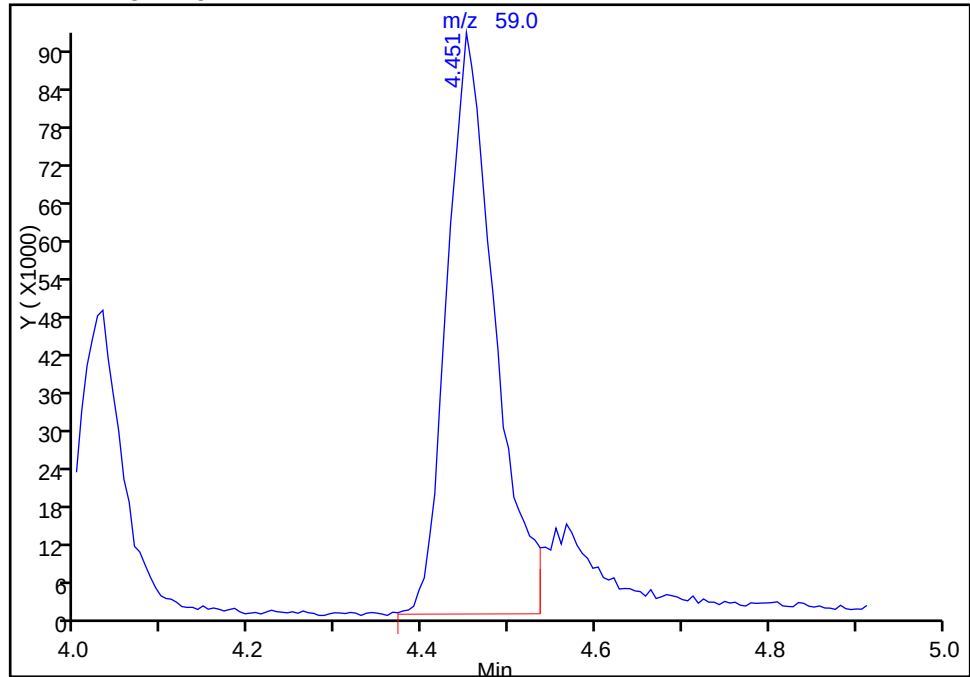
Detector

MS SCAN

32 2-Methyl-2-propanol, CAS: 75-65-0

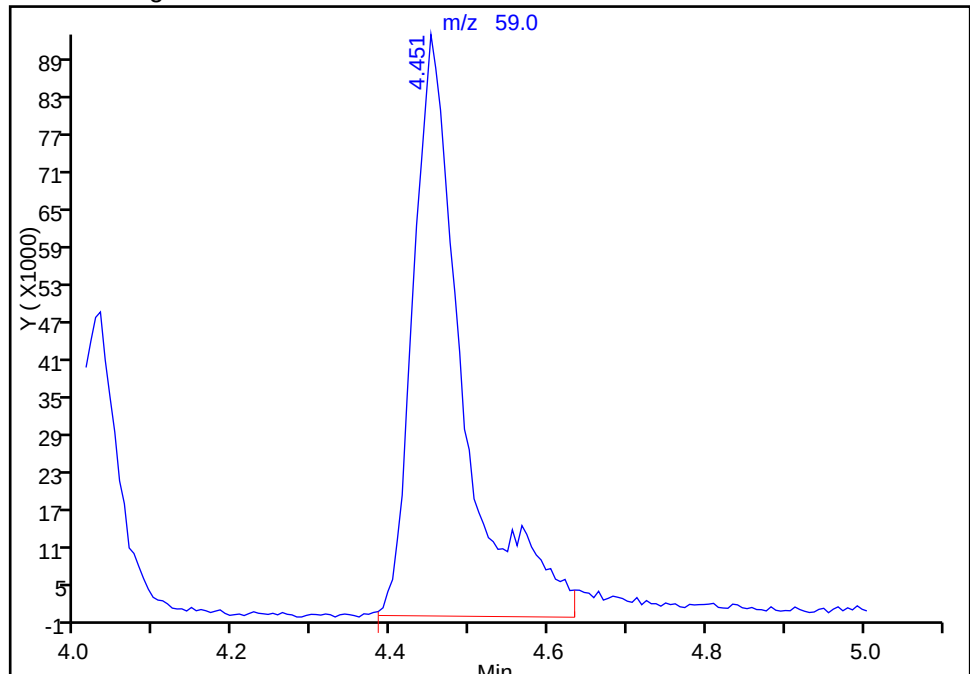
RT: 4.45
Area: 353645
Amount: 1527.0542
Amount Units: ng

Processing Integration Results



RT: 4.45
Area: 407341
Amount: 1734.0487
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:37:20

Audit Action: Manually Integrated

Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303013.D
 Lims ID: IC VSTD40
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 03-Mar-2015 16:28:30 ALS Bottle#: 11 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: IC VSTD40
 Misc. Info.: 180-0005873-013
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 04-Mar-2015 10:13:13 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK006

First Level Reviewer: fergusond

Date: 04-Mar-2015 09:39:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.329	4.321	0.007	99	195478	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.277	-0.004	99	458440	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.369	10.368	0.001	99	117839	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.687	12.685	0.002	94	165585	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.531	6.535	-0.004	99	407623	200.0	207.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.912	-0.010	99	495199	200.0	204.2	
\$ 7 Toluene-d8 (Surr)	98	8.928	8.932	-0.004	100	1773929	200.0	193.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.537	11.536	0.001	99	675059	200.0	197.5	
11 Dichlorodifluoromethane	85	1.621	1.620	0.001	100	459101	200.0	199.3	
12 Chloromethane	50	1.773	1.778	-0.005	100	749194	200.0	203.5	
13 Vinyl chloride	62	1.907	1.912	-0.005	100	717244	200.0	202.7	
14 Butadiene	39	1.944	1.948	-0.004	99	795057	200.0	193.8	
15 Bromomethane	94	2.254	2.258	-0.004	92	202557	200.0	203.5	
16 Chloroethane	64	2.370	2.380	-0.010	98	300539	200.0	208.8	
17 Dichlorofluoromethane	67	2.649	2.648	0.001	99	702217	200.0	212.8	
18 Trichlorofluoromethane	101	2.698	2.708	-0.010	99	629405	200.0	228.4	
20 Ethyl ether	59	3.094	3.092	0.002	99	524790	200.0	197.4	
21 Acrolein	56	3.264	3.274	-0.010	98	88701	250.0	252.6	
22 1,1-Dichloroethene	96	3.373	3.384	-0.011	99	537938	200.0	201.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.428	3.420	0.008	100	564199	200.0	209.1	
24 Acetone	43	3.495	3.505	-0.010	100	359769	400.0	373.7	
25 Iodomethane	142	3.574	3.585	-0.011	98	768602	200.0	204.7	
26 Carbon disulfide	76	3.659	3.664	-0.005	100	1429882	200.0	217.6	
28 3-Chloro-1-propene	76	3.939	3.956	-0.017	100	353770	200.0	212.2	
30 Methyl acetate	43	4.024	4.029	-0.005	100	2723193	1000.0	1028.4	
31 Methylene Chloride	84	4.146	4.150	-0.004	99	581573	200.0	206.2	
32 2-Methyl-2-propanol	59	4.450	4.454	-0.004	99	473360	2000.0	2020.7	M
33 Acrylonitrile	53	4.554	4.564	-0.010	100	2649598	2000.0	2018.3	
34 trans-1,2-Dichloroethene	96	4.566	4.576	-0.010	94	564166	200.0	202.1	
35 Methyl tert-butyl ether	73	4.602	4.607	-0.005	100	1454209	200.0	208.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.986	4.990	-0.004	99	987257	200.0	199.3	
37 1,1-Dichloroethane	63	5.174	5.178	-0.004	100	1076133	200.0	202.3	
38 Vinyl acetate	43	5.296	5.306	-0.010	100	412211	200.0	226.8	
44 2,2-Dichloropropane	77	5.935	5.933	0.002	95	436442	200.0	221.6	
45 cis-1,2-Dichloroethene	96	5.941	5.945	-0.004	98	599342	200.0	200.8	
46 2-Butanone (MEK)	43	5.989	6.000	-0.011	100	661664	400.0	421.8	
49 Chlorobromomethane	128	6.233	6.237	-0.004	99	250607	200.0	201.5	
51 Tetrahydrofuran	42	6.287	6.292	-0.005	99	447707	400.0	401.0	
52 Chloroform	83	6.348	6.346	0.002	96	860226	200.0	202.9	
53 1,1,1-Trichloroethane	97	6.537	6.535	0.002	99	607230	200.0	210.9	
54 Cyclohexane	56	6.592	6.590	0.002	98	1313560	200.0	203.2	
56 Carbon tetrachloride	117	6.725	6.724	0.001	94	443952	200.0	227.3	
55 1,1-Dichloropropene	75	6.725	6.730	-0.005	98	755478	200.0	205.6	
57 Isobutyl alcohol	41	6.950	6.949	0.001	98	374911	5000.0	5958.2	
58 Benzene	78	6.957	6.967	-0.010	98	2284771	200.0	197.3	
59 1,2-Dichloroethane	62	6.987	6.991	-0.004	98	678619	200.0	202.9	
62 n-Heptane	43	7.285	7.283	0.002	89	940701	200.0	209.0	
64 Trichloroethene	130	7.668	7.673	-0.005	99	560499	200.0	205.5	
66 Methylcyclohexane	83	7.869	7.867	0.002	99	1051065	200.0	204.0	
67 1,2-Dichloropropane	63	7.906	7.910	-0.004	97	626785	200.0	206.1	
68 Dibromomethane	93	8.027	8.025	0.002	99	285467	200.0	207.9	
70 1,4-Dioxane	88	8.064	8.068	-0.004	96	108953	4000.0	4019.1	
71 Dichlorobromomethane	83	8.204	8.202	0.002	100	559625	200.0	218.6	
74 cis-1,3-Dichloropropene	75	8.660	8.664	-0.004	100	764955	200.0	225.6	
75 4-Methyl-2-pentanone (MIBK)	43	8.824	8.828	-0.004	99	1424348	400.0	400.3	
76 Toluene	91	8.995	8.999	-0.004	99	2291440	200.0	188.4	
77 trans-1,3-Dichloropropene	75	9.220	9.224	-0.004	99	577469	200.0	225.2	
78 Ethyl methacrylate	69	9.317	9.321	-0.004	100	642835	200.0	222.9	
79 1,1,2-Trichloroethane	97	9.402	9.406	-0.004	99	430453	200.0	193.7	
80 Tetrachloroethene	164	9.536	9.540	-0.004	99	437446	200.0	194.9	
81 1,3-Dichloropropane	76	9.566	9.571	-0.005	100	810109	200.0	194.0	
82 2-Hexanone	43	9.658	9.662	-0.004	100	1007219	400.0	405.5	
84 Chlorodibromomethane	129	9.791	9.796	-0.005	99	335537	200.0	229.6	
85 Ethylene Dibromide	107	9.907	9.905	0.002	100	430697	200.0	201.3	
86 3-Chlorobenzotrifluoride	180	10.375	10.374	0.001	92	710605	200.0	190.5	
87 Chlorobenzene	112	10.394	10.398	-0.004	99	1486822	200.0	190.9	
88 4-Chlorobenzotrifluoride	180	10.430	10.428	0.002	99	673239	200.0	188.8	
89 1,1,1,2-Tetrachloroethane	131	10.479	10.477	0.002	94	404254	200.0	225.0	
90 Ethylbenzene	106	10.503	10.508	-0.005	99	878562	200.0	195.1	
91 m-Xylene & p-Xylene	106	10.619	10.623	-0.004	99	1087938	200.0	196.1	
92 o-Xylene	106	11.014	11.019	-0.004	95	1044535	200.0	194.0	
93 Styrene	104	11.026	11.031	-0.005	100	1702135	200.0	193.4	
94 Bromoform	173	11.215	11.213	0.002	99	189179	200.0	245.1	
96 2-Chlorobenzotrifluoride	180	11.276	11.280	-0.004	99	709528	200.0	191.8	
97 Isopropylbenzene	105	11.385	11.384	0.001	99	2509471	200.0	189.9	
99 1,1,2,2-Tetrachloroethane	83	11.677	11.682	-0.005	99	635984	200.0	206.5	
100 Bromobenzene	156	11.690	11.688	0.002	99	564181	200.0	195.0	
101 1,2,3-Trichloropropane	110	11.726	11.724	0.002	96	186872	200.0	192.8	
102 trans-1,4-Dichloro-2-buten	53	11.738	11.736	0.002	91	209408	200.0	222.4	
103 N-Propylbenzene	120	11.793	11.791	0.002	99	772940	200.0	201.1	
104 2-Chlorotoluene	126	11.878	11.882	-0.004	99	627560	200.0	197.8	
105 3-Chlorotoluene	126	11.939	11.937	0.002	99	635360	200.0	195.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.969	11.968	0.001	99	2069067	200.0	194.6	
107 4-Chlorotoluene	126	11.988	11.986	0.002	98	686264	200.0	200.4	
108 tert-Butylbenzene	119	12.292	12.296	-0.004	98	1773732	200.0	193.3	
110 1,2,4-Trimethylbenzene	105	12.340	12.339	0.001	98	2134132	200.0	194.5	
111 1,2-dichloro-4-(trifluorom	214	12.407	12.406	0.001	99	495775	200.0	200.1	
112 sec-Butylbenzene	105	12.511	12.515	-0.004	99	2515133	200.0	190.4	
113 1,3-Dichlorobenzene	146	12.620	12.625	-0.005	98	1106407	200.0	193.6	
114 4-Isopropyltoluene	119	12.657	12.655	0.002	98	2126114	200.0	196.4	
115 1,4-Dichlorobenzene	146	12.712	12.710	0.002	96	1119886	200.0	194.6	
116 2,4-Dichloro-1-(trifluorom	214	12.760	12.764	-0.004	95	459072	200.0	194.9	
118 2,5-Dichlorobenzotrifluori	214	12.815	12.813	0.002	98	520914	200.0	202.9	
120 n-Butylbenzene	91	13.064	13.069	-0.005	99	1909418	200.0	198.4	
121 1,2-Dichlorobenzene	146	13.083	13.087	-0.004	99	1024132	200.0	195.9	
122 1,2-Dibromo-3-Chloropropan	75	13.861	13.866	-0.005	89	86409	200.0	250.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.007	14.012	-0.005	99	2106510	600.0	589.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.427	14.431	-0.004	99	1383564	400.0	391.9	
126 1,2,4-Trichlorobenzene	180	14.695	14.693	0.002	99	524775	200.0	200.7	
127 Hexachlorobutadiene	225	14.865	14.869	-0.004	98	227215	200.0	203.4	
128 Naphthalene	128	14.944	14.942	0.002	100	1499909	200.0	197.7	
129 1,2,3-Trichlorobenzene	180	15.194	15.192	0.002	99	445662	200.0	198.7	
131 2,4,5-Trichlorotoluene	159	15.966	15.970	-0.004	98	227883	200.0	200.9	
130 2,3,6-Trichlorotoluene	159	16.064	16.068	-0.004	97	202347	200.0	193.5	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		400.0	390.1	
S 134 1,2-Dichloroethene, Total	96				0		400.0	402.9	
S 135 1,3-Dichloropropene, Total	1				0		400.0	450.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added: 10.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 8.00	Units: uL	
VOAVAPRI_00003	Amount Added: 8.00	Units: uL	
voaWEEpri Res_00003	Amount Added: 8.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added: 8.00	Units: uL	
VOA8260SURRE_00031	Amount Added: 8.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303013.D

Injection Date: 03-Mar-2015 16:28:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD40

Worklist Smp#: 13

Client ID:

Purge Vol: 5.000 mL

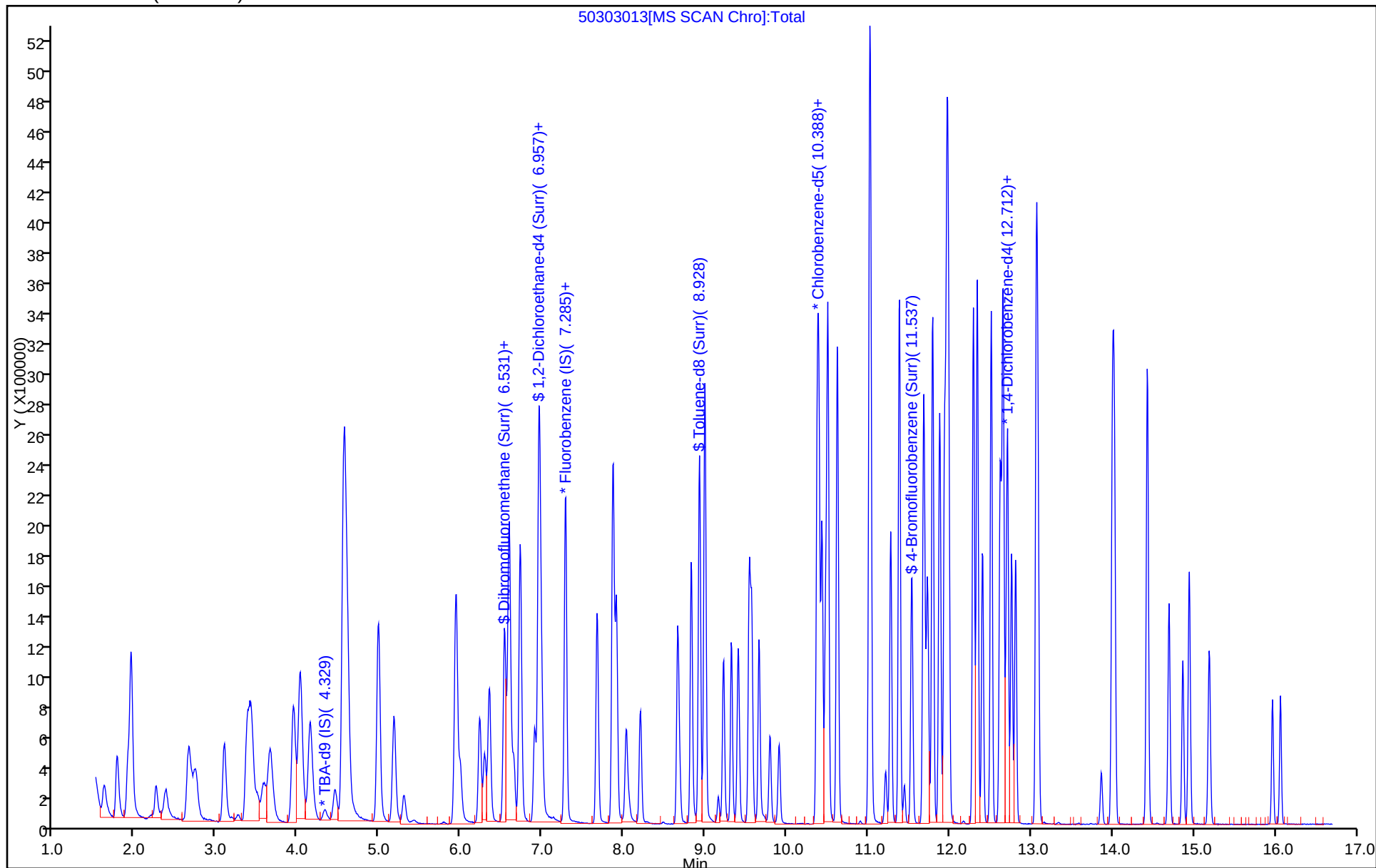
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303013.D

Injection Date: 03-Mar-2015 16:28:30

Instrument ID: CHHP5

Lims ID: IC VSTD40

Client ID:

Operator ID: 001562

ALS Bottle#:

11

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor:

1.0000

Method: MSVOA_LL_CHHP5

Limit Group:

VOA 8260C ICAL

Column: DB-624 (0.18 mm)

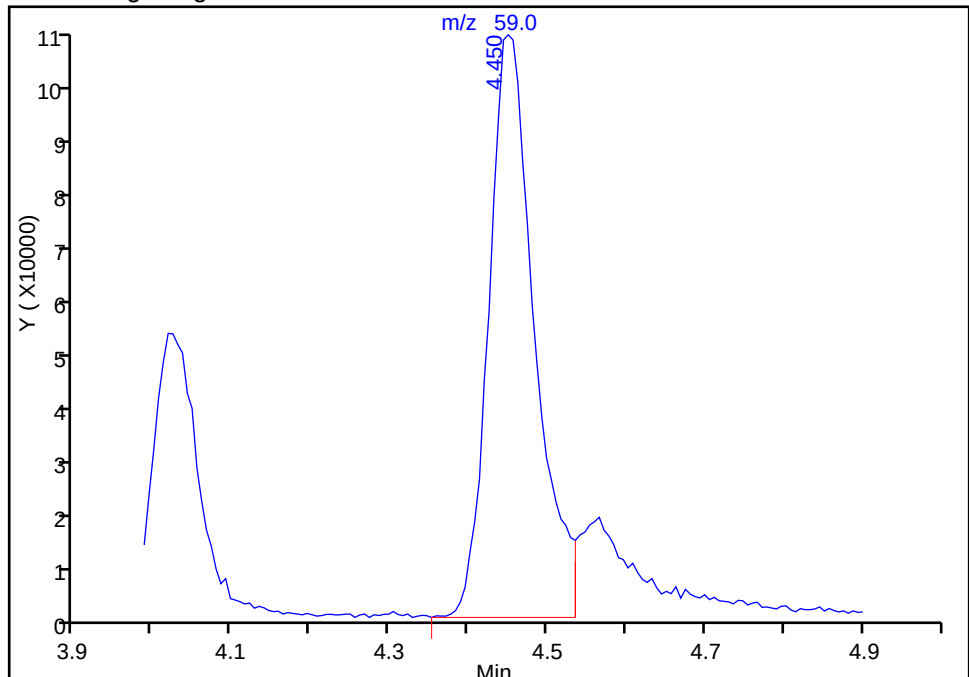
Detector

MS SCAN

32 2-Methyl-2-propanol, CAS: 75-65-0

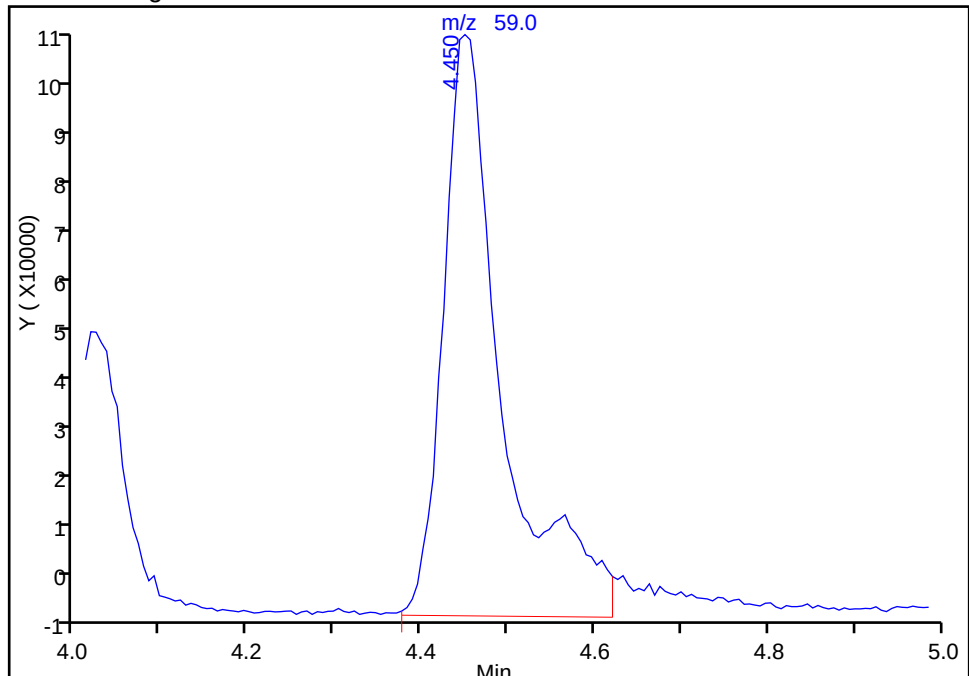
RT: 4.45
Area: 405922
Amount: 1729.0486
Amount Units: ng

Processing Integration Results



RT: 4.45
Area: 473360
Amount: 2020.7198
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:39:19

Audit Action: Manually Integrated

Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303014.D
 Lims ID: IC VSTD50
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 03-Mar-2015 16:52:30 ALS Bottle#: 12 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: IC VSTD50
 Misc. Info.: 180-0005873-014
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 04-Mar-2015 10:13:14 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK006

First Level Reviewer: fergusond

Date: 04-Mar-2015 09:40:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.327	4.321	0.006	97	182249	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.277	0.001	99	440848	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	97	121332	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	91	163855	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.535	6.535	0.000	98	454279	250.0	240.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.912	-0.006	100	585333	250.0	250.9	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.932	-0.006	99	1882951	250.0	199.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	99	778464	250.0	221.2	
11 Dichlorodifluoromethane	85	1.620	1.620	0.000	100	555245	250.0	250.7	
12 Chloromethane	50	1.778	1.778	0.000	100	892689	250.0	252.1	
13 Vinyl chloride	62	1.912	1.912	0.000	100	866068	250.0	254.5	
14 Butadiene	39	1.948	1.948	0.000	99	961606	250.0	243.7	
15 Bromomethane	94	2.253	2.258	-0.005	92	219710	250.0	230.1	
16 Chloroethane	64	2.374	2.380	-0.006	98	309302	250.0	223.5	
17 Dichlorofluoromethane	67	2.648	2.648	0.000	100	722968	250.0	227.9	
18 Trichlorofluoromethane	101	2.697	2.708	-0.011	99	625870	250.0	236.2	
20 Ethyl ether	59	3.092	3.092	0.000	100	666037	250.0	260.5	
21 Acrolein	56	3.262	3.274	-0.012	99	95898	275.0	284.0	
22 1,1-Dichloroethene	96	3.372	3.384	-0.012	99	655372	250.0	255.3	
23 1,1,2-Trichloro-1,2,2-trif	101	3.427	3.420	0.007	97	659263	250.0	254.1	
24 Acetone	43	3.500	3.505	-0.005	100	482030	500.0	520.6	
25 Iodomethane	142	3.573	3.585	-0.012	98	937612	250.0	259.7	
26 Carbon disulfide	76	3.658	3.664	-0.006	100	1738988	250.0	275.2	
28 3-Chloro-1-propene	76	3.944	3.956	-0.012	100	449430	250.0	280.3	
30 Methyl acetate	43	4.023	4.029	-0.006	100	3392163	1250.0	1332.2	
31 Methylene Chloride	84	4.145	4.150	-0.005	100	726477	250.0	269.0	
32 2-Methyl-2-propanol	59	4.461	4.454	0.007	99	611565	2500.0	2800.2	
33 Acrylonitrile	53	4.558	4.564	-0.006	99	3337128	2500.0	2643.5	
34 trans-1,2-Dichloroethene	96	4.570	4.576	-0.006	93	714392	250.0	266.2	
35 Methyl tert-butyl ether	73	4.601	4.607	-0.006	100	1811989	250.0	270.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.984	4.990	-0.006	100	1203451	250.0	252.6	
37 1,1-Dichloroethane	63	5.179	5.178	0.001	100	1328543	250.0	259.7	
38 Vinyl acetate	43	5.300	5.306	-0.006	100	523307	250.0	299.4	
44 2,2-Dichloropropane	77	5.927	5.933	-0.006	97	530241	250.0	280.0	
45 cis-1,2-Dichloroethene	96	5.939	5.945	-0.006	98	743970	250.0	259.2	
46 2-Butanone (MEK)	43	5.988	6.000	-0.012	100	803658	500.0	532.7	
49 Chlorobromomethane	128	6.231	6.237	-0.006	98	320382	250.0	267.9	
51 Tetrahydrofuran	42	6.286	6.292	-0.006	99	565784	500.0	527.0	
52 Chloroform	83	6.347	6.346	0.001	96	1072109	250.0	263.0	
53 1,1,1-Trichloroethane	97	6.535	6.535	0.000	98	735465	250.0	265.6	
54 Cyclohexane	56	6.590	6.590	0.000	97	1567791	250.0	252.3	
56 Carbon tetrachloride	117	6.724	6.724	0.000	96	541326	250.0	288.2	
55 1,1-Dichloropropene	75	6.724	6.730	-0.006	98	919340	250.0	260.2	
57 Isobutyl alcohol	41	6.955	6.949	0.006	98	519953	6250.0	8593.0	
58 Benzene	78	6.961	6.967	-0.006	98	2816860	250.0	253.0	
59 1,2-Dichloroethane	62	6.986	6.991	-0.005	99	882169	250.0	274.3	
62 n-Heptane	43	7.284	7.283	0.001	87	1135342	250.0	262.3	
64 Trichloroethene	130	7.673	7.673	0.000	99	695890	250.0	265.3	
66 Methylcyclohexane	83	7.868	7.867	0.001	99	1271791	250.0	256.7	
67 1,2-Dichloropropane	63	7.904	7.910	-0.006	97	779651	250.0	266.6	
68 Dibromomethane	93	8.026	8.025	0.001	99	367478	250.0	278.3	
70 1,4-Dioxane	88	8.062	8.068	-0.006	96	148650	5000.0	5702.3	
71 Dichlorobromomethane	83	8.202	8.202	0.000	100	722661	250.0	293.5	
74 cis-1,3-Dichloropropene	75	8.659	8.664	-0.005	99	973151	250.0	298.4	
75 4-Methyl-2-pentanone (MIBK)	43	8.829	8.828	0.001	99	1780762	500.0	486.1	
76 Toluene	91	8.993	8.999	-0.006	99	2786685	250.0	222.5	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	100	770673	250.0	291.8	
78 Ethyl methacrylate	69	9.322	9.321	0.001	100	840399	250.0	283.1	
79 1,1,2-Trichloroethane	97	9.407	9.406	0.001	99	552961	250.0	241.7	
80 Tetrachloroethene	164	9.541	9.540	0.001	99	530396	250.0	229.5	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	99	1025068	250.0	238.4	
82 2-Hexanone	43	9.656	9.662	-0.006	100	1267784	500.0	495.7	
84 Chlorodibromomethane	129	9.796	9.796	0.000	99	437822	250.0	291.0	
85 Ethylene Dibromide	107	9.906	9.905	0.001	100	560401	250.0	254.4	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	92	811123	250.0	211.2	
87 Chlorobenzene	112	10.392	10.398	-0.006	98	1821377	250.0	227.1	
88 4-Chlorobenzotrifluoride	180	10.435	10.428	0.007	98	788386	250.0	214.7	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	94	518562	250.0	280.4	
90 Ethylbenzene	106	10.502	10.508	-0.006	98	1084192	250.0	233.8	
91 m-Xylene & p-Xylene	106	10.623	10.623	0.000	98	1343425	250.0	235.2	
92 o-Xylene	106	11.013	11.019	-0.005	96	1282744	250.0	231.4	
93 Styrene	104	11.031	11.031	0.000	96	2101328	250.0	231.9	
94 Bromoform	173	11.214	11.213	0.001	98	253039	250.0	318.4	
96 2-Chlorobenzotrifluoride	180	11.274	11.280	-0.006	99	818132	250.0	214.8	
97 Isopropylbenzene	105	11.384	11.384	0.000	98	2939157	250.0	216.0	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.682	-0.006	98	794942	250.0	250.7	
100 Bromobenzene	156	11.688	11.688	0.000	99	712137	250.0	248.8	
101 1,2,3-Trichloropropane	110	11.725	11.724	0.001	97	239368	250.0	249.6	
102 trans-1,4-Dichloro-2-buten	53	11.737	11.736	0.001	92	267698	250.0	287.3	
103 N-Propylbenzene	120	11.792	11.791	0.001	98	938881	250.0	246.9	
104 2-Chlorotoluene	126	11.877	11.882	-0.005	98	766804	250.0	244.2	
105 3-Chlorotoluene	126	11.938	11.937	0.001	99	747748	250.0	233.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.968	11.968	0.000	98	2483271	250.0	236.0	
107 4-Chlorotoluene	126	11.986	11.986	0.000	98	846300	250.0	249.7	
108 tert-Butylbenzene	119	12.290	12.296	-0.006	98	2162487	250.0	238.1	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	98	2596483	250.0	239.1	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	99	570450	250.0	232.7	
112 sec-Butylbenzene	105	12.509	12.515	-0.006	98	2981190	250.0	228.0	
113 1,3-Dichlorobenzene	146	12.619	12.625	-0.006	97	1371526	250.0	242.5	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	98	2531591	250.0	236.3	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	97	1402521	250.0	246.3	
116 2,4-Dichloro-1-(trifluorom	214	12.765	12.764	0.001	95	528265	250.0	226.7	
118 2,5-Dichlorobenzotrifluori	214	12.814	12.813	0.001	98	607921	250.0	239.3	
120 n-Butylbenzene	91	13.063	13.069	-0.006	98	2301855	250.0	241.7	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	98	1268840	250.0	245.2	
122 1,2-Dibromo-3-Chloropropan	75	13.866	13.866	0.000	88	110818	250.0	325.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.012	-0.006	99	2522600	750.0	713.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.432	14.431	0.001	99	1703909	500.0	487.7	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	98	654550	250.0	252.9	
127 Hexachlorobutadiene	225	14.864	14.869	-0.005	98	277147	250.0	250.8	
128 Naphthalene	128	14.943	14.942	0.001	99	1887643	250.0	251.4	
129 1,2,3-Trichlorobenzene	180	15.186	15.192	-0.006	100	568326	250.0	256.1	
131 2,4,5-Trichlorotoluene	159	15.965	15.970	-0.005	98	286878	250.0	255.6	
130 2,3,6-Trichlorotoluene	159	16.062	16.068	-0.006	98	260759	250.0	251.9	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		500.0	466.6	
S 134 1,2-Dichloroethene, Total	96				0		500.0	525.4	
S 135 1,3-Dichloropropene, Total	1				0		500.0	590.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260SURR_00031	Amount Added: 10.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added: 10.00	Units: uL	
voaWEEpri Res_00003	Amount Added: 10.00	Units: uL	
VOAVAPRI_00003	Amount Added: 10.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 10.00	Units: uL	
VOAACRPRI_00003	Amount Added: 11.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent

Report Date: 04-Mar-2015 10:13:14

Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303014.D

Injection Date: 03-Mar-2015 16:52:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD50

Worklist Smp#: 14

Client ID:

Purge Vol: 5.000 mL

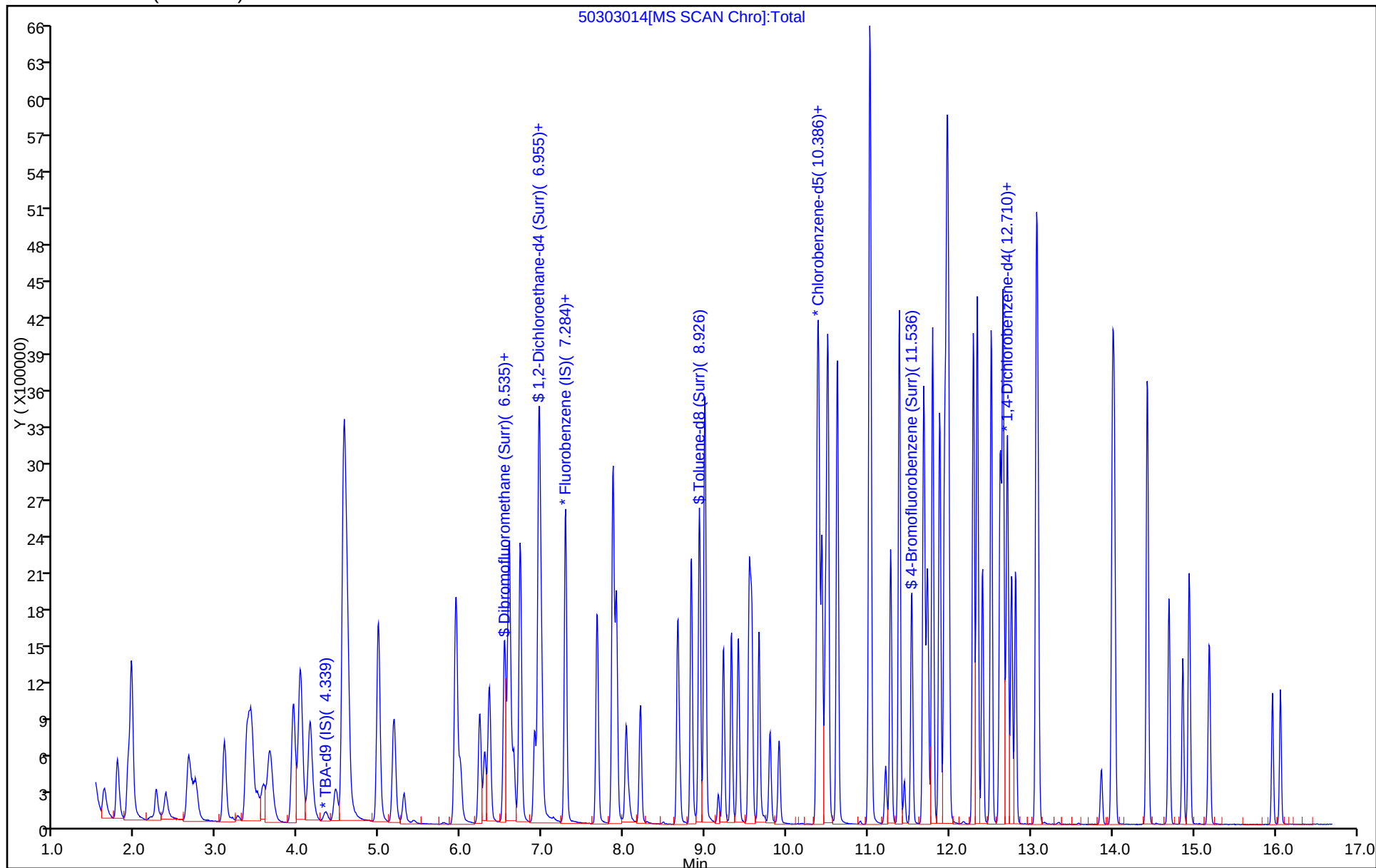
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Lims ID: IC VSTD1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 03-Mar-2015 18:29:30 ALS Bottle#: 16 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: IC VSTD1
 Misc. Info.: 180-0005873-018
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 04-Mar-2015 10:13:25 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK006

First Level Reviewer: fergusond

Date: 04-Mar-2015 09:08:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.327	4.321	0.006	97	158942	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.277	0.001	99	436397	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.368	-0.006	99	97555	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	98	138266	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.536	6.535	0.001	97	9351	5.00	5.00	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.912	-0.011	98	12383	5.00	5.36	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.932	-0.006	99	44042	5.00	5.79	
\$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	98	16688	5.00	5.90	
11 Dichlorodifluoromethane	85	1.620	1.620	0.000	1	11738	5.00	5.35	
12 Chloromethane	50	1.778	1.778	0.000	99	20422	5.00	5.83	
13 Vinyl chloride	62	1.906	1.912	-0.006	98	18364	5.00	5.45	
14 Butadiene	39	1.949	1.948	0.001	99	25646	5.00	6.57	
15 Bromomethane	94	2.253	2.258	-0.005	49	9174	5.00	4.90	
16 Chloroethane	64	2.393	2.380	0.013	46	8910	5.00	6.50	
17 Dichlorofluoromethane	67	2.654	2.648	0.006	97	18545	5.00	5.90	
18 Trichlorofluoromethane	101	2.703	2.708	-0.005	78	14651	5.00	5.59	
20 Ethyl ether	59	3.098	3.092	0.006	92	15110	5.00	5.97	
21 Acrolein	56	3.263	3.274	-0.011	95	33215	100.0	99.4	
22 1,1-Dichloroethene	96	3.390	3.384	0.006	99	14445	5.00	5.69	
23 1,1,2-Trichloro-1,2,2-trif	101	3.427	3.420	0.007	95	13613	5.00	5.30	
24 Acetone	43	3.518	3.505	0.013	85	27756	25.0	30.3	M
25 Iodomethane	142	3.591	3.585	0.006	94	20517	5.00	5.74	
26 Carbon disulfide	76	3.658	3.664	-0.006	96	31759	5.00	5.08	
28 3-Chloro-1-propene	76	3.944	3.956	-0.012	96	7709	5.00	4.86	
30 Methyl acetate	43	4.029	4.029	0.000	99	68405	25.0	27.1	
31 Methylene Chloride	84	4.145	4.150	-0.005	97	23143	5.00	5.07	
32 2-Methyl-2-propanol	59	4.449	4.454	-0.005	57	8526	50.0	44.8	
33 Acrylonitrile	53	4.564	4.564	0.000	98	66409	50.0	53.1	
34 trans-1,2-Dichloroethene	96	4.571	4.576	-0.005	51	14331	5.00	5.39	
35 Methyl tert-butyl ether	73	4.607	4.607	0.000	99	35247	5.00	5.31	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.984	4.990	-0.006	94	27239	5.00	5.78	
37 1,1-Dichloroethane	63	5.179	5.178	0.001	98	28747	5.00	5.68	
38 Vinyl acetate	43	5.307	5.306	0.001	58	6783	5.00	3.92	
44 2,2-Dichloropropane	77	5.939	5.933	0.006	64	9115	5.00	4.86	
45 cis-1,2-Dichloroethene	96	5.952	5.945	0.007	96	16372	5.00	5.76	
46 2-Butanone (MEK)	43	6.000	6.000	0.000	99	39378	25.0	26.4	
49 Chlorobromomethane	128	6.237	6.237	0.000	91	6992	5.00	5.91	
51 Tetrahydrofuran	42	6.298	6.292	0.006	94	12789	10.0	12.0	
52 Chloroform	83	6.341	6.346	-0.005	96	23149	5.00	5.74	
53 1,1,1-Trichloroethane	97	6.536	6.535	0.001	97	14873	5.00	5.43	
54 Cyclohexane	56	6.590	6.590	0.000	94	32962	5.00	5.36	M
56 Carbon tetrachloride	117	6.724	6.724	0.000	67	9550	5.00	5.14	
55 1,1-Dichloropropene	75	6.736	6.730	0.006	97	18284	5.00	5.23	
57 Isobutyl alcohol	41	6.955	6.949	0.006	34	6766	125.0	113.0	
58 Benzene	78	6.955	6.967	-0.012	98	62303	5.00	5.65	
59 1,2-Dichloroethane	62	6.998	6.991	0.007	97	17175	5.00	5.39	
62 n-Heptane	43	7.278	7.283	-0.005	57	23686	5.00	5.53	
64 Trichloroethene	130	7.679	7.673	0.006	96	12976	5.00	5.00	
66 Methylcyclohexane	83	7.862	7.867	-0.005	98	25976	5.00	5.30	
67 1,2-Dichloropropane	63	7.910	7.910	0.000	93	15999	5.00	5.53	
68 Dibromomethane	93	8.026	8.025	0.001	97	6736	5.00	5.15	
70 1,4-Dioxane	88	8.081	8.068	0.013	40	2785	100.0	107.9	
71 Dichlorobromomethane	83	8.202	8.202	0.000	98	10980	5.00	4.51	
74 cis-1,3-Dichloropropene	75	8.659	8.664	-0.005	97	13441	5.00	4.16	
75 4-Methyl-2-pentanone (MIBK)	43	8.829	8.828	0.001	99	75647	25.0	25.7	
76 Toluene	91	8.993	8.999	-0.006	99	60820	5.00	6.04	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	94	9160	5.00	4.31	
78 Ethyl methacrylate	69	9.328	9.321	0.007	95	11161	5.00	4.68	
79 1,1,2-Trichloroethane	97	9.407	9.406	0.001	93	10673	5.00	5.80	
80 Tetrachloroethene	164	9.541	9.540	0.001	96	10884	5.00	5.86	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	96	19318	5.00	5.59	
82 2-Hexanone	43	9.669	9.662	0.006	99	51105	25.0	24.9	
84 Chlorodibromomethane	129	9.796	9.796	0.000	96	5520	5.00	4.56	
85 Ethylene Dibromide	107	9.912	9.905	0.007	98	9291	5.00	5.24	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	64	18756	5.00	6.07	
87 Chlorobenzene	112	10.399	10.398	0.000	98	39232	5.00	6.08	
88 4-Chlorobenzotrifluoride	180	10.435	10.428	0.007	97	17103	5.00	5.79	
89 1,1,1,2-Tetrachloroethane	131	10.484	10.477	0.007	94	7857	5.00	5.28	
90 Ethylbenzene	106	10.502	10.508	-0.006	99	20645	5.00	5.54	
91 m-Xylene & p-Xylene	106	10.624	10.623	0.001	99	26322	5.00	5.73	
92 o-Xylene	106	11.019	11.019	0.001	96	25758	5.00	5.78	
93 Styrene	104	11.031	11.031	0.000	96	42726	5.00	5.86	
94 Bromoform	173	11.220	11.213	0.007	52	2588	5.00	4.05	
96 2-Chlorobenzotrifluoride	180	11.275	11.280	-0.005	97	17742	5.00	5.79	
97 Isopropylbenzene	105	11.384	11.384	0.000	99	65207	5.00	5.96	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.682	-0.006	91	12676	5.00	4.97	
100 Bromobenzene	156	11.688	11.688	0.000	97	14051	5.00	5.82	
101 1,2,3-Trichloropropane	110	11.725	11.724	0.001	95	5015	5.00	6.20	
102 trans-1,4-Dichloro-2-buten	53	11.743	11.736	0.007	90	4072	5.00	5.18	
103 N-Propylbenzene	120	11.792	11.791	0.001	100	16822	5.00	5.24	
104 2-Chlorotoluene	126	11.877	11.882	-0.005	99	15299	5.00	5.77	
105 3-Chlorotoluene	126	11.944	11.937	0.007	98	16343	5.00	6.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.962	11.968	-0.006	100	50437	5.00	5.68	
107 4-Chlorotoluene	126	11.986	11.986	0.000	95	15984	5.00	5.59	
108 tert-Butylbenzene	119	12.290	12.296	-0.006	98	43127	5.00	5.63	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	96	51091	5.00	5.58	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	97	10729	5.00	5.19	
112 sec-Butylbenzene	105	12.509	12.515	-0.006	99	65330	5.00	5.92	
113 1,3-Dichlorobenzene	146	12.619	12.625	-0.006	97	28602	5.00	5.99	
114 4-Isopropyltoluene	119	12.662	12.655	0.007	98	51205	5.00	5.66	
115 1,4-Dichlorobenzene	146	12.716	12.710	0.006	98	27681	5.00	5.76	
116 2,4-Dichloro-1-(trifluorom	214	12.765	12.764	0.001	93	11024	5.00	5.61	
118 2,5-Dichlorobenzotrifluori	214	12.814	12.813	0.001	95	11088	5.00	5.17	
120 n-Butylbenzene	91	13.063	13.069	-0.006	99	44994	5.00	5.60	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	97	25288	5.00	5.79	
122 1,2-Dibromo-3-Chloropropan	75	13.854	13.866	-0.012	89	1174	5.00	4.08	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.012	-0.006	99	47582	15.0	16.0	M
125 2,3- & 3,4- Dichlorotoluen	125	14.432	14.431	0.001	98	32193	10.0	10.9	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	96	11994	5.00	5.49	
127 Hexachlorobutadiene	225	14.864	14.869	-0.005	93	5277	5.00	5.66	
128 Naphthalene	128	14.943	14.942	0.001	99	34798	5.00	5.49	
129 1,2,3-Trichlorobenzene	180	15.192	15.192	0.000	95	10498	5.00	5.61	
131 2,4,5-Trichlorotoluene	159	15.965	15.970	-0.005	93	5832	5.00	6.16	
130 2,3,6-Trichlorotoluene	159	16.068	16.068	0.000	93	5388	5.00	6.17	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		10.0	11.5	
S 134 1,2-Dichloroethene, Total	96				0		10.0	11.2	
S 135 1,3-Dichloropropene, Total	1				0		10.0	8.48	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00031	Amount Added: 0.20	Units: uL	
VOA8260VOAPRI_00102	Amount Added: 0.20	Units: uL	
voaWEEpri Res_00003	Amount Added: 0.20	Units: uL	
voaWKetpri Re_00003	Amount Added: 0.80	Units: uL	
VOAVAPRI_00003	Amount Added: 0.20	Units: uL	
VOAACRPRI_00003	Amount Added: 4.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Injection Date: 03-Mar-2015 18:29:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD1

Worklist Smp#: 18

Client ID:

Purge Vol: 5.000 mL

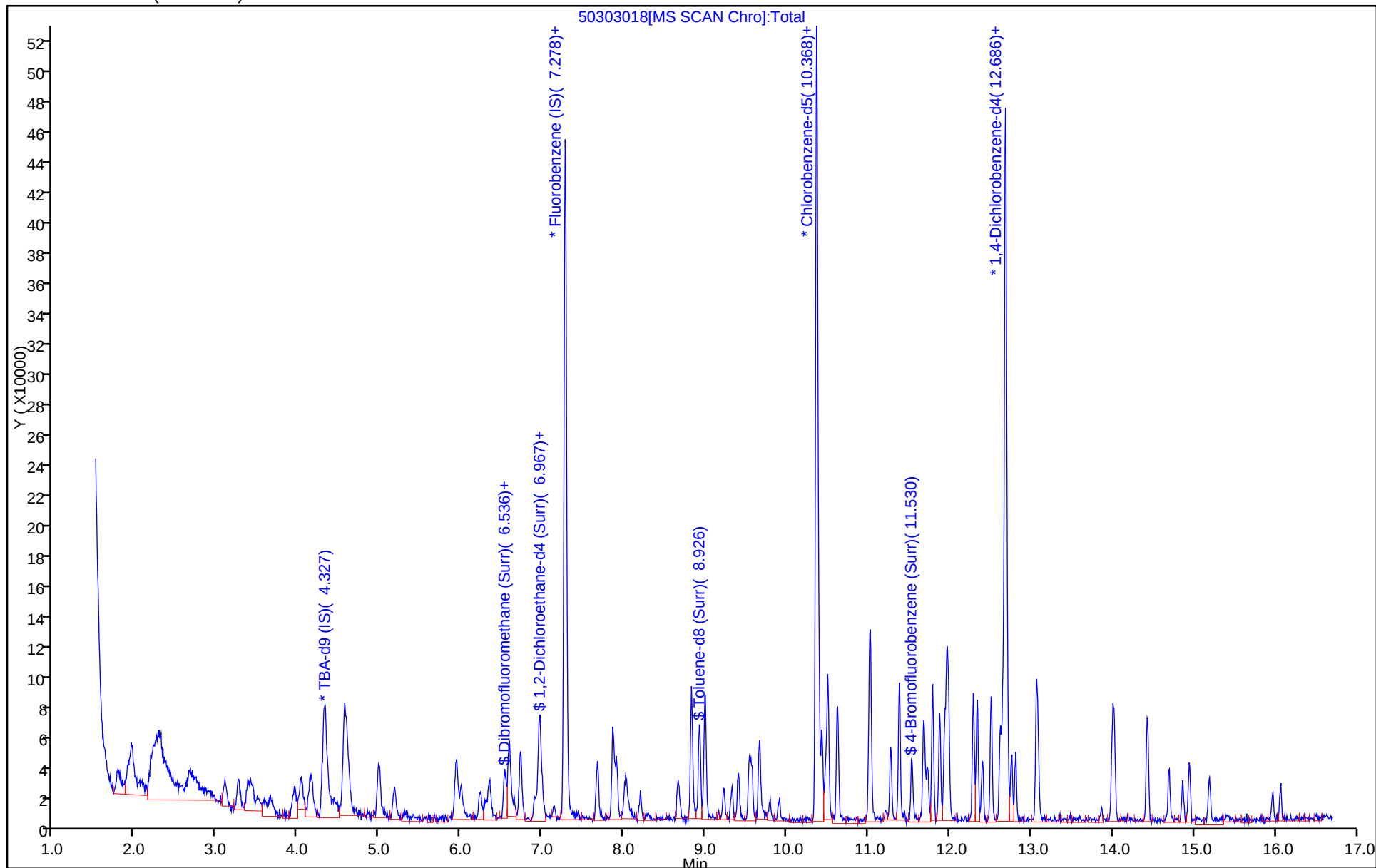
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



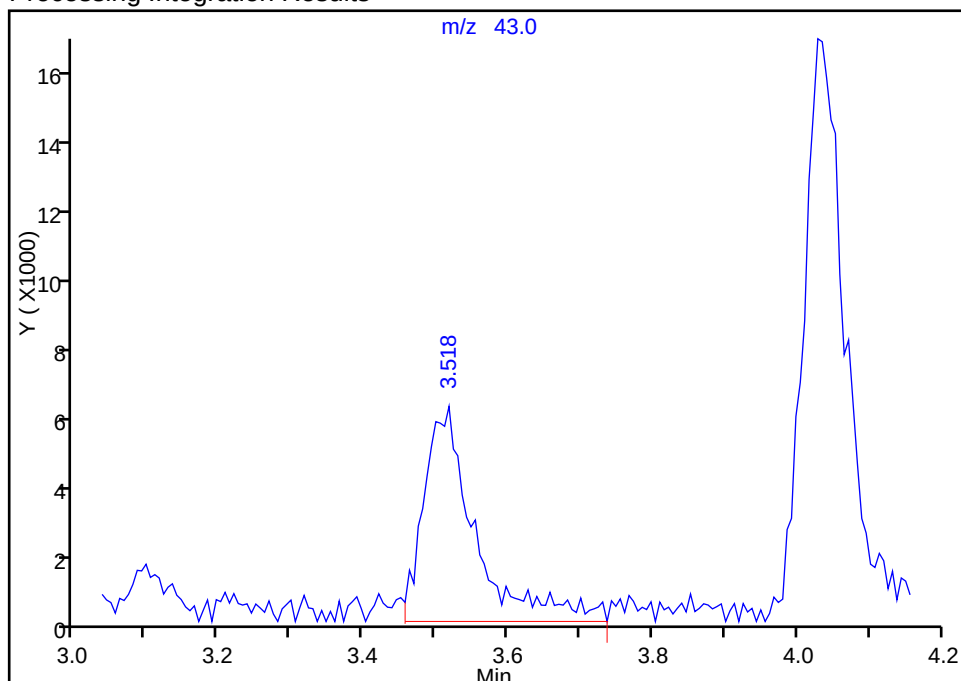
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
Injection Date: 03-Mar-2015 18:29:30 Instrument ID: CHHP5
Lims ID: IC VSTD1
Client ID:
Operator ID: 001562 ALS Bottle#: 16 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

24 Acetone, CAS: 67-64-1

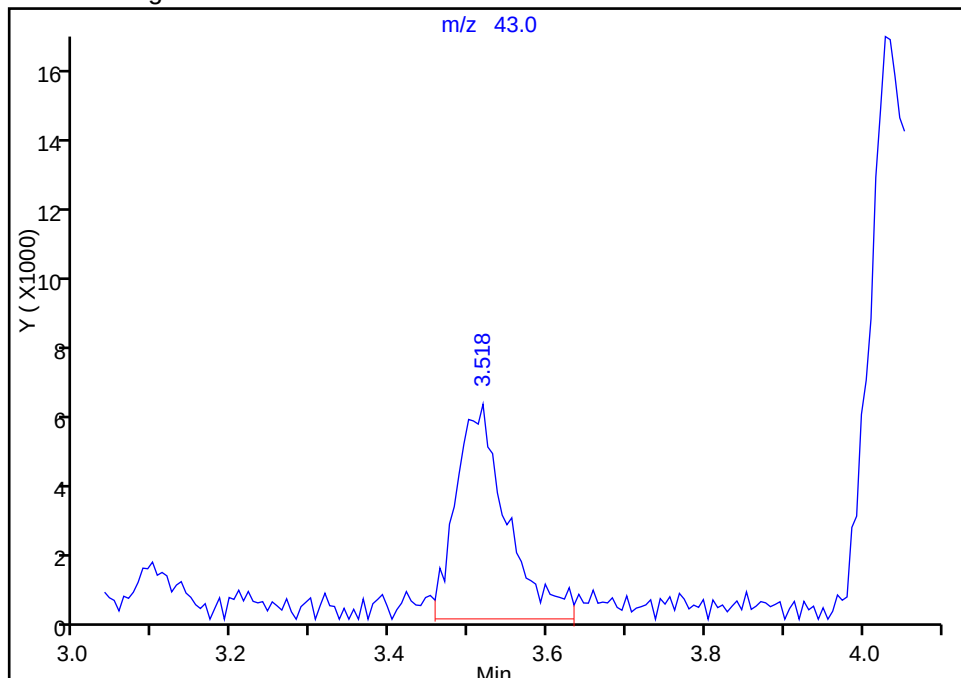
RT: 3.52
Area: 30678
Amount: 34.064759
Amount Units: ng

Processing Integration Results



RT: 3.52
Area: 27756
Amount: 30.284284
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:45:02
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Injection Date: 03-Mar-2015 18:29:30

Instrument ID: CHHP5

Lims ID: IC VSTD1

Client ID:

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 18

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

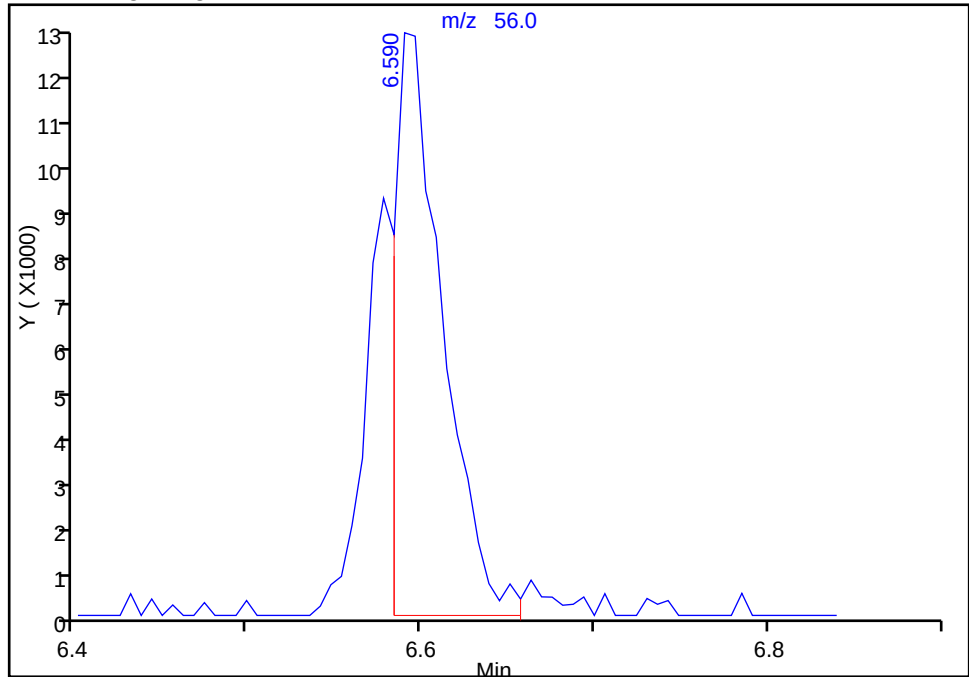
Column: DB-624 (0.18 mm)

Detector: MS SCAN

54 Cyclohexane, CAS: 110-82-7

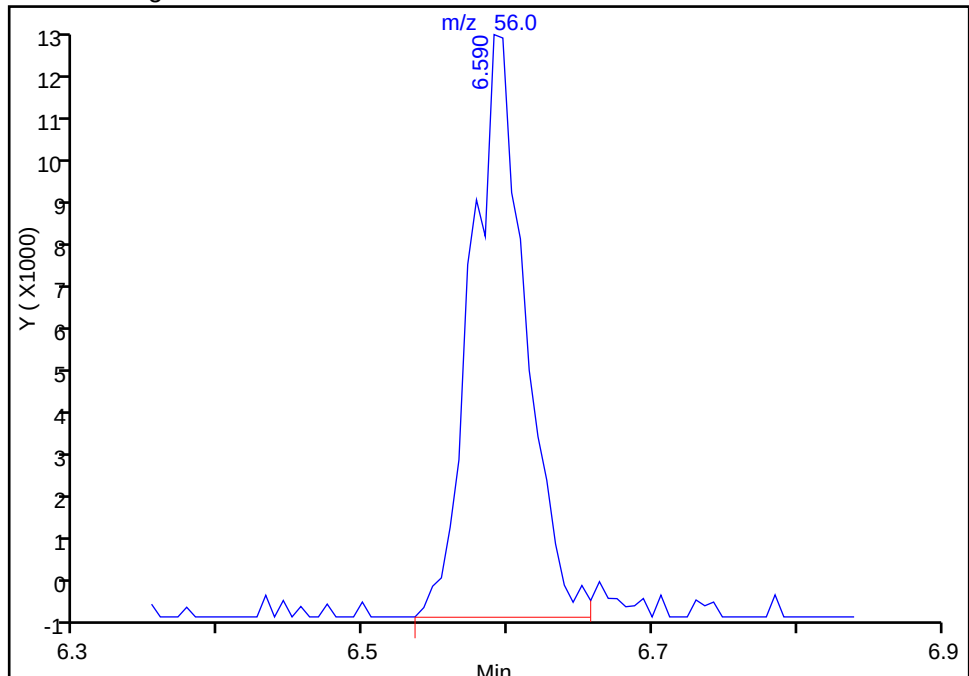
RT: 6.59
Area: 24266
Amount: 3.949469
Amount Units: ng

Processing Integration Results



RT: 6.59
Area: 32962
Amount: 5.357794
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 04-Mar-2015 09:45:02

Audit Action: Manually Integrated

Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Lab Sample ID: CCVIS 180-135153/2 Calibration Date: 03/10/2015 11:37

Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 03/03/2015 18:29

Lab File ID: 50310002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2512	0.2616	0.1000	10.4	10.0	4.1	20.0
Chloromethane	Ave	0.4015	0.4050	0.1000	10.1	10.0	0.8	20.0
Vinyl chloride	Ave	0.3859	0.4058	0.1000	10.5	10.0	5.2	20.0
Bromomethane	Lin2		0.1589	0.0500	14.0	10.0	39.9*	20.0
Chloroethane	Ave	0.1570	0.2145	0.0500	13.7	10.0	36.6*	20.0
Dichlorofluoromethane	Ave	0.3598	0.5000	0.0100	13.9	10.0	38.9*	20.0
Trichlorofluoromethane	Ave	0.3005	0.4493	0.1000	15.0	10.0	49.5*	20.0
Ethyl ether	Ave	0.2900	0.2813	0.0100	9.70	10.0	-3.0	20.0
Acrolein	Ave	0.0383	0.0337	0.0100	26.4	30.0	-12.1	20.0
1,1-Dichloroethene	Ave	0.2911	0.2964	0.1000	10.2	10.0	1.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2943	0.3183	0.1000	10.8	10.0	8.1	20.0
Acetone	Ave	0.1050	0.1443	0.0500	27.5	20.0	37.5*	20.0
Iodomethane	Ave	0.4096	0.4181	0.0100	10.2	10.0	2.1	20.0
Carbon disulfide	Ave	0.7166	0.7643	0.1000	10.7	10.0	6.7	20.0
Allyl chloride	Ave	0.1818	0.1362	0.0100	7.49	10.0	-25.1*	20.0
Methyl acetate	Ave	0.2888	0.2645	0.1000	45.8	50.0	-8.4	20.0
Methylene Chloride	Lin2		0.3302	0.1000	10.2	10.0	1.9	20.0
tert-Butyl alcohol	Ave	1.198	1.183	0.0100	98.7	100	-1.3	20.0
Acrylonitrile	Ave	0.1432	0.1369	0.0100	95.6	100	-4.4	20.0
trans-1,2-Dichloroethene	Ave	0.3044	0.3056	0.1000	10.0	10.0	0.4	20.0
Methyl tert-butyl ether	Ave	0.7605	0.5065	0.1000	6.66	10.0	-33.4*	20.0
Hexane	Ave	0.5404	0.5240	0.0100	9.70	10.0	-3.0	20.0
1,1-Dichloroethane	Ave	0.5802	0.5476	0.2000	9.44	10.0	-5.6	20.0
Vinyl acetate	Ave	0.1982	0.1093	0.0100	5.51	10.0	-44.9*	20.0
2,2-Dichloropropane	Ave	0.2148	0.0960	0.0100	4.47	10.0	-55.3*	20.0
cis-1,2-Dichloroethene	Ave	0.3255	0.3298	0.1000	10.1	10.0	1.3	20.0
2-Butanone (MEK)	Ave	0.1711	0.1867	0.0500	21.8	20.0	9.1	20.0
Bromochloromethane	Ave	0.1357	0.1345	0.0100	9.91	10.0	-0.9	20.0
Tetrahydrofuran	Ave	0.1218	0.1126	0.0100	18.5	20.0	-7.6	20.0
Chloroform	Ave	0.4624	0.4686	0.2000	10.1	10.0	1.3	20.0
1,1,1-Trichloroethane	Ave	0.3141	0.2620	0.1000	8.34	10.0	-16.6	20.0
Cyclohexane	Ave	0.7049	0.7147	0.1000	10.1	10.0	1.4	20.0
1,1-Dichloropropene	Ave	0.4007	0.4031	0.0100	10.1	10.0	0.6	20.0
Carbon tetrachloride	Ave	0.2130	0.2198	0.1000	10.3	10.0	3.2	20.0
Isobutyl alcohol	Ave	0.0069	0.0043*	0.0100	155	250	-37.8*	20.0
Benzene	Ave	1.263	1.284	0.5000	10.2	10.0	1.7	20.0
1,2-Dichloroethane	Ave	0.3648	0.3795	0.1000	10.4	10.0	4.0	20.0
n-Heptane	Ave	0.4910	0.4697	0.0100	9.57	10.0	-4.3	20.0
Trichloroethene	Ave	0.2974	0.2929	0.2000	9.85	10.0	-1.5	20.0
Methylcyclohexane	Ave	0.5619	0.5710	0.1000	10.2	10.0	1.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Lab Sample ID: CCVIS 180-135153/2 Calibration Date: 03/10/2015 11:37

Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 03/03/2015 18:29

Lab File ID: 50310002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3317	0.2929	0.1000	8.83	10.0	-11.7	20.0
Dibromomethane	Ave	0.1498	0.1524	0.0100	10.2	10.0	1.8	20.0
1,4-Dioxane	Ave	0.0030	0.0027*	0.0100	185	200	-7.4	20.0
Bromodichloromethane	Ave	0.2792	0.2804	0.2000	10.0	10.0	0.4	20.0
cis-1,3-Dichloropropene	Ave	0.3698	0.2433	0.2000	6.58	10.0	-34.2*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.510	1.419	0.1000	18.8	20.0	-6.0	20.0
Toluene	Ave	5.161	5.756	0.4000	11.2	10.0	11.5	20.0
trans-1,3-Dichloropropene	Ave	1.088	0.6168	0.1000	5.67	10.0	-43.3*	20.0
Ethyl methacrylate	Ave	1.224	0.8216	0.0100	6.71	10.0	-32.9*	20.0
1,1,2-Trichloroethane	Ave	0.9428	0.9658	0.1000	10.2	10.0	2.4	20.0
Tetrachloroethene	Ave	0.9523	1.091	0.2000	11.5	10.0	14.5	20.0
1,3-Dichloropropane	Ave	1.772	1.797	0.0100	10.1	10.0	1.4	20.0
2-Hexanone	Ave	1.054	1.076	0.1000	20.4	20.0	2.1	20.0
Dibromochloromethane	Ave	0.6200	0.6974	0.1000	11.2	10.0	12.5	20.0
1,2-Dibromoethane (EDB)	Ave	0.9079	0.8732	0.1000	9.62	10.0	-3.8	20.0
3-Chlorobenzotrifluoride	Ave	1.583	1.838	0.0100	11.6	10.0	16.1	20.0
Chlorobenzene	Ave	3.305	3.637	0.5000	11.0	10.0	10.0	20.0
4-Chlorobenzotrifluoride	Ave	1.513	1.664	0.0100	11.0	10.0	10.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.7622	0.7655	0.0100	10.0	10.0	0.4	20.0
Ethylbenzene	Ave	1.911	2.116	0.1000	11.1	10.0	10.7	20.0
m-Xylene & p-Xylene	Ave	2.354	2.558	0.1000	10.9	10.0	8.7	20.0
o-Xylene	Ave	2.285	2.481	0.3000	10.9	10.0	8.6	20.0
Styrene	Ave	3.735	4.123	0.3000	11.0	10.0	10.4	20.0
Bromoform	Ave	0.3275	0.3746	0.1000	11.4	10.0	14.4	20.0
2-Chlorobenzotrifluoride	Ave	1.569	1.720	0.0100	11.0	10.0	9.6	20.0
Isopropylbenzene	Ave	5.608	6.575	0.1000	11.7	10.0	17.2	20.0
1,1,2,2-Tetrachloroethane	Ave	1.307	1.432	0.3000	11.0	10.0	9.6	20.0
Bromobenzene	Ave	0.8735	0.9189	0.0100	10.5	10.0	5.2	20.0
1,2,3-Trichloropropane	Ave	0.2927	0.2887	0.0100	9.86	10.0	-1.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2844	0.2334	0.0100	8.21	10.0	-17.9	20.0
N-Propylbenzene	Ave	1.160	1.229	0.0100	10.6	10.0	5.9	20.0
2-Chlorotoluene	Ave	0.9582	0.9715	0.0100	10.1	10.0	1.4	20.0
3-Chlorotoluene	Ave	0.9794	1.013	0.0100	10.3	10.0	3.4	20.0
1,3,5-Trimethylbenzene	Ave	3.211	3.428	0.0100	10.7	10.0	6.8	20.0
4-Chlorotoluene	Ave	1.034	1.036	0.0100	10.0	10.0	0.1	20.0
tert-Butylbenzene	Ave	2.771	2.904	0.0100	10.5	10.0	4.8	20.0
1,2,4-Trimethylbenzene	Ave	3.314	3.515	0.0100	10.6	10.0	6.1	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.7482	0.8449	0.0100	11.3	10.0	12.9	20.0
sec-Butylbenzene	Ave	3.989	4.362	0.0100	10.9	10.0	9.3	20.0
1,3-Dichlorobenzene	Ave	1.726	1.789	0.6000	10.4	10.0	3.6	20.0
4-Isopropyltoluene	Ave	3.269	3.538	0.0100	10.8	10.0	8.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-135153/2 Calibration Date: 03/10/2015 11:37
 Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 03/03/2015 18:29
 Lab File ID: 50310002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.737	1.830	0.5000	10.5	10.0	5.3	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.7111	0.8080	0.0100	11.4	10.0	13.6	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.7753	0.9313	0.0100	12.0	10.0	20.1*	20.0
n-Butylbenzene	Ave	2.906	3.175	0.0100	10.9	10.0	9.2	20.0
1,2-Dichlorobenzene	Ave	1.579	1.672	0.4000	10.6	10.0	5.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1040	0.0887	0.0500	8.53	10.0	-14.7	20.0
2,4- & 2,5- & 2,6- Dichlorotoluene	Ave	1.078	1.124	0.0100	31.3	30.0	4.2	20.0
2,3- & 3,4- Dichlorotoluene	Ave	1.066	1.077	0.0100	20.2	20.0	1.0	20.0
1,2,4-Trichlorobenzene	Ave	0.7897	0.8382	0.2000	10.6	10.0	6.1	20.0
Hexachlorobutadiene	Ave	0.3373	0.4115	0.0100	12.2	10.0	22.0*	20.0
Naphthalene	Ave	2.291	2.265	0.0100	9.88	10.0	-1.2	20.0
1,2,3-Trichlorobenzene	Ave	0.6771	0.6869	0.0100	10.1	10.0	1.4	20.0
2,4,5-Trichlorotoluene	Ave	0.3426	0.3299	0.0100	9.63	10.0	-3.7	20.0
2,3,6-Trichlorotoluene	Ave	0.3158	0.3135	0.0100	9.93	10.0	-0.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2141	0.2142		10.0	10.0	0.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2646	0.2565		9.70	10.0	-3.0	20.0
Toluene-d8 (Surr)	Ave	3.897	4.097		10.5	10.0	5.1	20.0
4-Bromofluorobenzene (Surr)	Ave	1.450	1.386		9.56	10.0	-4.4	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310002.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 10-Mar-2015 11:37:30 ALS Bottle#: 2 Worklist Smp#: 2
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: CCVIS
 Misc. Info.: 180-0005958-002
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 07:20:56 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 10-Mar-2015 12:18:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.296	0.000	85	68961	1000.0	1000.0	s
* 2 Fluorobenzene (IS)	96	7.271	7.271	0.000	99	383152	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.367	0.000	99	86796	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	97	130106	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.529	0.000	88	82077	50.0	50.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	99	98279	50.0	48.5	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.926	0.000	100	355628	50.0	52.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.529	0.000	94	120296	50.0	47.8	
11 Dichlorodifluoromethane	85	1.607	1.607	0.000	99	100221	50.0	52.1	
12 Chloromethane	50	1.771	1.771	0.000	100	155159	50.0	50.4	
13 Vinyl chloride	62	1.899	1.899	0.000	100	155500	50.0	52.6	
14 Butadiene	39	1.948	1.948	0.000	99	188682	50.0	55.0	
15 Bromomethane	94	2.252	2.252	0.000	93	60865	50.0	69.9	
16 Chloroethane	64	2.374	2.374	0.000	96	82179	50.0	68.3	
17 Dichlorofluoromethane	67	2.641	2.641	0.000	99	191557	50.0	69.5	
18 Trichlorofluoromethane	101	2.684	2.684	0.000	97	172166	50.0	74.8	
20 Ethyl ether	59	3.073	3.073	0.000	99	107764	50.0	48.5	
21 Acrolein	56	3.250	3.250	0.000	97	38683	150.0	131.8	
22 1,1-Dichloroethene	96	3.371	3.371	0.000	99	113578	50.0	50.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.414	3.414	0.000	98	121938	50.0	54.1	
24 Acetone	43	3.493	3.493	0.000	99	110609	100.0	137.5	
25 Iodomethane	142	3.566	3.566	0.000	99	160201	50.0	51.0	
26 Carbon disulfide	76	3.651	3.651	0.000	100	292825	50.0	53.3	
28 3-Chloro-1-propene	76	3.925	3.925	0.000	99	52201	50.0	37.5	
30 Methyl acetate	43	4.016	4.016	0.000	100	506638	250.0	228.9	
31 Methylene Chloride	84	4.126	4.126	0.000	99	126531	50.0	50.9	
32 2-Methyl-2-propanol	59	4.436	4.436	0.000	84	40792	500.0	493.6	
33 Acrylonitrile	53	4.545	4.545	0.000	99	524694	500.0	478.2	
34 trans-1,2-Dichloroethene	96	4.552	4.552	0.000	54	117105	50.0	50.2	
35 Methyl tert-butyl ether	73	4.594	4.594	0.000	89	194055	50.0	33.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.977	4.977	0.000	98	200786	50.0	48.5	
37 1,1-Dichloroethane	63	5.166	5.166	0.000	100	209820	50.0	47.2	
38 Vinyl acetate	43	5.294	5.294	0.000	100	41883	50.0	27.6	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	59	36792	50.0	22.4	
45 cis-1,2-Dichloroethene	96	5.933	5.933	0.000	91	126358	50.0	50.7	
46 2-Butanone (MEK)	43	5.981	5.981	0.000	100	143045	100.0	109.1	
49 Chlorobromomethane	128	6.218	6.218	0.000	98	51514	50.0	49.6	
51 Tetrahydrofuran	42	6.285	6.285	0.000	97	86255	100.0	92.4	
52 Chloroform	83	6.340	6.340	0.000	96	179542	50.0	50.7	
53 1,1,1-Trichloroethane	97	6.523	6.523	0.000	89	100400	50.0	41.7	
54 Cyclohexane	56	6.577	6.577	0.000	98	273840	50.0	50.7	
56 Carbon tetrachloride	117	6.717	6.717	0.000	67	84208	50.0	51.6	
55 1,1-Dichloropropene	75	6.717	6.717	0.000	95	154453	50.0	50.3	
57 Isobutyl alcohol	41	6.948	6.948	0.000	34	40871	1250.0	777.2	
58 Benzene	78	6.955	6.955	0.000	99	492104	50.0	50.8	
59 1,2-Dichloroethane	62	6.979	6.979	0.000	98	145394	50.0	52.0	
62 n-Heptane	43	7.277	7.277	0.000	82	179951	50.0	47.8	
64 Trichloroethene	130	7.660	7.660	0.000	99	112206	50.0	49.2	
66 Methylcyclohexane	83	7.861	7.861	0.000	100	218761	50.0	50.8	
67 1,2-Dichloropropane	63	7.897	7.897	0.000	93	112220	50.0	44.2	
68 Dibromomethane	93	8.019	8.019	0.000	96	58400	50.0	50.9	
70 1,4-Dioxane	88	8.068	8.068	0.000	94	20971	1000.0	925.6	
71 Dichlorobromomethane	83	8.196	8.196	0.000	99	107432	50.0	50.2	
74 cis-1,3-Dichloropropene	75	8.658	8.658	0.000	98	93226	50.0	32.9	
75 4-Methyl-2-pentanone (MIBK)	43	8.828	8.828	0.000	99	246272	100.0	94.0	
76 Toluene	91	8.992	8.992	0.000	100	499560	50.0	55.8	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	98	53534	50.0	28.3	
78 Ethyl methacrylate	69	9.321	9.321	0.000	99	71307	50.0	33.6	
79 1,1,2-Trichloroethane	97	9.400	9.400	0.000	98	83828	50.0	51.2	
80 Tetrachloroethene	164	9.540	9.540	0.000	98	94655	50.0	57.3	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	99	156004	50.0	50.7	
82 2-Hexanone	43	9.662	9.662	0.000	98	186845	100.0	102.1	
84 Chlorodibromomethane	129	9.789	9.789	0.000	97	60527	50.0	56.2	
85 Ethylene Dibromide	107	9.905	9.905	0.000	100	75789	50.0	48.1	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	95	159537	50.0	58.1	
87 Chlorobenzene	112	10.392	10.392	0.000	100	315668	50.0	55.0	
88 4-Chlorobenzotrifluoride	180	10.434	10.434	0.000	99	144391	50.0	55.0	
89 1,1,1,2-Tetrachloroethane	131	10.471	10.471	0.000	95	66445	50.0	50.2	
90 Ethylbenzene	106	10.501	10.501	0.000	100	183671	50.0	55.4	
91 m-Xylene & p-Xylene	106	10.617	10.617	0.000	99	222026	50.0	54.3	
92 o-Xylene	106	11.012	11.012	0.000	96	215329	50.0	54.3	
93 Styrene	104	11.024	11.024	0.000	97	357881	50.0	55.2	
94 Bromoform	173	11.213	11.213	0.000	97	32512	50.0	57.2	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	99	149282	50.0	54.8	
97 Isopropylbenzene	105	11.377	11.377	0.000	100	570723	50.0	58.6	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	97	124269	50.0	54.8	
100 Bromobenzene	156	11.681	11.681	0.000	98	119549	50.0	52.6	
101 1,2,3-Trichloropropane	110	11.718	11.718	0.000	94	37565	50.0	49.3	
102 trans-1,4-Dichloro-2-buten	53	11.736	11.736	0.000	85	30362	50.0	41.0	
103 N-Propylbenzene	120	11.791	11.791	0.000	100	159892	50.0	53.0	
104 2-Chlorotoluene	126	11.876	11.876	0.000	100	126395	50.0	50.7	
105 3-Chlorotoluene	126	11.937	11.937	0.000	100	131750	50.0	51.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.961	0.000	99	446060	50.0	53.4	
107 4-Chlorotoluene	126	11.986	11.986	0.000	97	134734	50.0	50.1	
108 tert-Butylbenzene	119	12.290	12.290	0.000	100	377860	50.0	52.4	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	100	457313	50.0	53.0	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.405	0.000	99	109921	50.0	56.5	
112 sec-Butylbenzene	105	12.509	12.509	0.000	100	567532	50.0	54.7	
113 1,3-Dichlorobenzene	146	12.618	12.618	0.000	99	232739	50.0	51.8	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	100	460347	50.0	54.1	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	98	238084	50.0	52.7	
116 2,4-Dichloro-1-(trifluorom	214	12.758	12.758	0.000	94	105128	50.0	56.8	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	97	121171	50.0	60.1	
120 n-Butylbenzene	91	13.062	13.062	0.000	100	413090	50.0	54.6	
121 1,2-Dichlorobenzene	146	13.081	13.081	0.000	98	217500	50.0	52.9	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.859	0.000	96	11545	50.0	42.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.005	0.000	100	438618	150.0	156.3	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.425	0.000	99	280172	100.0	101.0	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	99	109053	50.0	53.1	
127 Hexachlorobutadiene	225	14.863	14.863	0.000	95	53544	50.0	61.0	
128 Naphthalene	128	14.936	14.936	0.000	100	294648	50.0	49.4	
129 1,2,3-Trichlorobenzene	180	15.185	15.185	0.000	99	89366	50.0	50.7	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	96	42925	50.0	48.2	
130 2,3,6-Trichlorotoluene	159	16.068	16.068	0.000	96	40788	50.0	49.6	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	100.9	
S 133 Xylenes, Total	106				0		100.0	108.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	61.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

s - Failed ISTD Recovery Test

Reagents:

VOA8260VOAPRI_00104	Amount Added: 2.00	Units: uL	
voaWEEpri Res_00003	Amount Added: 2.00	Units: uL	
VOAVAPRI_00003	Amount Added: 2.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 2.00	Units: uL	
VOAACRPRI_00003	Amount Added: 6.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURRE_00031	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310002.D

Injection Date: 10-Mar-2015 11:37:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

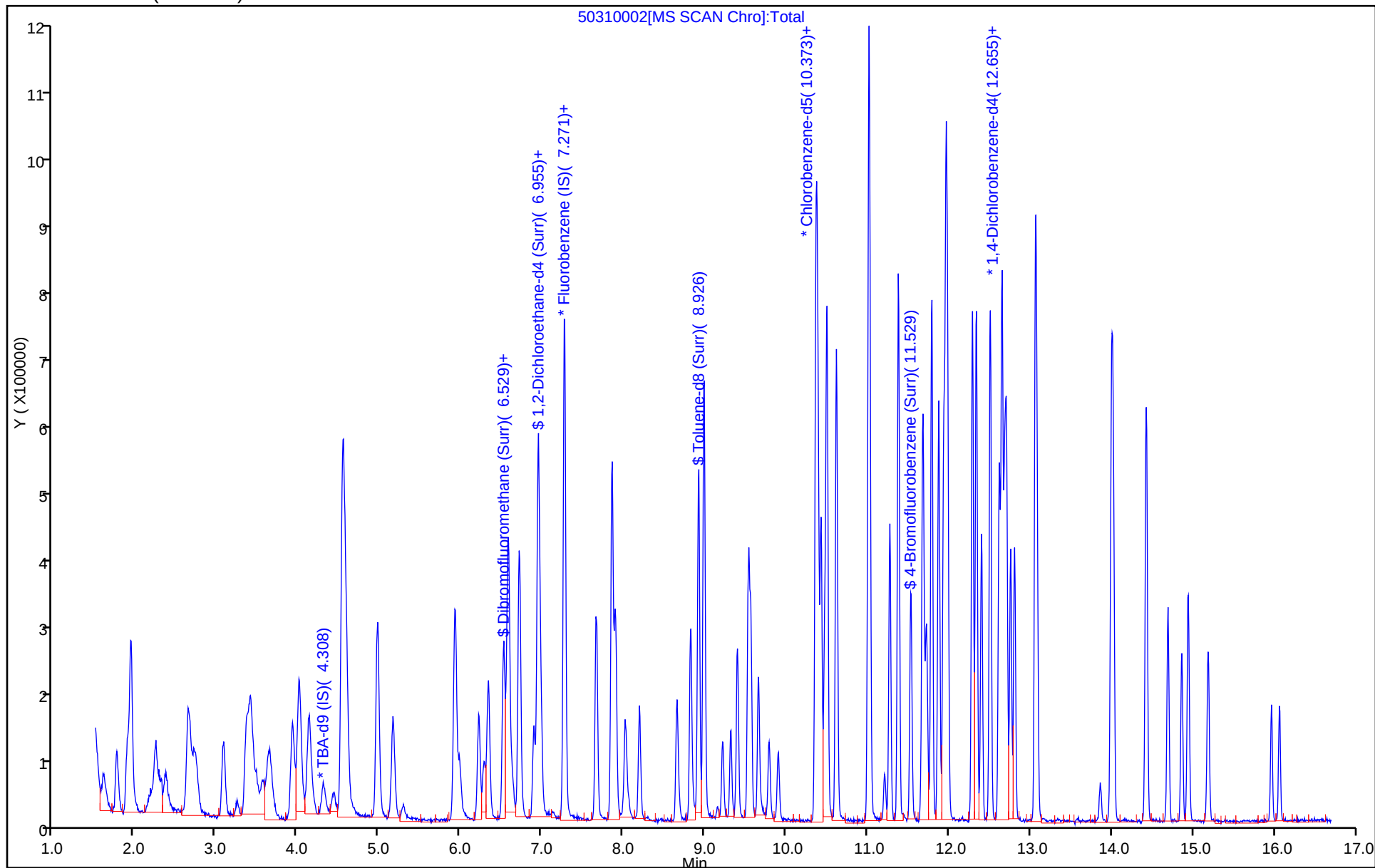
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-135260/2 Calibration Date: 03/11/2015 11:20
 Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 03/03/2015 18:29
 Lab File ID: 50311002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2512	0.2451	0.1000	9.76	10.0	-2.4	20.0
Chloromethane	Ave	0.4015	0.3283	0.1000	8.18	10.0	-18.2	20.0
Vinyl chloride	Ave	0.3859	0.3778	0.1000	9.79	10.0	-2.1	20.0
Bromomethane	Lin2		0.2270	0.0500	20.4	10.0	104.2*	20.0
Chloroethane	Ave	0.1570	0.2721	0.0500	17.3	10.0	73.3*	20.0
Dichlorofluoromethane	Ave	0.3598	0.6186	0.0100	17.2	10.0	71.9*	20.0
Trichlorofluoromethane	Ave	0.3005	0.4542	0.1000	15.1	10.0	51.1*	20.0
Ethyl ether	Ave	0.2900	0.2636	0.0100	9.09	10.0	-9.1	20.0
Acrolein	Ave	0.0383	0.0293	0.0100	22.9	30.0	-23.6*	20.0
1,1-Dichloroethene	Ave	0.2911	0.2717	0.1000	9.33	10.0	-6.7	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2943	0.2821	0.1000	9.59	10.0	-4.1	20.0
Acetone	Ave	0.1050	0.1137	0.0500	21.6	20.0	8.2	20.0
Iodomethane	Ave	0.4096	0.4051	0.0100	9.89	10.0	-1.1	20.0
Carbon disulfide	Ave	0.7166	0.6853	0.1000	9.56	10.0	-4.4	20.0
Allyl chloride	Ave	0.1818	0.1418	0.0100	7.80	10.0	-22.0*	20.0
Methyl acetate	Ave	0.2888	0.2598	0.1000	45.0	50.0	-10.0	20.0
Methylene Chloride	Lin2		0.3177	0.1000	9.77	10.0	-2.3	20.0
tert-Butyl alcohol	Ave	1.198	1.117	0.0100	93.2	100	-6.8	20.0
Acrylonitrile	Ave	0.1432	0.1243	0.0100	86.8	100	-13.2	20.0
trans-1,2-Dichloroethene	Ave	0.3044	0.2949	0.1000	9.69	10.0	-3.1	20.0
Methyl tert-butyl ether	Ave	0.7605	0.5300	0.1000	6.97	10.0	-30.3*	20.0
Hexane	Ave	0.5404	0.4494	0.0100	8.32	10.0	-16.8	20.0
1,1-Dichloroethane	Ave	0.5802	0.5359	0.2000	9.24	10.0	-7.6	20.0
Vinyl acetate	Ave	0.1982	0.1212	0.0100	6.12	10.0	-38.8*	20.0
2,2-Dichloropropane	Ave	0.2148	0.0904	0.0100	4.21	10.0	-57.9*	20.0
cis-1,2-Dichloroethene	Ave	0.3255	0.3066	0.1000	9.42	10.0	-5.8	20.0
2-Butanone (MEK)	Ave	0.1711	0.1714	0.0500	20.0	20.0	0.2	20.0
Bromochloromethane	Ave	0.1357	0.1344	0.0100	9.91	10.0	-0.9	20.0
Tetrahydrofuran	Ave	0.1218	0.0993	0.0100	16.3	20.0	-18.4	20.0
Chloroform	Ave	0.4624	0.4862	0.2000	10.5	10.0	5.2	20.0
1,1,1-Trichloroethane	Ave	0.3141	0.2597	0.1000	8.27	10.0	-17.3	20.0
Cyclohexane	Ave	0.7049	0.5750	0.1000	8.16	10.0	-18.4	20.0
Carbon tetrachloride	Ave	0.2130	0.2168	0.1000	10.2	10.0	1.8	20.0
1,1-Dichloropropene	Ave	0.4007	0.3879	0.0100	9.68	10.0	-3.2	20.0
Isobutyl alcohol	Ave	0.0069	0.0040*	0.0100	147	250	-41.2*	20.0
Benzene	Ave	1.263	1.207	0.5000	9.56	10.0	-4.4	20.0
1,2-Dichloroethane	Ave	0.3648	0.4110	0.1000	11.3	10.0	12.7	20.0
n-Heptane	Ave	0.4910	0.4008	0.0100	8.16	10.0	-18.4	20.0
Trichloroethene	Ave	0.2974	0.2912	0.2000	9.79	10.0	-2.1	20.0
Methylcyclohexane	Ave	0.5619	0.5218	0.1000	9.29	10.0	-7.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Lab Sample ID: CCVIS 180-135260/2 Calibration Date: 03/11/2015 11:20

Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 03/03/2015 18:29

Lab File ID: 50311002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3317	0.2981	0.1000	8.99	10.0	-10.1	20.0
Dibromomethane	Ave	0.1498	0.1589	0.0100	10.6	10.0	6.1	20.0
1,4-Dioxane	Ave	0.0030	0.0025*	0.0100	166	200	-17.1	20.0
Bromodichloromethane	Ave	0.2792	0.3323	0.2000	11.9	10.0	19.0	20.0
cis-1,3-Dichloropropene	Ave	0.3698	0.2562	0.2000	6.93	10.0	-30.7*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.510	1.410	0.1000	18.7	20.0	-6.6	20.0
Toluene	Ave	5.161	5.507	0.4000	10.7	10.0	6.7	20.0
trans-1,3-Dichloropropene	Ave	1.088	0.6668	0.1000	6.13	10.0	-38.7*	20.0
Ethyl methacrylate	Ave	1.224	1.002	0.0100	8.19	10.0	-18.1	20.0
1,1,2-Trichloroethane	Ave	0.9428	1.023	0.1000	10.9	10.0	8.5	20.0
Tetrachloroethene	Ave	0.9523	1.032	0.2000	10.8	10.0	8.3	20.0
1,3-Dichloropropane	Ave	1.772	1.964	0.0100	11.1	10.0	10.8	20.0
2-Hexanone	Ave	1.054	1.033	0.1000	19.6	20.0	-2.0	20.0
Dibromochloromethane	Ave	0.6200	0.7877	0.1000	12.7	10.0	27.0*	20.0
1,2-Dibromoethane (EDB)	Ave	0.9079	0.9044	0.1000	9.96	10.0	-0.4	20.0
3-Chlorobenzotrifluoride	Ave	1.583	1.771	0.0100	11.2	10.0	11.9	20.0
Chlorobenzene	Ave	3.305	3.516	0.5000	10.6	10.0	6.4	20.0
4-Chlorobenzotrifluoride	Ave	1.513	1.647	0.0100	10.9	10.0	8.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.7622	0.8372	0.0100	11.0	10.0	9.8	20.0
Ethylbenzene	Ave	1.911	1.981	0.1000	10.4	10.0	3.6	20.0
m-Xylene & p-Xylene	Ave	2.354	2.443	0.1000	10.4	10.0	3.8	20.0
o-Xylene	Ave	2.285	2.336	0.3000	10.2	10.0	2.3	20.0
Styrene	Ave	3.735	3.950	0.3000	10.6	10.0	5.8	20.0
Bromoform	Ave	0.3275	0.4958	0.1000	15.1	10.0	51.4*	20.0
2-Chlorobenzotrifluoride	Ave	1.569	1.726	0.0100	11.0	10.0	10.0	20.0
Isopropylbenzene	Ave	5.608	6.050	0.1000	10.8	10.0	7.9	20.0
1,1,2,2-Tetrachloroethane	Ave	1.307	1.428	0.3000	10.9	10.0	9.3	20.0
Bromobenzene	Ave	0.8735	0.9523	0.0100	10.9	10.0	9.0	20.0
1,2,3-Trichloropropane	Ave	0.2927	0.3001	0.0100	10.3	10.0	2.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2844	0.2371	0.0100	8.34	10.0	-16.6	20.0
N-Propylbenzene	Ave	1.160	1.170	0.0100	10.1	10.0	0.9	20.0
2-Chlorotoluene	Ave	0.9582	0.9719	0.0100	10.1	10.0	1.4	20.0
3-Chlorotoluene	Ave	0.9794	0.9672	0.0100	9.88	10.0	-1.2	20.0
1,3,5-Trimethylbenzene	Ave	3.211	3.366	0.0100	10.5	10.0	4.8	20.0
4-Chlorotoluene	Ave	1.034	1.058	0.0100	10.2	10.0	2.3	20.0
tert-Butylbenzene	Ave	2.771	2.860	0.0100	10.3	10.0	3.2	20.0
1,2,4-Trimethylbenzene	Ave	3.314	3.399	0.0100	10.3	10.0	2.6	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.7482	0.8862	0.0100	11.8	10.0	18.5	20.0
sec-Butylbenzene	Ave	3.989	4.093	0.0100	10.3	10.0	2.6	20.0
1,3-Dichlorobenzene	Ave	1.726	1.709	0.6000	9.90	10.0	-1.0	20.0
4-Isopropyltoluene	Ave	3.269	3.313	0.0100	10.1	10.0	1.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-135260/2 Calibration Date: 03/11/2015 11:20
 Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 03/03/2015 18:29
 Lab File ID: 50311002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.737	1.774	0.5000	10.2	10.0	2.1	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.7111	0.8276	0.0100	11.6	10.0	16.4	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.7753	0.9579	0.0100	12.4	10.0	23.6*	20.0
n-Butylbenzene	Ave	2.906	2.983	0.0100	10.3	10.0	2.7	20.0
1,2-Dichlorobenzene	Ave	1.579	1.557	0.4000	9.86	10.0	-1.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1040	0.1029	0.0500	9.89	10.0	-1.1	20.0
2,4- & 2,5- & 2,6- Dichlorotoluene	Ave	1.078	1.024	0.0100	28.5	30.0	-5.1	20.0
2,3- & 3,4- Dichlorotoluene	Ave	1.066	0.999	0.0100	18.7	20.0	-6.3	20.0
1,2,4-Trichlorobenzene	Ave	0.7897	0.7360	0.2000	9.32	10.0	-6.8	20.0
Hexachlorobutadiene	Ave	0.3373	0.3684	0.0100	10.9	10.0	9.2	20.0
Naphthalene	Ave	2.291	1.977	0.0100	8.63	10.0	-13.7	20.0
1,2,3-Trichlorobenzene	Ave	0.6771	0.5806	0.0100	8.57	10.0	-14.3	20.0
2,4,5-Trichlorotoluene	Ave	0.3426	0.2610	0.0100	7.62	10.0	-23.8*	20.0
2,3,6-Trichlorotoluene	Ave	0.3158	0.2351	0.0100	7.44	10.0	-25.6*	20.0
Dibromofluoromethane (Surr)	Ave	0.2141	0.2173		10.1	10.0	1.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2646	0.3005		11.4	10.0	13.6	20.0
Toluene-d8 (Surr)	Ave	3.897	4.170		10.7	10.0	7.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.450	1.497		10.3	10.0	3.3	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311002.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 11-Mar-2015 11:20:30 ALS Bottle#: 2 Worklist Smp#: 2
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: CCVIS
 Misc. Info.: 180-0005976-002
 Operator ID: 001562 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub4
 Method: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 14:23:33 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 12:02:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.305	4.305	0.000	82	113757	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.268	7.268	0.000	99	516360	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.364	0.000	98	116893	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	97	169715	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.526	6.526	0.000	88	112186	50.0	50.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.897	0.000	97	155187	50.0	56.8	
\$ 7 Toluene-d8 (Surr)	98	8.923	8.923	0.000	100	487471	50.0	53.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	95	175028	50.0	51.6	
11 Dichlorodifluoromethane	85	1.610	1.610	0.000	99	126560	50.0	48.8	
12 Chloromethane	50	1.768	1.768	0.000	99	169533	50.0	40.9	
13 Vinyl chloride	62	1.902	1.902	0.000	100	195057	50.0	48.9	
14 Butadiene	39	1.945	1.945	0.000	99	217729	50.0	47.1	
15 Bromomethane	94	2.249	2.249	0.000	90	117229	50.0	102.1	
16 Chloroethane	64	2.371	2.371	0.000	97	140493	50.0	86.7	
17 Dichlorofluoromethane	67	2.645	2.645	0.000	99	319418	50.0	86.0	
18 Trichlorofluoromethane	101	2.687	2.687	0.000	99	234519	50.0	75.6	
20 Ethyl ether	59	3.083	3.083	0.000	99	136127	50.0	45.5	
21 Acrolein	56	3.247	3.247	0.000	93	45320	150.0	114.6	
22 1,1-Dichloroethene	96	3.368	3.368	0.000	98	140314	50.0	46.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.429	3.429	0.000	98	145649	50.0	47.9	
24 Acetone	43	3.496	3.496	0.000	99	117375	100.0	108.2	
25 Iodomethane	142	3.575	3.575	0.000	99	209171	50.0	49.5	
26 Carbon disulfide	76	3.648	3.648	0.000	100	353882	50.0	47.8	
28 3-Chloro-1-propene	76	3.934	3.934	0.000	96	73217	50.0	39.0	
30 Methyl acetate	43	4.019	4.019	0.000	100	670838	250.0	224.9	
31 Methylene Chloride	84	4.135	4.135	0.000	95	164068	50.0	48.9	
32 2-Methyl-2-propanol	59	4.439	4.439	0.000	85	63519	500.0	465.9	
33 Acrylonitrile	53	4.549	4.549	0.000	99	641873	500.0	434.1	
34 trans-1,2-Dichloroethene	96	4.555	4.555	0.000	95	152284	50.0	48.4	
35 Methyl tert-butyl ether	73	4.597	4.597	0.000	91	273666	50.0	34.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.981	4.981	0.000	98	232046	50.0	41.6	
37 1,1-Dichloroethane	63	5.163	5.163	0.000	99	276708	50.0	46.2	
38 Vinyl acetate	43	5.291	5.291	0.000	100	62606	50.0	30.6	
44 2,2-Dichloropropane	77	5.923	5.923	0.000	62	46693	50.0	21.1	
45 cis-1,2-Dichloroethene	96	5.930	5.930	0.000	90	158334	50.0	47.1	
46 2-Butanone (MEK)	43	5.990	5.990	0.000	99	177009	100.0	100.2	
49 Chlorobromomethane	128	6.222	6.222	0.000	94	69389	50.0	49.5	
51 Tetrahydrofuran	42	6.289	6.289	0.000	98	102577	100.0	81.6	
52 Chloroform	83	6.343	6.343	0.000	96	251066	50.0	52.6	
53 1,1,1-Trichloroethane	97	6.532	6.532	0.000	94	134093	50.0	41.3	
54 Cyclohexane	56	6.587	6.587	0.000	97	296900	50.0	40.8	
56 Carbon tetrachloride	117	6.708	6.708	0.000	79	111932	50.0	50.9	
55 1,1-Dichloropropene	75	6.720	6.720	0.000	98	200306	50.0	48.4	
57 Isobutyl alcohol	41	6.939	6.939	0.000	37	52102	1250.0	735.1	
58 Benzene	78	6.952	6.952	0.000	99	623153	50.0	47.8	
59 1,2-Dichloroethane	62	6.982	6.982	0.000	98	212212	50.0	56.3	
62 n-Heptane	43	7.274	7.274	0.000	80	206938	50.0	40.8	
64 Trichloroethene	130	7.663	7.663	0.000	97	150353	50.0	48.9	
66 Methylcyclohexane	83	7.858	7.858	0.000	96	269454	50.0	46.4	
67 1,2-Dichloropropane	63	7.901	7.901	0.000	96	153913	50.0	44.9	
68 Dibromomethane	93	8.016	8.016	0.000	97	82032	50.0	53.0	
70 1,4-Dioxane	88	8.059	8.059	0.000	94	25312	1000.0	829.0	
71 Dichlorobromomethane	83	8.199	8.199	0.000	98	171562	50.0	59.5	
74 cis-1,3-Dichloropropene	75	8.655	8.655	0.000	98	132285	50.0	34.6	
75 4-Methyl-2-pentanone (MIBK)	43	8.825	8.825	0.000	99	329559	100.0	93.4	
76 Toluene	91	8.990	8.990	0.000	99	643680	50.0	53.3	
77 trans-1,3-Dichloropropene	75	9.215	9.215	0.000	97	77948	50.0	30.6	
78 Ethyl methacrylate	69	9.318	9.318	0.000	97	117169	50.0	41.0	
79 1,1,2-Trichloroethane	97	9.397	9.397	0.000	99	119597	50.0	54.3	
80 Tetrachloroethene	164	9.531	9.531	0.000	97	120582	50.0	54.2	
81 1,3-Dichloropropane	76	9.561	9.561	0.000	97	229543	50.0	55.4	
82 2-Hexanone	43	9.659	9.659	0.000	100	241542	100.0	98.0	
84 Chlorodibromomethane	129	9.793	9.793	0.000	98	92074	50.0	63.5	
85 Ethylene Dibromide	107	9.902	9.902	0.000	100	105721	50.0	49.8	
86 3-Chlorobenzotrifluoride	180	10.371	10.371	0.000	94	207029	50.0	55.9	
87 Chlorobenzene	112	10.389	10.389	0.000	99	410978	50.0	53.2	
88 4-Chlorobenzotrifluoride	180	10.431	10.431	0.000	99	192490	50.0	54.4	
89 1,1,1,2-Tetrachloroethane	131	10.474	10.474	0.000	96	97863	50.0	54.9	
90 Ethylbenzene	106	10.498	10.498	0.000	100	231517	50.0	51.8	
91 m-Xylene & p-Xylene	106	10.620	10.620	0.000	99	285514	50.0	51.9	
92 o-Xylene	106	11.009	11.009	0.000	96	273101	50.0	51.1	
93 Styrene	104	11.021	11.021	0.000	95	461723	50.0	52.9	
94 Bromoform	173	11.210	11.210	0.000	96	57954	50.0	75.7	
96 2-Chlorobenzotrifluoride	180	11.277	11.277	0.000	99	201806	50.0	55.0	
97 Isopropylbenzene	105	11.380	11.380	0.000	100	707170	50.0	53.9	
99 1,1,2,2-Tetrachloroethane	83	11.672	11.672	0.000	97	166902	50.0	54.6	
100 Bromobenzene	156	11.685	11.685	0.000	99	161615	50.0	54.5	
101 1,2,3-Trichloropropane	110	11.721	11.721	0.000	96	50927	50.0	51.3	
102 trans-1,4-Dichloro-2-buten	53	11.727	11.727	0.000	86	40243	50.0	41.7	
103 N-Propylbenzene	120	11.788	11.788	0.000	100	198649	50.0	50.4	
104 2-Chlorotoluene	126	11.873	11.873	0.000	100	164951	50.0	50.7	
105 3-Chlorotoluene	126	11.934	11.934	0.000	99	164149	50.0	49.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	99	571218	50.0	52.4	
107 4-Chlorotoluene	126	11.983	11.983	0.000	98	179530	50.0	51.2	
108 tert-Butylbenzene	119	12.287	12.287	0.000	99	485362	50.0	51.6	
110 1,2,4-Trimethylbenzene	105	12.335	12.335	0.000	98	576924	50.0	51.3	
111 1,2-dichloro-4-(trifluorom	214	12.402	12.402	0.000	99	150399	50.0	59.2	
112 sec-Butylbenzene	105	12.506	12.506	0.000	100	694597	50.0	51.3	
113 1,3-Dichlorobenzene	146	12.615	12.615	0.000	99	290017	50.0	49.5	
114 4-Isopropyltoluene	119	12.652	12.652	0.000	100	562198	50.0	50.7	
115 1,4-Dichlorobenzene	146	12.707	12.707	0.000	98	301088	50.0	51.1	
116 2,4-Dichloro-1-(trifluorom	214	12.761	12.761	0.000	94	140450	50.0	58.2	
118 2,5-Dichlorobenzotrifluori	214	12.804	12.804	0.000	97	162572	50.0	61.8	
120 n-Butylbenzene	91	13.059	13.059	0.000	99	506323	50.0	51.3	
121 1,2-Dichlorobenzene	146	13.084	13.084	0.000	99	264300	50.0	49.3	
122 1,2-Dibromo-3-Chloropropan	75	13.862	13.862	0.000	92	17466	50.0	49.5	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.008	0.000	98	521140	150.0	142.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.428	0.000	99	339172	100.0	93.7	
126 1,2,4-Trichlorobenzene	180	14.690	14.690	0.000	97	124909	50.0	46.6	
127 Hexachlorobutadiene	225	14.866	14.866	0.000	96	62516	50.0	54.6	
128 Naphthalene	128	14.939	14.939	0.000	100	335526	50.0	43.1	
129 1,2,3-Trichlorobenzene	180	15.189	15.189	0.000	97	98528	50.0	42.9	
131 2,4,5-Trichlorotoluene	159	15.967	15.967	0.000	97	44301	50.0	38.1	
130 2,3,6-Trichlorotoluene	159	16.065	16.065	0.000	93	39891	50.0	37.2	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	95.5	
S 133 Xylenes, Total	106				0		100.0	103.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	65.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOAPRI_00104	Amount Added: 2.00	Units: uL	
voaWEEpri Res_00003	Amount Added: 2.00	Units: uL	
VOAVAPRI_00003	Amount Added: 2.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 2.00	Units: uL	
VOACRPRI_00003	Amount Added: 6.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURRE_00031	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311002.D

Injection Date: 11-Mar-2015 11:20:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

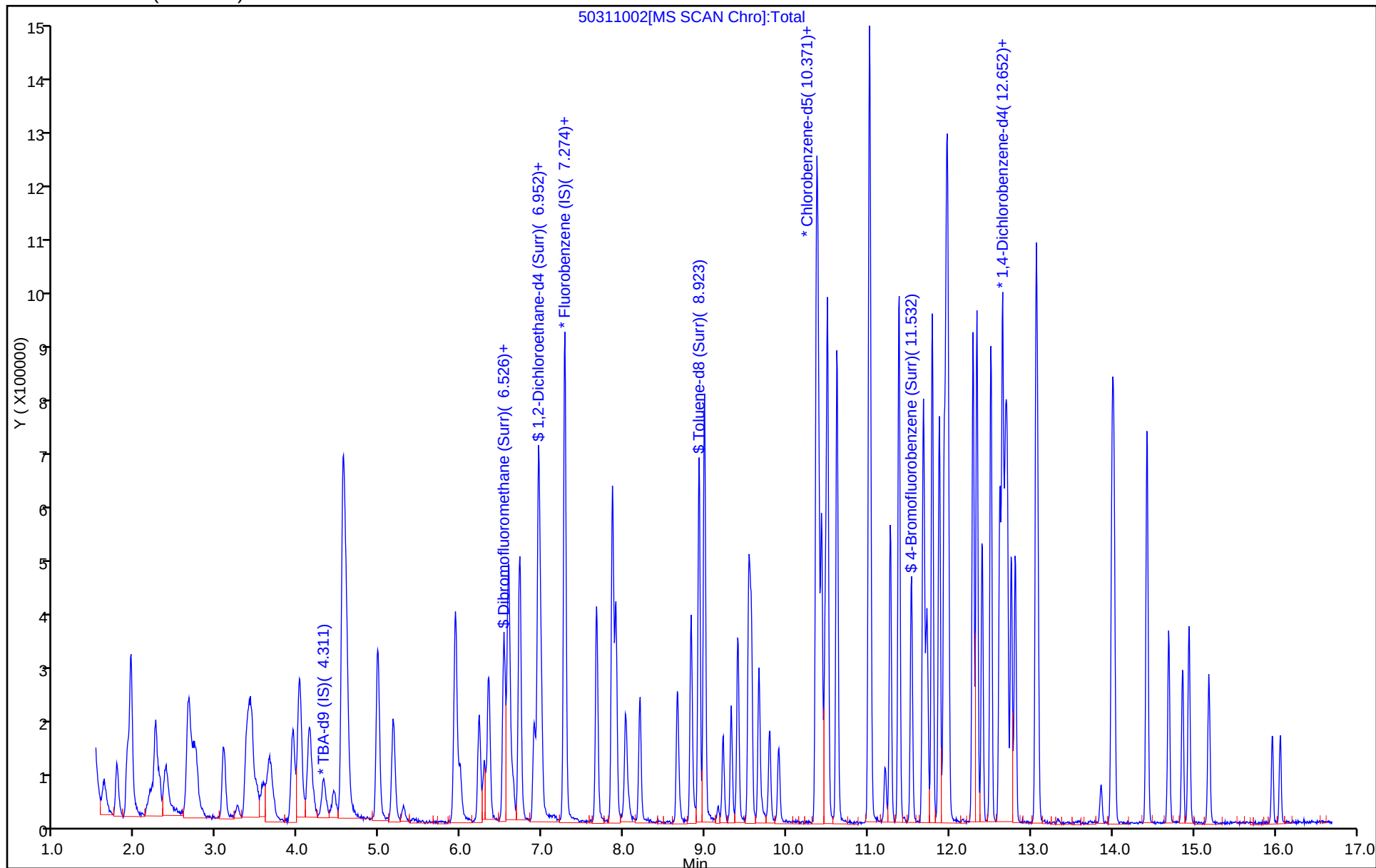
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303006.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 03-Mar-2015 12:21:30 ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0005873-006
Operator ID: 001562 Instrument ID: CHHP5
Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 10:13:03 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond

Date: 03-Mar-2015 12:34:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags

\$ 10 BFB	95	8.342	8.342	0.000	0	147446	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

VOA BFB 25_00001

Amount Added: 1.00

Units: uL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303006.D

Injection Date: 03-Mar-2015 12:21:30

Instrument ID: CHHP5

Lims ID: BFB

Client ID:

Operator ID: 001562

ALS Bottle#: 3 Worklist Smp#: 6

Injection Vol: 5.0 mL

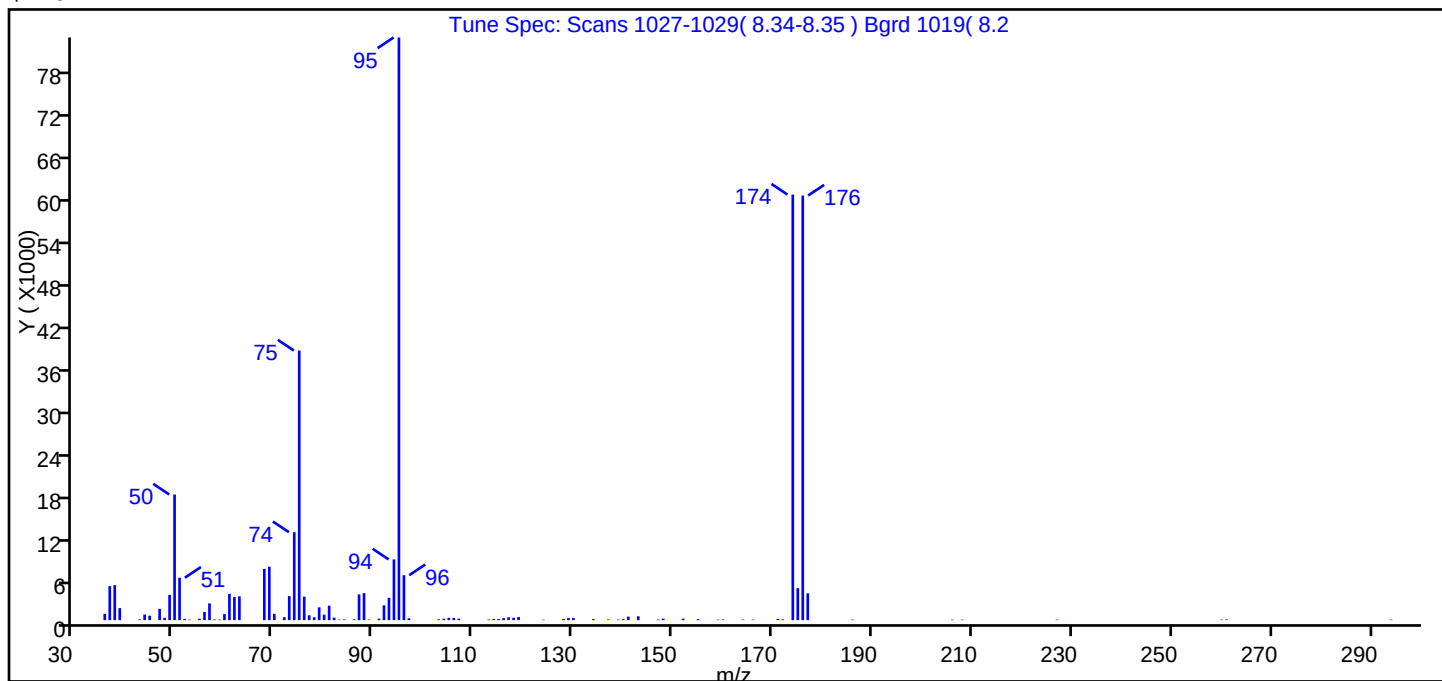
Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.6
75	30 to 60% of m/z 95	46.3
96	5 to 9% of m/z 95	7.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	73.0
175	5 to 9% of m/z 174	5.5 (7.5)
176	Greater than 95% but less than 101% of m/z 174	72.9 (99.8)
177	5 to 9% of m/z 176	4.6 (6.3)

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303006.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 03-Mar-2015 12:21:30
Spectrum: Tune Spec: Scans 1027-1029(8.34-8.35) Bgrd 1019(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 93

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	884	69.00	7531	96.00	6342	147.00	90
37.00	4798	70.00	895	97.00	267	148.00	212
38.00	4937	72.00	420	103.00	118	152.00	208
39.00	1701	73.00	3394	104.00	203	155.00	140
43.00	90	74.00	12405	105.00	323	159.00	71
44.00	787	75.00	38024	106.00	305	160.00	100
45.00	628	76.00	3310	107.00	205	164.00	78
47.00	1594	77.00	688	113.00	90	166.00	74
48.00	327	78.00	405	114.00	165	171.00	160
49.00	3565	79.00	1805	115.00	156	172.00	105
50.00	17720	80.00	768	116.00	297	174.00	60024
51.00	5986	81.00	2046	117.00	405	175.00	4514
52.00	186	82.00	354	118.00	334	176.00	59888
53.00	74	83.00	67	119.00	437	177.00	3780
55.00	198	84.00	93	124.00	67	186.00	69
56.00	1152	86.00	120	128.00	166	206.00	73
57.00	2364	87.00	3629	129.00	302	208.00	68
58.00	96	88.00	3807	130.00	296	227.00	70
59.00	84	89.00	81	134.00	146	260.00	73
60.00	846	91.00	210	137.00	89	261.00	93
61.00	3705	92.00	2094	139.00	81	294.00	74
62.00	3255	93.00	3151	140.00	139		
63.00	3358	94.00	8567	141.00	495		
68.00	7231	95.00	82184	143.00	545		

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303006.D

Injection Date: 03-Mar-2015 12:21:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: BFB

Worklist Smp#: 6

Client ID:

Injection Vol: 5.0 mL

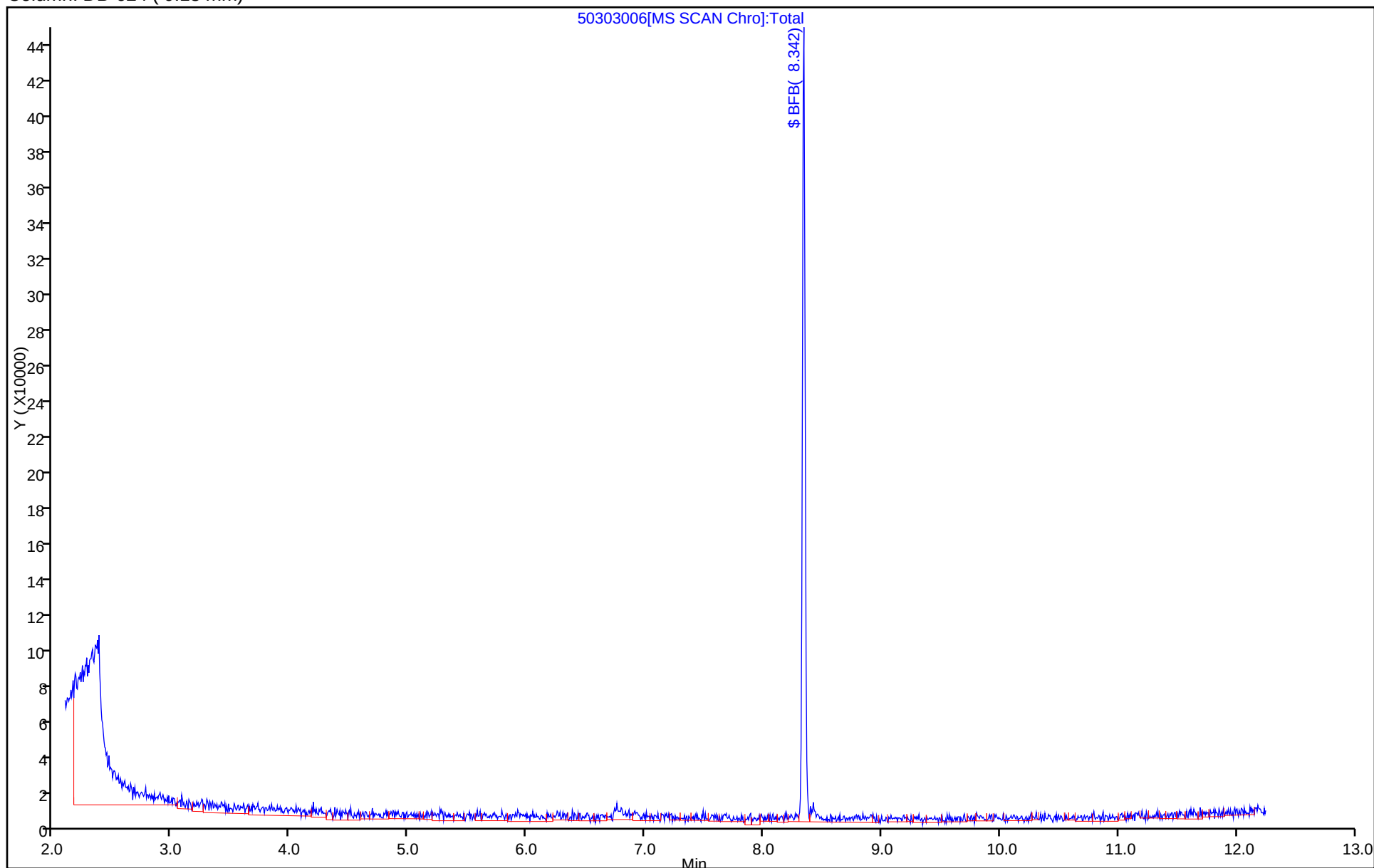
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310001.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 10-Mar-2015 10:55:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0005958-001
Operator ID: 001562 Instrument ID: CHHP5
Method: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 11-Mar-2015 07:20:54 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 10-Mar-2015 11:23:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags

\$ 10 BFB	95	8.341	8.341	0.000	0	79704	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

VOA BFB 25_00001

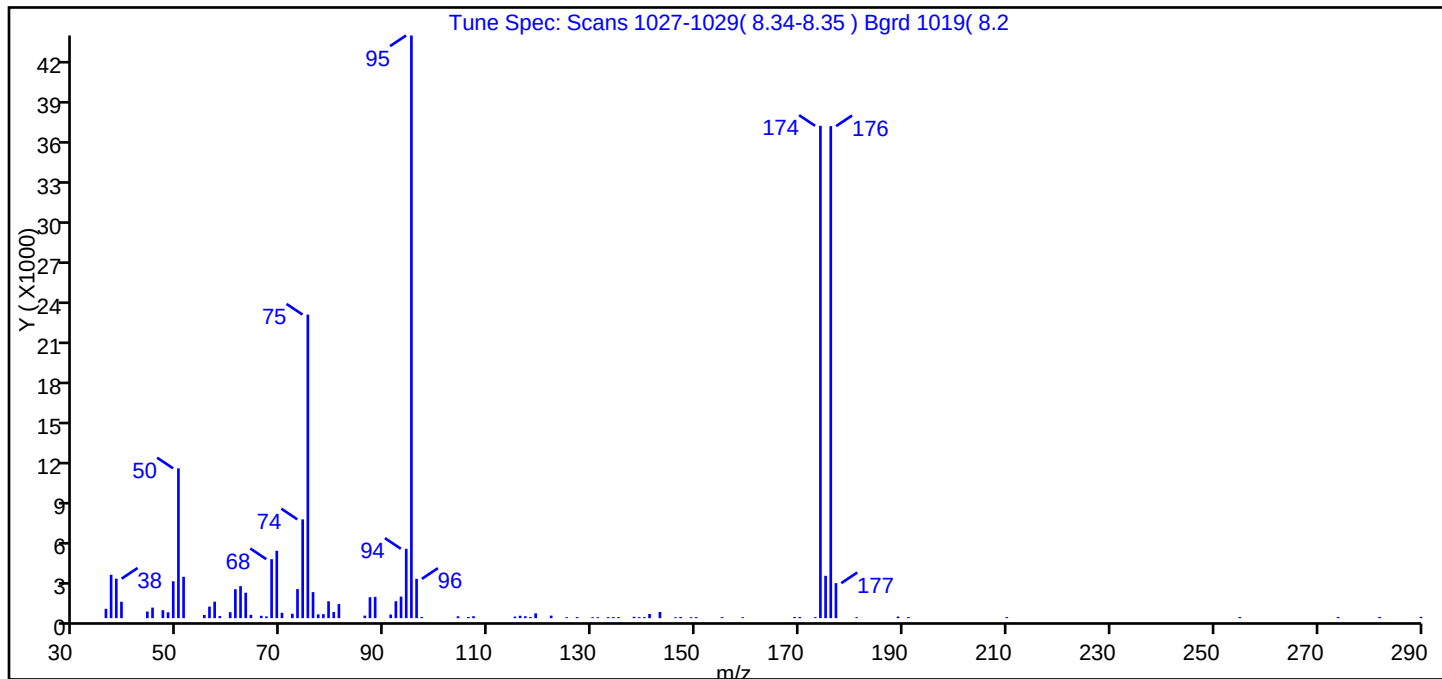
Amount Added: 1.00

Units: uL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310001.D
Injection Date: 10-Mar-2015 10:55:30 Instrument ID: CHHP5
Lims ID: BFB
Client ID:
Operator ID: 001562 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	25.7
75	30 to 60% of m/z 95	52.1
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.2 (0.2)
174	50 to 120% of m/z 95	84.5
175	5 to 9% of m/z 174	7.3 (8.6)
176	Greater than 95% but less than 101% of m/z 174	84.4 (99.9)
177	5 to 9% of m/z 176	6.0 (7.1)

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 10-Mar-2015 10:55:30
Spectrum: Tune Spec: Scans 1027-1029(8.34-8.35) Bgrd 1019(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 87

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	700	68.00	4424	97.00	84	146.00	66
37.00	3254	69.00	5054	104.00	140	147.00	85
38.00	2961	70.00	399	106.00	84	149.00	69
39.00	1229	72.00	329	107.00	145	150.00	79
44.00	494	73.00	2179	115.00	117	155.00	78
45.00	789	74.00	7408	116.00	180	159.00	72
47.00	597	75.00	22768	117.00	143	169.00	89
48.00	438	76.00	1953	118.00	83	170.00	87
49.00	2767	77.00	283	119.00	362	173.00	73
50.00	11236	78.00	298	122.00	188	174.00	36928
51.00	3102	79.00	1263	125.00	70	175.00	3176
55.00	238	80.00	456	127.00	82	176.00	36904
56.00	866	81.00	1057	130.00	67	177.00	2626
57.00	1239	86.00	188	131.00	68	181.00	70
58.00	155	87.00	1571	133.00	78	189.00	118
60.00	447	88.00	1597	134.00	76	191.00	79
61.00	2169	91.00	273	135.00	79	210.00	79
62.00	2400	92.00	1269	138.00	102	255.00	88
63.00	1906	93.00	1616	139.00	75	274.00	89
64.00	251	94.00	5202	140.00	77	282.00	91
66.00	178	95.00	43704	141.00	308	290.00	98
67.00	129	96.00	2948	143.00	465		

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310001.D

Injection Date: 10-Mar-2015 10:55:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

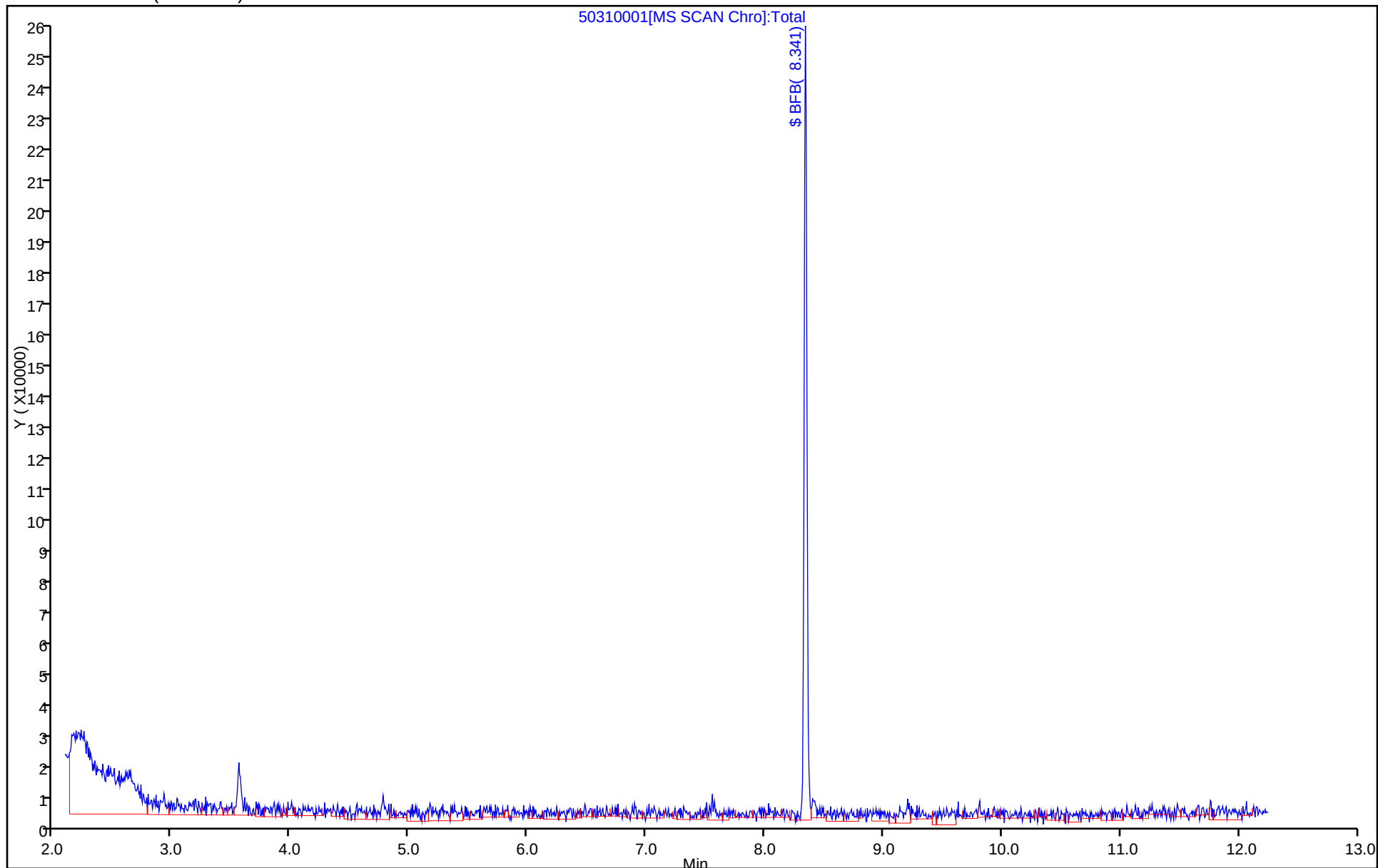
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311001.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 11-Mar-2015 10:41:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0005976-001
Operator ID: 001562 Instrument ID: CHHP5
Method: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 11-Mar-2015 14:23:32 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 10:57:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags

\$ 10 BFB	95	8.341	8.341	0.000	0	111877	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

VOA BFB 25_00001

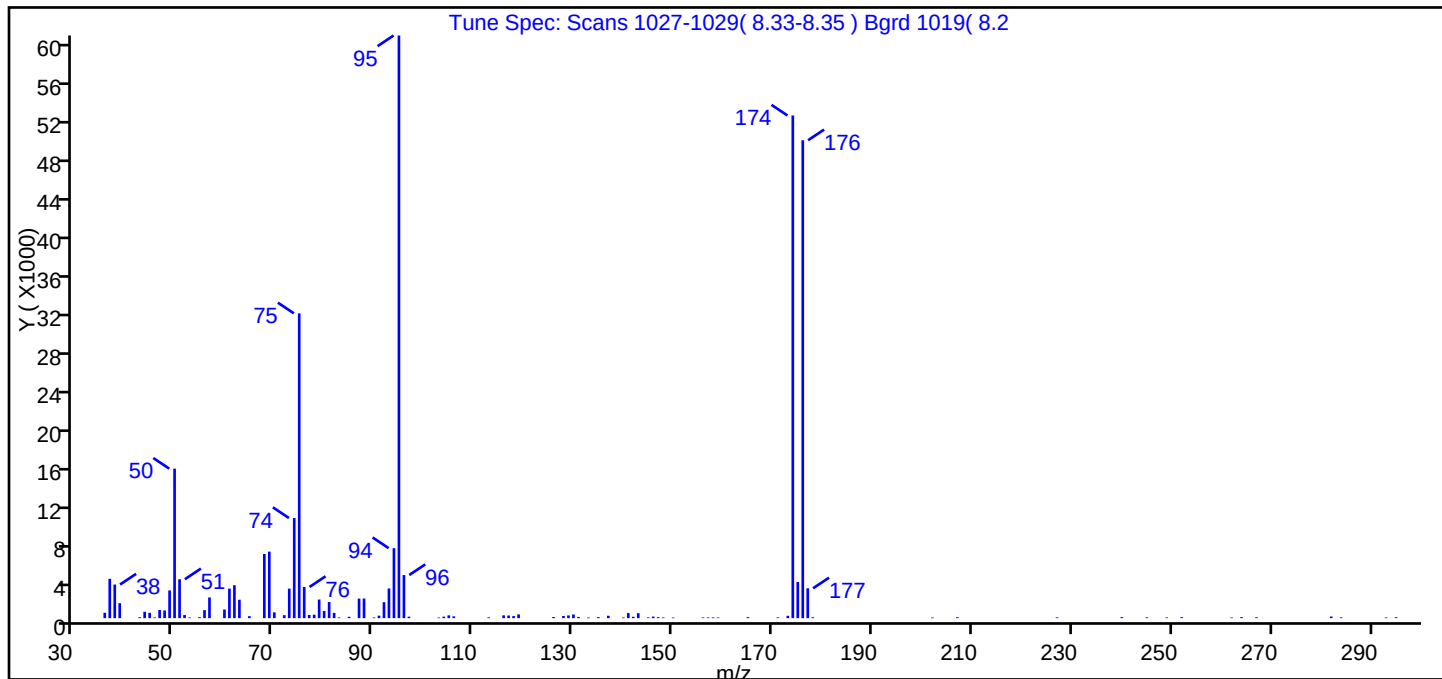
Amount Added: 1.00

Units: uL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311001.D
Injection Date: 11-Mar-2015 10:41:30 Instrument ID: CHHP5
Lims ID: BFB
Client ID:
Operator ID: 001562 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	25.7
75	30 to 60% of m/z 95	52.3
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	86.3
175	5 to 9% of m/z 174	6.2 (7.2)
176	Greater than 95% but less than 101% of m/z 174	82.0 (95.1)
177	5 to 9% of m/z 176	5.1 (6.2)

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 11-Mar-2015 10:41:30
Spectrum: Tune Spec: Scans 1027-1029(8.33-8.35) Bgrd 1019(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 101

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	558	72.00	309	106.00	183	159.00	68
37.00	4056	73.00	3045	113.00	81	165.00	104
38.00	3469	74.00	10331	116.00	290	171.00	77
39.00	1545	75.00	31448	117.00	274	173.00	243
43.00	95	76.00	3217	118.00	212	174.00	51864
44.00	657	77.00	332	119.00	385	175.00	3729
45.00	543	78.00	355	126.00	119	176.00	49312
46.00	73	79.00	1920	128.00	222	177.00	3081
47.00	844	80.00	738	129.00	279	178.00	87
48.00	790	81.00	1662	130.00	379	202.00	67
49.00	2860	82.00	538	131.00	127	207.00	93
50.00	15425	83.00	72	133.00	68	227.00	77
51.00	4014	85.00	140	135.00	106	240.00	108
52.00	326	87.00	2017	137.00	246	245.00	82
53.00	70	88.00	2024	140.00	67	249.00	72
55.00	103	90.00	71	141.00	520	252.00	100
56.00	828	91.00	257	142.00	143	262.00	67
57.00	2139	92.00	1645	143.00	511	264.00	102
60.00	893	93.00	3059	145.00	77	267.00	86
61.00	3049	94.00	7223	146.00	161	282.00	167
62.00	3397	95.00	60120	147.00	99	284.00	78
63.00	1897	96.00	4448	148.00	74	293.00	73
65.00	200	97.00	152	150.00	67	295.00	95
68.00	6623	103.00	67	156.00	72		
69.00	6864	104.00	154	157.00	71		
70.00	598	105.00	286	158.00	74		

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311001.D

Injection Date: 11-Mar-2015 10:41:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: MB 180-135153/4

Matrix: Water Lab File ID: 50310004.D

Analysis Method: 8260C Date Collected: _____

Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 12:44

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 180-135153/4
 Matrix: Water Lab File ID: 50310004.D
 Analysis Method: 8260C Date Collected: _____
 Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 12:44
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		64-135
2037-26-5	Toluene-d8 (Surr)	101		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	97		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310004.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 10-Mar-2015 12:44:30 ALS Bottle#: 4 Worklist Smp#: 4
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Misc. Info.: 180-0005958-004
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 07:20:56 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 07:21:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.304	4.296	0.008	96	86833	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.271	0.002	99	432295	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.363	10.367	-0.004	99	100617	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.681	12.685	-0.004	99	161434	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.537	6.529	0.008	52	89936	50.0	48.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.900	0.002	98	114939	50.0	50.3	
\$ 7 Toluene-d8 (Surr)	98	8.922	8.926	-0.004	100	397513	50.0	50.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.529	0.002	97	147203	50.0	50.4	
11 Dichlorodifluoromethane	85		1.607					ND	
12 Chloromethane	50		1.771					ND	
13 Vinyl chloride	62		1.899					ND	
14 Butadiene	39		1.948					ND	
15 Bromomethane	94		2.252					ND	
16 Chloroethane	64		2.374					ND	
17 Dichlorofluoromethane	67		2.641					ND	
18 Trichlorofluoromethane	101		2.684					ND	
19 Ethanol	45		3.012					ND	
20 Ethyl ether	59		3.073					ND	
21 Acrolein	56		3.250					ND	
22 1,1-Dichloroethene	96		3.371					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.414					ND	
24 Acetone	43		3.493					ND	
25 Iodomethane	142		3.566					ND	
26 Carbon disulfide	76		3.651					ND	
27 Isopropyl alcohol	45		3.736					ND	
28 3-Chloro-1-propene	76		3.925					ND	
29 Acetonitrile	40		3.943					ND	
30 Methyl acetate	43		4.016					ND	
31 Methylene Chloride	84		4.126					ND	
32 2-Methyl-2-propanol	59		4.436					ND	
33 Acrylonitrile	53		4.545					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.552					ND	
35 Methyl tert-butyl ether	73		4.594					ND	
36 Hexane	57		4.977					ND	
37 1,1-Dichloroethane	63		5.166					ND	
38 Vinyl acetate	43		5.294					ND	
41 Isopropyl ether	45		5.300					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
40 Isopropyl ether TIC	45		5.409					ND	
42 Tert-butyl ethyl ether	59		5.799					ND	
44 2,2-Dichloropropane	77		5.926					ND	
45 cis-1,2-Dichloroethene	96		5.933					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.981					ND	
48 Ethyl acetate	43		5.993					ND	
47 Propionitrile	54		6.024					ND	
49 Chlorobromomethane	128		6.218					ND	
51 Tetrahydrofuran	42		6.285					ND	
52 Chloroform	83		6.340					ND	
50 Methacrylonitrile	41		6.389					ND	
53 1,1,1-Trichloroethane	97		6.523					ND	
54 Cyclohexane	56		6.577					ND	
56 Carbon tetrachloride	117		6.717					ND	
55 1,1-Dichloropropene	75		6.717					ND	
57 Isobutyl alcohol	41		6.948					ND	
58 Benzene	78		6.955					ND	
59 1,2-Dichloroethane	62		6.979					ND	
61 Tert-amyl methyl ether	73		7.143					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.277					ND	
63 n-Butanol	56		7.654					ND	
64 Trichloroethene	130		7.660					ND	
66 Methylcyclohexane	83		7.861					ND	
65 Ethyl acrylate	55		7.867					ND	
69 Methyl methacrylate	69		7.867					ND	
67 1,2-Dichloropropane	63		7.897					ND	
68 Dibromomethane	93		8.019					ND	
70 1,4-Dioxane	88		8.068					ND	
71 Dichlorobromomethane	83		8.196					ND	
72 2-Nitropropane	41		8.427					ND	
73 2-Chloroethyl vinyl ether	63		8.506					ND	
74 cis-1,3-Dichloropropene	75		8.658					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828					ND	
76 Toluene	91		8.992					ND	
77 trans-1,3-Dichloropropene	75		9.224					ND	
78 Ethyl methacrylate	69		9.321					ND	
79 1,1,2-Trichloroethane	97		9.400					ND	
80 Tetrachloroethene	164		9.540					ND	
81 1,3-Dichloropropane	76		9.564					ND	
83 n-Butyl acetate	43		9.662					ND	
82 2-Hexanone	43		9.662					ND	
84 Chlorodibromomethane	129		9.789					ND	
85 Ethylene Dibromide	107		9.905					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.373					ND	
87 Chlorobenzene	112		10.392					ND	
88 4-Chlorobenzotrifluoride	180		10.434					ND	
89 1,1,1,2-Tetrachloroethane	131		10.471					ND	
90 Ethylbenzene	106		10.501					ND	
91 m-Xylene & p-Xylene	106		10.617					ND	
92 o-Xylene	106		11.012					ND	
93 Styrene	104		11.024					ND	
94 Bromoform	173		11.213					ND	
96 2-Chlorobenzotrifluoride	180		11.274					ND	
95 Cyclohexanol	57		11.280					ND	
97 Isopropylbenzene	105		11.377					ND	
98 Cyclohexanone	55		11.450					ND	
99 1,1,2,2-Tetrachloroethane	83		11.675					ND	
100 Bromobenzene	156		11.681					ND	
101 1,2,3-Trichloropropane	110		11.718					ND	
102 trans-1,4-Dichloro-2-buten	53		11.736					ND	
103 N-Propylbenzene	120		11.791					ND	
104 2-Chlorotoluene	126		11.876					ND	
105 3-Chlorotoluene	126		11.937					ND	
106 1,3,5-Trimethylbenzene	105		11.961					ND	
107 4-Chlorotoluene	126		11.986					ND	
108 tert-Butylbenzene	119		12.290					ND	
109 Pentachloroethane	167		12.314					ND	
110 1,2,4-Trimethylbenzene	105		12.338					ND	
111 1,2-dichloro-4-(trifluorom	214		12.405					ND	
112 sec-Butylbenzene	105		12.509					ND	
113 1,3-Dichlorobenzene	146		12.618					ND	
119 Benzyl chloride	91		12.655					ND	
114 4-Isopropyltoluene	119		12.655					ND	
115 1,4-Dichlorobenzene	146		12.709					ND	
117 1,2,3-Trimethylbenzene	105		12.758					ND	
116 2,4-Dichloro-1-(triflourom	214		12.758					ND	
118 2,5-Dichlorobenzotrifluori	214		12.807					ND	
120 n-Butylbenzene	91		13.062					ND	
121 1,2-Dichlorobenzene	146		13.081					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.859					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.005					ND	
124 1,3,5-Trichlorobenzene	180		14.078					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.425					ND	
126 1,2,4-Trichlorobenzene	180		14.693					ND	
127 Hexachlorobutadiene	225		14.863					ND	
128 Naphthalene	128		14.936					ND	
129 1,2,3-Trichlorobenzene	180		15.185					ND	
131 2,4,5-Trichlorotoluene	159		15.964					ND	
130 2,3,6-Trichlorotoluene	159		16.068					ND	
132 2-Methylnaphthalene	142		16.080					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
151 Isooctane	57		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310004.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
150 2,6-Dichlorotoluene	1		0.000					ND	
146 2,5-Dichlorotoluene	1		0.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	
T 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310004.D

Injection Date: 10-Mar-2015 12:44:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

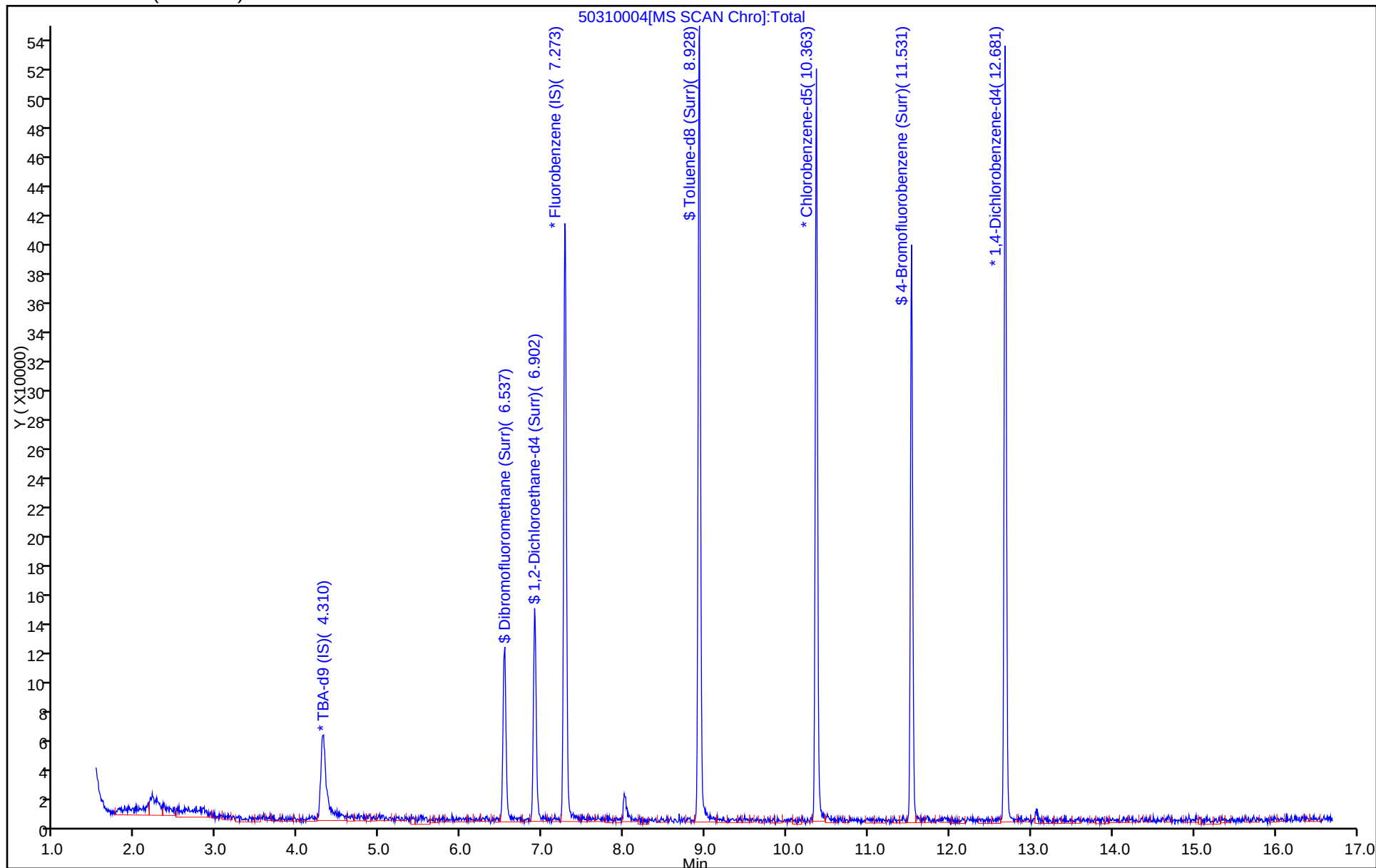
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: MB 180-135260/5

Matrix: Water Lab File ID: 50311005.D

Analysis Method: 8260C Date Collected: _____

Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 12:32

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: MB 180-135260/5
Matrix: Water Lab File ID: 50311005.D
Analysis Method: 8260C Date Collected: _____
Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 12:32
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		64-135
2037-26-5	Toluene-d8 (Surr)	107		71-118
460-00-4	4-Bromofluorobenzene (Surr)	108		70-118
1868-53-7	Dibromofluoromethane (Surr)	99		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311005.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 11-Mar-2015 12:32:30 ALS Bottle#: 5 Worklist Smp#: 5
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Misc. Info.: 180-0005976-005
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 12-Mar-2015 10:06:10 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: fergusond

Date: 12-Mar-2015 10:06:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.290	4.305	-0.015	84	126687	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.268	0.009	99	555581	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.364	-0.003	99	126896	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.679	12.682	-0.003	98	199201	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.535	6.526	0.009	51	117609	50.0	49.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	97	164738	50.0	56.0	
\$ 7 Toluene-d8 (Surr)	98	8.925	8.923	0.002	99	530984	50.0	53.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	96	197864	50.0	53.8	
11 Dichlorodifluoromethane	85		1.610					ND	
12 Chloromethane	50		1.768					ND	
13 Vinyl chloride	62		1.902					ND	
14 Butadiene	39		1.945					ND	
15 Bromomethane	94		2.249					ND	
16 Chloroethane	64		2.371					ND	
17 Dichlorofluoromethane	67		2.645					ND	
18 Trichlorofluoromethane	101		2.687					ND	
19 Ethanol	45		3.012					ND	
20 Ethyl ether	59		3.083					ND	
21 Acrolein	56		3.247					ND	
22 1,1-Dichloroethene	96		3.368					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.429					ND	
24 Acetone	43		3.496					ND	
25 Iodomethane	142		3.575					ND	
26 Carbon disulfide	76		3.648					ND	
27 Isopropyl alcohol	45		3.736					ND	
28 3-Chloro-1-propene	76		3.934					ND	
29 Acetonitrile	40		3.943					ND	
30 Methyl acetate	43		4.019					ND	
31 Methylene Chloride	84		4.135					ND	
32 2-Methyl-2-propanol	59		4.439					ND	
33 Acrylonitrile	53		4.549					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.555					ND	
35 Methyl tert-butyl ether	73		4.597					ND	
36 Hexane	57		4.981					ND	
37 1,1-Dichloroethane	63		5.163					ND	
38 Vinyl acetate	43		5.291					ND	
41 Isopropyl ether	45		5.300					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
40 Isopropyl ether TIC	45		5.409					ND	
42 Tert-butyl ethyl ether	59		5.799					ND	
44 2,2-Dichloropropane	77		5.923					ND	
45 cis-1,2-Dichloroethene	96		5.930					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.990					ND	
48 Ethyl acetate	43		5.993					ND	
47 Propionitrile	54		6.024					ND	
49 Chlorobromomethane	128		6.222					ND	
51 Tetrahydrofuran	42		6.289					ND	
52 Chloroform	83		6.343					ND	
50 Methacrylonitrile	41		6.389					ND	
53 1,1,1-Trichloroethane	97		6.532					ND	
54 Cyclohexane	56		6.587					ND	
56 Carbon tetrachloride	117		6.708					ND	
55 1,1-Dichloropropene	75		6.720					ND	
57 Isobutyl alcohol	41		6.939					ND	
58 Benzene	78		6.952					ND	
59 1,2-Dichloroethane	62		6.982					ND	
61 Tert-amyl methyl ether	73		7.143					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.274					ND	
63 n-Butanol	56		7.654					ND	
64 Trichloroethene	130		7.663					ND	
66 Methylcyclohexane	83		7.858					ND	
65 Ethyl acrylate	55		7.867					ND	
69 Methyl methacrylate	69		7.867					ND	
67 1,2-Dichloropropane	63		7.901					ND	
68 Dibromomethane	93		8.016					ND	
70 1,4-Dioxane	88		8.059					ND	
71 Dichlorobromomethane	83		8.199					ND	
72 2-Nitropropane	41		8.427					ND	
73 2-Chloroethyl vinyl ether	63		8.506					ND	
74 cis-1,3-Dichloropropene	75		8.655					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825					ND	
76 Toluene	91		8.990					ND	
77 trans-1,3-Dichloropropene	75		9.215					ND	
78 Ethyl methacrylate	69		9.318					ND	
79 1,1,2-Trichloroethane	97		9.397					ND	
80 Tetrachloroethene	164		9.531					ND	
81 1,3-Dichloropropane	76		9.561					ND	
82 2-Hexanone	43		9.659					ND	
83 n-Butyl acetate	43		9.662					ND	
84 Chlorodibromomethane	129		9.793					ND	
85 Ethylene Dibromide	107		9.902					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.371					ND	
87 Chlorobenzene	112		10.389					ND	
88 4-Chlorobenzotrifluoride	180		10.431					ND	
89 1,1,1,2-Tetrachloroethane	131		10.474					ND	
90 Ethylbenzene	106		10.498					ND	
91 m-Xylene & p-Xylene	106		10.620					ND	
92 o-Xylene	106		11.009					ND	
93 Styrene	104		11.021					ND	
94 Bromoform	173		11.210					ND	
96 2-Chlorobenzotrifluoride	180		11.277					ND	
95 Cyclohexanol	57		11.280					ND	
97 Isopropylbenzene	105		11.380					ND	
98 Cyclohexanone	55		11.450					ND	
99 1,1,2,2-Tetrachloroethane	83		11.672					ND	
100 Bromobenzene	156		11.685					ND	
101 1,2,3-Trichloropropane	110		11.721					ND	
102 trans-1,4-Dichloro-2-buten	53		11.727					ND	
103 N-Propylbenzene	120		11.788					ND	
104 2-Chlorotoluene	126		11.873					ND	
105 3-Chlorotoluene	126		11.934					ND	
106 1,3,5-Trimethylbenzene	105		11.964					ND	
107 4-Chlorotoluene	126		11.983					ND	
108 tert-Butylbenzene	119		12.287					ND	
109 Pentachloroethane	167		12.314					ND	
110 1,2,4-Trimethylbenzene	105		12.335					ND	
111 1,2-dichloro-4-(trifluorom	214		12.402					ND	
112 sec-Butylbenzene	105		12.506					ND	
113 1,3-Dichlorobenzene	146		12.615					ND	
114 4-Isopropyltoluene	119		12.652					ND	
119 Benzyl chloride	91		12.655					ND	
115 1,4-Dichlorobenzene	146		12.707					ND	
117 1,2,3-Trimethylbenzene	105		12.758					ND	
116 2,4-Dichloro-1-(triflourom	214		12.761					ND	
118 2,5-Dichlorobenzotrifluori	214		12.804					ND	
120 n-Butylbenzene	91		13.059					ND	
121 1,2-Dichlorobenzene	146		13.084					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.862					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.008					ND	
124 1,3,5-Trichlorobenzene	180		14.078					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.428					ND	
126 1,2,4-Trichlorobenzene	180		14.690					ND	
127 Hexachlorobutadiene	225		14.866					ND	
128 Naphthalene	128		14.939					ND	
129 1,2,3-Trichlorobenzene	180		15.189					ND	
131 2,4,5-Trichlorotoluene	159		15.967					ND	
130 2,3,6-Trichlorotoluene	159		16.065					ND	
132 2-Methylnaphthalene	142		16.080					ND	
150 2,6-Dichlorotoluene	1		0.000					ND	
146 2,5-Dichlorotoluene	1		0.000					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
151 Isooctane	57		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
147 2,4-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	
T 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	

Reagents:

VOA8260INT_00029

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR_00031

Amount Added: 2.00

Units: uL

Run Reagent

Report Date: 12-Mar-2015 10:06:11

Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311005.D

Injection Date: 11-Mar-2015 12:32:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: MB

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

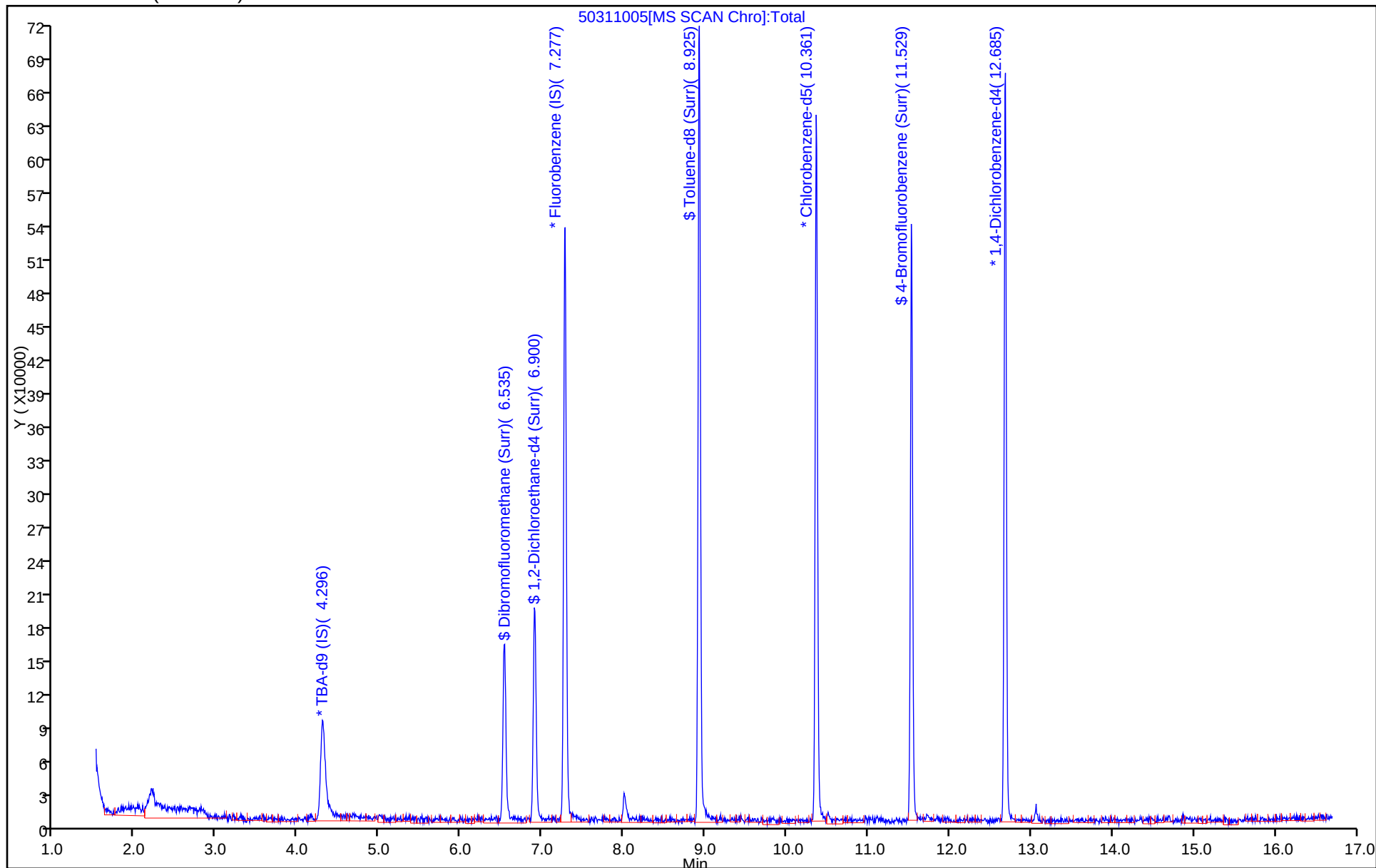
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 180-135153/7

Matrix: Water Lab File ID: 50310007.D

Analysis Method: 8260C Date Collected: _____

Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 14:12

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	8.77		1.0	0.28
75-01-4	Vinyl chloride	9.10		1.0	0.23
74-83-9	Bromomethane	12.6		1.0	0.31
75-00-3	Chloroethane	11.2		1.0	0.21
75-35-4	1,1-Dichloroethene	9.96		1.0	0.30
67-64-1	Acetone	19.9		5.0	2.5
75-15-0	Carbon disulfide	9.92		1.0	0.21
75-09-2	Methylene Chloride	9.53		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	10.3		1.0	0.17
1634-04-4	Methyl tert-butyl ether	6.36		1.0	0.18
75-34-3	1,1-Dichloroethane	9.34		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.85		1.0	0.24
74-97-5	Bromochloromethane	9.21		1.0	0.18
78-93-3	2-Butanone (MEK)	17.5		5.0	0.55
67-66-3	Chloroform	9.97		1.0	0.17
71-55-6	1,1,1-Trichloroethane	7.66		1.0	0.29
56-23-5	Carbon tetrachloride	9.07		1.0	0.14
71-43-2	Benzene	9.95		1.0	0.11
107-06-2	1,2-Dichloroethane	10.2		1.0	0.21
79-01-6	Trichloroethene	10.3		1.0	0.14
78-87-5	1,2-Dichloropropane	8.70		1.0	0.095
75-27-4	Bromodichloromethane	10.1		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	6.54		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.4		5.0	0.53
108-88-3	Toluene	10.9		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	5.53		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.4		1.0	0.20
127-18-4	Tetrachloroethene	11.1		1.0	0.15
591-78-6	2-Hexanone	15.4		5.0	0.16
124-48-1	Dibromochloromethane	10.7		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.28		1.0	0.18
108-90-7	Chlorobenzene	10.6		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.41		1.0	0.28
100-41-4	Ethylbenzene	11.0		1.0	0.23
1330-20-7	Xylenes, Total	21.8		3.0	0.49
100-42-5	Styrene	10.3		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 180-135153/7
 Matrix: Water Lab File ID: 50310007.D
 Analysis Method: 8260C Date Collected: _____
 Sample wt/vol: 5(mL) Date Analyzed: 03/10/2015 14:12
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135153 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	11.1		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	10.6		1.0	0.20
107-13-1	Acrylonitrile	96.5		20	0.55
123-91-1	1,4-Dioxane	184	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		64-135
2037-26-5	Toluene-d8 (Surr)	109		71-118
460-00-4	4-Bromofluorobenzene (Surr)	100		70-118
1868-53-7	Dibromofluoromethane (Surr)	100		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310007.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 10-Mar-2015 14:12:30 ALS Bottle#: 7 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: LCS
 Misc. Info.: 180-0005958-007
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 07:28:12 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 07:28:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.321	4.296	0.025	79	64251	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.271	0.000	99	376237	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.367	0.001	99	85792	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	96	119827	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.529	0.000	88	80469	50.0	50.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	98	99496	50.0	50.0	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.926	0.000	100	364571	50.0	54.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.529	0.001	95	124588	50.0	50.1	
11 Dichlorodifluoromethane	85	1.620	1.607	0.013	98	93247	50.0	49.3	
12 Chloromethane	50	1.772	1.771	0.001	100	132524	50.0	43.9	
13 Vinyl chloride	62	1.906	1.899	0.007	100	132059	50.0	45.5	
14 Butadiene	39	1.954	1.948	0.006	99	160452	50.0	47.7	
15 Bromomethane	94	2.252	2.252	0.000	90	54347	50.0	63.1	
16 Chloroethane	64	2.386	2.374	0.012	97	66269	50.0	56.1	
17 Dichlorofluoromethane	67	2.654	2.641	0.013	98	169228	50.0	62.5	
18 Trichlorofluoromethane	101	2.691	2.684	0.006	97	142123	50.0	62.8	
20 Ethyl ether	59	3.086	3.073	0.013	99	99817	50.0	45.7	
21 Acrolein	56	3.262	3.250	0.012	98	36167	150.0	125.5	
22 1,1-Dichloroethene	96	3.372	3.371	0.001	98	109062	50.0	49.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.421	3.414	0.007	99	113748	50.0	51.4	
24 Acetone	43	3.494	3.493	0.001	97	78808	100.0	99.7	
25 Iodomethane	142	3.567	3.566	0.001	98	159243	50.0	51.7	
26 Carbon disulfide	76	3.652	3.651	0.001	100	267310	50.0	49.6	
28 3-Chloro-1-propene	76	3.944	3.925	0.019	98	47939	50.0	35.0	
30 Methyl acetate	43	4.023	4.016	0.007	100	499454	250.0	229.8	
31 Methylene Chloride	84	4.138	4.126	0.012	99	116772	50.0	47.7	
32 2-Methyl-2-propanol	59	4.443	4.436	0.007	83	39034	500.0	507.0	
33 Acrylonitrile	53	4.552	4.545	0.007	99	519620	500.0	482.3	
34 trans-1,2-Dichloroethene	96	4.564	4.552	0.012	89	118240	50.0	51.6	
35 Methyl tert-butyl ether	73	4.601	4.594	0.007	88	181931	50.0	31.8	
36 Hexane	57	4.984	4.977	0.007	98	197136	50.0	48.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.179	5.166	0.013	99	203959	50.0	46.7	
38 Vinyl acetate	43	5.288	5.294	-0.006	100	38307	50.0	25.7	
44 2,2-Dichloropropane	77	5.927	5.926	0.001	61	32427	50.0	20.1	
45 cis-1,2-Dichloroethene	96	5.933	5.933	0.001	90	120654	50.0	49.3	
46 2-Butanone (MEK)	43	5.982	5.981	0.001	99	112611	100.0	87.5	
49 Chlorobromomethane	128	6.225	6.218	0.007	97	47009	50.0	46.1	
51 Tetrahydrofuran	42	6.292	6.285	0.007	98	80332	100.0	87.7	
52 Chloroform	83	6.347	6.340	0.007	95	173433	50.0	49.8	
53 1,1,1-Trichloroethane	97	6.529	6.523	0.006	88	90504	50.0	38.3	
54 Cyclohexane	56	6.584	6.577	0.007	99	251370	50.0	47.4	
56 Carbon tetrachloride	117	6.718	6.717	0.001	61	72667	50.0	45.3	
55 1,1-Dichloropropene	75	6.724	6.717	0.007	97	166067	50.0	55.1	
57 Isobutyl alcohol	41	6.955	6.948	0.007	33	41965	1250.0	812.6	
58 Benzene	78	6.955	6.955	0.000	99	472564	50.0	49.7	
59 1,2-Dichloroethane	62	6.985	6.979	0.006	99	140009	50.0	51.0	
62 n-Heptane	43	7.277	7.277	0.000	84	178126	50.0	48.2	
64 Trichloroethene	130	7.667	7.660	0.007	100	115281	50.0	51.5	
66 Methylcyclohexane	83	7.861	7.861	0.000	99	210536	50.0	49.8	
67 1,2-Dichloropropane	63	7.904	7.897	0.007	90	108590	50.0	43.5	
68 Dibromomethane	93	8.026	8.019	0.007	96	56831	50.0	50.4	
70 1,4-Dioxane	88	8.062	8.068	-0.006	95	20509	1000.0	921.8	
71 Dichlorobromomethane	83	8.202	8.196	0.006	98	105842	50.0	50.4	
74 cis-1,3-Dichloropropene	75	8.658	8.658	0.000	98	90940	50.0	32.7	
75 4-Methyl-2-pentanone (MIBK)	43	8.823	8.828	-0.005	100	225362	100.0	87.0	
76 Toluene	91	8.993	8.992	0.001	100	484640	50.0	54.7	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	96	51653	50.0	27.7	
78 Ethyl methacrylate	69	9.321	9.321	0.000	99	72830	50.0	34.7	
79 1,1,2-Trichloroethane	97	9.401	9.400	0.001	99	83788	50.0	51.8	
80 Tetrachloroethene	164	9.534	9.540	-0.006	97	90922	50.0	55.6	
81 1,3-Dichloropropane	76	9.565	9.564	0.001	99	156853	50.0	51.6	
82 2-Hexanone	43	9.656	9.662	-0.006	99	138842	100.0	76.8	
84 Chlorodibromomethane	129	9.790	9.789	0.001	98	57026	50.0	53.6	
85 Ethylene Dibromide	107	9.905	9.905	0.000	98	72287	50.0	46.4	
86 3-Chlorobenzotrifluoride	180	10.368	10.373	-0.005	95	144139	50.0	53.1	
87 Chlorobenzene	112	10.392	10.392	0.000	100	299465	50.0	52.8	
88 4-Chlorobenzotrifluoride	180	10.429	10.434	-0.005	99	132478	50.0	51.0	
89 1,1,1,2-Tetrachloroethane	131	10.471	10.471	0.000	93	61545	50.0	47.1	
90 Ethylbenzene	106	10.502	10.501	0.001	100	180093	50.0	54.9	
91 m-Xylene & p-Xylene	106	10.617	10.617	0.000	100	219713	50.0	54.4	
92 o-Xylene	106	11.013	11.012	0.001	96	213500	50.0	54.5	
93 Styrene	104	11.025	11.024	0.001	99	331361	50.0	51.7	
94 Bromoform	173	11.213	11.213	0.000	97	31255	50.0	55.6	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	99	141711	50.0	52.6	
97 Isopropylbenzene	105	11.378	11.377	0.001	99	561921	50.0	58.4	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.675	0.001	97	118724	50.0	52.9	
100 Bromobenzene	156	11.682	11.681	0.001	98	117951	50.0	56.3	
101 1,2,3-Trichloropropane	110	11.718	11.718	0.000	97	38996	50.0	55.6	
102 trans-1,4-Dichloro-2-buten	53	11.737	11.736	0.001	84	28544	50.0	41.9	
103 N-Propylbenzene	120	11.785	11.791	-0.006	100	155860	50.0	56.0	
104 2-Chlorotoluene	126	11.877	11.876	0.001	100	128903	50.0	56.1	
105 3-Chlorotoluene	126	11.937	11.937	0.000	40	118982	50.0	50.7	
106 1,3,5-Trimethylbenzene	105	11.962	11.961	0.001	100	437270	50.0	56.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
107 4-Chlorotoluene	126	11.986	11.986	0.000	96	127974	50.0	51.6	
108 tert-Butylbenzene	119	12.290	12.290	0.000	99	376008	50.0	56.6	
110 1,2,4-Trimethylbenzene	105	12.339	12.338	0.001	98	440296	50.0	55.4	
111 1,2-dichloro-4-(trifluorom	214	12.400	12.405	-0.005	98	100727	50.0	56.2	
112 sec-Butylbenzene	105	12.509	12.509	0.000	100	553750	50.0	57.9	
113 1,3-Dichlorobenzene	146	12.619	12.618	0.001	99	221162	50.0	53.5	
114 4-Isopropyltoluene	119	12.649	12.655	-0.006	100	440354	50.0	56.2	
115 1,4-Dichlorobenzene	146	12.710	12.709	0.001	98	230294	50.0	55.3	
116 2,4-Dichloro-1-(trifluorom	214	12.759	12.758	0.001	95	92580	50.0	54.3	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	97	104270	50.0	56.1	
120 n-Butylbenzene	91	13.063	13.062	0.001	100	396390	50.0	56.9	
121 1,2-Dichlorobenzene	146	13.081	13.081	0.000	98	209172	50.0	55.3	
122 1,2-Dibromo-3-Chloropropan	75	13.860	13.859	0.001	96	10258	50.0	41.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.005	0.001	99	380399	150.0	147.2	
125 2,3- & 3,4- Dichlorotoluen	125	14.426	14.425	0.001	100	235147	100.0	92.0	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	99	95316	50.0	50.4	
127 Hexachlorobutadiene	225	14.864	14.863	0.001	96	47275	50.0	58.5	
128 Naphthalene	128	14.937	14.936	0.001	100	259579	50.0	47.3	
129 1,2,3-Trichlorobenzene	180	15.180	15.185	-0.005	98	76964	50.0	47.4	
131 2,4,5-Trichlorotoluene	159	15.965	15.964	0.001	97	33252	50.0	40.5	
130 2,3,6-Trichlorotoluene	159	16.062	16.068	-0.006	97	30887	50.0	40.8	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	100.9	
S 133 Xylenes, Total	106				0		100.0	108.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	60.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOA2ND_00105	Amount Added: 2.00	Units: uL	
VOAEE2ND_00001	Amount Added: 2.00	Units: uL	
VOAVA2ND_00002	Amount Added: 2.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 2.00	Units: uL	
VOAACRO2ND_00005	Amount Added: 6.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150310-5958.b\50310007.D

Injection Date: 10-Mar-2015 14:12:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: LCS

Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL

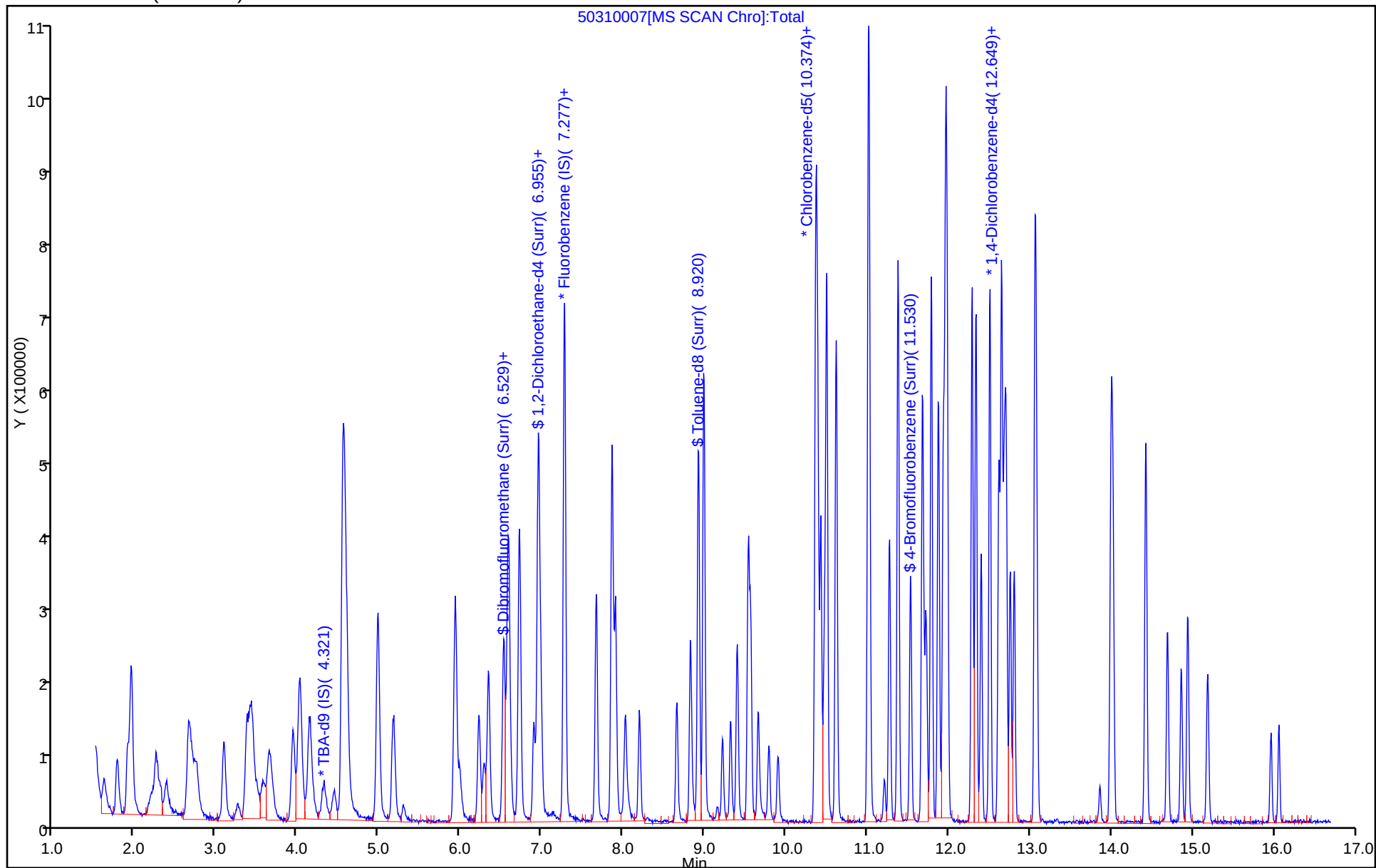
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 180-135260/8

Matrix: Water Lab File ID: 50311008.D

Analysis Method: 8260C Date Collected: _____

Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 13:58

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	7.06		1.0	0.28
75-01-4	Vinyl chloride	8.54		1.0	0.23
74-83-9	Bromomethane	17.6		1.0	0.31
75-00-3	Chloroethane	14.7		1.0	0.21
75-35-4	1,1-Dichloroethene	9.10		1.0	0.30
67-64-1	Acetone	20.9		5.0	2.5
75-15-0	Carbon disulfide	9.10		1.0	0.21
75-09-2	Methylene Chloride	9.76		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	9.64		1.0	0.17
1634-04-4	Methyl tert-butyl ether	6.63		1.0	0.18
75-34-3	1,1-Dichloroethane	9.32		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.49		1.0	0.24
74-97-5	Bromochloromethane	10.2		1.0	0.18
78-93-3	2-Butanone (MEK)	17.9		5.0	0.55
67-66-3	Chloroform	10.7		1.0	0.17
71-55-6	1,1,1-Trichloroethane	8.16		1.0	0.29
56-23-5	Carbon tetrachloride	9.82		1.0	0.14
71-43-2	Benzene	9.62		1.0	0.11
107-06-2	1,2-Dichloroethane	10.7		1.0	0.21
79-01-6	Trichloroethene	9.96		1.0	0.14
78-87-5	1,2-Dichloropropane	8.53		1.0	0.095
75-27-4	Bromodichloromethane	10.6		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	6.52		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	16.6		5.0	0.53
108-88-3	Toluene	10.8		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	6.00		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.4		1.0	0.20
127-18-4	Tetrachloroethene	10.8		1.0	0.15
591-78-6	2-Hexanone	16.3		5.0	0.16
124-48-1	Dibromochloromethane	11.7		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.31		1.0	0.18
108-90-7	Chlorobenzene	10.4		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.82		1.0	0.28
100-41-4	Ethylbenzene	10.3		1.0	0.23
1330-20-7	Xylenes, Total	21.2		3.0	0.49
100-42-5	Styrene	10.1		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 180-135260/8
 Matrix: Water Lab File ID: 50311008.D
 Analysis Method: 8260C Date Collected: _____
 Sample wt/vol: 5(mL) Date Analyzed: 03/11/2015 13:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 135260 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	12.4		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	10.4		1.0	0.20
107-13-1	Acrylonitrile	83.7		20	0.55
123-91-1	1,4-Dioxane	177	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		64-135
2037-26-5	Toluene-d8 (Surr)	109		71-118
460-00-4	4-Bromofluorobenzene (Surr)	106		70-118
1868-53-7	Dibromofluoromethane (Surr)	103		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311008.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 11-Mar-2015 13:58:30 ALS Bottle#: 8 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: LCS
 Misc. Info.: 180-0005976-008
 Operator ID: 001562 Instrument ID: CHHP5
 Method: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C ICAL
 Last Update: 11-Mar-2015 14:41:31 Calib Date: 03-Mar-2015 18:29:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: XAWRK049

First Level Reviewer: fergusond

Date: 11-Mar-2015 14:41:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.314	4.305	0.009	78	98793	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.268	0.003	98	507781	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.364	-0.003	98	112964	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	96	166456	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.526	0.003	88	112501	50.0	51.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	98	151306	50.0	56.3	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	100	479026	50.0	54.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	96	173007	50.0	52.8	
11 Dichlorodifluoromethane	85	1.619	1.610	0.009	99	111534	50.0	43.7	
12 Chloromethane	50	1.778	1.768	0.010	100	143889	50.0	35.3	
13 Vinyl chloride	62	1.905	1.902	0.003	100	167298	50.0	42.7	
14 Butadiene	39	1.948	1.945	0.003	99	189311	50.0	41.7	
15 Bromomethane	94	2.252	2.249	0.003	91	100010	50.0	87.9	
16 Chloroethane	64	2.386	2.371	0.015	98	117441	50.0	73.7	
17 Dichlorofluoromethane	67	2.654	2.645	0.010	99	269137	50.0	73.6	
18 Trichlorofluoromethane	101	2.696	2.687	0.009	98	203603	50.0	66.7	
20 Ethyl ether	59	3.092	3.083	0.009	98	132671	50.0	45.0	
21 Acrolein	56	3.250	3.247	0.003	100	49586	150.0	127.5	
22 1,1-Dichloroethene	96	3.365	3.368	-0.003	97	134586	50.0	45.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.426	3.429	-0.003	96	141577	50.0	47.4	
24 Acetone	43	3.499	3.496	0.003	98	111200	100.0	104.3	
25 Iodomethane	142	3.566	3.575	-0.009	100	199588	50.0	48.0	
26 Carbon disulfide	76	3.651	3.648	0.003	100	330984	50.0	45.5	
28 3-Chloro-1-propene	76	3.931	3.934	-0.003	96	59960	50.0	32.5	
30 Methyl acetate	43	4.016	4.019	-0.003	100	637777	250.0	217.5	
31 Methylene Chloride	84	4.150	4.135	0.015	95	161169	50.0	48.8	
32 2-Methyl-2-propanol	59	4.448	4.439	0.009	77	54825	500.0	463.1	
33 Acrylonitrile	53	4.552	4.549	0.003	99	608827	500.0	418.7	
34 trans-1,2-Dichloroethene	96	4.570	4.555	0.015	96	148989	50.0	48.2	
35 Methyl tert-butyl ether	73	4.594	4.597	-0.003	91	256123	50.0	33.2	
36 Hexane	57	4.984	4.981	0.003	98	233874	50.0	42.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.172	5.163	0.009	99	274690	50.0	46.6	
38 Vinyl acetate	43	5.294	5.291	0.003	100	61651	50.0	30.6	
44 2,2-Dichloropropane	77	5.933	5.923	0.010	56	41896	50.0	19.2	
45 cis-1,2-Dichloroethene	96	5.939	5.930	0.009	90	156873	50.0	47.5	
46 2-Butanone (MEK)	43	5.987	5.990	-0.003	99	155411	100.0	89.4	
49 Chlorobromomethane	128	6.219	6.222	-0.003	95	70017	50.0	50.8	
51 Tetrahydrofuran	42	6.292	6.289	0.004	96	89297	100.0	72.2	
52 Chloroform	83	6.346	6.343	0.003	97	252102	50.0	53.7	
53 1,1,1-Trichloroethane	97	6.529	6.532	-0.003	88	130110	50.0	40.8	
54 Cyclohexane	56	6.590	6.587	0.003	96	292304	50.0	40.8	
56 Carbon tetrachloride	117	6.723	6.708	0.015	63	106268	50.0	49.1	
55 1,1-Dichloropropene	75	6.723	6.720	0.003	96	218781	50.0	53.8	
57 Isobutyl alcohol	41	6.936	6.939	-0.003	84	51512	1250.0	739.1	
58 Benzene	78	6.955	6.952	0.003	100	616916	50.0	48.1	
59 1,2-Dichloroethane	62	6.979	6.982	-0.003	97	198483	50.0	53.6	
62 n-Heptane	43	7.277	7.274	0.003	81	201069	50.0	40.3	
64 Trichloroethene	130	7.666	7.663	0.003	97	150474	50.0	49.8	
66 Methylcyclohexane	83	7.861	7.858	0.003	97	264028	50.0	46.3	
67 1,2-Dichloropropane	63	7.904	7.901	0.003	94	143623	50.0	42.6	
68 Dibromomethane	93	8.025	8.016	0.009	97	76043	50.0	50.0	
70 1,4-Dioxane	88	8.062	8.059	0.003	91	26537	1000.0	883.8	
71 Dichlorobromomethane	83	8.196	8.199	-0.003	98	150595	50.0	53.1	
74 cis-1,3-Dichloropropene	75	8.658	8.655	0.003	98	122517	50.0	32.6	
75 4-Methyl-2-pentanone (MIBK)	43	8.828	8.825	0.003	98	282479	100.0	82.8	
76 Toluene	91	8.987	8.990	-0.004	100	629526	50.0	54.0	
77 trans-1,3-Dichloropropene	75	9.218	9.215	0.003	97	73711	50.0	30.0	
78 Ethyl methacrylate	69	9.315	9.318	-0.003	97	108176	50.0	39.1	
79 1,1,2-Trichloroethane	97	9.400	9.397	0.003	98	110918	50.0	52.1	
80 Tetrachloroethene	164	9.534	9.531	0.003	98	116586	50.0	54.2	
81 1,3-Dichloropropane	76	9.564	9.561	0.003	98	204600	50.0	51.1	
82 2-Hexanone	43	9.656	9.659	-0.003	100	194195	100.0	81.6	
84 Chlorodibromomethane	129	9.790	9.793	-0.003	96	81604	50.0	58.3	
85 Ethylene Dibromide	107	9.899	9.902	-0.003	96	95443	50.0	46.5	
86 3-Chlorobenzotrifluoride	180	10.374	10.371	0.003	96	255737	50.0	71.5	
87 Chlorobenzene	112	10.392	10.389	0.003	99	389275	50.0	52.1	
88 4-Chlorobenzotrifluoride	180	10.428	10.431	-0.003	99	231223	50.0	67.6	
89 1,1,1,2-Tetrachloroethane	131	10.471	10.474	-0.003	94	84526	50.0	49.1	
90 Ethylbenzene	106	10.495	10.498	-0.003	100	223052	50.0	51.7	
91 m-Xylene & p-Xylene	106	10.617	10.620	-0.003	99	284666	50.0	53.5	
92 o-Xylene	106	11.012	11.009	0.003	97	271129	50.0	52.5	
93 Styrene	104	11.024	11.021	0.003	99	427072	50.0	50.6	
94 Bromoform	173	11.207	11.210	-0.003	98	45706	50.0	61.8	
96 2-Chlorobenzotrifluoride	180	11.274	11.277	-0.003	99	248504	50.0	70.1	
97 Isopropylbenzene	105	11.377	11.380	-0.003	99	692222	50.0	54.6	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.672	0.003	96	153392	50.0	52.0	
100 Bromobenzene	156	11.681	11.685	-0.004	98	155247	50.0	53.4	
101 1,2,3-Trichloropropane	110	11.718	11.721	-0.003	96	48919	50.0	50.2	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.727	0.003	86	36879	50.0	39.0	
103 N-Propylbenzene	120	11.785	11.788	-0.003	100	195213	50.0	50.5	
104 2-Chlorotoluene	126	11.876	11.873	0.003	99	155160	50.0	48.6	
105 3-Chlorotoluene	126	11.937	11.934	0.003	99	200497	50.0	61.5	
106 1,3,5-Trimethylbenzene	105	11.961	11.964	-0.003	99	554995	50.0	51.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
107 4-Chlorotoluene	126	11.986	11.983	0.003	93	174483	50.0	50.7	
108 tert-Butylbenzene	119	12.290	12.287	0.003	99	477534	50.0	51.8	
110 1,2,4-Trimethylbenzene	105	12.332	12.335	-0.003	99	552579	50.0	50.1	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.402	-0.003	97	183423	50.0	73.6	
112 sec-Butylbenzene	105	12.509	12.506	0.003	100	672842	50.0	50.7	
113 1,3-Dichlorobenzene	146	12.618	12.615	0.003	99	283519	50.0	49.3	
114 4-Isopropyltoluene	119	12.655	12.652	0.003	100	553664	50.0	50.9	
115 1,4-Dichlorobenzene	146	12.704	12.707	-0.003	97	286935	50.0	49.6	
116 2,4-Dichloro-1-(trifluorom	214	12.758	12.761	-0.003	93	169280	50.0	71.5	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.804	0.003	97	189247	50.0	73.3	
120 n-Butylbenzene	91	13.062	13.059	0.003	100	490075	50.0	50.7	
121 1,2-Dichlorobenzene	146	13.081	13.084	-0.003	99	263691	50.0	50.2	
122 1,2-Dibromo-3-Chloropropan	75	13.853	13.862	-0.009	92	13183	50.0	38.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.008	-0.003	99	609504	150.0	169.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.428	-0.003	99	382524	100.0	107.8	
126 1,2,4-Trichlorobenzene	180	14.687	14.690	-0.003	99	116460	50.0	44.3	
127 Hexachlorobutadiene	225	14.863	14.866	-0.003	96	58541	50.0	52.1	
128 Naphthalene	128	14.942	14.939	0.003	99	309821	50.0	40.6	
129 1,2,3-Trichlorobenzene	180	15.186	15.189	-0.003	99	90409	50.0	40.1	
131 2,4,5-Trichlorotoluene	159	15.964	15.967	-0.003	96	50658	50.0	44.4	
130 2,3,6-Trichlorotoluene	159	16.062	16.065	-0.003	96	46247	50.0	44.0	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	95.6	
S 133 Xylenes, Total	106				0		100.0	106.1	
S 135 1,3-Dichloropropene, Total	1				0		100.0	62.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOA2ND_00105	Amount Added: 2.00	Units: uL	
VOAEE2ND_00001	Amount Added: 2.00	Units: uL	
VOAVA2ND_00002	Amount Added: 2.00	Units: uL	
voaWKetpri Re_00003	Amount Added: 2.00	Units: uL	
VOAACRO2ND_00005	Amount Added: 6.00	Units: uL	
VOA8260INT_00029	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150311-5976.b\50311008.D

Injection Date: 11-Mar-2015 13:58:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: LCS

Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL

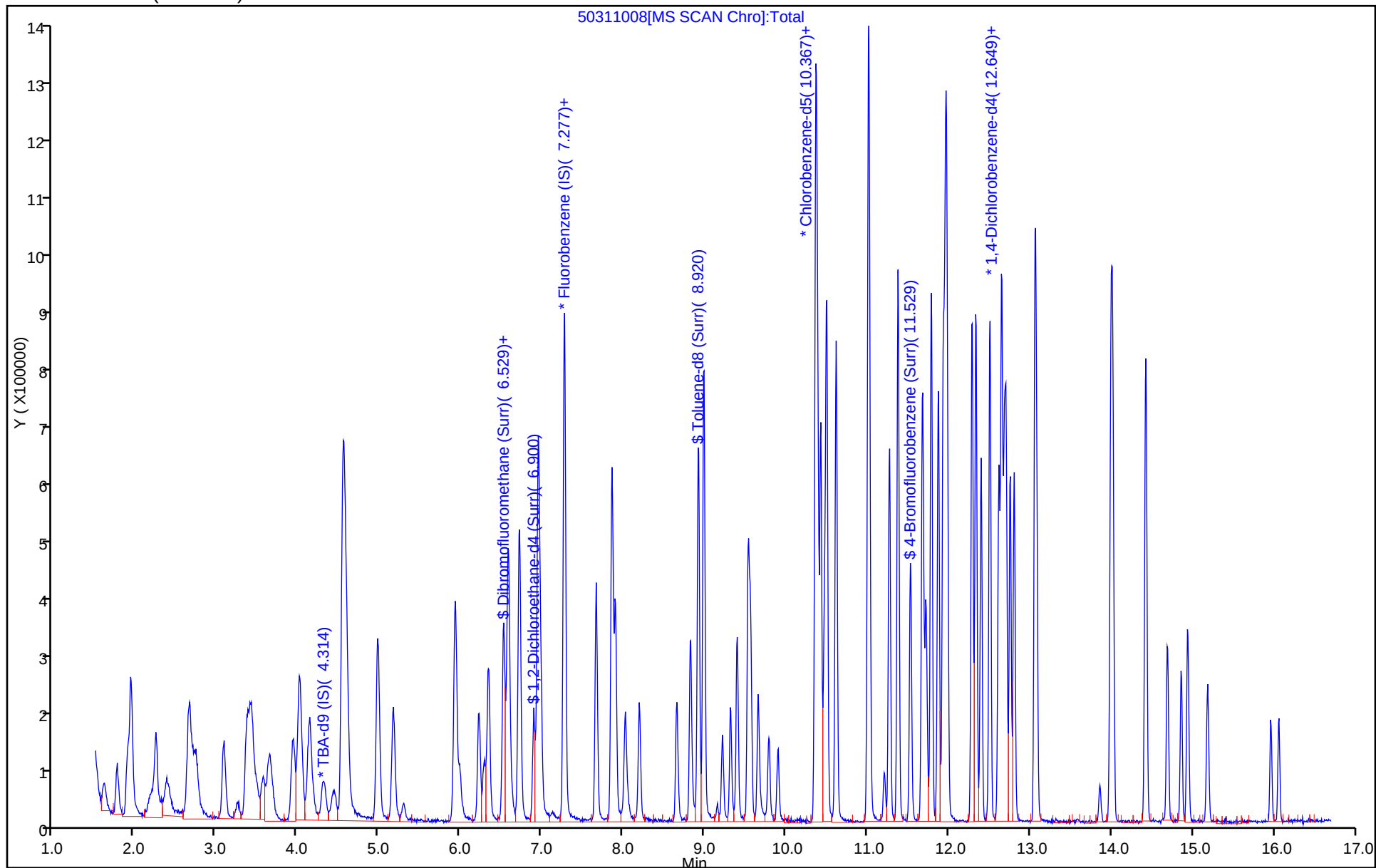
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Instrument ID: CHHP5 Start Date: 03/03/2015 12:21Analysis Batch Number: 134613 End Date: 03/03/2015 19:17

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-134613/6		03/03/2015 12:21	1	50303006.D	DB-624 0.18 (mm)
IC 180-134613/8		03/03/2015 14:28	1	50303008.D	DB-624 0.18 (mm)
ICIS 180-134613/9		03/03/2015 14:52	1	50303009.D	DB-624 0.18 (mm)
IC 180-134613/10		03/03/2015 15:16	1	50303010.D	DB-624 0.18 (mm)
IC 180-134613/11		03/03/2015 15:40	1	50303011.D	DB-624 0.18 (mm)
IC 180-134613/12		03/03/2015 16:04	1	50303012.D	DB-624 0.18 (mm)
IC 180-134613/13		03/03/2015 16:28	1	50303013.D	DB-624 0.18 (mm)
IC 180-134613/14		03/03/2015 16:52	1	50303014.D	DB-624 0.18 (mm)
IC 180-134613/18		03/03/2015 18:29	1	50303018.D	DB-624 0.18 (mm)
ICV 180-134613/20		03/03/2015 19:17	1		DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Instrument ID: CHHP5 Start Date: 03/10/2015 10:55Analysis Batch Number: 135153 End Date: 03/10/2015 22:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-135153/1		03/10/2015 10:55	1	50310001.D	DB-624 0.18 (mm)
CCVIS 180-135153/2		03/10/2015 11:37	1	50310002.D	DB-624 0.18 (mm)
MB 180-135153/4		03/10/2015 12:44	1	50310004.D	DB-624 0.18 (mm)
ZZZZZ		03/10/2015 13:23	1		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 13:48	1		DB-624 0.18 (mm)
LCS 180-135153/7		03/10/2015 14:12	1	50310007.D	DB-624 0.18 (mm)
ZZZZZ		03/10/2015 14:36	1		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 15:00	1		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 15:48	1		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 16:12	400		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 16:36	125		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 17:00	10		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 17:25	5		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 17:49	25		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 18:13	10		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 18:37	1		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 19:01	1		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 19:26	1		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 19:50	1		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 20:14	1		DB-624 0.18 (mm)
ZZZZZ		03/10/2015 20:38	1		DB-624 0.18 (mm)
180-41613-4	HD-MW-50S-0/1-0	03/10/2015 21:02	50	50310024.D	DB-624 0.18 (mm)
180-41613-5	HD-MW-51D-0/1-0	03/10/2015 21:26	50	50310025.D	DB-624 0.18 (mm)
180-41613-1	HD-QC-5-0/1-2	03/10/2015 21:50	1	50310026.D	DB-624 0.18 (mm)
180-41613-6	HD-MW-127-0/1-0	03/10/2015 22:14	12.5	50310027.D	DB-624 0.18 (mm)
180-41613-2	HD-QC-2-0/1-3	03/10/2015 22:38	1	50310028.D	DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Instrument ID: CHHP5 Start Date: 03/11/2015 10:41Analysis Batch Number: 135260 End Date: 03/11/2015 21:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-135260/1		03/11/2015 10:41	1	50311001.D	DB-624 0.18 (mm)
CCVIS 180-135260/2		03/11/2015 11:20	1	50311002.D	DB-624 0.18 (mm)
MB 180-135260/5		03/11/2015 12:32	1	50311005.D	DB-624 0.18 (mm)
ZZZZZ		03/11/2015 13:09	1		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 13:34	1		DB-624 0.18 (mm)
LCS 180-135260/8		03/11/2015 13:58	1	50311008.D	DB-624 0.18 (mm)
ZZZZZ		03/11/2015 14:22	1		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 14:46	1		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 15:34	5		DB-624 0.18 (mm)
180-41613-3	HD-QC-2-0/1-4	03/11/2015 16:22	1	50311014.D	DB-624 0.18 (mm)
180-41613-7 DL	HD-MW-132-0/1-0 DL	03/11/2015 16:46	25	50311015.D	DB-624 0.18 (mm)
180-41613-8	HD-MW-95-0/1-0	03/11/2015 17:10	1	50311016.D	DB-624 0.18 (mm)
180-41613-9	HD-MW-97-0/1-0	03/11/2015 17:35	25	50311017.D	DB-624 0.18 (mm)
ZZZZZ		03/11/2015 17:59	1		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 18:23	200		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 18:47	1		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 19:12	1		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 19:36	1		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 20:00	1		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 20:24	20		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 20:48	5		DB-624 0.18 (mm)
ZZZZZ		03/11/2015 21:12	1		DB-624 0.18 (mm)
180-41613-7	HD-MW-132-0/1-0	03/11/2015 21:36	2.5	50311027.D	DB-624 0.18 (mm)

300_ORGFMS

Anions, Ion Chromatography

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: A-ICS2100 A 02-28-2015-5.d
Lab ID: LCS 180-134458/5 Client ID: _____

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Nitrate as N	2.50	2.72	109	90-110	
Chloride	50.0	50.8	102	90-110	
Sulfate	50.0	50.4	101	90-110	

Column to be used to flag recovery and RPD values

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Lab File ID: A-ICS2100 A 02-28-2015-6.d Lab Sample ID: MB 180-134458/6
 Matrix: Water Date Extracted: _____
 Instrument ID: CHIC2100A Date Analyzed: 02/28/2015 12:02
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-134458/4	A-ICS2100 A 02-28-2015- 4.d	02/28/2015 11:31
	LCS 180-134458/5	A-ICS2100 A 02-28-2015- 5.d	02/28/2015 11:46
	CCB 180-134458/16	A-ICS2100 A 02-28-2015- 16.d	02/28/2015 16:51
	CCB 180-134458/28	A-ICS2100 A 02-28-2015- 28.d	02/28/2015 19:54
	CCB 180-134458/38	A-ICS2100 A 02-28-2015- 30.d	03/01/2015 14:54
HD-MW-50S-0/1-0	180-41613-4	A-ICS2100 A 02-28-2015- 31.d	03/01/2015 15:09
HD-MW-51D-0/1-0	180-41613-5	A-ICS2100 A 02-28-2015- 32.d	03/01/2015 15:24
HD-MW-127-0/1-0	180-41613-6	A-ICS2100 A 02-28-2015- 33.d	03/01/2015 15:40
HD-MW-132-0/1-0	180-41613-7	A-ICS2100 A 02-28-2015- 34.d	03/01/2015 15:55
HD-MW-95-0/1-0	180-41613-8	A-ICS2100 A 02-28-2015- 35.d	03/01/2015 16:10
HD-MW-97-0/1-0	180-41613-9	A-ICS2100 A 02-28-2015- 36.d	03/01/2015 16:25
	CCB 180-134458/36	A-ICS2100 A 02-28-2015- 38.d	03/01/2015 16:56

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: HD-MW-50S-0/1-0 Lab Sample ID: 180-41613-4
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-31.d
Analysis Method: 300.0 Date Collected: 02/27/2015 09:55
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 03/01/2015 15:09
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.7	H B	0.10	0.0062
16887-00-6	Chloride	170	B	1.0	0.20
14808-79-8	Sulfate	57		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-31.d
Lims ID: 180-41613-A-4 Lab Sample ID: 180-41613-4
Client ID: HD-MW-50S-0/1-0
Sample Type: Client
Inject. Date: 01-Mar-2015 15:09:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-029
Misc. Info.: 29 180-41613-a-4
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:59:47 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.983	4.000	-0.017	434920509H	171.6	
3 Sulfate	5.508	5.525	-0.017	897733479	57.3	
5 Nitrate as N	7.208	7.208	0.000	10649445H	2.72	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-31.d

Injection Date: 01-Mar-2015 15:09:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-41613-A-4

Lab Sample ID: 180-41613-4

Worklist Smp#: 29

Client ID: HD-MW-50S-0/1-0

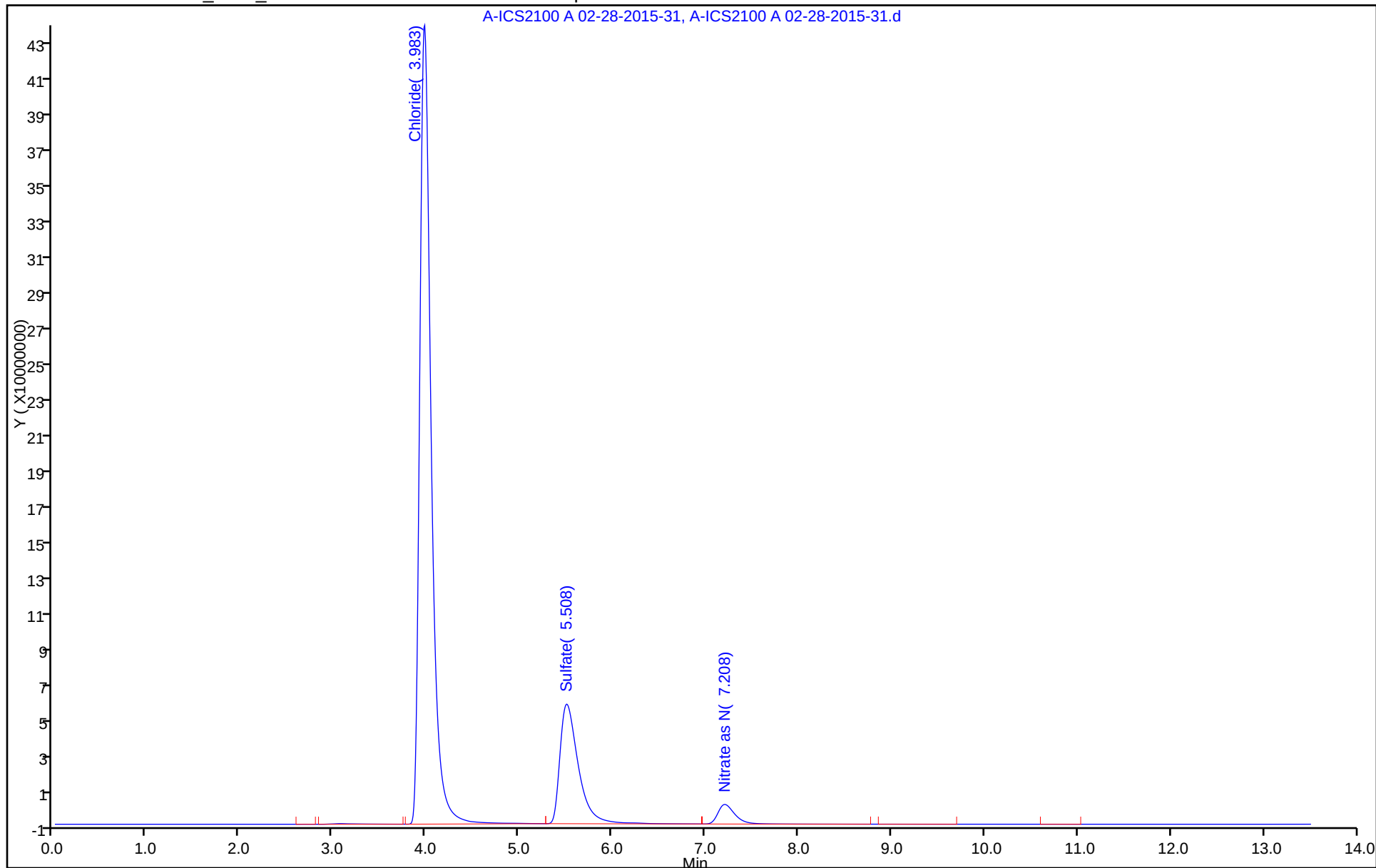
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: HD-MW-51D-0/1-0 Lab Sample ID: 180-41613-5
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-32.d
Analysis Method: 300.0 Date Collected: 02/27/2015 10:05
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 03/01/2015 15:24
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.88	H B	0.10	0.0062
16887-00-6	Chloride	170	B	1.0	0.20
14808-79-8	Sulfate	63		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-32.d
Lims ID: 180-41613-A-5 Lab Sample ID: 180-41613-5
Client ID: HD-MW-51D-0/1-0
Sample Type: Client
Inject. Date: 01-Mar-2015 15:24:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-030
Misc. Info.: 30 180-41613-a-5
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:59:47 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.983	4.000	-0.017	432321468H	170.5	
3 Sulfate	5.500	5.525	-0.025	984885463	62.9	
5 Nitrate as N	7.250	7.208	0.042	3421808H	0.8808	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-32.d

Injection Date: 01-Mar-2015 15:24:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-41613-A-5

Lab Sample ID: 180-41613-5

Worklist Smp#: 30

Client ID: HD-MW-51D-0/1-0

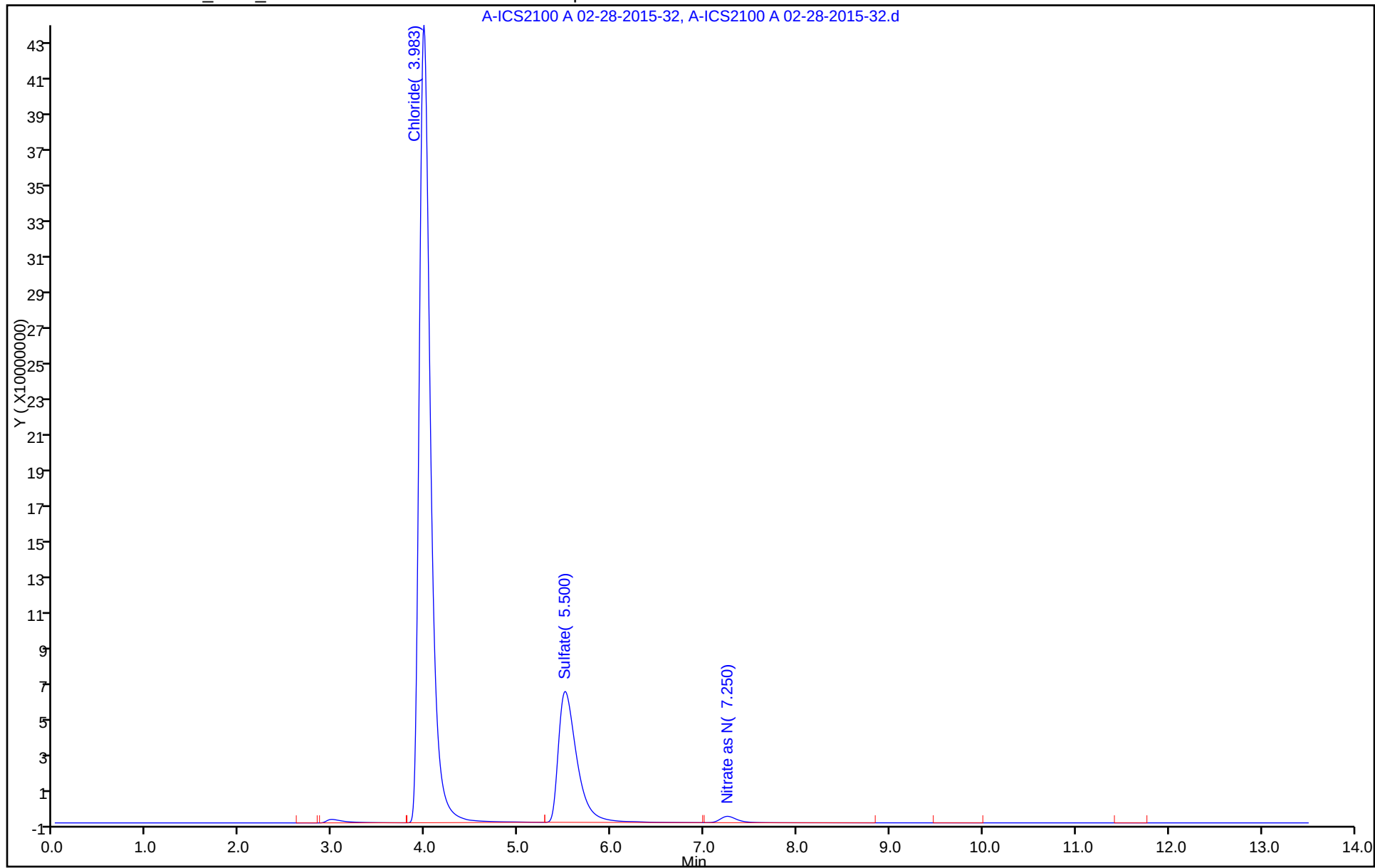
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: HD-MW-127-0/1-0 Lab Sample ID: 180-41613-6
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-33.d
Analysis Method: 300.0 Date Collected: 02/27/2015 09:35
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 03/01/2015 15:40
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.4	H B	0.10	0.0062
16887-00-6	Chloride	100	B	1.0	0.20
14808-79-8	Sulfate	7.6		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-33.d
Lims ID: 180-41613-A-6 Lab Sample ID: 180-41613-6
Client ID: HD-MW-127-0/1-0
Sample Type: Client
Inject. Date: 01-Mar-2015 15:40:00 ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-031
Misc. Info.: 31 180-41613-a-6
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:59:47 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.983	4.000	-0.017	256585561H	101.3	
3 Sulfate	5.583	5.525	0.058	119530434	7.56	
5 Nitrate as N	7.217	7.208	0.009	9276409H	2.37	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-33.d

Injection Date: 01-Mar-2015 15:40:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-41613-A-6

Lab Sample ID: 180-41613-6

Worklist Smp#: 31

Client ID: HD-MW-127-0/1-0

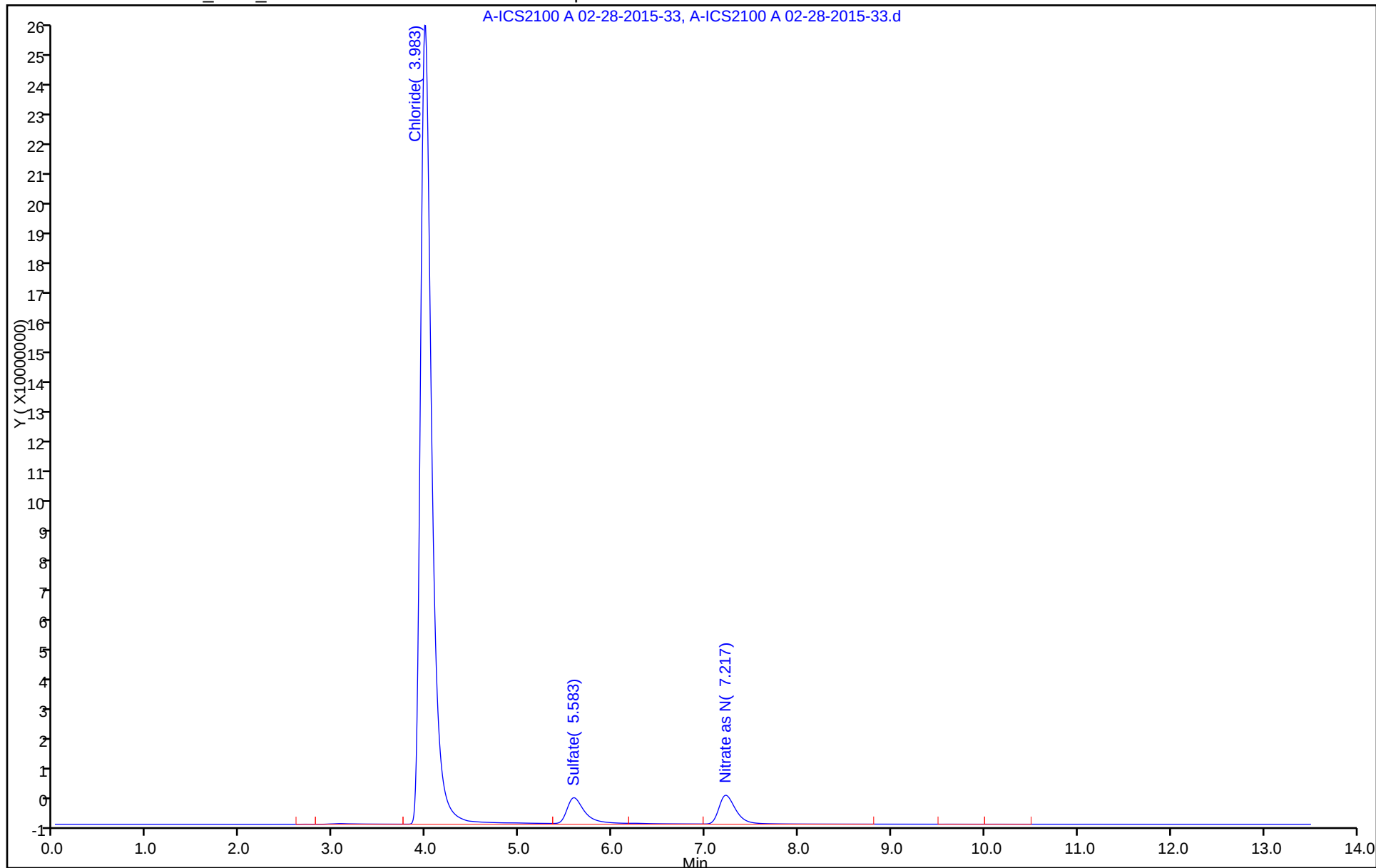
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: HD-MW-132-0/1-0 Lab Sample ID: 180-41613-7
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-34.d
Analysis Method: 300.0 Date Collected: 02/27/2015 09:40
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 03/01/2015 15:55
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	4.6	H B	0.10	0.0062
16887-00-6	Chloride	11	B	1.0	0.20
14808-79-8	Sulfate	3.9		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-34.d
Lims ID: 180-41613-A-7 Lab Sample ID: 180-41613-7
Client ID: HD-MW-132-0/1-0
Sample Type: Client
Inject. Date: 01-Mar-2015 15:55:00 ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-032
Misc. Info.: 32 180-41613-a-7
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:59:47 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

First Level Reviewer: hartmanm

Date: 03-Mar-2015 11:53:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.017	4.000	0.017	26148930H	10.6	
3 Sulfate	5.608	5.525	0.083	62669034	3.93	
5 Nitrate as N	7.183	7.208	-0.025	18100494H	4.62	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-34.d

Injection Date: 01-Mar-2015 15:55:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-41613-A-7

Lab Sample ID: 180-41613-7

Worklist Smp#: 32

Client ID: HD-MW-132-0/1-0

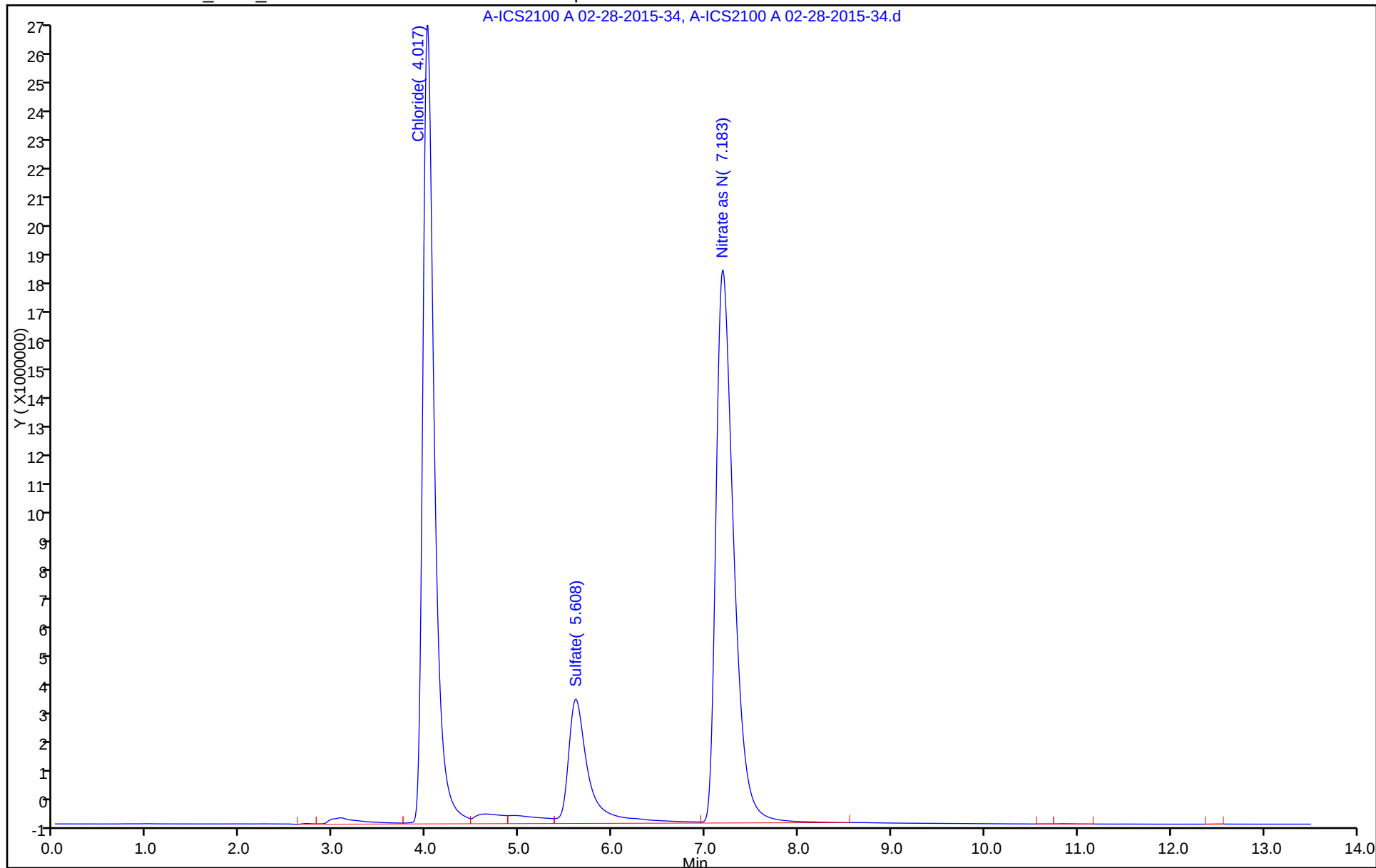
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: HD-MW-95-0/1-0 Lab Sample ID: 180-41613-8
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-35.d
Analysis Method: 300.0 Date Collected: 02/27/2015 11:00
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 03/01/2015 16:10
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.70	H B	0.10	0.0062
16887-00-6	Chloride	60	B	1.0	0.20
14808-79-8	Sulfate	37		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-35.d
Lims ID: 180-41613-A-8 Lab Sample ID: 180-41613-8
Client ID: HD-MW-95-0/1-0
Sample Type: Client
Inject. Date: 01-Mar-2015 16:10:00 ALS Bottle#: 0 Worklist Smp#: 33
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-033
Misc. Info.: 33 180-41613-a-8
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:59:47 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.008	4.000	0.008	152724556H	60.4	
3 Sulfate	5.533	5.525	0.008	587383566	37.5	
5 Nitrate as N	7.267	7.208	0.059	2721665H	0.7025	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-35.d

Injection Date: 01-Mar-2015 16:10:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-41613-A-8

Lab Sample ID: 180-41613-8

Worklist Smp#: 33

Client ID: HD-MW-95-0/1-0

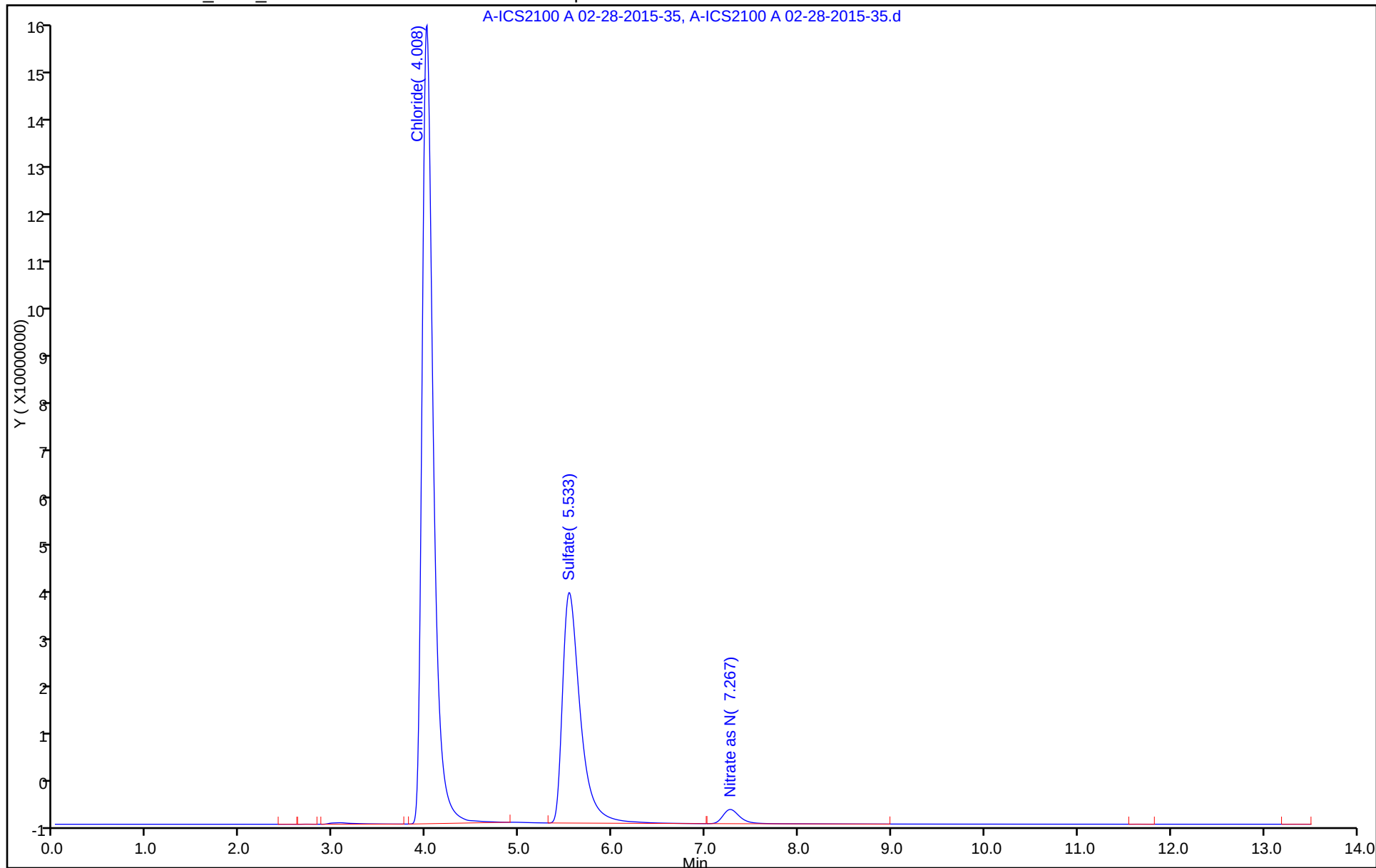
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: HD-MW-97-0/1-0 Lab Sample ID: 180-41613-9
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-36.d
Analysis Method: 300.0 Date Collected: 02/27/2015 10:45
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 03/01/2015 16:25
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	1.8	H B	0.10	0.0062
16887-00-6	Chloride	130	B	1.0	0.20
14808-79-8	Sulfate	30		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-36.d
Lims ID: 180-41613-A-9 Lab Sample ID: 180-41613-9
Client ID: HD-MW-97-0/1-0
Sample Type: Client
Inject. Date: 01-Mar-2015 16:25:00 ALS Bottle#: 0 Worklist Smp#: 34
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-034
Misc. Info.: 34 180-41613-a-9
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:59:47 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

First Level Reviewer: hartmanm

Date: 03-Mar-2015 11:24:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.992	4.000	-0.008	331529370H	130.8	
3 Sulfate	5.542	5.525	0.017	474393597	30.2	
5 Nitrate as N	7.233	7.208	0.025	7043186H	1.80	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-36.d

Injection Date: 01-Mar-2015 16:25:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-41613-A-9

Lab Sample ID: 180-41613-9

Worklist Smp#: 34

Client ID: HD-MW-97-0/1-0

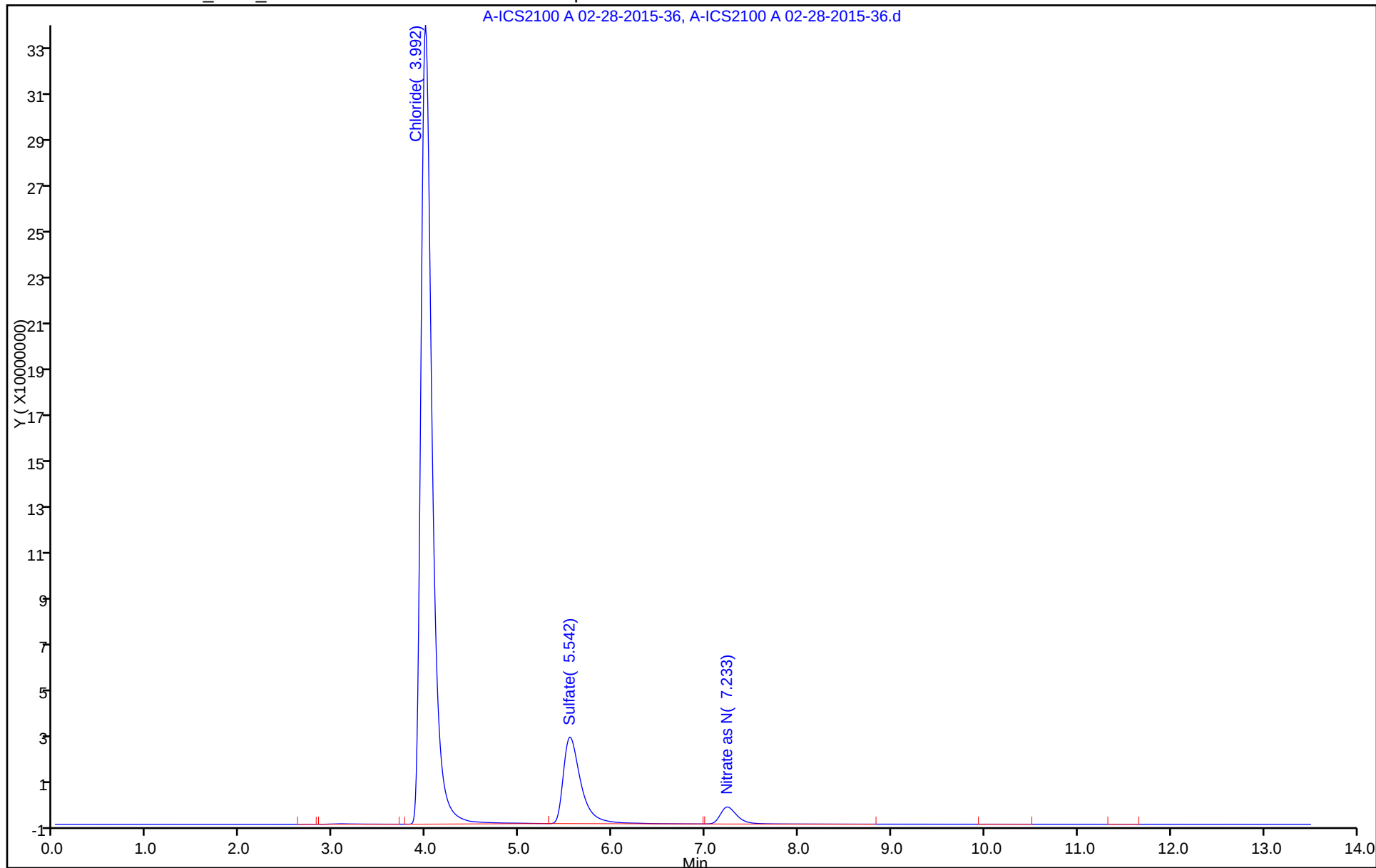
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 133779

SDG No.: _____

Instrument ID: CHIC2100A GC Column: AS-18 ID: _____ Heated Purge: (Y/N) N

Calibration Start Date: 02/18/2015 16:38 Calibration End Date: 02/18/2015 18:25 Calibration ID: 21971

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-133779/2	A-ICS2100 A 02-18A-2015-2.d
Level 2	IC 180-133779/3	A-ICS2100 A 02-18A-2015-3.d
Level 3	ICRT 180-133779/4	A-ICS2100 A 02-18A-2015-4.d
Level 4	IC 180-133779/5	A-ICS2100 A 02-18A-2015-5.d
Level 5	IC 180-133779/6	A-ICS2100 A 02-18A-2015-6.d
Level 6	IC 180-133779/7	A-ICS2100 A 02-18A-2015-7.d
Level 7	IC 180-133779/8	A-ICS2100 A 02-18A-2015-8.d
Level 8	IC 180-133779/9	A-ICS2100 A 02-18A-2015-9.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Fluoride	3.008	3.000	3.000	3.000	2.992	2.992	2.992	2.983			2.650 - 3.350	2.996
Chloride	4.042	4.033	4.017	4.008	4.000	4.000	3.992	3.983			3.667 - 4.367	4.009
Nitrite as N	4.733	4.725	4.717	4.717	4.700	4.700	4.683	4.675			4.467 - 4.967	4.706
Sulfate	5.567	5.550	5.550	5.533	5.467	5.425	5.367	5.342			5.200 - 5.900	5.475
Bromide	6.325	6.317	6.300	6.292	6.283	6.258	6.225	6.217			5.950 - 6.650	6.277
Nitrate as N	7.350	7.333	7.317	7.300	7.267	7.217	7.175	7.142			7.067 - 7.567	7.263
Orthophosphate as P		+++++	10.458	10.375	10.200	10.117	10.000	9.942			10.208 - 10.708	10.182

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 133779

SDG No.: _____

Instrument ID: CHIC2100A GC Column: AS-18 ID: _____ Heated Purge: (Y/N) N

Calibration Start Date: 02/18/2015 16:38 Calibration End Date: 02/18/2015 18:25 Calibration ID: 21971

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-133779/2	A-ICS2100 A 02-18A-2015-2.d
Level 2	IC 180-133779/3	A-ICS2100 A 02-18A-2015-3.d
Level 3	ICRT 180-133779/4	A-ICS2100 A 02-18A-2015-4.d
Level 4	IC 180-133779/5	A-ICS2100 A 02-18A-2015-5.d
Level 5	IC 180-133779/6	A-ICS2100 A 02-18A-2015-6.d
Level 6	IC 180-133779/7	A-ICS2100 A 02-18A-2015-7.d
Level 7	IC 180-133779/8	A-ICS2100 A 02-18A-2015-8.d
Level 8	IC 180-133779/9	A-ICS2100 A 02-18A-2015-9.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Fluoride	2163200 3165843	2445916 3212839	2684732 3169919	2963388 2965770	Lin2	-46911.187	3009662.85							0.9950		0.9900
Chloride	1881673 2567721	2349794 2575536	2454915 2548766	2585728 2421631	Lin2	-665487.98	2538987.66							0.9990		0.9900
Nitrite as N	4289940 4114648	3721616 3759856	3877108 3530822	4108169 3257069	Lin2	27970.5648	3735089.23							0.9940		0.9900
Sulfate	16949742 16074169	15515894 15891053	15500606 15836712	16166879 14968109	Lin2	1228486.84	15649189.8							0.9990		0.9900
Bromide	746315 868610	769310 868188	797174 854789	854312 810309	Lin2	-20794.475	839212.726							0.9980		0.9900
Nitrate as N	3199060 4205984	3604280 4022596	3833744 3807690	4201889 3504135	Lin2	-37245.802	3927006.52							0.9960		0.9900
Orthophosphate as P	12849501	++++ 16235438	5311680 16994054	10345730 16850946	Lin2	-6082562.0	16983972.7							0.9950		0.9900

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1 Analy Batch No.: 133779

SDG No.: _____

Instrument ID: CHIC2100A GC Column: AS-18 ID: _____ Heated Purge: (Y/N) N

Calibration Start Date: 02/18/2015 16:38 Calibration End Date: 02/18/2015 18:25 Calibration ID: 21971

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-133779/2	A-ICS2100 A 02-18A-2015-2.d
Level 2	IC 180-133779/3	A-ICS2100 A 02-18A-2015-3.d
Level 3	ICRT 180-133779/4	A-ICS2100 A 02-18A-2015-4.d
Level 4	IC 180-133779/5	A-ICS2100 A 02-18A-2015-5.d
Level 5	IC 180-133779/6	A-ICS2100 A 02-18A-2015-6.d
Level 6	IC 180-133779/7	A-ICS2100 A 02-18A-2015-7.d
Level 7	IC 180-133779/8	A-ICS2100 A 02-18A-2015-8.d
Level 8	IC 180-133779/9	A-ICS2100 A 02-18A-2015-9.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Fluoride	Lin2	108160 16064197	611479 23774396	1342366 29657700	2963388	7914608	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Chloride	Lin2	1881673 257553603	11748971 382314941	24549148 484326140	51714566	128386026	1.00 100	5.00 150	10.0 200	20.0	50.0
Nitrite as N	Lin2	214497 18799281	930404 26481163	1938554 32570690	4108169	10286620	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Sulfate	Lin2	16949742 1589105343	77579469 2375506786	155006056 2993621710	323337576	803708435	1.00 100	5.00 150	10.0 200	20.0	50.0
Bromide	Lin2	149263 17363768	769310 25643657	1594349 32412358	3417246	8686100	0.200 20.0	1.00 30.0	2.00 40.0	4.00	10.0
Nitrate as N	Lin2	159953 20112979	901070 28557676	1916872 35041348	4201889	10514959	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Orthophosphate as P	Lin2	81177192	++++ 127455403	2655840 168509455	10345730	32123753	5.00	++++ 7.50	0.500 10.0	1.00	2.50

Curve Type Legend:

Lin2 = Linear 1/conc^2 by height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-2.d
 Lims ID: ic L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 18-Feb-2015 16:38:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005751-002
 Misc. Info.: 2 IC L2
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 03-Mar-2015 14:01:48 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK026

First Level Reviewer: reaglec

Date: 18-Feb-2015 19:28:18

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.008	3.000	0.008	108160H	0.0500	0.0515	
2 Chloride	4.042	4.017	0.025	1881673H	1.00	1.00	
7 Nitrite as N	4.733	4.717	0.016	214497H	0.0500	0.0499	
3 Sulfate	5.567	5.550	0.017	16949742	1.00	1.00	
4 Bromide	6.325	6.300	0.025	149263H	0.2000	0.2026	
5 Nitrate as N	7.350	7.317	0.033	159953H	0.0500	0.0502	
6 Orthophosphate as P		10.458			ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

H - Response Measured by Height

Reagents:

ICSTDL2_00155

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-2.d

Injection Date: 18-Feb-2015 16:38:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L2

Worklist Smp#: 2

Client ID:

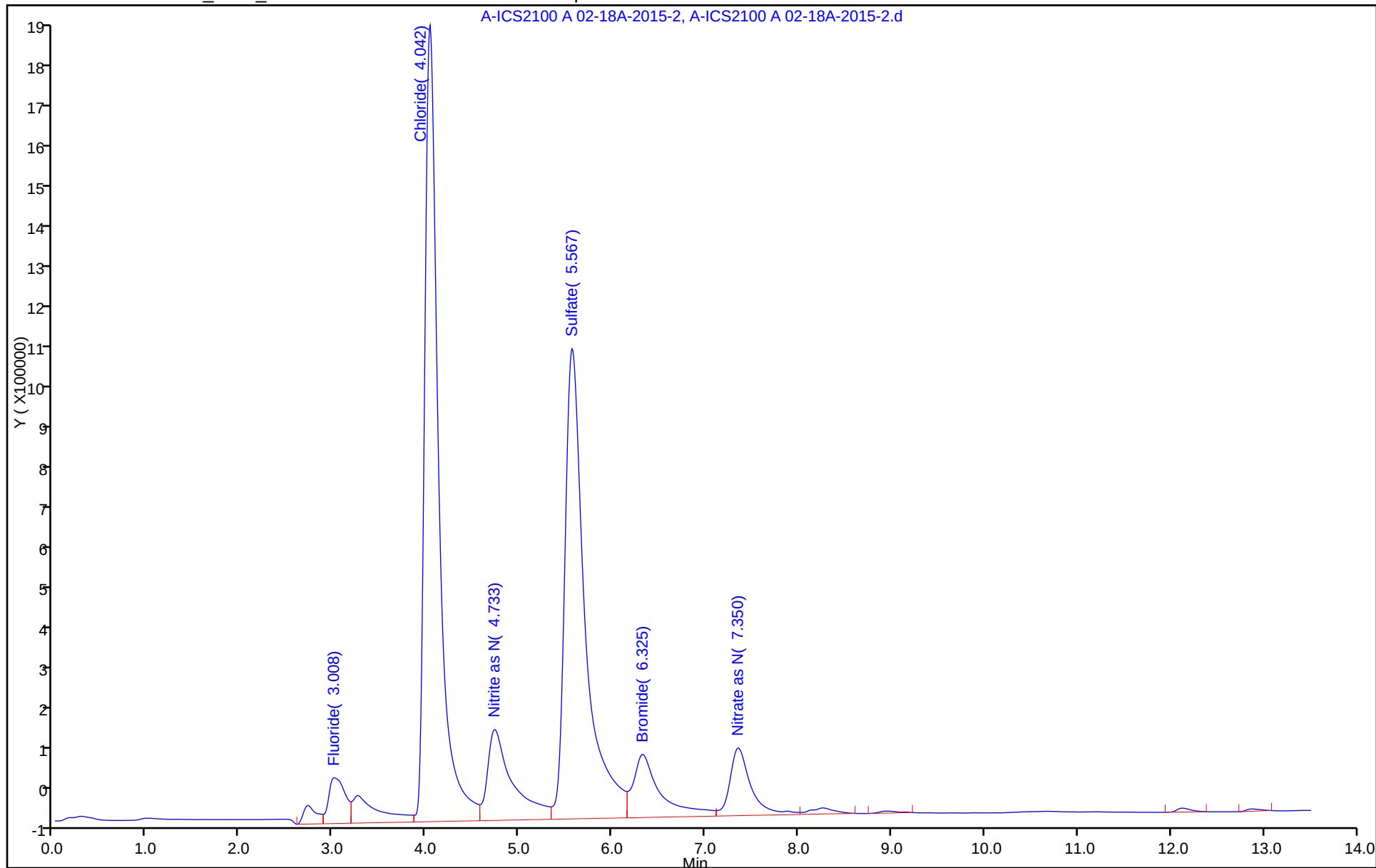
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-3.d
 Lims ID: ic L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 18-Feb-2015 16:53:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005751-003
 Misc. Info.: 3 IC L3
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 03-Mar-2015 14:01:49 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK026

First Level Reviewer: reaglec

Date: 18-Feb-2015 19:28:41

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	611479H	0.2500	0.2188	
2 Chloride	4.033	4.017	0.016	11748971H	5.00	4.89	
7 Nitrite as N	4.725	4.717	0.008	930404H	0.2500	0.2416	
3 Sulfate	5.550	5.550	0.000	77579469	5.00	4.88	
4 Bromide	6.317	6.300	0.017	769310H	1.00	0.9415	
5 Nitrate as N	7.333	7.317	0.016	901070H	0.2500	0.2389	
6 Orthophosphate as P	10.467	10.458	0.009	686387	0.2500	0.3985	

Reagents:

ICSTDL3_00194

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-3.d

Injection Date: 18-Feb-2015 16:53:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L3

Worklist Smp#: 3

Client ID:

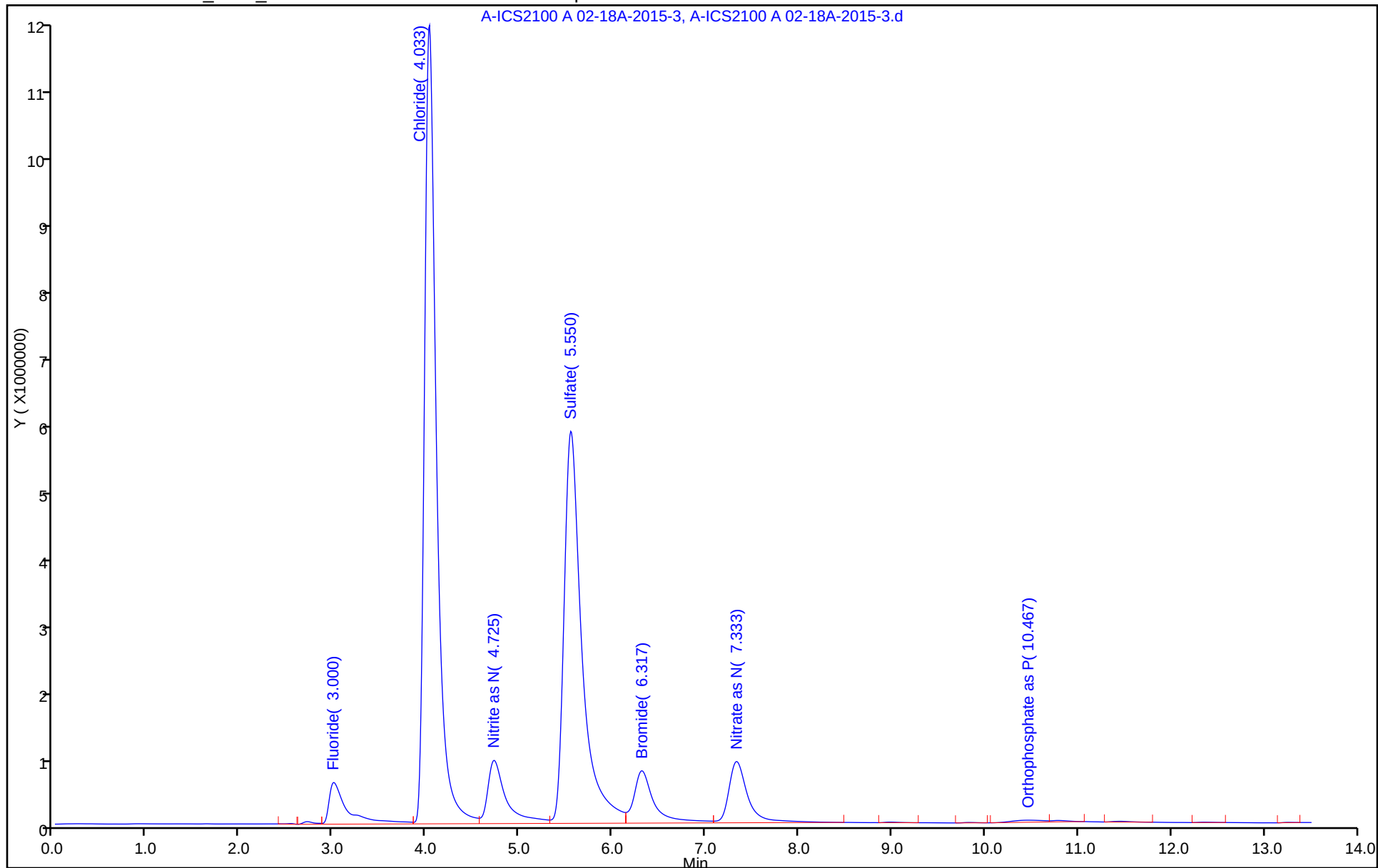
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-4.d
 Lims ID: icrt L4
 Client ID:
 Sample Type: ICRT Calib Level: 4
 Inject. Date: 18-Feb-2015 17:08:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005751-004
 Misc. Info.: 4 ICRT L4
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 03-Mar-2015 14:01:49 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK026

First Level Reviewer: hartmanm

Date: 03-Mar-2015 13:48:26

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	1342366H	0.5000	0.4616	
2 Chloride	4.017	4.017	0.000	24549148H	10.0	9.93	
7 Nitrite as N	4.717	4.717	0.000	1938554H	0.5000	0.5115	
3 Sulfate	5.550	5.550	0.000	155006056	10.0	9.83	
4 Bromide	6.300	6.300	0.000	1594349H	2.00	1.92	
5 Nitrate as N	7.317	7.317	0.000	1916872H	0.5000	0.4976	
6 Orthophosphate as P	10.458	10.458	0.000	2655840	0.5000	0.5145	

Reagents:

ICSTDL4_00131

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-4.d

Injection Date: 18-Feb-2015 17:08:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: icrt L4

Worklist Smp#: 4

Client ID:

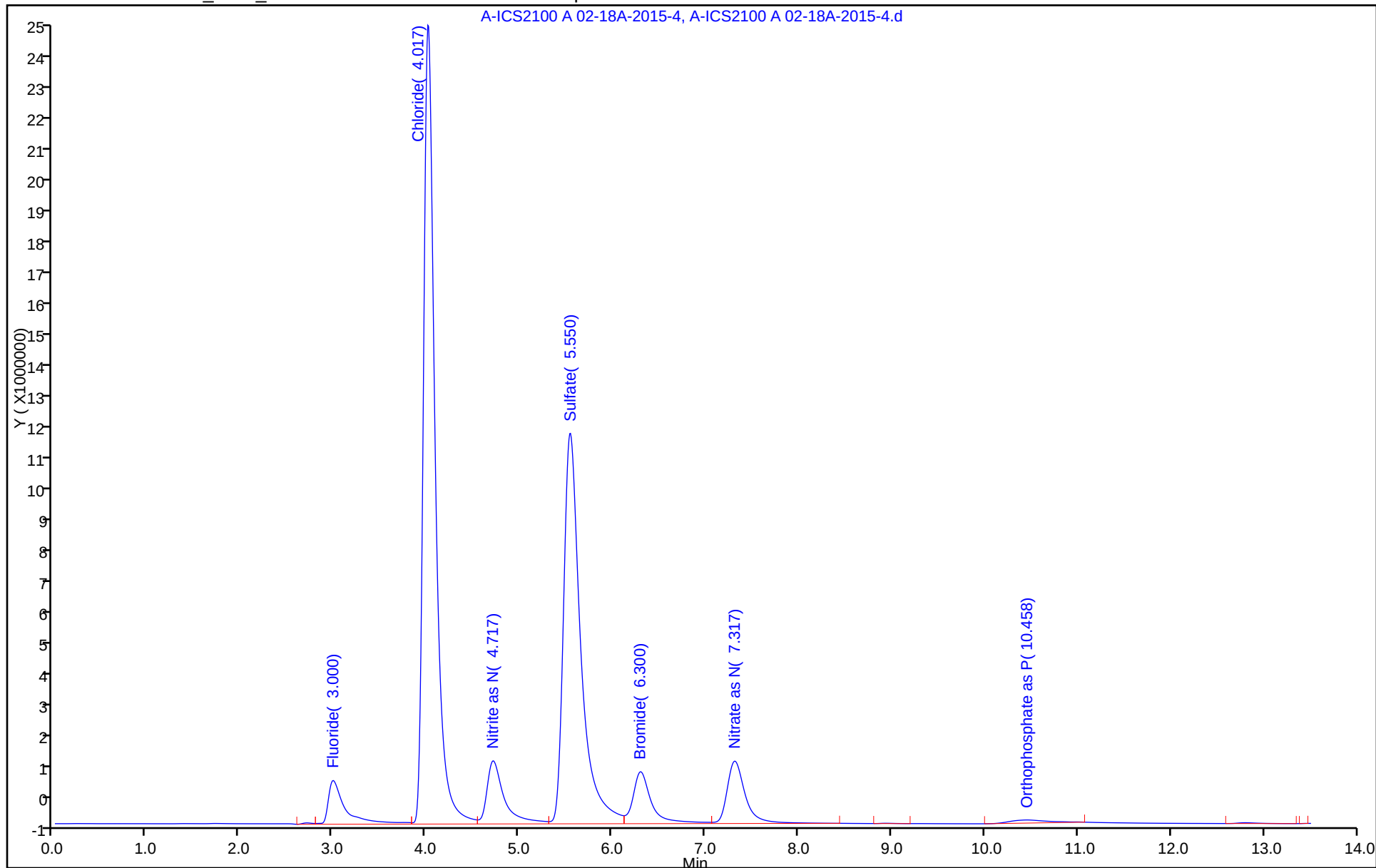
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-5.d
 Lims ID: ic L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 18-Feb-2015 17:24:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005751-005
 Misc. Info.: 5 IC L5
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 03-Mar-2015 14:01:49 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008

Process Host: XAWRK026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	2963388H	1.00	1.00	
2 Chloride	4.008	4.017	-0.009	51714566H	20.0	20.6	
7 Nitrite as N	4.717	4.717	0.000	4108169H	1.00	1.09	
3 Sulfate	5.533	5.550	-0.017	323337576	20.0	20.6	
4 Bromide	6.292	6.300	-0.008	3417246H	4.00	4.10	
5 Nitrate as N	7.300	7.317	-0.017	4201889H	1.00	1.08	
6 Orthophosphate as P	10.375	10.458	-0.083	10345730	1.00	0.9673	

Reagents:

ICSTD5_00132

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-5.d

Injection Date: 18-Feb-2015 17:24:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L5

Worklist Smp#: 5

Client ID:

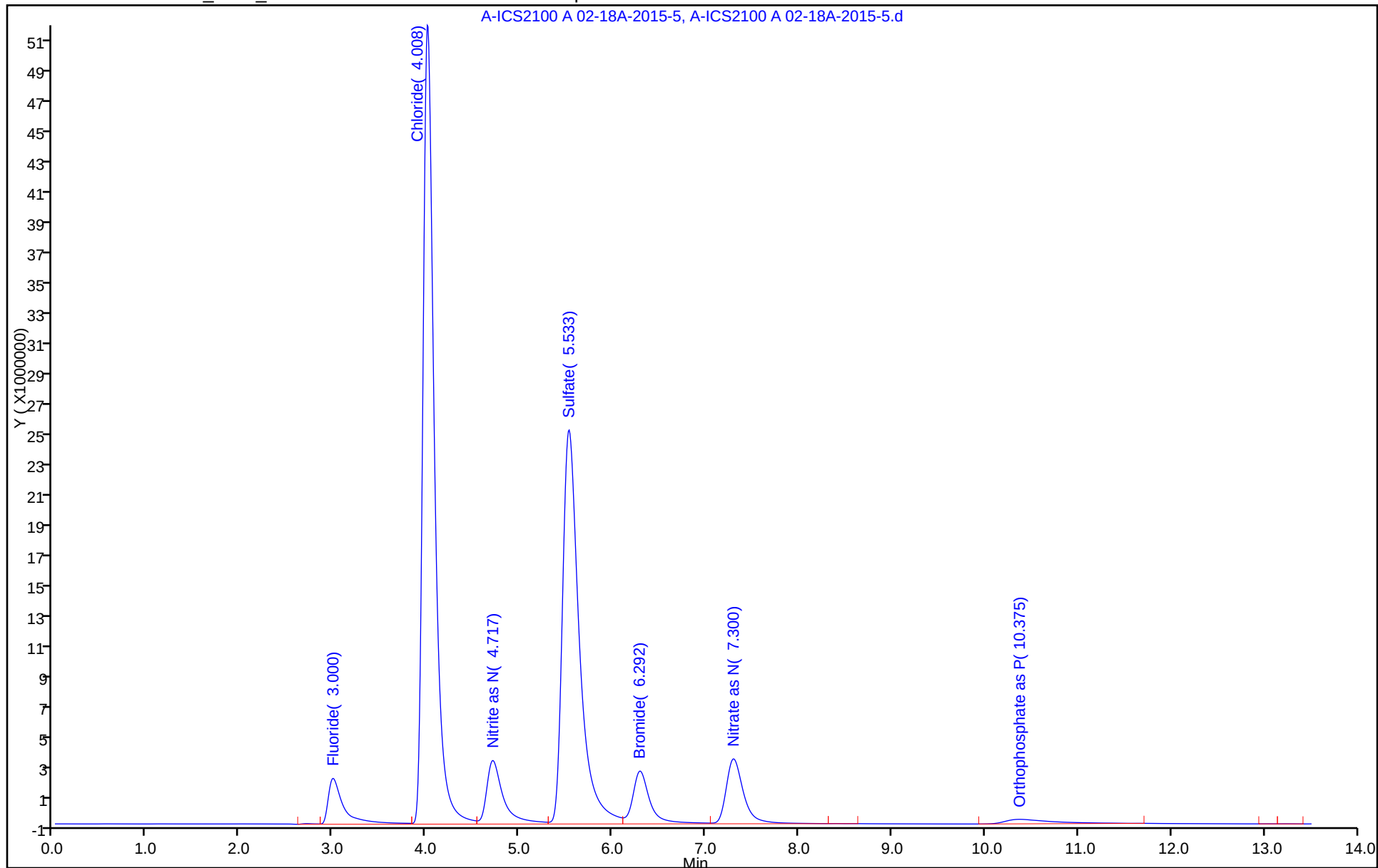
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-6.d
 Lims ID: ic L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 18-Feb-2015 17:39:00 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005751-006
 Misc. Info.: 6 IC L6
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 03-Mar-2015 14:01:50 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK026

First Level Reviewer: reaglec

Date: 18-Feb-2015 19:29:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	7914608H	2.50	2.65	
2 Chloride	4.000	4.017	-0.017	128386026H	50.0	50.8	
7 Nitrite as N	4.700	4.717	-0.017	10286620H	2.50	2.75	
3 Sulfate	5.467	5.550	-0.083	803708435	50.0	51.3	
4 Bromide	6.283	6.300	-0.017	8686100H	10.0	10.4	
5 Nitrate as N	7.267	7.317	-0.050	10514959H	2.50	2.69	
6 Orthophosphate as P	10.200	10.458	-0.258	32123753	2.50	2.25	

Reagents:

ICSTDL6_00200

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-6.d

Injection Date: 18-Feb-2015 17:39:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L6

Worklist Smp#: 6

Client ID:

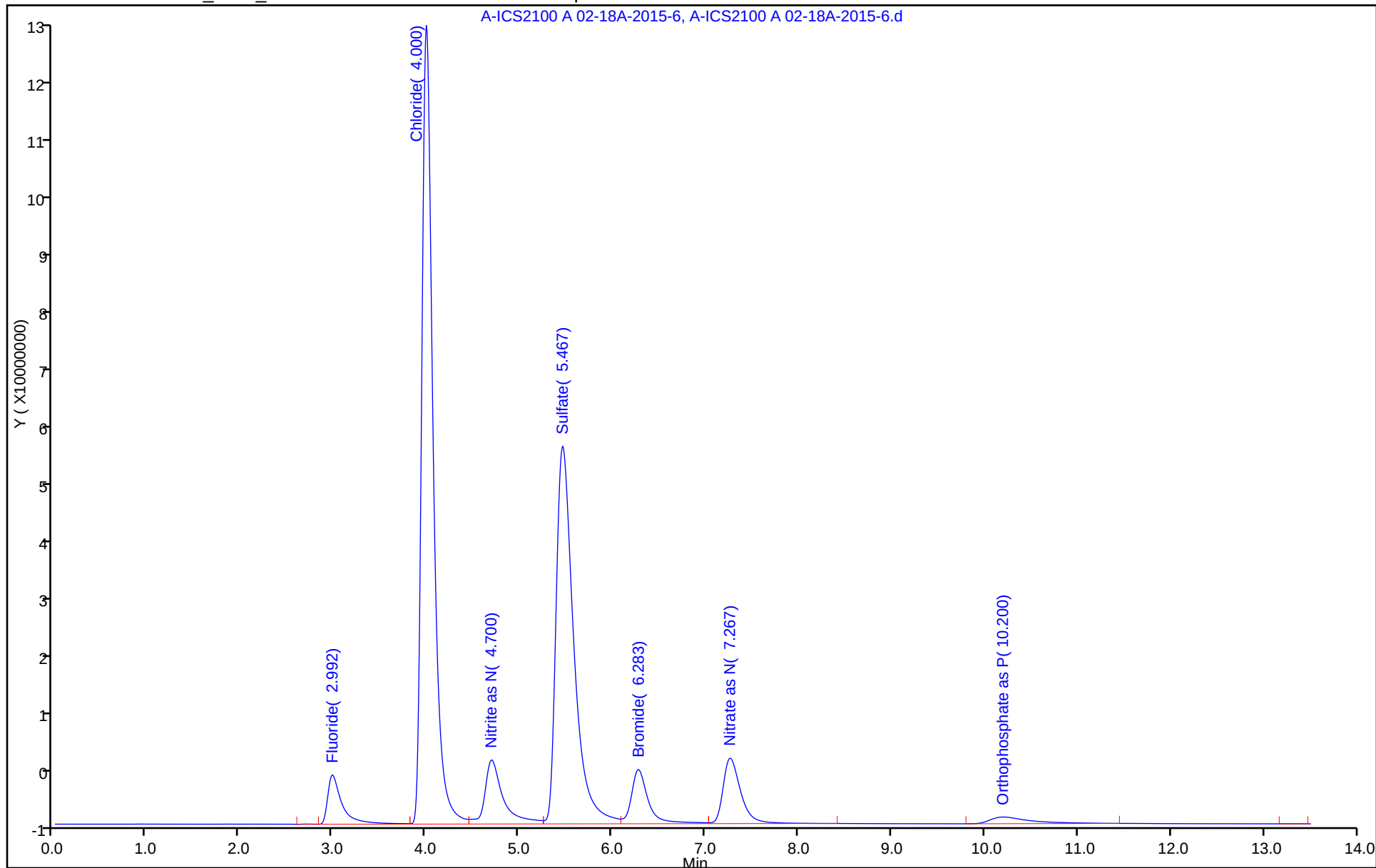
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-7.d
 Lims ID: ic L7
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 18-Feb-2015 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005751-007
 Misc. Info.: 7 IC L7
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 03-Mar-2015 14:01:50 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK026

First Level Reviewer: reaglec

Date: 18-Feb-2015 19:29:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	16064197H	5.00	5.35	
2 Chloride	4.000	4.017	-0.017	257553603H	100.0	101.7	
7 Nitrite as N	4.700	4.717	-0.017	18799281H	5.00	5.03	
3 Sulfate	5.425	5.550	-0.125	1589105343	100.0	101.5	
4 Bromide	6.258	6.300	-0.042	17363768H	20.0	20.7	
5 Nitrate as N	7.217	7.317	-0.100	20112979H	5.00	5.13	
6 Orthophosphate as P	10.117	10.458	-0.341	81177192	5.00	5.14	

Reagents:

ICSTDL7_00131

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-7.d

Injection Date: 18-Feb-2015 17:54:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L7

Worklist Smp#: 7

Client ID:

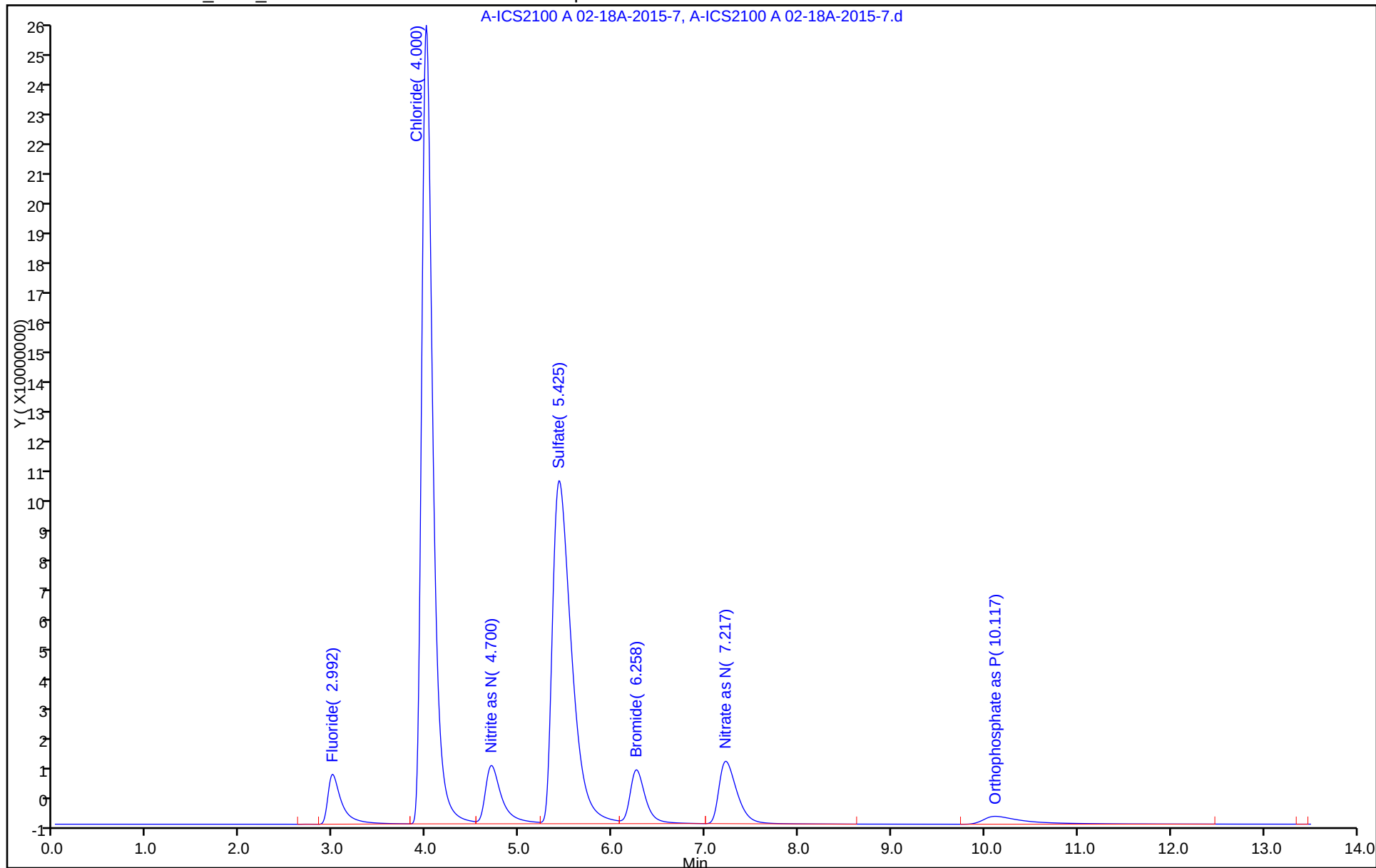
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-8.d
 Lims ID: ic L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 18-Feb-2015 18:09:00 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005751-008
 Misc. Info.: 8 IC L8
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 03-Mar-2015 14:01:50 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK026

First Level Reviewer: reaglec

Date: 18-Feb-2015 19:29:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	23774396H	7.50	7.91	
2 Chloride	3.992	4.017	-0.025	382314941H	150.0	150.8	
7 Nitrite as N	4.683	4.717	-0.034	26481163H	7.50	7.08	
3 Sulfate	5.367	5.550	-0.183	2375506786	150.0	151.7	
4 Bromide	6.225	6.300	-0.075	25643657H	30.0	30.6	
5 Nitrate as N	7.175	7.317	-0.142	28557676H	7.50	7.28	
6 Orthophosphate as P	10.000	10.458	-0.458	127455403	7.50	7.86	

Reagents:

ICSTDL8_00101

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-8.d

Injection Date: 18-Feb-2015 18:09:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L8

Worklist Smp#: 8

Client ID:

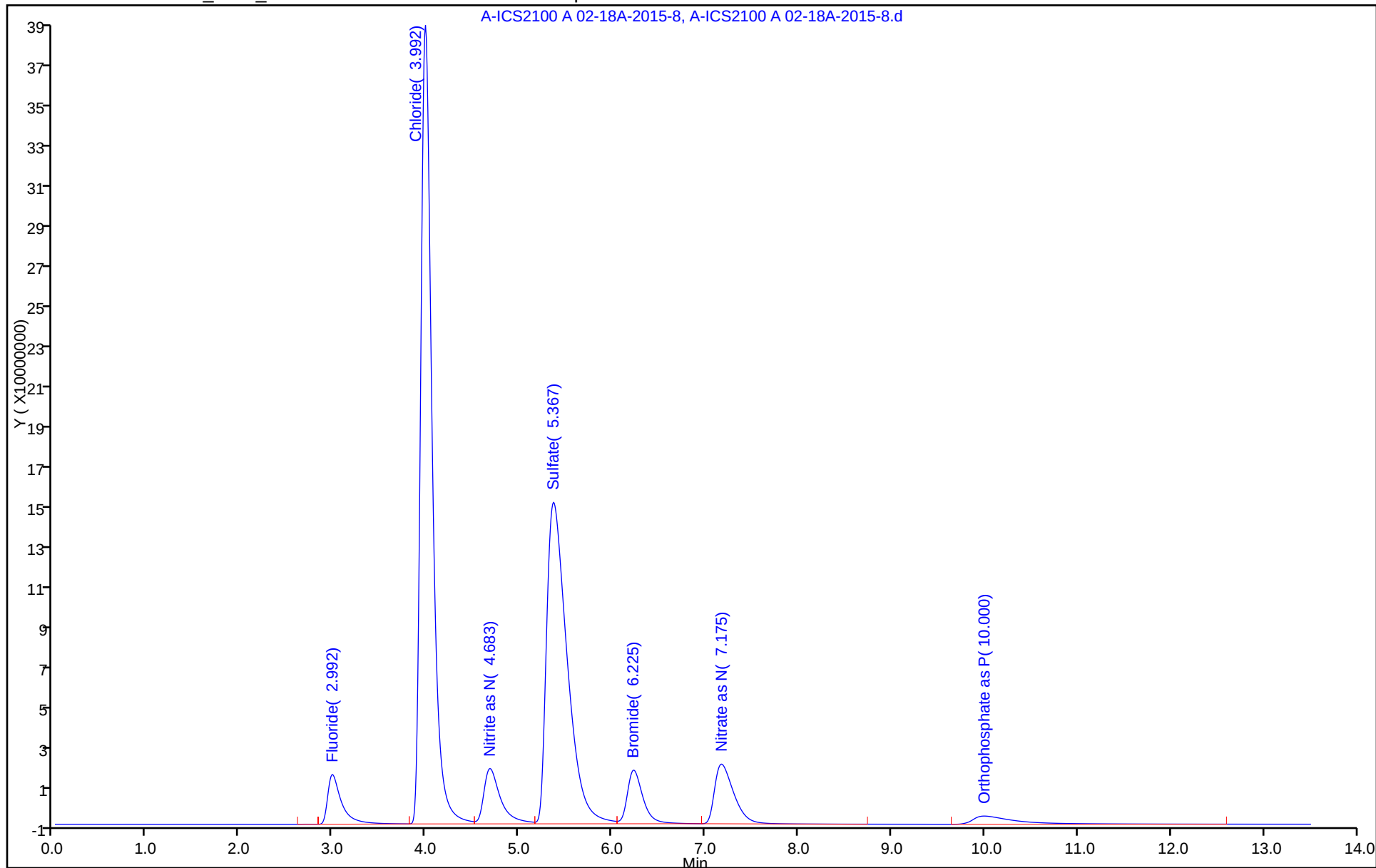
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Lims ID: ic L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 18-Feb-2015 18:25:00 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005751-009
 Misc. Info.: 9 IC L9
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 03-Mar-2015 14:02:05 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK026

First Level Reviewer: hartmanm

Date: 03-Mar-2015 14:01:47

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	3.000	-0.017	29657700H	10.0	9.87	
2 Chloride	3.983	4.017	-0.034	484326140H	200.0	191.0	
7 Nitrite as N	4.675	4.717	-0.042	32570690H	10.0	8.71	
3 Sulfate	5.342	5.550	-0.208	2993621710	200.0	191.2	
4 Bromide	6.217	6.300	-0.083	32412358H	40.0	38.6	
5 Nitrate as N	7.142	7.317	-0.175	35041348H	10.0	8.93	
6 Orthophosphate as P	9.942	10.458	-0.516	168509455	10.0	10.3	

Reagents:

ICSTDL9_00106

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Injection Date: 18-Feb-2015 18:25:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L9

Worklist Smp#: 9

Client ID:

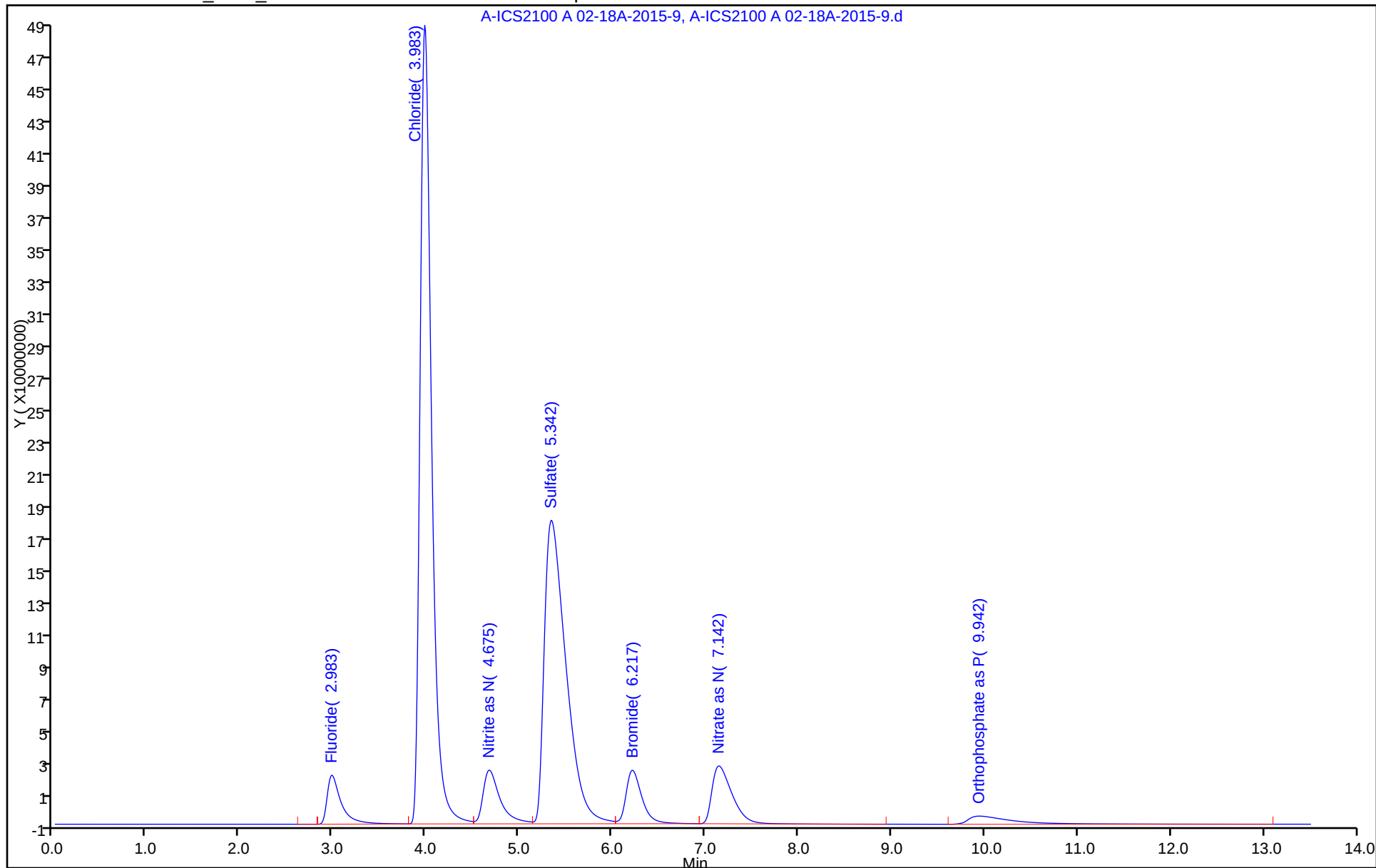
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: ICV 180-134458/2 Calibration Date: 02/28/2015 11:00
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-2.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3089701		3.10	3.00	3.2	10.0
Chloride	Lin2		2571335		61.0	60.0	1.7	10.0
Nitrite as N	Lin2		3762130		3.02	3.00	0.5	10.0
Sulfate	Lin2		17152434		65.7	60.0	9.5	10.0
Bromide	Lin2		889310		12.7	12.0	6.2	10.0
Nitrate as N	Lin2		4189662		3.21	3.00	7.0	10.0
Orthophosphate as P	Lin2		14000227		2.83	3.00	-5.6	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: ICV 180-134458/2 Calibration Date: 02/28/2015 11:00
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-2.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.65	3.35
Chloride	4.00	3.65	4.35
Nitrite as N	4.68	4.45	4.95
Sulfate	5.50	5.18	5.88
Bromide	6.24	5.89	6.59
Nitrate as N	7.21	6.97	7.47
Orthophosphate as P	10.39	10.18	10.68

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-2.d
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 28-Feb-2015 11:00:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005848-002
 Misc. Info.: 2 ICV
 Operator ID: Instrument ID: CHIC2100A
 Sublist:
 Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 10-Mar-2015 09:27:23 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008

Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	9269103H	3.00	3.10	
2 Chloride	4.000	4.000	0.000	154280102H	60.0	61.0	
7 Nitrite as N	4.683	4.700	-0.017	11290905H	3.00	3.02	
3 Sulfate	5.500	5.525	-0.025	1029146059	60.0	65.7	
4 Bromide	6.242	6.242	0.000	10671717H	12.0	12.7	
5 Nitrate as N	7.208	7.217	-0.009	12568987H	3.00	3.21	
6 Orthophosphate as P	10.392	10.425	-0.033	42000681	3.00	2.83	

Reagents:

icicv_01209

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-2.d

Injection Date: 28-Feb-2015 11:00:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: icv

Worklist Smp#: 2

Client ID:

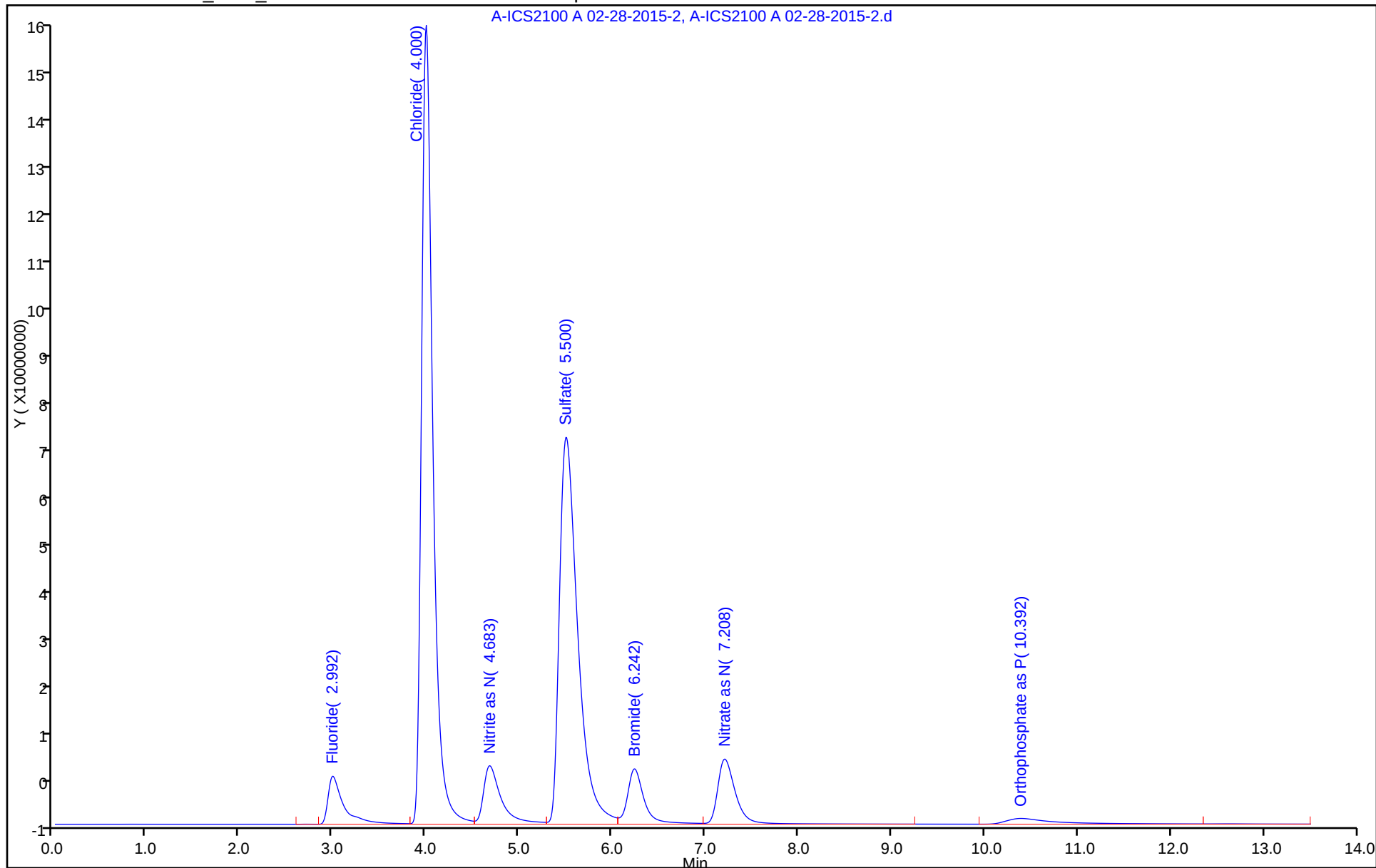
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: CCV 180-134458/3 Calibration Date: 02/28/2015 11:16
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-3.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3107922		2.60	2.50	3.9	10.0
Chloride	Lin2		2573583		50.9	50.0	1.9	10.0
Nitrite as N	Lin2		3954408		2.64	2.50	5.6	10.0
Sulfate	Lin2		15859749		50.6	50.0	1.2	10.0
Bromide	Lin2		887374		10.6	10.0	6.0	10.0
Nitrate as N	Lin2		4288656		2.74	2.50	9.6	10.0
Orthophosphate as P	Lin2		14304839		2.46	2.50	-1.4	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: CCV 180-134458/3 Calibration Date: 02/28/2015 11:16
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-3.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.00	2.65	3.35
Chloride	4.00	3.65	4.35
Nitrite as N	4.70	4.45	4.95
Sulfate	5.53	5.18	5.88
Bromide	6.24	5.89	6.59
Nitrate as N	7.22	6.97	7.47
Orthophosphate as P	10.43	10.18	10.68

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-3.d
 Lims ID: ccv
 Client ID:
 Sample Type: CCV
 Inject. Date: 28-Feb-2015 11:16:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005848-003
 Misc. Info.: 3 CCV
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 10-Mar-2015 09:27:23 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008

Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	7769805H	2.50	2.60	
2 Chloride	4.000	4.000	0.000	128679137H	50.0	50.9	
7 Nitrite as N	4.700	4.700	0.000	9886021H	2.50	2.64	
3 Sulfate	5.525	5.525	0.000	792987458	50.0	50.6	
4 Bromide	6.242	6.242	0.000	8873741H	10.0	10.6	
5 Nitrate as N	7.217	7.217	0.000	10721641H	2.50	2.74	
6 Orthophosphate as P	10.425	10.425	0.000	35762098	2.50	2.46	

Reagents:

icccv_01178

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-3.d

Injection Date: 28-Feb-2015 11:16:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccv

Worklist Smp#: 3

Client ID:

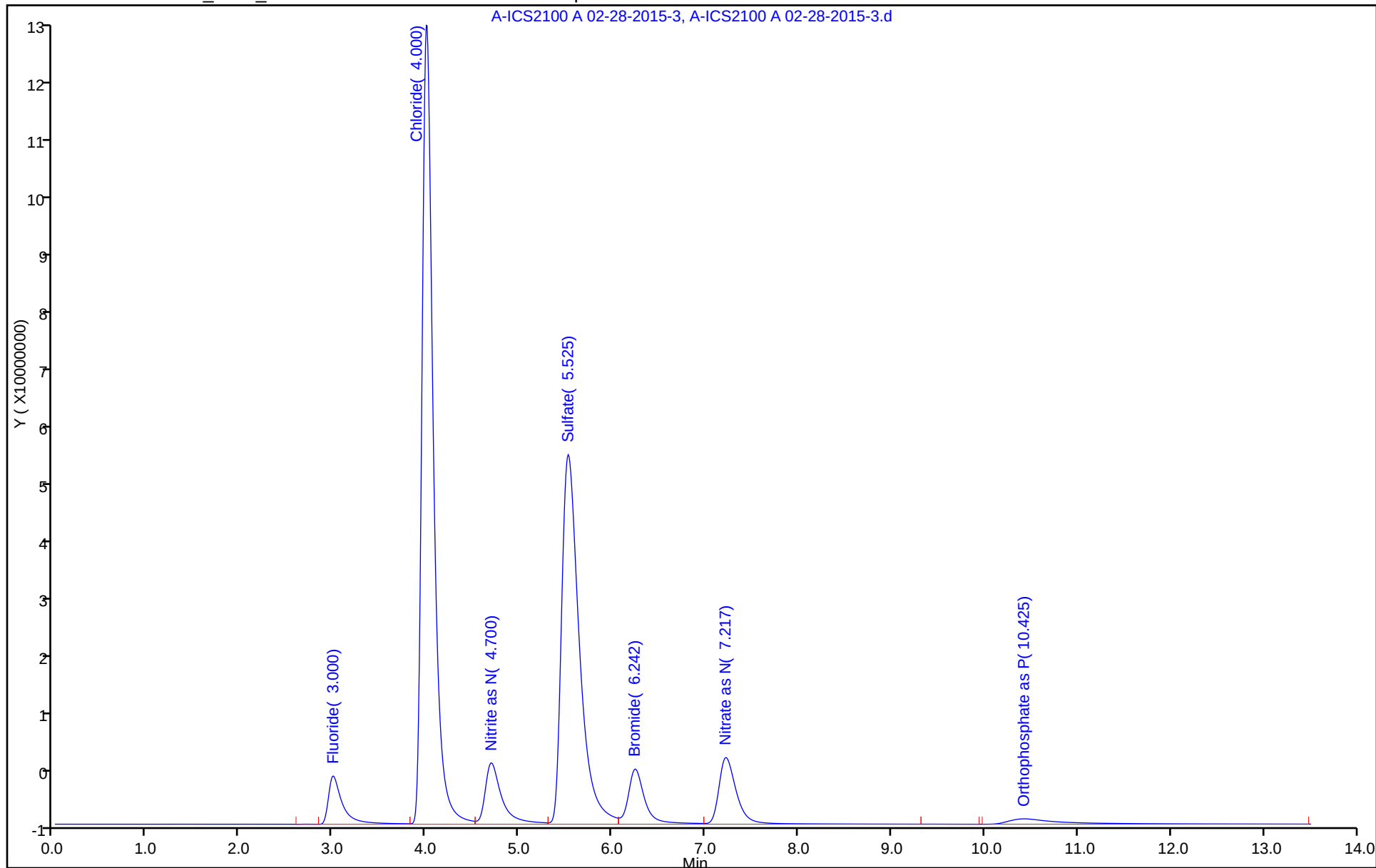
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: CCV 180-134458/15 Calibration Date: 02/28/2015 16:35
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-15.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3128176		2.61	2.50	4.6	10.0
Chloride	Lin2		2565453		50.8	50.0	1.6	10.0
Nitrite as N	Lin2		3956768		2.64	2.50	5.6	10.0
Sulfate	Lin2		15698982		50.1	50.0	0.2	10.0
Bromide	Lin2		882736		10.5	10.0	5.4	10.0
Nitrate as N	Lin2		4266677		2.73	2.50	9.0	10.0
Orthophosphate as P	Lin2		11101389		1.99	2.50	-20.3*	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: CCV 180-134458/15 Calibration Date: 02/28/2015 16:35
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-15.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.64	3.34
Chloride	4.00	3.65	4.35
Nitrite as N	4.69	4.44	4.94
Sulfate	5.53	5.18	5.88
Bromide	6.24	5.89	6.59
Nitrate as N	7.22	6.97	7.47
Orthophosphate as P	10.45	10.20	10.70

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-15.d
 Lims ID: ccv
 Client ID:
 Sample Type: CCV
 Inject. Date: 28-Feb-2015 16:35:00 ALS Bottle#: 0 Worklist Smp#: 15
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005848-015
 Misc. Info.: 15 CCV
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 10-Mar-2015 09:59:42 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008

Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	7820440H	2.50	2.61	
2 Chloride	4.000	4.000	0.000	128272659H	50.0	50.8	
7 Nitrite as N	4.692	4.692	0.000	9891921H	2.50	2.64	
3 Sulfate	5.525	5.525	0.000	784949093	50.0	50.1	
4 Bromide	6.242	6.242	0.000	8827358H	10.0	10.5	
5 Nitrate as N	7.217	7.217	0.000	10666692H	2.50	2.73	
6 Orthophosphate as P	10.450	10.450	0.000	27753472	2.50	1.99	

Reagents:

icccv_01178

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-15.d

Injection Date: 28-Feb-2015 16:35:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccv

Worklist Smp#: 15

Client ID:

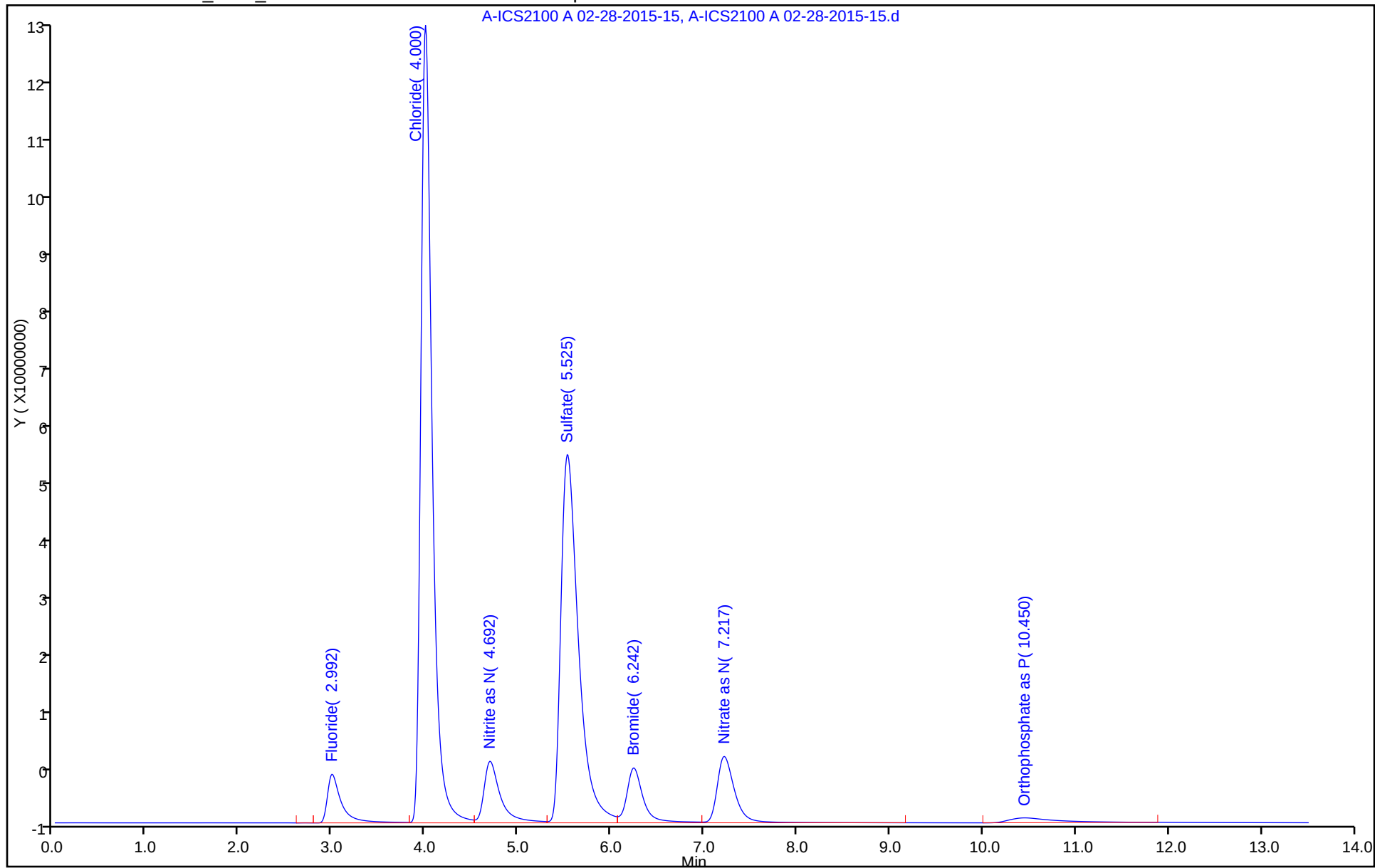
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: CCV 180-134458/27 Calibration Date: 02/28/2015 19:39
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-27.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3125812		2.61	2.50	4.5	10.0
Chloride	Lin2		2630463		52.1	50.0	4.1	10.0
Nitrite as N	Lin2		3953181		2.64	2.50	5.5	10.0
Sulfate	Lin2		15927028		50.8	50.0	1.6	10.0
Bromide	Lin2		885543		10.6	10.0	5.8	10.0
Nitrate as N	Lin2		4292831		2.74	2.50	9.7	10.0
Orthophosphate as P	Lin2		13897590		2.40	2.50	-3.8	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: CCV 180-134458/27 Calibration Date: 02/28/2015 19:39
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-27.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.00	2.65	3.35
Chloride	4.01	3.66	4.36
Nitrite as N	4.71	4.46	4.96
Sulfate	5.53	5.18	5.88
Bromide	6.25	5.90	6.60
Nitrate as N	7.23	6.98	7.48
Orthophosphate as P	10.43	10.18	10.68

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-27.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 28-Feb-2015 19:39:00 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-027
Misc. Info.: 27 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:59:46 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	7814531H	2.50	2.61	
2 Chloride	4.008	4.008	0.000	131523143H	50.0	52.1	
7 Nitrite as N	4.708	4.708	0.000	9882953H	2.50	2.64	
3 Sulfate	5.533	5.533	0.000	796351380	50.0	50.8	
4 Bromide	6.250	6.250	0.000	8855426H	10.0	10.6	
5 Nitrate as N	7.225	7.225	0.000	10732078H	2.50	2.74	
6 Orthophosphate as P	10.425	10.425	0.000	34743976	2.50	2.40	

Reagents:

icccv_01178

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-27.d

Injection Date: 28-Feb-2015 19:39:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccv

Worklist Smp#: 27

Client ID:

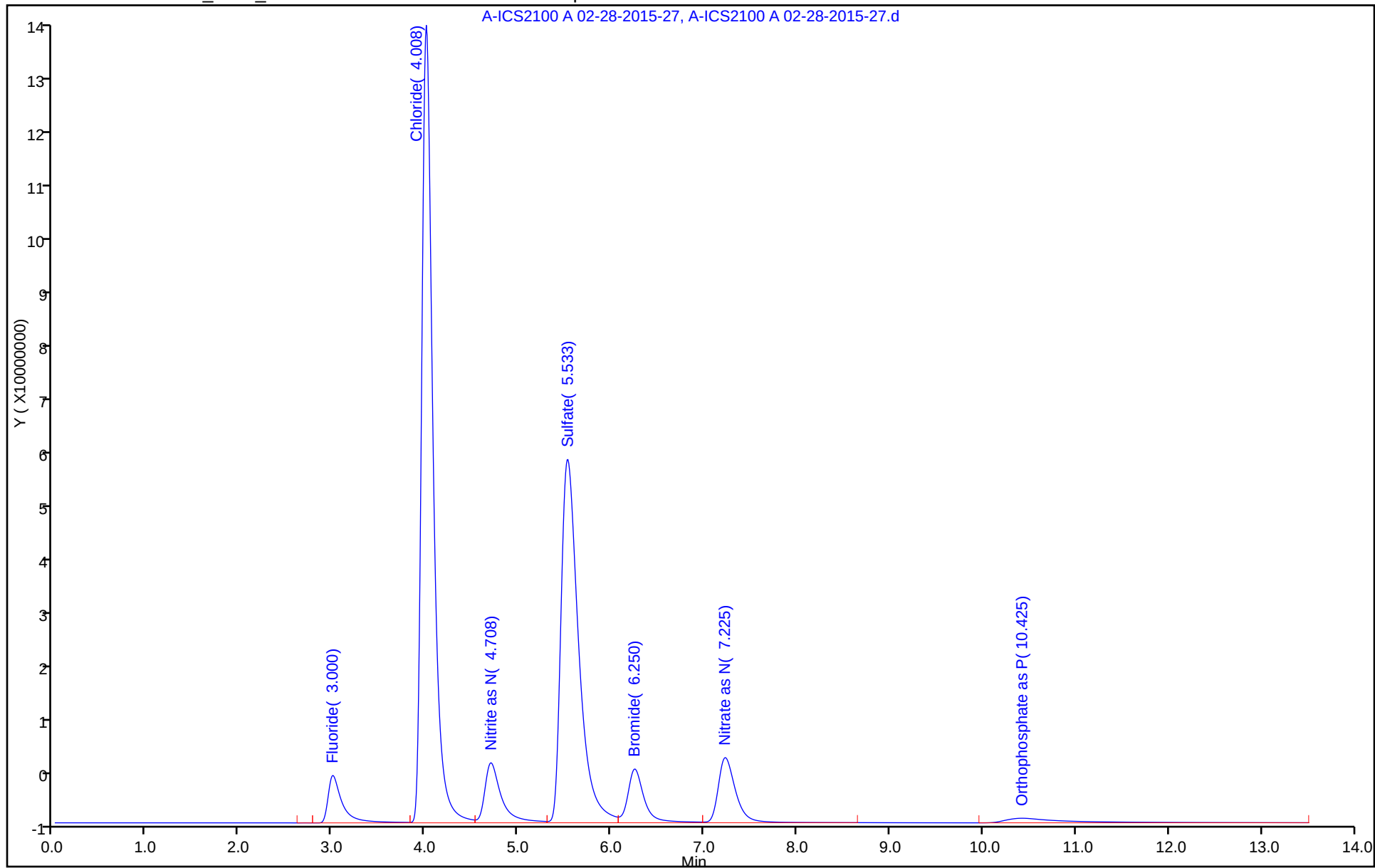
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: CCV 180-134458/37 Calibration Date: 03/01/2015 14:38
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-29.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3053125		2.55	2.50	2.1	10.0
Chloride	Lin2		2549289		50.5	50.0	0.9	10.0
Nitrite as N	Lin2		3901277		2.60	2.50	4.1	10.0
Sulfate	Lin2		15707829		50.1	50.0	0.2	10.0
Bromide	Lin2		882789		10.5	10.0	5.4	10.0
Nitrate as N	Lin2		4252396		2.72	2.50	8.7	10.0
Orthophosphate as P	Lin2		13310358		2.32	2.50	-7.3	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: CCV 180-134458/37 Calibration Date: 03/01/2015 14:38
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-29.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.64	3.34
Chloride	4.00	3.65	4.35
Nitrite as N	4.69	4.44	4.94
Sulfate	5.53	5.18	5.88
Bromide	6.24	5.89	6.59
Nitrate as N	7.21	6.96	7.46
Orthophosphate as P	10.39	10.14	10.64

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-29.d
 Lims ID: ccv
 Client ID:
 Sample Type: CCV
 Inject. Date: 01-Mar-2015 14:38:00 ALS Bottle#: 0 Worklist Smp#: 37
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005848-037
 Misc. Info.: 30197 CCV
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 10-Mar-2015 09:59:47 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008

Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	7632813H	2.50	2.55	
2 Chloride	4.000	4.000	0.000	127464472H	50.0	50.5	
7 Nitrite as N	4.692	4.692	0.000	9753193H	2.50	2.60	
3 Sulfate	5.525	5.525	0.000	785391468	50.0	50.1	
4 Bromide	6.242	6.242	0.000	8827890H	10.0	10.5	
5 Nitrate as N	7.208	7.208	0.000	10630991H	2.50	2.72	
6 Orthophosphate as P	10.392	10.392	0.000	33275896	2.50	2.32	

Reagents:

icccv_01178

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-29.d

Injection Date: 01-Mar-2015 14:38:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccv

Worklist Smp#: 37

Client ID:

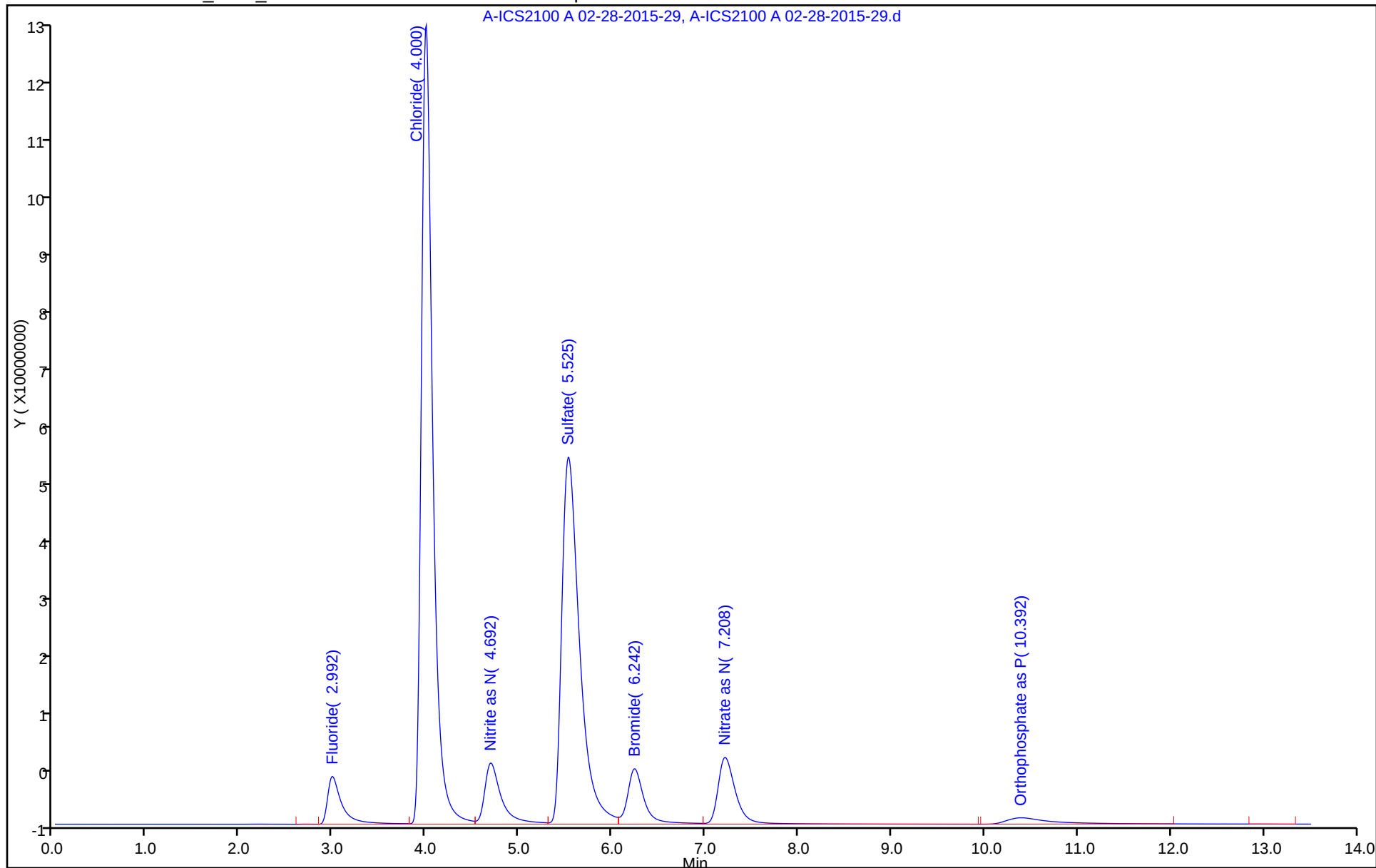
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Lab Sample ID: CCV 180-134458/35 Calibration Date: 03/01/2015 16:41
 Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
 GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
 Lab File ID: A-ICS2100 A 02-28-2015-37.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3021345		2.53	2.50	1.0	10.0
Chloride	Lin2		2549380		50.5	50.0	0.9	10.0
Nitrite as N	Lin2		3895881		2.60	2.50	4.0	10.0
Sulfate	Lin2		15742021		50.2	50.0	0.4	10.0
Bromide	Lin2		880798		10.5	10.0	5.2	10.0
Nitrate as N	Lin2		4252200		2.72	2.50	8.7	10.0
Orthophosphate as P	Lin2		12139245		2.15	2.50	-14.2*	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Lab Sample ID: CCV 180-134458/35 Calibration Date: 03/01/2015 16:41
Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38
GC Column: AS-18 ID: _____ Calib End Date: 02/18/2015 18:25
Lab File ID: A-ICS2100 A 02-28-2015-37.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.00	2.65	3.35
Chloride	4.01	3.66	4.36
Nitrite as N	4.70	4.45	4.95
Sulfate	5.53	5.18	5.88
Bromide	6.25	5.90	6.60
Nitrate as N	7.22	6.97	7.47
Orthophosphate as P	10.46	10.21	10.71

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-37.d
 Lims ID: ccv
 Client ID:
 Sample Type: CCV
 Inject. Date: 01-Mar-2015 16:41:00 ALS Bottle#: 0 Worklist Smp#: 35
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005848-035
 Misc. Info.: 35 ccv
 Operator ID: Instrument ID: CHIC2100A
 Sublist: chrom-300_9056_CHIC2100A*sub3
 Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 10-Mar-2015 09:59:49 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last Ical File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008

Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	7553363H	2.50	2.53	
2 Chloride	4.008	4.008	0.000	127468982H	50.0	50.5	
7 Nitrite as N	4.700	4.700	0.000	9739702H	2.50	2.60	
3 Sulfate	5.525	5.525	0.000	787101043	50.0	50.2	
4 Bromide	6.250	6.250	0.000	8807982H	10.0	10.5	
5 Nitrate as N	7.217	7.217	0.000	10630501H	2.50	2.72	
6 Orthophosphate as P	10.458	10.458	0.000	30348113	2.50	2.15	

Reagents:

icccv_01178

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-37.d

Injection Date: 01-Mar-2015 16:41:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccv

Worklist Smp#: 35

Client ID:

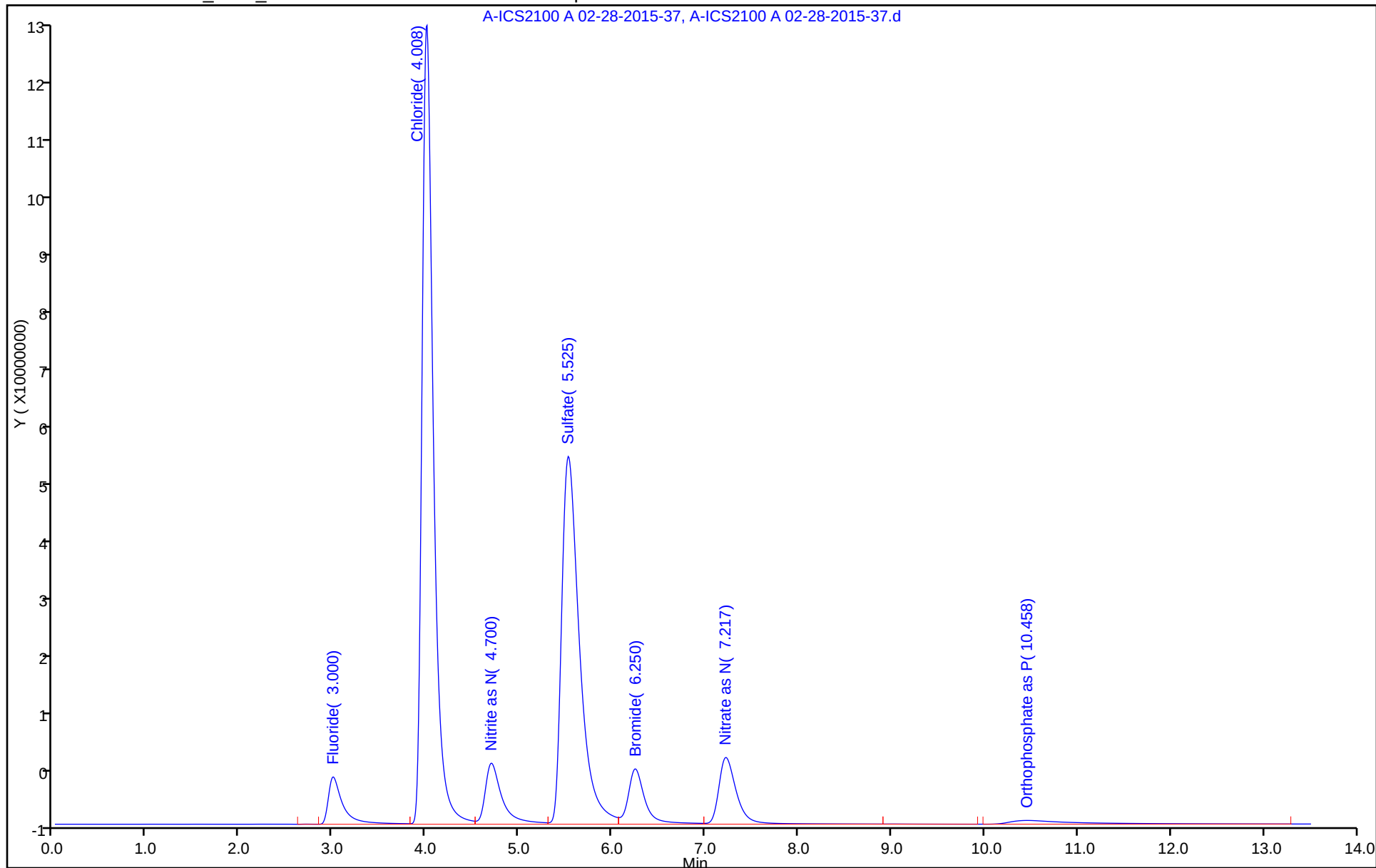
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: MB 180-134458/6
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-6.d
Analysis Method: 300.0 Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 02/28/2015 12:02
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0106	J	0.10	0.0062
16887-00-6	Chloride	0.281	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-6.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 28-Feb-2015 12:02:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-006
Misc. Info.: 6 MB
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:27:19 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	6967H		0.0179	
2 Chloride	4.042	4.000	0.042	47456H		0.2808	
7 Nitrite as N	4.783	4.692	0.091	77394H		0.0132	
3 Sulfate	5.667	5.525	0.142	384014		-0.0540	
4 Bromide		6.242				ND	
5 Nitrate as N	7.308	7.217	0.091	4255H		0.0106	
6 Orthophosphate as P		10.450				ND	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-6.d

Injection Date: 28-Feb-2015 12:02:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: mb

Worklist Smp#: 6

Client ID:

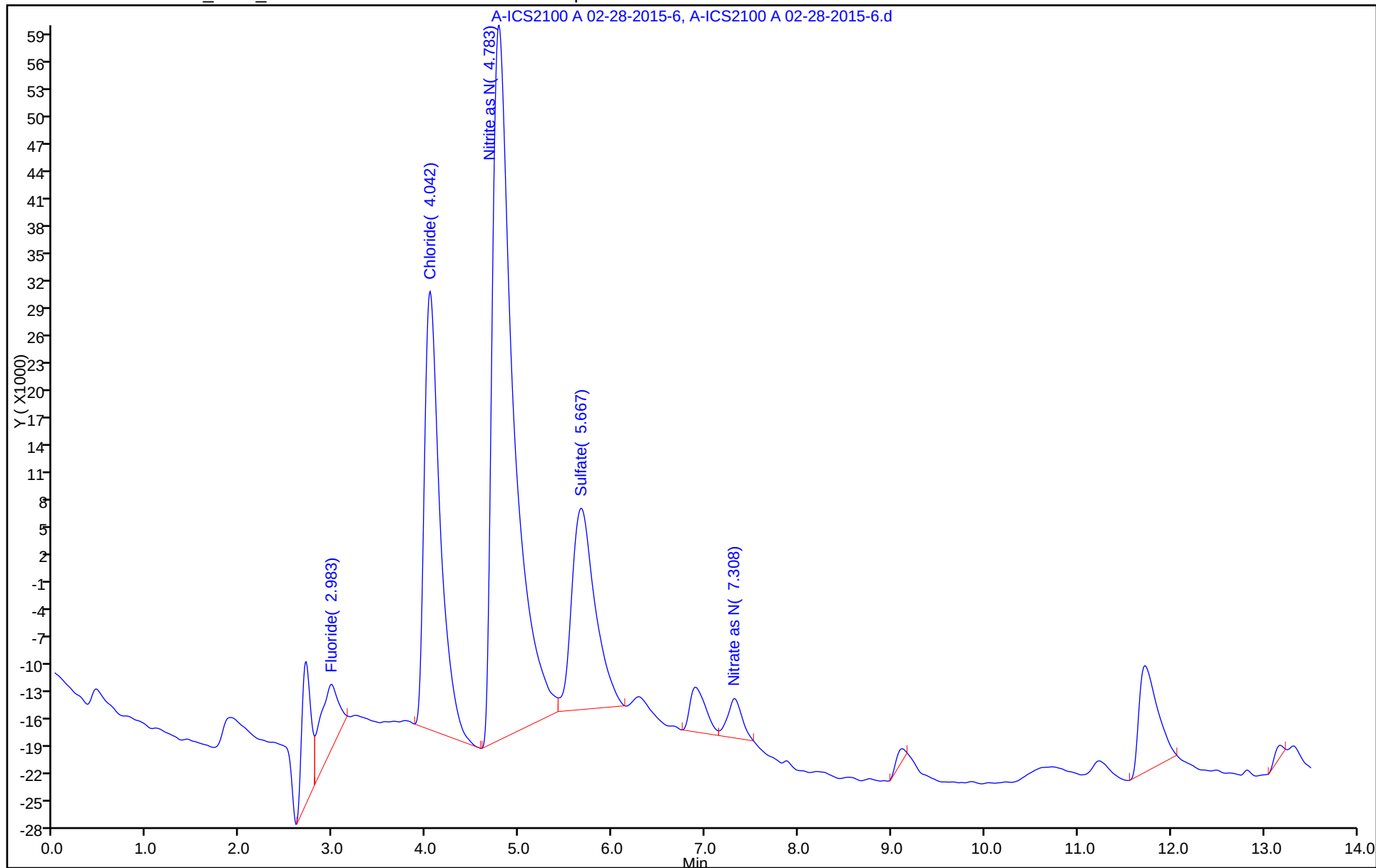
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: CCB 180-134458/4
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-4.d
Analysis Method: 300.0 Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 02/28/2015 11:31
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	0.281	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-4.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 28-Feb-2015 11:31:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-004
Misc. Info.: 4 CCB
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:27:19 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.975	2.992	-0.017	9364H		0.0187	
2 Chloride	4.033	4.000	0.033	48057H		0.2810	
7 Nitrite as N	4.775	4.692	0.083	76321H		0.0129	
3 Sulfate	5.658	5.525	0.133	363220		-0.0553	
4 Bromide		6.242				ND	
5 Nitrate as N		7.217				ND	
6 Orthophosphate as P		10.450				ND	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-4.d

Injection Date: 28-Feb-2015 11:31:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccb

Worklist Smp#: 4

Client ID:

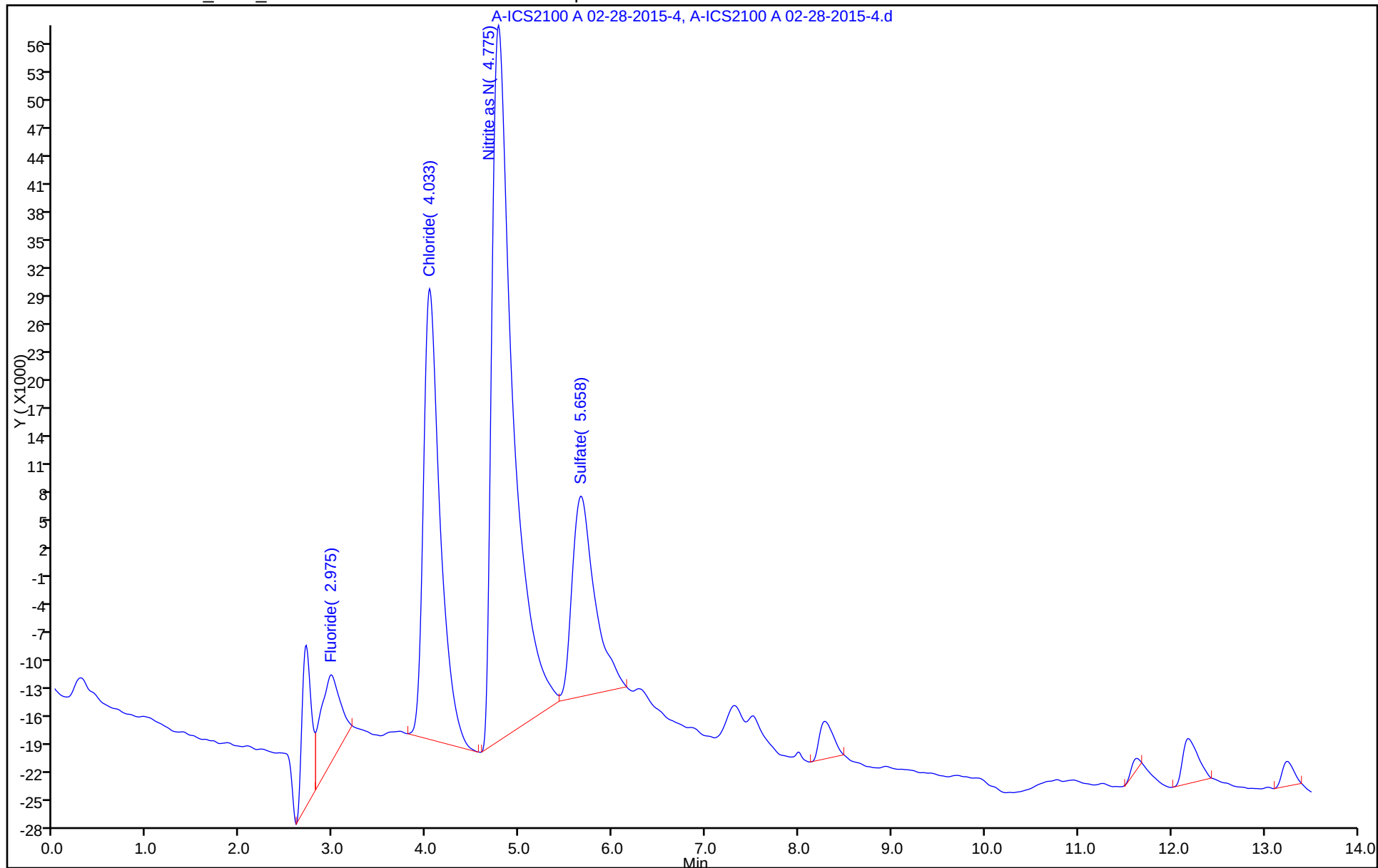
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: CCB 180-134458/16
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-16.d
Analysis Method: 300.0 Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 02/28/2015 16:51
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00983	J	0.10	0.0062
16887-00-6	Chloride	0.287	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-16.d
 Lims ID: ccb
 Client ID:
 Sample Type: CCB
 Inject. Date: 28-Feb-2015 16:51:00 ALS Bottle#: 0 Worklist Smp#: 16
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005848-016
 Misc. Info.: 16 CCB
 Operator ID: Instrument ID: CHIC2100A
 Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 10-Mar-2015 09:59:42 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.967	2.992	-0.025	7777H		0.0182	
2 Chloride	4.033	4.000	0.033	62793H		0.2868	
7 Nitrite as N	4.775	4.692	0.083	73407H		0.0122	
3 Sulfate	5.667	5.525	0.142	411605		-0.0522	
4 Bromide		6.242				ND	
5 Nitrate as N	7.292	7.217	0.075	1342H		0.009826	
6 Orthophosphate as P		10.450				ND	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-16.d

Injection Date: 28-Feb-2015 16:51:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccb

Worklist Smp#: 16

Client ID:

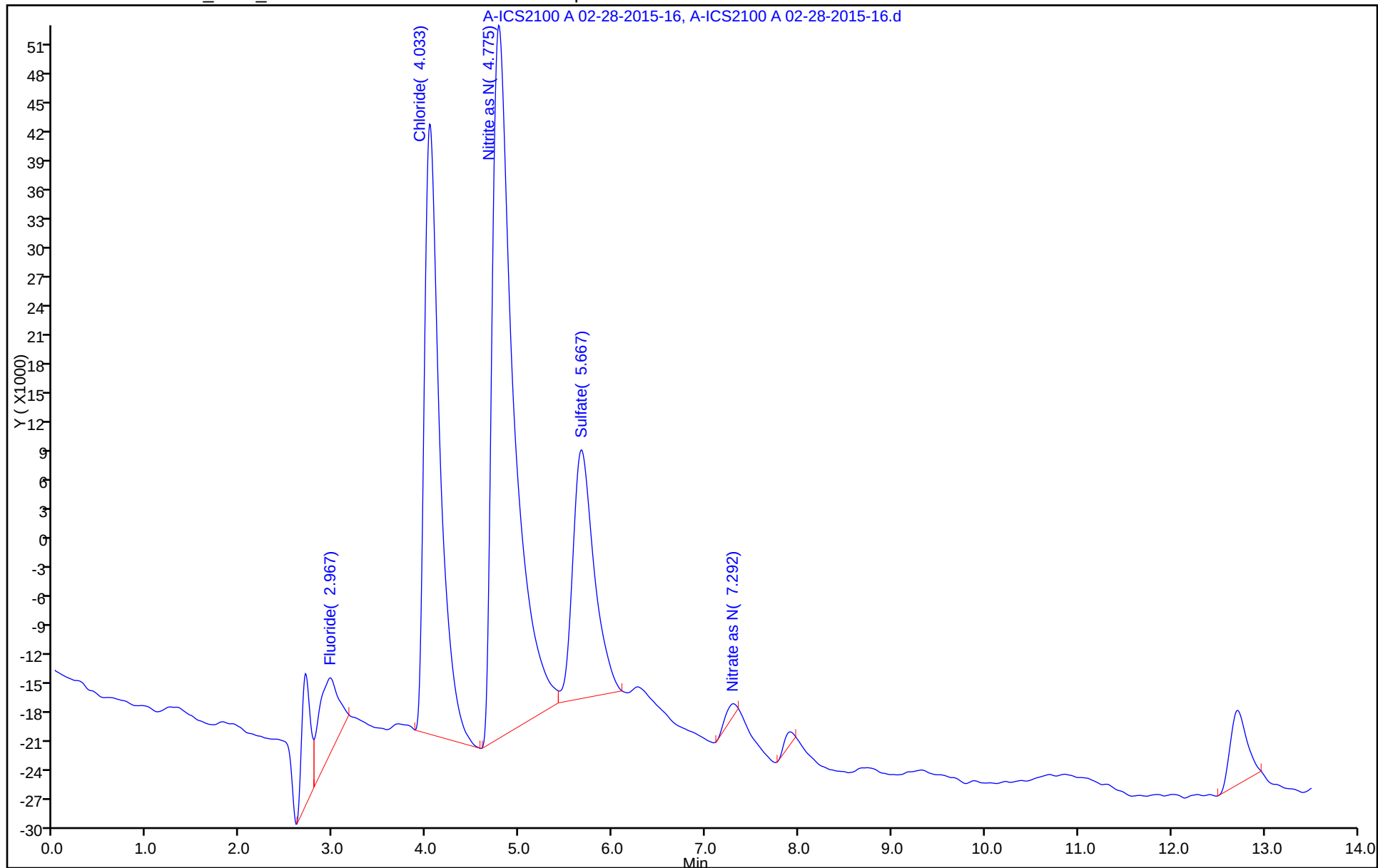
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: CCB 180-134458/28
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-28.d
Analysis Method: 300.0 Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 02/28/2015 19:54
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0107	J	0.10	0.0062
16887-00-6	Chloride	0.477	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-28.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 28-Feb-2015 19:54:00 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-028
Misc. Info.: 28 ccb
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:59:46 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	3.000	-0.017	12113H		0.0196	
2 Chloride	4.042	4.008	0.034	544819H		0.4767	
7 Nitrite as N	4.775	4.708	0.067	85909H		0.0155	
3 Sulfate	5.642	5.533	0.109	687938		-0.0345	
4 Bromide		6.250				ND	
5 Nitrate as N	7.300	7.225	0.075	4761H		0.0107	
6 Orthophosphate as P		10.425				ND	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-28.d

Injection Date: 28-Feb-2015 19:54:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccb

Worklist Smp#: 28

Client ID:

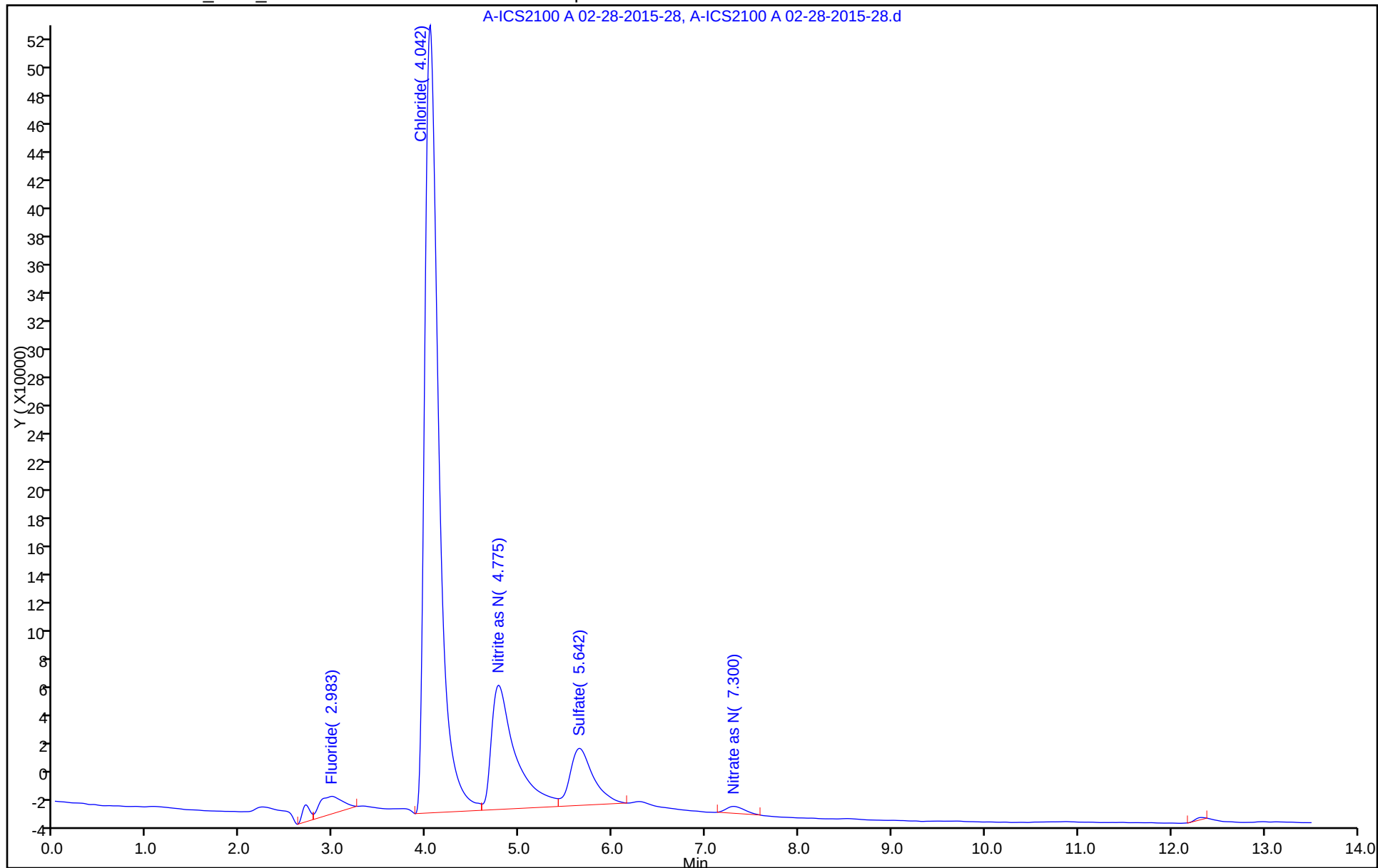
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: CCB 180-134458/36
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-38.d
Analysis Method: 300.0 Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 03/01/2015 16:56
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	0.294	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-38.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 01-Mar-2015 16:56:00 ALS Bottle#: 0 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005848-036
Misc. Info.: 36 ccb
Operator ID: Instrument ID: CHIC2100A
Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 10-Mar-2015 09:59:49 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Column 1 : Det: 0008
Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.708	3.000	-0.292	18441H		0.0217	
2 Chloride	4.042	4.008	0.034	80697H		0.2939	
7 Nitrite as N	4.775	4.700	0.075	74469H		0.0124	
3 Sulfate	5.650	5.525	0.125	395945		-0.0532	
4 Bromide		6.250				ND	
5 Nitrate as N		7.217				ND	
6 Orthophosphate as P		10.458				ND	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-38.d

Injection Date: 01-Mar-2015 16:56:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccb

Worklist Smp#: 36

Client ID:

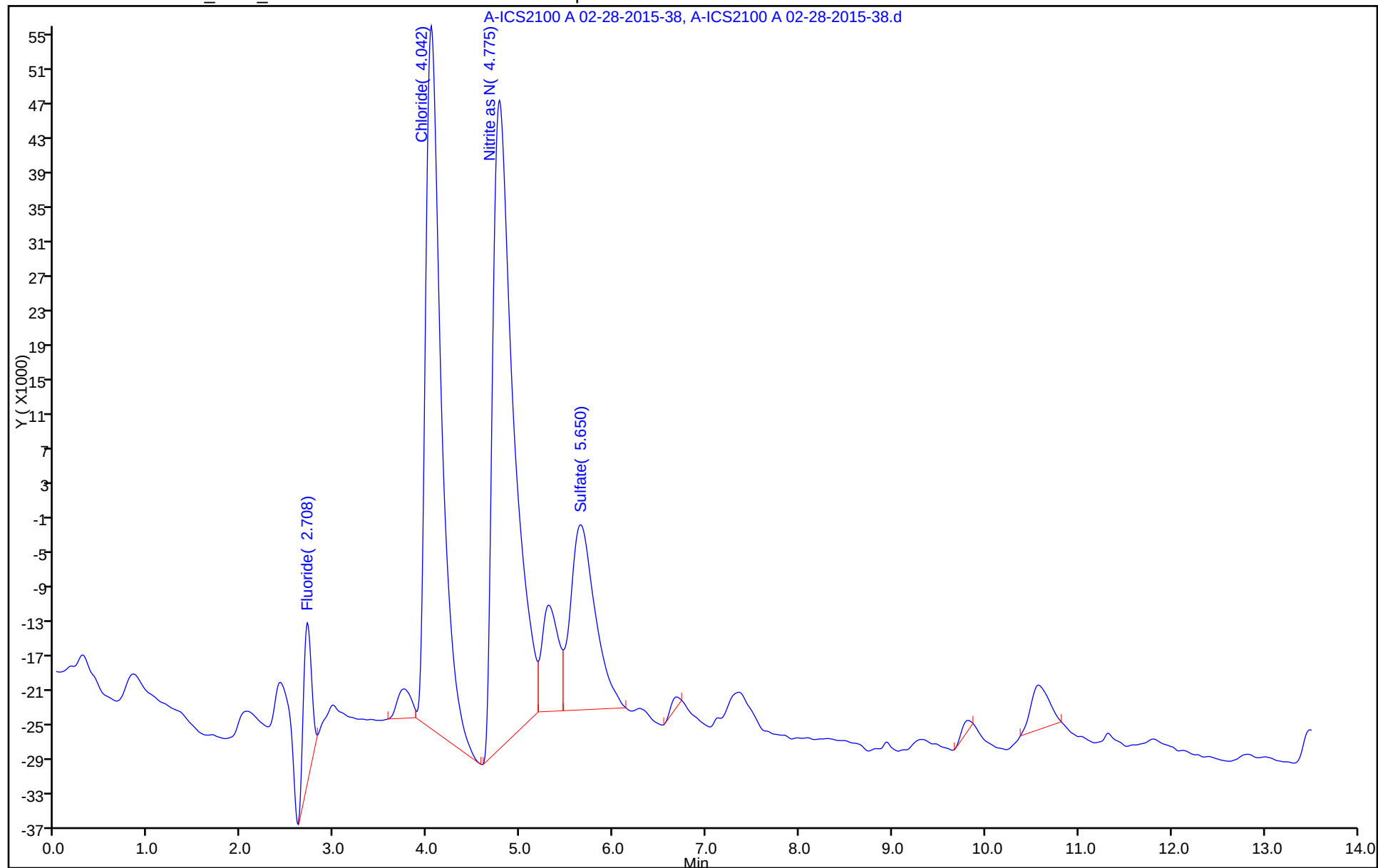
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: CCB 180-134458/38
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-30.d
Analysis Method: 300.0 Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 03/01/2015 14:54
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0118	J	0.10	0.0062
16887-00-6	Chloride	0.276	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-30.d
 Lims ID: ccb
 Client ID:
 Sample Type: CCB
 Inject. Date: 01-Mar-2015 14:54:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005848-038
 Misc. Info.: 25511 CCB
 Operator ID: Instrument ID: CHIC2100A
 Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 10-Mar-2015 09:59:47 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.975	2.992	-0.017	5205H		0.0173	
2 Chloride	4.033	4.000	0.033	36435H		0.2765	
7 Nitrite as N	4.775	4.692	0.083	71499H		0.0117	
3 Sulfate	5.658	5.525	0.133	354869		-0.0558	
4 Bromide		6.242				ND	
5 Nitrate as N	7.300	7.208	0.092	9050H		0.0118	
6 Orthophosphate as P	10.208	10.392	-0.184	49598		0.3611	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-30.d

Injection Date: 01-Mar-2015 14:54:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccb

Worklist Smp#: 38

Client ID:

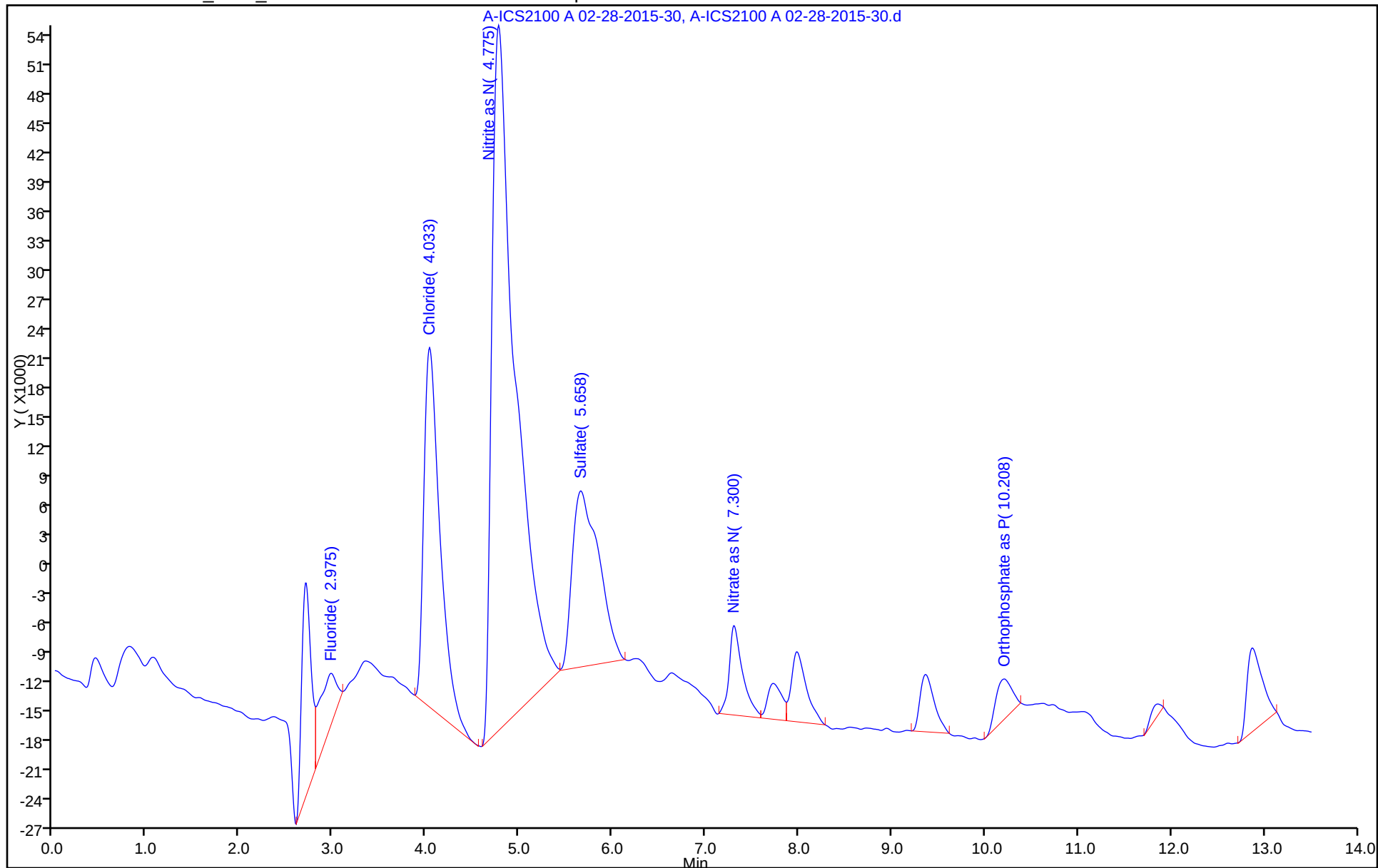
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: LCS 180-134458/5
Matrix: Water Lab File ID: A-ICS2100 A 02-28-2015-5.d
Analysis Method: 300.0 Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1(mL) Date Analyzed: 02/28/2015 11:46
Con. Extract Vol.: 1.0(mL) Dilution Factor: 1
Injection Volume: 10(uL) GC Column: AS-18 ID: _____
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 134458 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.72		0.10	0.0062
16887-00-6	Chloride	50.8		1.0	0.20
14808-79-8	Sulfate	50.4		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-5.d
 Lims ID: lcs
 Client ID:
 Sample Type: LCS
 Inject. Date: 28-Feb-2015 11:46:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 10.0 ul Dil. Factor: 1.0000
 Sample Info: 180-0005848-005
 Misc. Info.: 5 LCS
 Operator ID: Instrument ID: CHIC2100A
 Method: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\300_9056_CHIC2100A.m
 Limit Group: GC Anions ICAL
 Last Update: 10-Mar-2015 09:27:19 Calib Date: 18-Feb-2015 18:25:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
 Column 1 : Det: 0008
 Process Host: XAWRK032

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	7817711H	2.50	2.61	
2 Chloride	4.000	4.000	0.000	128405067H	50.0	50.8	
7 Nitrite as N	4.692	4.692	0.000	9884702H	2.50	2.64	
3 Sulfate	5.525	5.525	0.000	789731838	50.0	50.4	
4 Bromide	6.242	6.242	0.000	8827110H	10.0	10.5	
5 Nitrate as N	7.217	7.217	0.000	10663456H	2.50	2.72	
6 Orthophosphate as P	10.433	10.450	-0.017	28415012	2.50	2.03	

Reagents:

icccv_01178

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150228-5848.b\A-ICS2100 A 02-28-2015-5.d

Injection Date: 28-Feb-2015 11:46:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: lcs

Worklist Smp#: 5

Client ID:

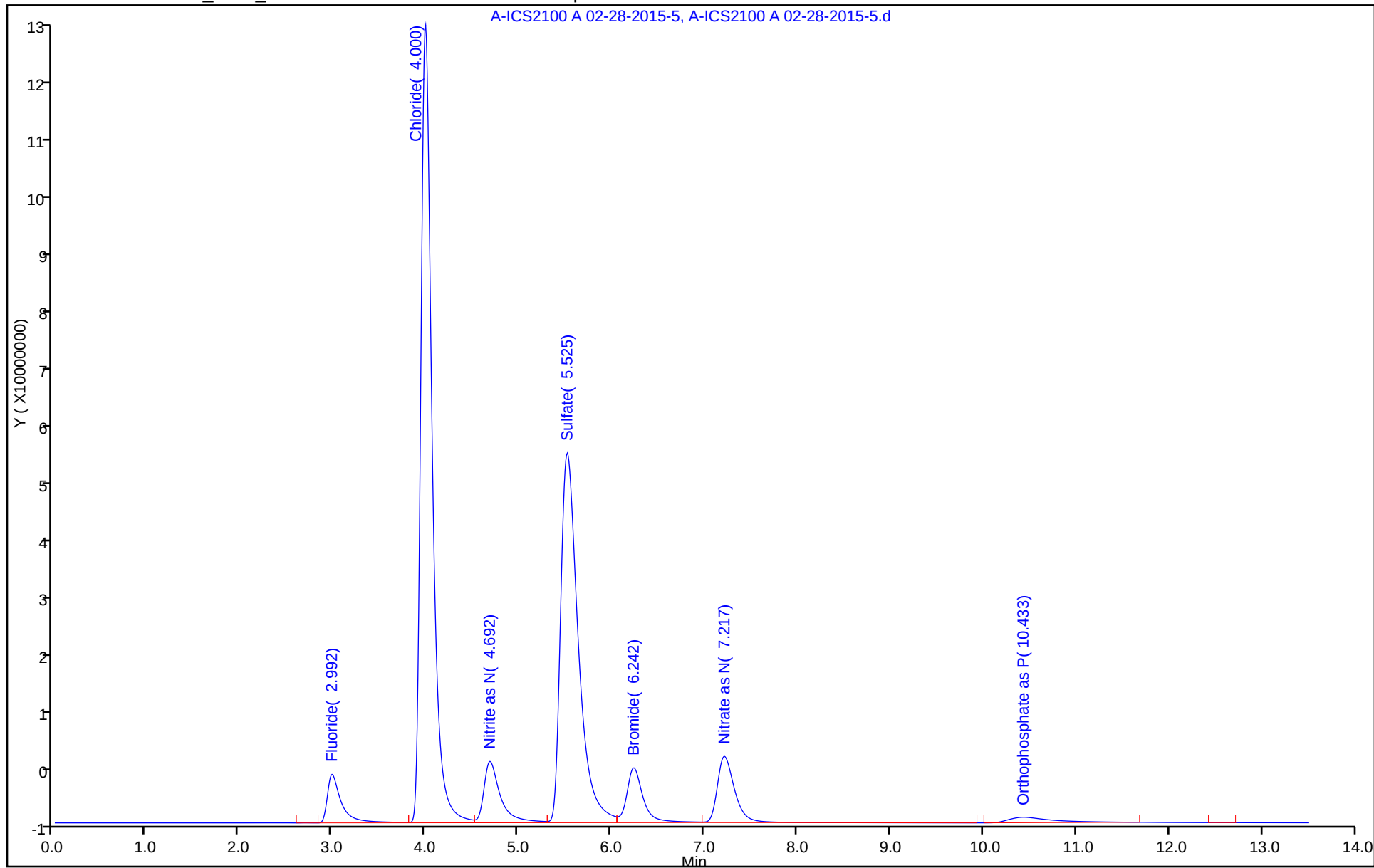
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300_9056_CHIC2100A

Limit Group: GC Anions ICAL



HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica PittsburghJob No.: 180-41613-1

SDG No.: _____

Instrument ID: CHIC2100AStart Date: 02/18/2015 16:38Analysis Batch Number: 133779End Date: 02/19/2015 10:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 180-133779/2		02/18/2015 16:38	1	A-ICS2100 A 02-18A-2015-2.d	AS-18
IC 180-133779/3		02/18/2015 16:53	1	A-ICS2100 A 02-18A-2015-3.d	AS-18
ICRT 180-133779/4		02/18/2015 17:08	1	A-ICS2100 A 02-18A-2015-4.d	AS-18
IC 180-133779/5		02/18/2015 17:24	1	A-ICS2100 A 02-18A-2015-5.d	AS-18
IC 180-133779/6		02/18/2015 17:39	1	A-ICS2100 A 02-18A-2015-6.d	AS-18
IC 180-133779/7		02/18/2015 17:54	1	A-ICS2100 A 02-18A-2015-7.d	AS-18
IC 180-133779/8		02/18/2015 18:09	1	A-ICS2100 A 02-18A-2015-8.d	AS-18
IC 180-133779/9		02/18/2015 18:25	1	A-ICS2100 A 02-18A-2015-9.d	AS-18
ZZZZZ		02/18/2015 18:40	1		AS-18
ZZZZZ		02/18/2015 18:55	1		AS-18
ZZZZZ		02/18/2015 19:11	1		AS-18
ICV 180-133779/13		02/18/2015 19:49	1		AS-18
CCV 180-133779/14		02/18/2015 20:04	1		AS-18
CCB 180-133779/15		02/18/2015 20:20	1		AS-18
ZZZZZ		02/18/2015 20:35	1		AS-18
ZZZZZ		02/18/2015 20:50	1		AS-18
ZZZZZ		02/18/2015 21:06	1		AS-18
ZZZZZ		02/18/2015 21:21	1		AS-18
ZZZZZ		02/18/2015 21:36	1		AS-18
ZZZZZ		02/18/2015 21:52	1		AS-18
ZZZZZ		02/18/2015 22:07	1		AS-18
ZZZZZ		02/18/2015 22:22	1		AS-18
ZZZZZ		02/18/2015 22:38	1		AS-18
ZZZZZ		02/18/2015 22:53	1		AS-18
CCV 180-133779/26		02/18/2015 23:08	1		AS-18
CCB 180-133779/27		02/18/2015 23:23	1		AS-18
ZZZZZ		02/18/2015 23:39	1		AS-18
ZZZZZ		02/18/2015 23:54	5		AS-18
ZZZZZ		02/19/2015 00:09	5		AS-18
ZZZZZ		02/19/2015 00:25	50		AS-18
ZZZZZ		02/19/2015 00:40	1		AS-18
ZZZZZ		02/19/2015 00:55	5		AS-18
ZZZZZ		02/19/2015 01:11	10		AS-18
ZZZZZ		02/19/2015 01:26	100		AS-18
ZZZZZ		02/19/2015 01:41	2.5		AS-18
ZZZZZ		02/19/2015 01:56	25		AS-18
CCV 180-133779/38		02/19/2015 02:12	1		AS-18
CCB 180-133779/39		02/19/2015 02:27	1		AS-18
ZZZZZ		02/19/2015 02:42	10		AS-18
ZZZZZ		02/19/2015 02:58	100		AS-18
ZZZZZ		02/19/2015 03:13	1		AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica PittsburghJob No.: 180-41613-1

SDG No.: _____

Instrument ID: CHIC2100AStart Date: 02/18/2015 16:38Analysis Batch Number: 133779End Date: 02/19/2015 10:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/19/2015 03:28	10		AS-18
ZZZZZ		02/19/2015 03:44	1		AS-18
ZZZZZ		02/19/2015 03:59	1		AS-18
ZZZZZ		02/19/2015 04:14	1		AS-18
ZZZZZ		02/19/2015 04:29	1		AS-18
ZZZZZ		02/19/2015 04:45	1		AS-18
ZZZZZ		02/19/2015 05:00	1		AS-18
CCV 180-133779/50		02/19/2015 05:15	1		AS-18
CCB 180-133779/51		02/19/2015 05:31	1		AS-18
ZZZZZ		02/19/2015 05:46	1		AS-18
ZZZZZ		02/19/2015 06:01	1		AS-18
ZZZZZ		02/19/2015 06:17	1		AS-18
ZZZZZ		02/19/2015 06:32	1		AS-18
ZZZZZ		02/19/2015 06:47	1		AS-18
ZZZZZ		02/19/2015 07:02	1		AS-18
ZZZZZ		02/19/2015 07:18	1		AS-18
ZZZZZ		02/19/2015 07:33	1		AS-18
ZZZZZ		02/19/2015 07:48	1		AS-18
ZZZZZ		02/19/2015 08:04	10		AS-18
CCV 180-133779/62		02/19/2015 08:19	1		AS-18
CCB 180-133779/63		02/19/2015 08:34	1		AS-18
ZZZZZ		02/19/2015 08:49	1		AS-18
ZZZZZ		02/19/2015 09:05	10		AS-18
ZZZZZ		02/19/2015 09:20	1		AS-18
ZZZZZ		02/19/2015 09:35	10		AS-18
CCV 180-133779/68		02/19/2015 09:51	1		AS-18
CCB 180-133779/69		02/19/2015 10:06	1		AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica PittsburghJob No.: 180-41613-1

SDG No.: _____

Instrument ID: CHIC2100AStart Date: 02/28/2015 10:45Analysis Batch Number: 134458End Date: 03/01/2015 16:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/28/2015 10:45	1		AS-18
ICV 180-134458/2		02/28/2015 11:00	1	A-ICS2100 A 02-28-2015-2.d	AS-18
CCV 180-134458/3		02/28/2015 11:16	1	A-ICS2100 A 02-28-2015-3.d	AS-18
CCB 180-134458/4		02/28/2015 11:31	1	A-ICS2100 A 02-28-2015-4.d	AS-18
LCS 180-134458/5		02/28/2015 11:46	1	A-ICS2100 A 02-28-2015-5.d	AS-18
MB 180-134458/6		02/28/2015 12:02	1	A-ICS2100 A 02-28-2015-6.d	AS-18
ZZZZZ		02/28/2015 14:33	1		AS-18
ZZZZZ		02/28/2015 14:48	1		AS-18
ZZZZZ		02/28/2015 15:03	1		AS-18
ZZZZZ		02/28/2015 15:19	1		AS-18
ZZZZZ		02/28/2015 15:34	5		AS-18
ZZZZZ		02/28/2015 15:49	5		AS-18
ZZZZZ		02/28/2015 16:05	5		AS-18
ZZZZZ		02/28/2015 16:20	5		AS-18
CCV 180-134458/15		02/28/2015 16:35	1	A-ICS2100 A 02-28-2015-15.d	AS-18
CCB 180-134458/16		02/28/2015 16:51	1	A-ICS2100 A 02-28-2015-16.d	AS-18
ZZZZZ		02/28/2015 17:06	100		AS-18
ZZZZZ		02/28/2015 17:21	1000		AS-18
ZZZZZ		02/28/2015 17:36	100		AS-18
ZZZZZ		02/28/2015 17:52	1000		AS-18
ZZZZZ		02/28/2015 18:07	100		AS-18
ZZZZZ		02/28/2015 18:22	100		AS-18
ZZZZZ		02/28/2015 18:38	100		AS-18
ZZZZZ		02/28/2015 18:53	1000		AS-18
ZZZZZ		02/28/2015 19:08	1000		AS-18
ZZZZZ		02/28/2015 19:23	1000		AS-18
CCV 180-134458/27		02/28/2015 19:39	1	A-ICS2100 A 02-28-2015-27.d	AS-18
CCB 180-134458/28		02/28/2015 19:54	1	A-ICS2100 A 02-28-2015-28.d	AS-18
CCV 180-134458/37		03/01/2015 14:38	1	A-ICS2100 A 02-28-2015-29.d	AS-18
CCB 180-134458/38		03/01/2015 14:54	1	A-ICS2100 A 02-28-2015-30.d	AS-18
180-41613-4	HD-MW-50S-0/1-0	03/01/2015 15:09	1	A-ICS2100 A 02-28-2015-31.d	AS-18
180-41613-5	HD-MW-51D-0/1-0	03/01/2015 15:24	1	A-ICS2100 A 02-28-2015-32.d	AS-18
180-41613-6	HD-MW-127-0/1-0	03/01/2015 15:40	1	A-ICS2100 A 02-28-2015-33.d	AS-18
180-41613-7	HD-MW-132-0/1-0	03/01/2015 15:55	1	A-ICS2100 A 02-28-2015-34.d	AS-18
180-41613-8	HD-MW-95-0/1-0	03/01/2015 16:10	1	A-ICS2100 A 02-28-2015-35.d	AS-18
180-41613-9	HD-MW-97-0/1-0	03/01/2015 16:25	1	A-ICS2100 A 02-28-2015-36.d	AS-18
CCV 180-134458/35		03/01/2015 16:41	1	A-ICS2100 A 02-28-2015-37.d	AS-18

300.0

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Instrument ID: CHIC2100A Start Date: 02/28/2015 10:45Analysis Batch Number: 134458 End Date: 03/01/2015 16:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCB 180-134458/36		03/01/2015 16:56	1	A-ICS2100 A 02-28-2015-38.d	AS-18

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-41613-1

SDG No.: _____

Project: Harley Davidson

Client Sample ID	Lab Sample ID
<u>HD-MW-50S-0/1-0</u>	<u>180-41613-4</u>
<u>HD-MW-51D-0/1-0</u>	<u>180-41613-5</u>
<u>HD-MW-127-0/1-0</u>	<u>180-41613-6</u>
<u>HD-MW-132-0/1-0</u>	<u>180-41613-7</u>
<u>HD-MW-95-0/1-0</u>	<u>180-41613-8</u>
<u>HD-MW-97-0/1-0</u>	<u>180-41613-9</u>

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-50S-0/1-0 Lab Sample ID: 180-41613-4
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.: _____
Matrix: Water Date Sampled: 02/27/2015 09:55
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	120000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	9500	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	16000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	50000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-51D-0/1-0 Lab Sample ID: 180-41613-5
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.:
Matrix: Water Date Sampled: 02/27/2015 10:05
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	100000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	24000	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	30000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	49000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-127-0/1-0 Lab Sample ID: 180-41613-6
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.: _____
Matrix: Water Date Sampled: 02/27/2015 09:35
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	100000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	4200	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	21000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	25000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-132-0/1-0 Lab Sample ID: 180-41613-7
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.:
Matrix: Water Date Sampled: 02/27/2015 09:40
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	56000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	1800	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	4100	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	4800	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-95-0/1-0 Lab Sample ID: 180-41613-8
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.: _____
Matrix: Water Date Sampled: 02/27/2015 11:00
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	110000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	3100	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	9100	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	30000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-97-0/1-0 Lab Sample ID: 180-41613-9
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.:
Matrix: Water Date Sampled: 02/27/2015 10:45
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	93000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6800	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	20000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	40000	100	3.8	ug/L		B	1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

ICV Source: MICVX_00030 Concentration Units: ug/L

CCV Source: MCCV1X_00073

Analyte	ICV 180-135448/5 03/12/2015 09:42				CCV 180-135448/10 03/12/2015 10:07				CCV 180-135448/22 03/12/2015 11:01			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	40700		40000	102	47700		50000	95	48200		50000	96
Magnesium	39100		40000	98	48500		50000	97	48100		50000	96
Potassium	40600		40000	102	48000		50000	96	48200		50000	96
Sodium	39400		40000	98	47600		50000	95	47100		50000	94

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

ICV Source: MICVX_00030 Concentration Units: ug/L

CCV Source: MCCV1X_00073

Analyte	CCV 180-135448/34 03/12/2015 11:59											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	48900		50000	98								
Magnesium	48800		50000	98								
Potassium	49000		50000	98								
Sodium	48200		50000	96								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Method: 6020A Instrument ID: X
 Lab Sample ID: CRI 180-135448/7 Concentration Units: ug/L
 CRQL Check Standard Source: MCRIX_00062

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	103		103	70-130
Potassium	100	96.2	J	96	70-130
Magnesium	100	95.0	J	95	70-130
Sodium	100	98.2	J	98	70-130

Lab Sample ID: CRI 180-135448/91 Concentration Units: ug/L
 CRQL Check Standard Source: MCRIX_00062

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	110		110	70-130
Potassium	100	102		102	70-130
Magnesium	100	97.4	J	97	70-130
Sodium	100	108		108	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 180-135448/6 03/12/2015 09:46		CCB1 180-135448/11 03/12/2015 10:14		CCB2 180-135448/23 03/12/2015 11:08		CCB3 180-135448/35 03/12/2015 12:06	
		Found	C	Found	C	Found	C	Found	C
Calcium	100	100	U	100	U	3.54	J	4.98	J
Magnesium	100	100	U	2.50	J	2.87	J	3.30	J
Potassium	100	100	U	100	U	100	U	6.99	J
Sodium	100	5.17	J	5.79	J	4.36	J	5.60	J

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Concentration Units: ug/L Lab Sample ID: MB 180-134585/1-A
Instrument Code: X Batch No.: 135448

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	5.27	J		6020A
7440-09-7	Potassium	100	U		6020A
7439-95-4	Magnesium	100	U		6020A
7440-23-5	Sodium	5.05	J		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Lab Sample ID: ICSA 180-135448/8 Instrument ID: X
 Lab File ID: X50312A.xml ICS Source: MICSAX_00063
 Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Calcium	100000	108300	108
Magnesium	100000	109400	109
Potassium	100000	108400	108
Sodium	100000	108300	108
<i>Aluminum</i>	<i>100000</i>	<i>103100</i>	<i>103</i>
<i>Antimony</i>		<i>-0.0750</i>	
<i>Arsenic</i>		<i>-0.0230</i>	
<i>Barium</i>		<i>0.147</i>	
<i>Beryllium</i>		<i>0.0150</i>	
<i>Boron</i>		<i>3.34</i>	
<i>Cadmium</i>		<i>2.52</i>	
<i>Chromium</i>		<i>-0.747</i>	
<i>Cobalt</i>		<i>0.230</i>	
<i>Copper</i>		<i>2.49</i>	
<i>Iron</i>	<i>100000</i>	<i>111000</i>	<i>111</i>
<i>Lead</i>		<i>0.302</i>	
<i>Manganese</i>		<i>2.34</i>	
<i>Molybdenum</i>	<i>2000</i>	<i>2337</i>	<i>117</i>
<i>Nickel</i>		<i>0.464</i>	
<i>Selenium</i>		<i>0.347</i>	
<i>Silicon</i>		<i>89.1</i>	
<i>Silver</i>		<i>0.0020</i>	
<i>Strontium</i>		<i>0.825</i>	
<i>Thallium</i>		<i>0.0190</i>	
<i>Tin</i>		<i>-0.367</i>	
<i>Titanium</i>	<i>2000</i>	<i>2317</i>	<i>116</i>
<i>Vanadium</i>		<i>-0.946</i>	
<i>Zinc</i>		<i>4.34</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Lab Sample ID: ICSAB 180-135448/9 Instrument ID: X
 Lab File ID: X50312A.xml ICS Source: MICSABX_00067
 Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Calcium	100000	100133	100
Magnesium	100000	101367	101
Potassium	100000	99607	100
Sodium	100000	100170	100
<i>Aluminum</i>	<i>100000</i>	<i>96230</i>	<i>96</i>
<i>Antimony</i>	<i>20.0</i>	<i>20.7</i>	<i>103</i>
<i>Arsenic</i>	<i>20.0</i>	<i>21.1</i>	<i>106</i>
<i>Barium</i>	<i>20.0</i>	<i>20.0</i>	<i>100</i>
<i>Beryllium</i>	<i>20.0</i>	<i>19.7</i>	<i>99</i>
<i>Boron</i>	<i>50.0</i>	<i>50.9</i>	<i>102</i>
<i>Cadmium</i>	<i>20.0</i>	<i>22.5</i>	<i>113</i>
<i>Chromium</i>	<i>20.0</i>	<i>19.4</i>	<i>97</i>
<i>Cobalt</i>	<i>20.0</i>	<i>20.7</i>	<i>104</i>
<i>Copper</i>	<i>20.0</i>	<i>22.5</i>	<i>112</i>
<i>Iron</i>	<i>100000</i>	<i>105933</i>	<i>106</i>
<i>Lead</i>	<i>20.0</i>	<i>22.0</i>	<i>110</i>
<i>Manganese</i>	<i>22.5</i>	<i>22.9</i>	<i>102</i>
<i>Molybdenum</i>	<i>2000</i>	<i>2209</i>	<i>110</i>
<i>Nickel</i>	<i>20.0</i>	<i>21.2</i>	<i>106</i>
<i>Selenium</i>	<i>50.0</i>	<i>53.0</i>	<i>106</i>
<i>Silicon</i>	<i>500</i>	<i>599</i>	<i>120</i>
<i>Silver</i>	<i>20.0</i>	<i>19.5</i>	<i>97</i>
<i>Strontium</i>	<i>25.0</i>	<i>20.9</i>	<i>84</i>
<i>Thallium</i>	<i>20.0</i>	<i>20.9</i>	<i>104</i>
<i>Tin</i>	<i>100</i>	<i>103</i>	<i>103</i>
<i>Titanium</i>	<i>2000</i>	<i>2144</i>	<i>107</i>
<i>Vanadium</i>	<i>20.0</i>	<i>19.0</i>	<i>95</i>
<i>Zinc</i>	<i>25.0</i>	<i>23.3</i>	<i>93</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: HD-MW-50S-0/1-0 MS

Lab ID: 180-41613-4 MS

Lab Name: TestAmerica Pittsburgh

Job No.: 180-41613-1

SDG No.: _____

Matrix: Water

Concentration Units: ug/L

% Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	170000	120000	50000	91	75-125		6020A
Potassium	54300	9500	50000	89	75-125		6020A
Magnesium	61200	16000	50000	91	75-125		6020A
Sodium	94300	50000	50000	88	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: HD-MW-50S-0/1-0 MSD Lab ID: 180-41613-4 MSD
 Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Matrix: Water Concentration Units: ug/L
 % Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	171000	50000	92	75-125	0	20		6020A
Potassium	55200	50000	91	75-125	2	20		6020A
Magnesium	62600	50000	94	75-125	2	20		6020A
Sodium	95400	50000	90	75-125	1	20		6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: HD-MW-50S-0/1-0 PDS

Lab ID: 180-41613-4 PDS

Lab Name: TestAmerica Pittsburgh

Job No.: 180-41613-1

SDG No.: _____

Matrix: Water

Concentration Units: ug/L

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	168000	120000	50000	86	75-125		6020A
Potassium	56800	9500	50000	95	75-125		6020A
Magnesium	63900	16000	50000	97	75-125		6020A
Sodium	95800	50000	50000	91	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 180-134585/2-A

Lab Name: TestAmerica Pittsburgh

Job No.: 180-41613-1

Sample Matrix: Water

LCS Source: MTAPITTMSA_00023

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	47500		95	80	120		6020A
Potassium	50000	45900		92	80	120		6020A
Magnesium	50000	44300		89	80	120		6020A
Sodium	50000	42800		86	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 180-41613-4

SDG No:

Lab Name: TestAmerica Pittsburgh

Job No: 180-41613-1

Matrix: Water

Concentration Units: ug/L

Analyte	Initial Sample Result (I) C		Serial Dilution Result (S) C		% Difference	Q	Method
Calcium	120000		126000		0.60		6020A
Potassium	9500		9630		1.0		6020A
Magnesium	16000		16200		3.8		6020A
Sodium	50000		51300		2.1		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-41613-1
SDG Number: _____
Matrix: Water Instrument ID: X
Method: 6020A MDL Date: 01/23/2010 18:33
Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	44	100	2.8374
Magnesium	26	100	1.1665
Potassium	39	100	5.823
Sodium	23	100	3.8135

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-41613-1
SDG Number: _____
Matrix: Water Instrument ID: X
Method: 6020A XMDL Date: 01/23/2010 18:33

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	44	100	2.8374
Magnesium	26	100	1.1665
Potassium	39	100	5.823
Sodium	23	100	3.8135

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Pittsburgh

Job No: 180-41613-1

SDG No.: _____

Instrument ID: X

Date: 03/14/2011 22:35

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		1500000	6020A
Potassium		450000	6020A
Magnesium		1500000	6020A
Sodium		450000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 180-134585/1-A	03/03/2015 08:32	134585		50	50
LCS 180-134585/2-A	03/03/2015 08:32	134585		50	50
180-41613-4	03/03/2015 08:32	134585		50	50
180-41613-4 MS	03/03/2015 08:32	134585		50	50
180-41613-4 MSD	03/03/2015 08:32	134585		50	50
180-41613-5	03/03/2015 08:32	134585		50	50
180-41613-6	03/03/2015 08:32	134585		50	50
180-41613-7	03/03/2015 08:32	134585		50	50
180-41613-8	03/03/2015 08:32	134585		50	50
180-41613-9	03/03/2015 08:32	134585		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Instrument ID: X Analysis Method: 6020A
 Start Date: 03/12/2015 08:24 End Date: 03/12/2015 16:56

Lab Sample Id	D/F	T y p e	Time	Analytes																	
				C a	K	M g	N a														
ITUNE 180-135448/1			08:24																		
STD1 180-135448/2 IC	1		09:29	X	X	X	X														
STD2 180-135448/3 IC	1		09:33	X	X	X	X														
STD3 180-135448/4 IC	1		09:38	X	X	X	X														
ICV 180-135448/5	1		09:42	X	X	X	X														
ICB 180-135448/6	1		09:46	X	X	X	X														
CRI 180-135448/7	1		09:51	X	X	X	X														
ICSA 180-135448/8	1		09:55	X	X	X	X														
ICSAB 180-135448/9	1		09:59	X	X	X	X														
CCV 180-135448/10	1		10:07	X	X	X	X														
CCB1 180-135448/11	1		10:14	X	X	X	X														
MB 180-134585/1-A	1	R	10:18	X	X	X	X														
LCS 180-134585/2-A	1	R	10:23	X	X	X	X														
180-41613-4	1	T	10:27	X	X	X	X														
180-41613-4 SD	5	T	10:31	X	X	X	X														
180-41613-4 MS	1	T	10:35	X	X	X	X														
180-41613-4 MSD	1	T	10:39	X	X	X	X														
180-41613-4 PDS	1	T	10:44	X	X	X	X														
180-41613-5	1	T	10:48	X	X	X	X														
180-41613-6	1	T	10:52	X	X	X	X														
180-41613-7	1	T	10:57	X	X	X	X														
CCV 180-135448/22	1		11:01	X	X	X	X														
CCB2 180-135448/23	1		11:08	X	X	X	X														
180-41613-8	1	T	11:13	X	X	X	X														
180-41613-9	1	T	11:17	X	X	X	X														
ZZZZZZ			11:21																		
ZZZZZZ			11:25																		
ZZZZZZ			11:30																		
ZZZZZZ			11:37																		
ZZZZZZ			11:41																		
ZZZZZZ			11:46																		
ZZZZZZ			11:50																		
ZZZZZZ			11:54																		
CCV 180-135448/34	1		11:59	X	X	X	X														
CCB3 180-135448/35	1		12:06	X	X	X	X														
ZZZZZZ			12:10																		
ZZZZZZ			12:15																		
ZZZZZZ			12:19																		
ZZZZZZ			12:23																		
ZZZZZZ			12:27																		
ZZZZZZ			12:32																		
ZZZZZZ			12:36																		

Lab Name:	TestAmerica Pittsburgh	Job No.:	180-41613-1
SDG No.:			
Instrument ID:	X	Analysis Method:	6020A
Start Date:	03/12/2015 08:24	End Date:	03/12/2015 16:56

[illegible]

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Instrument ID: X Analysis Method: 6020A
 Start Date: 03/12/2015 08:24 End Date: 03/12/2015 16:56

Lab Sample Id	D/F	T y p e	Time	Analytes																									
				C a	K	M g	N a																						
ZZZZZZ			16:08																										
CCV 180-135448/86			16:12																										
CCB8 180-135448/87			16:19																										
ZZZZZZ			16:24																										
ZZZZZZ			16:28																										
ZZZZZZ			16:32																										
CRI 180-135448/91	1		16:40	X	X	X	X																						
CRI 180-135448/92			16:44																										
CCV 180-135448/93			16:48																										
CCB9 180-135448/94			16:56																										

Prep Types:
 R = Total Recoverable
 T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

ICP-MS Instrument ID: X Start Date: 03/12/2015 End Date: 03/12/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc	Q	Element Y-89	Q	Element Rh-103	Q	Element In	Q
STD1 180-135448/2 IC	09:29	100		100		100		100		100	
STD2 180-135448/3 IC	09:33	91		98		94		88		89	
STD3 180-135448/4 IC	09:38	99		102		99		98		97	
ICV 180-135448/5	09:42	98		98		98		93		94	
ICB 180-135448/6	09:46	102		104		102		100		100	
CRI 180-135448/7	09:51	103		104		102		100		100	
ICSA 180-135448/8	09:55	90		91		95		86		89	
ICSAB 180-135448/9	09:59	87		87		91		87		90	
CCV 180-135448/10	10:07	91		95		97		92		94	
CCB1 180-135448/11	10:14	99		96		102		100		101	
MB 180-134585/1-A	10:18	96		94		102		100		101	
LCS 180-134585/2-A	10:23	107		80		90		86		85	
180-41613-4	10:27	104		78		89		85		86	
180-41613-4 SD	10:31	103		88		95		93		93	
180-41613-4 MS	10:35	98		75		86		84		81	
180-41613-4 MSD	10:39	94		74		84		80		79	
180-41613-4 PDS	10:44	93		74		84		79		79	
180-41613-5	10:48	98		74		85		84		81	
180-41613-6	10:52	100		76		84		83		82	
180-41613-7	10:57	100		76		84		83		82	
CCV 180-135448/22	11:01	97		92		91		87		88	
CCB2 180-135448/23	11:08	102		95		96		95		94	
180-41613-8	11:13	98		77		86		83		84	
180-41613-9	11:17	96		75		85		83		82	
CCV 180-135448/34	11:59	101		96		94		89		89	
CCB3 180-135448/35	12:06	105		100		97		96		95	
CRI 180-135448/91	16:40	96		94		93		92		89	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

ICP-MS Instrument ID: X Start Date: 03/12/2015 End Date: 03/12/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 180-135448/2 IC	09:29	100		100		100					
STD2 180-135448/3 IC	09:33	91		91		90					
STD3 180-135448/4 IC	09:38	97		97		98					
ICV 180-135448/5	09:42	95		94		91					
ICB 180-135448/6	09:46	99		98		97					
CRI 180-135448/7	09:51	99		99		99					
ICSA 180-135448/8	09:55	94		95		89					
ICSAB 180-135448/9	09:59	97		98		89					
CCV 180-135448/10	10:07	97		97		93					
CCB1 180-135448/11	10:14	102		103		103					
MB 180-134585/1-A	10:18	103		104		104					
LCS 180-134585/2-A	10:23	93		94		85					
180-41613-4	10:27	92		94		87					
180-41613-4 SD	10:31	98		98		93					
180-41613-4 MS	10:35	91		92		85					
180-41613-4 MSD	10:39	90		91		83					
180-41613-4 PDS	10:44	90		91		84					
180-41613-5	10:48	90		90		84					
180-41613-6	10:52	89		90		84					
180-41613-7	10:57	90		90		86					
CCV 180-135448/22	11:01	91		92		84					
CCB2 180-135448/23	11:08	96		96		95					
180-41613-8	11:13	90		91		86					
180-41613-9	11:17	91		91		87					
CCV 180-135448/34	11:59	94		93		85					
CCB3 180-135448/35	12:06	97		97		97					
CRI 180-135448/91	16:40	89		89		91					

Dilution Corrected Concentrations

STD1 1501659 3/12/2015 9:29:19 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:29:45	100.564%	0.020	0.645	-0.005	0.000	-0.148	0.117	-0.087
2	09:30:12	99.346%	0.003	-0.605	0.040	0.000	0.194	-0.011	0.012
3	09:30:38	100.090%	-0.023	-0.041	-0.035	0.000	-0.046	-0.107	0.075
X		100.000%	-0.000	-0.000	0.000	0.000	-0.000	0.000	0.000
σ		0.614%	0.021	0.626	0.038	0.000	0.175	0.112	0.082
%RSD		0.614	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:29:45	-0.138	0.330	0.000	3.030	-1.142	1.313	99.726%	0.001
2	09:30:12	0.042	-0.053	0.000	-0.979	-2.359	-1.672	100.749%	-0.102
3	09:30:38	0.095	-0.277	0.000	-2.051	3.501	0.359	99.525%	0.101
X		-0.000	-0.000	0.000	-0.000	-0.000	0.000	100.000%	0.000
σ		0.122	0.306	0.000	2.678	3.092	1.524	0.657%	0.102
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.657	0.000
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:29:45	-0.010	-0.014	0.009	0.665	-0.548	0.003	0.011	0.015
2	09:30:12	0.004	-0.011	-0.009	-0.010	0.406	-0.002	0.003	0.016
3	09:30:38	0.006	0.024	0.000	-0.655	0.141	-0.001	-0.014	-0.031
X		-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
σ		0.009	0.021	0.009	0.660	0.493	0.003	0.013	0.027
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:29:45	-0.006	0.073	-0.037	-0.001	-0.105	0.110	0.000	0.003
2	09:30:12	0.023	-0.104	-0.012	-0.001	0.107	-0.062	0.000	0.001
3	09:30:38	-0.017	0.031	0.049	0.002	-0.002	-0.047	0.000	-0.004
X		-0.000	-0.000	-0.000	-0.000	0.000	-0.000	0.000	0.000
σ		0.021	0.092	0.044	0.002	0.106	0.095	0.000	0.003
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:29:45	98.949%	-0.031	-0.011	99.554%	-0.007	-0.004	-0.002	0.001
2	09:30:12	100.409%	0.021	0.012	100.167%	-0.001	-0.012	-0.002	0.000
3	09:30:38	100.642%	0.010	-0.001	100.280%	0.008	0.016	0.004	-0.001
X		100.000%	0.000	0.000	100.000%	0.000	0.000	-0.000	0.000
σ		0.918%	0.027	0.011	0.390%	0.007	0.014	0.003	0.001
%RSD		0.918	0.000	0.000	0.390	0.000	0.000	0.000	0.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:29:45	98.259%	-0.058	-0.012	0.003	-0.021	0.000	99.099%	98.380%
2	09:30:12	100.669%	-0.012	-0.013	-0.012	-0.000	0.012	100.572%	101.154%
3	09:30:38	101.072%	0.071	0.025	0.009	0.021	-0.012	100.329%	100.466%
X		100.000%	-0.000	0.000	0.000	0.000	-0.000	100.000%	100.000%
σ		1.521%	0.065	0.022	0.011	0.021	0.012	0.790%	1.444%
%RSD		1.521	0.000	0.000	0.000	0.000	0.000	0.790	1.444
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:29:45	0.002	-0.001	-0.011	-0.005	0.002	99.323%		
2	09:30:12	0.000	0.000	0.005	0.014	0.004	99.311%		
3	09:30:38	-0.002	0.001	0.006	-0.008	-0.005	101.366%		
X		0.000	-0.000	-0.000	-0.000	0.000	100.000%		
σ		0.002	0.001	0.009	0.012	0.005	1.183%		
%RSD		0.000	0.000	0.000	0.000	0.000	1.183		

STD2 1487947

3/12/2015 9:33:58 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:34:25	93.697%	195.900	0.008	0.101	0.000	98160.000	97870.000	98190.000
2	09:34:51	90.426%	199.600	0.933	-0.237	0.000	100900.000	100500.000	99750.000
3	09:35:18	88.981%	204.500	-0.743	-1.106	0.000	100900.000	101600.000	102100.000
X		91.035%	200.000	0.066	-0.414	0.000	100000.000	100000.000	100000.000
σ		2.416%	4.299	0.839	0.623	0.000	1597.000	1919.000	1950.000
%RSD		2.654	2.149	1270.000	150.500	0.000	1.597	1.919	1.950
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:34:25	975.200	23.980	0.000	98570.000	97920.000	99050.000	98.305%	-0.041
2	09:34:51	1005.000	7.367	0.000	100100.000	99230.000	100000.000	98.222%	0.086
3	09:35:18	1020.000	6.976	0.000	101300.000	102900.000	100900.000	97.026%	0.016
X		1000.000	12.770	0.000	100000.000	100000.000	100000.000	97.851%	0.021
σ		22.630	9.706	0.000	1380.000	2555.000	939.900	0.716%	0.063
%RSD		2.263	75.980	0.000	1.380	2.555	0.940	0.732	309.000
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:34:25	198.800	199.100	999.000	49270.000	49590.000	197.400	198.500	197.100
2	09:34:51	199.500	198.500	993.400	50000.000	49890.000	200.100	198.900	200.200
3	09:35:18	201.600	202.300	1008.000	50720.000	50520.000	202.500	202.600	202.700
X		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		1.462	2.052	7.121	723.500	475.900	2.554	2.259	2.824
%RSD		0.731	1.026	0.712	1.447	0.952	1.277	1.130	1.412
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:34:25	197.400	198.500	196.300	198.800	197.900	200.900	0.000	199.400
2	09:34:51	200.200	200.100	200.400	200.800	200.300	197.500	0.000	199.900
3	09:35:18	202.400	201.500	203.300	200.300	201.900	201.600	0.000	200.700
X		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		2.518	1.495	3.526	1.040	2.022	2.224	0.000	0.657
%RSD		1.259	0.748	1.763	0.520	1.011	1.112	0.000	0.328
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:34:25	93.801%	0.060	0.044	88.505%	198.900	199.300	198.600	197.500
2	09:34:51	94.026%	0.090	0.056	88.362%	201.000	200.800	200.000	202.700
3	09:35:18	93.480%	0.099	0.055	88.015%	200.100	199.900	201.400	199.800
X		93.769%	0.083	0.052	88.294%	200.000	200.000	200.000	200.000
σ		0.275%	0.021	0.007	0.252%	1.012	0.740	1.392	2.622
%RSD		0.293	24.900	12.600	0.286	0.506	0.370	0.696	1.311
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:34:25	90.406%	-0.292	0.117	0.117	199.900	196.400	91.336%	89.251%
2	09:34:51	88.773%	-0.334	0.182	0.092	200.000	201.400	90.816%	91.753%
3	09:35:18	89.043%	-0.210	0.101	0.075	200.100	202.200	91.661%	90.800%
X		89.407%	-0.279	0.133	0.095	200.000	200.000	91.271%	90.601%
σ		0.876%	0.063	0.043	0.021	0.136	3.173	0.426%	1.263%
%RSD		0.979	22.680	32.400	22.250	0.068	1.586	0.467	1.394
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:34:25	191.500	191.700	190.800	190.800	190.200	93.770%		
2	09:34:51	201.200	202.800	201.300	201.600	202.000	89.465%		
3	09:35:18	207.200	205.500	207.900	207.600	207.800	86.298%		
X		200.000	200.000	200.000	200.000	200.000	89.844%		
σ		7.924	7.353	8.644	8.512	9.000	3.751%		
%RSD		3.962	3.676	4.322	4.256	4.500	4.175		

STD3 1487948

3/12/2015 9:38:13 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:40	98.491%	0.089	202.300	202.100	0.000	74.640	60.180	58.330
2	09:39:07	100.311%	0.079	198.100	194.800	0.000	70.660	60.140	55.880
3	09:39:34	98.028%	0.142	199.600	203.100	0.000	70.920	59.740	58.310
X		98.943%	0.103	200.000	200.000	0.000	72.070	60.020	57.510
σ		1.207%	0.034	2.143	4.513	0.000	2.231	0.241	1.408
%RSD		1.220	32.850	1.072	2.257	0.000	3.095	0.402	2.448
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:40	6.643	9991.000	0.000	58.820	68.720	182.400	103.684%	198.300
2	09:39:07	6.623	9920.000	0.000	55.630	59.560	171.800	102.205%	195.700
3	09:39:34	6.243	10090.000	0.000	56.510	105.400	173.400	100.614%	206.000
X		6.503	10000.000	0.000	56.990	77.880	175.900	102.168%	200.000
σ		0.225	85.180	0.000	1.644	24.240	5.746	1.535%	5.374
%RSD		3.464	0.852	0.000	2.886	31.120	3.268	1.503	2.687
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:40	0.129	0.099	0.784	108.400	106.600	0.103	0.206	0.222
2	09:39:07	0.092	0.082	0.759	66.590	64.850	0.131	0.278	0.202
3	09:39:34	0.113	0.113	0.778	50.130	49.770	0.124	0.187	0.219
X		0.112	0.098	0.773	75.040	73.730	0.119	0.224	0.214
σ		0.018	0.015	0.013	30.040	29.430	0.014	0.048	0.011
%RSD		16.460	15.690	1.669	40.030	39.920	11.960	21.360	4.990
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:40	0.314	0.823	0.541	0.204	1.479	-0.054	0.000	0.321
2	09:39:07	0.275	0.678	0.601	0.070	1.259	-0.004	0.000	0.335
3	09:39:34	0.290	0.639	0.843	0.184	1.046	0.450	0.000	0.343
X		0.293	0.713	0.662	0.153	1.262	0.131	0.000	0.333
σ		0.020	0.097	0.160	0.072	0.216	0.278	0.000	0.011
%RSD		6.703	13.570	24.200	47.140	17.150	212.300	0.000	3.382
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:40	97.521%	195.800	196.800	96.167%	0.383	0.362	0.384	-0.278
2	09:39:07	99.556%	201.400	200.900	98.270%	0.317	0.391	0.300	-0.363
3	09:39:34	100.467%	202.800	202.300	99.131%	0.380	0.314	0.321	-0.311
X		99.181%	200.000	200.000	97.856%	0.360	0.355	0.335	-0.317
σ		1.508%	3.736	2.873	1.525%	0.037	0.039	0.044	0.043
%RSD		1.521	1.868	1.437	1.558	10.330	10.890	13.070	13.560
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:40	94.962%	198.300	199.200	199.200	0.241	0.523	95.583%	94.496%
2	09:39:07	98.155%	199.300	199.100	198.900	0.243	0.390	96.527%	99.222%
3	09:39:34	98.735%	202.400	201.800	201.800	0.202	0.382	99.712%	98.417%
X		97.284%	200.000	200.000	200.000	0.229	0.432	97.274%	97.378%
σ		2.032%	2.145	1.550	1.595	0.023	0.079	2.164%	2.528%
%RSD		2.089	1.073	0.775	0.798	10.140	18.360	2.224	2.596
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:38:40	0.103	0.115	0.121	0.142	0.123	98.485%		
2	09:39:07	0.131	0.128	0.119	0.155	0.134	98.092%		
3	09:39:34	0.114	0.126	0.147	0.101	0.132	97.463%		
X		0.116	0.123	0.129	0.133	0.129	98.014%		
σ		0.014	0.007	0.016	0.028	0.006	0.516%		
%RSD		12.090	5.777	12.270	21.410	4.654	0.526		

ICV 1495536 3/12/2015 9:42:31 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:58	98.163%	80.770	89.970	88.690	0.000	39340.000	38520.000	38690.000
2	09:43:24	97.196%	81.120	86.720	85.670	0.000	39820.000	38910.000	39430.000
3	09:43:51	98.716%	79.600	85.290	85.710	0.000	38970.000	38950.000	39040.000
X		98.025%	100.623%	109.158%	108.366%	0.000	98.450%	96.984%	97.636%
σ		0.769%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.785	0.991	2.746	1.999	0.000	1.083	0.617	0.942
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:58	382.500	4398.000	0.000	40700.000	40260.000	39840.000	98.451%	84.920
2	09:43:24	393.500	4586.000	0.000	41030.000	40660.000	41140.000	97.473%	86.390
3	09:43:51	385.500	4566.000	0.000	40210.000	40590.000	41140.000	97.413%	85.180
X		96.787%	112.918%	0.000	101.622%	101.261%	101.774%	97.779%	106.872%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.583%	n/a
%RSD		1.464	2.286	0.000	1.009	0.524	1.843	0.596	0.913
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:58	81.340	80.650	427.600	19910.000	21370.000	80.380	82.940	82.880
2	09:43:24	82.900	84.240	440.900	20590.000	22180.000	82.940	83.300	83.830
3	09:43:51	82.220	83.590	447.200	20740.000	22400.000	82.190	84.400	84.370
X		102.693%	103.537%	109.644%	102.042%	109.925%	102.295%	104.433%	104.619%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.947	2.309	2.277	2.167	2.471	1.606	0.910	0.904
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:58	83.020	80.010	81.260	81.030	83.410	84.670	0.000	78.420
2	09:43:24	84.280	83.290	82.240	80.680	83.730	81.690	0.000	78.040
3	09:43:51	83.580	82.310	82.490	81.010	79.260	82.290	0.000	78.050
X		104.532%	102.338%	102.498%	101.135%	102.666%	103.604%	0.000	97.713%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.752	2.056	0.793	0.241	3.033	1.900	0.000	0.273
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:58	96.024%	81.430	82.000	91.971%	79.130	79.280	77.960	79.350
2	09:43:24	98.966%	82.430	83.720	92.963%	79.000	79.100	81.360	79.680
3	09:43:51	99.462%	84.300	84.460	93.256%	78.920	79.080	79.850	79.000
X		98.150%	103.398%	104.242%	92.730%	98.770%	98.943%	99.655%	99.181%
σ		1.858%	n/a	n/a	0.674%	n/a	n/a	n/a	n/a
%RSD		1.893	1.760	1.510	0.726	0.133	0.142	2.133	0.429
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:58	92.094%	80.550	81.810	81.480	79.610	77.350	92.781%	92.544%
2	09:43:24	94.286%	82.300	81.750	80.440	79.420	78.840	96.236%	94.445%
3	09:43:51	95.109%	81.160	82.550	82.480	80.550	80.210	95.835%	95.848%
X		93.830%	101.668%	102.541%	101.828%	99.826%	98.501%	94.951%	94.279%
σ		1.559%	n/a	n/a	n/a	n/a	n/a	1.889%	1.659%
%RSD		1.661	1.088	0.543	1.252	0.760	1.811	1.990	1.759
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:42:58	82.730	82.160	81.180	78.680	79.620	90.186%		
2	09:43:24	83.460	83.100	83.630	81.300	83.000	91.168%		
3	09:43:51	84.670	83.590	83.280	81.900	82.620	91.771%		
X		104.522%	103.688%	103.372%	100.781%	102.183%	91.042%		
σ		n/a	n/a	n/a	n/a	n/a	0.800%		
%RSD		1.172	0.876	1.604	2.128	2.264	0.879		

ICB 3/12/2015 9:46:49 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:47:15	101.787%	0.002	1.104	1.272	0.000	6.090	1.568	1.529
2	09:47:42	103.100%	0.026	-2.456	-1.708	0.000	5.166	0.712	1.120
3	09:48:09	100.819%	-0.031	-3.764	-2.927	0.000	4.253	0.617	0.789
X		101.902%	-0.001	-1.705	-1.121	0.000	5.170	0.966	1.146
σ		1.145%	0.029	2.519	2.160	0.000	0.919	0.524	0.371
%RSD		1.123	2482.000	147.700	192.700	0.000	17.770	54.260	32.330
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:47:15	-0.751	44.340	0.000	5.318	0.714	0.414	104.445%	-0.378
2	09:47:42	-0.840	7.850	0.000	2.207	-1.526	2.098	104.838%	-0.295
3	09:48:09	-0.778	3.623	0.000	2.646	-0.200	-0.206	102.175%	-0.339
X		-0.789	18.600	0.000	3.390	-0.337	0.769	103.819%	-0.337
σ		0.046	22.390	0.000	1.684	1.126	1.192	1.438%	0.041
%RSD		5.788	120.300	0.000	49.660	334.000	155.100	1.385	12.190
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:47:15	-0.005	0.013	0.014	57.850	54.980	0.007	-0.003	-0.050
2	09:47:42	0.015	0.020	-0.010	35.870	38.770	0.004	0.017	-0.063
3	09:48:09	-0.014	-0.058	-0.017	21.750	22.520	0.008	0.040	-0.055
X		-0.001	-0.009	-0.004	38.490	38.760	0.006	0.018	-0.056
σ		0.015	0.043	0.016	18.200	16.230	0.002	0.021	0.006
%RSD		1016.000	499.200	395.600	47.270	41.880	27.960	117.200	11.390
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:47:15	-0.043	-0.131	-0.116	0.066	1.003	0.472	0.000	0.003
2	09:47:42	-0.047	-0.047	0.003	-0.007	1.647	-0.218	0.000	0.004
3	09:48:09	-0.031	-0.040	-0.123	0.062	0.294	0.040	0.000	0.004
X		-0.040	-0.073	-0.079	0.040	0.981	0.098	0.000	0.004
σ		0.008	0.051	0.070	0.041	0.677	0.349	0.000	0.001
%RSD		20.740	69.340	89.720	102.500	68.980	354.900	0.000	16.050
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:47:15	100.211%	1.239	1.411	98.557%	-0.048	-0.057	0.004	-0.008
2	09:47:42	101.056%	1.128	0.989	99.603%	-0.031	-0.050	-0.002	0.014
3	09:48:09	103.315%	0.619	0.644	100.541%	-0.037	-0.046	0.004	0.043
X		101.527%	0.995	1.015	99.567%	-0.038	-0.051	0.002	0.016
σ		1.605%	0.331	0.384	0.992%	0.009	0.006	0.003	0.025
%RSD		1.581	33.250	37.850	0.997	22.720	11.220	170.700	155.600
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:47:15	96.936%	-0.558	-0.143	-0.143	-0.028	0.001	96.341%	95.636%
2	09:47:42	100.790%	-0.490	-0.131	-0.117	-0.007	-0.012	99.656%	98.393%
3	09:48:09	101.537%	-0.461	-0.126	-0.100	0.007	-0.012	99.683%	100.035%
X		99.755%	-0.503	-0.133	-0.120	-0.009	-0.008	98.560%	98.021%
σ		2.469%	0.050	0.009	0.022	0.018	0.008	1.922%	2.223%
%RSD		2.475	9.852	6.856	18.120	188.500	99.070	1.950	2.268
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:47:15	0.011	0.006	0.005	-0.011	0.002	95.529%		
2	09:47:42	0.005	0.009	-0.012	0.022	0.003	96.560%		
3	09:48:09	0.010	0.002	-0.003	-0.015	0.002	97.698%		
X		0.009	0.005	-0.003	-0.001	0.002	96.596%		
σ		0.003	0.003	0.009	0.020	0.001	1.085%		
%RSD		38.290	60.560	277.300	1558.000	21.930	1.123		

CRI 1495535 3/12/2015 9:51:09 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:51:35	102.427%	0.912	6.808	5.806	0.000	98.740	96.800	93.790
2	09:52:02	103.225%	0.882	3.223	4.658	0.000	98.460	95.750	94.370
3	09:52:29	103.750%	0.968	4.289	3.907	0.000	97.340	96.270	96.920
X		103.134%	92.040%	95.462%	95.807%	0.000	122.727%	96.273%	95.029%
σ		0.666%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.646	4.762	38.570	19.960	0.000	0.755	0.549	1.754
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:51:35	26.570	545.500	0.000	96.040	102.300	100.600	105.412%	4.362
2	09:52:02	27.440	521.300	0.000	95.970	103.300	104.200	103.352%	4.536
3	09:52:29	27.400	533.500	0.000	96.550	104.100	105.600	102.549%	5.151
X		90.445%	106.686%	0.000	96.183%	103.248%	103.483%	103.771%	93.660%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.477%	n/a
%RSD		1.813	2.262	0.000	0.329	0.850	2.473	1.423	8.848
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:51:35	0.926	1.869	4.872	53.750	50.530	0.490	1.248	2.040
2	09:52:02	0.964	1.921	5.310	55.250	55.900	0.497	1.060	2.111
3	09:52:29	0.934	2.015	5.121	55.470	53.490	0.498	1.098	2.118
X		94.128%	96.750%	102.025%	109.648%	106.609%	98.944%	113.525%	104.472%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.106	3.807	4.306	1.709	5.050	0.918	8.740	2.073
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:51:35	2.023	5.041	4.937	0.743	5.477	4.757	0.000	4.776
2	09:52:02	2.008	5.203	5.167	1.094	4.272	4.617	0.000	4.678
3	09:52:29	2.034	5.802	5.192	0.993	5.904	5.012	0.000	4.732
X		101.073%	106.976%	101.971%	94.343%	104.354%	95.903%	0.000	94.570%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.627	7.494	2.754	19.170	16.220	4.176	0.000	1.033
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:51:35	100.301%	4.882	4.445	98.851%	0.886	0.935	1.044	0.980
2	09:52:02	101.577%	5.017	4.744	99.867%	0.947	0.892	1.020	0.995
3	09:52:29	102.482%	4.980	4.964	100.245%	0.990	0.998	0.988	0.990
X		101.453%	99.193%	94.359%	99.654%	94.072%	94.164%	101.730%	98.815%
σ		1.096%	n/a	n/a	0.721%	n/a	n/a	n/a	n/a
%RSD		1.080	1.401	5.519	0.723	5.544	5.690	2.784	0.775
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:51:35	97.940%	4.215	1.615	1.838	9.335	9.768	97.128%	96.925%
2	09:52:02	100.857%	4.155	1.757	1.750	9.880	9.474	99.735%	98.881%
3	09:52:29	100.644%	4.579	1.749	1.826	9.658	9.740	101.318%	100.007%
X		99.814%	86.326%	85.358%	90.233%	96.246%	96.607%	99.394%	98.604%
σ		1.626%	n/a	n/a	n/a	n/a	n/a	2.116%	1.560%
%RSD		1.629	5.315	4.683	2.633	2.848	1.681	2.129	1.582
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:51:35	1.043	0.911	0.952	0.907	0.964	98.507%		
2	09:52:02	0.943	0.960	1.012	1.011	0.968	99.211%		
3	09:52:29	0.931	0.973	1.149	0.934	1.059	99.459%		
X		97.238%	94.811%	103.761%	95.083%	99.701%	99.059%		
σ		n/a	n/a	n/a	n/a	n/a	0.494%		
%RSD		6.296	3.484	9.706	5.655	5.420	0.498		

ICSA 1488332 3/12/2015 9:55:27 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:55:53	91.344%	0.045	5.323	5.179	0.000	107900.000	108600.000	107200.000
2	09:56:20	89.036%	0.009	1.801	3.047	0.000	108900.000	110300.000	110600.000
3	09:56:46	88.753%	-0.010	-0.047	1.805	0.000	108100.000	109900.000	110600.000
X		89.711%	0.015	2.359	3.344	0.000	108300.000	109600.000	109400.000
σ		1.421%	0.028	2.728	1.706	0.000	517.600	886.400	1984.000
%RSD		1.584	189.200	115.600	51.030	0.000	0.478	0.809	1.813
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:55:53	101800.000	115.300	0.000	107500.000	106500.000	106400.000	92.994%	2270.000
2	09:56:20	103700.000	80.050	0.000	109700.000	109000.000	108500.000	91.288%	2311.000
3	09:56:46	103800.000	71.790	0.000	108000.000	109100.000	109800.000	88.524%	2370.000
X		103100.000	89.060	0.000	108400.000	108200.000	108300.000	90.935%	2317.000
σ		1122.000	23.130	0.000	1143.000	1508.000	1735.000	2.256%	50.160
%RSD		1.089	25.970	0.000	1.054	1.393	1.602	2.481	2.165
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:55:53	-0.968	-0.844	2.388	107400.000	107600.000	0.217	0.584	2.211
2	09:56:20	-0.966	-0.747	2.288	111200.000	110700.000	0.221	0.382	2.227
3	09:56:46	-0.904	-0.652	2.334	114400.000	113000.000	0.251	0.426	2.241
X		-0.946	-0.747	2.336	111000.000	110500.000	0.230	0.464	2.226
σ		0.036	0.096	0.050	3496.000	2718.000	0.019	0.106	0.015
%RSD		3.857	12.860	2.137	3.149	2.460	8.101	22.890	0.691
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:55:53	2.530	4.546	2.978	0.336	0.218	0.558	0.000	0.814
2	09:56:20	2.575	4.090	3.314	-0.054	0.944	-0.017	0.000	0.836
3	09:56:46	2.368	4.380	2.794	-0.351	-0.122	0.460	0.000	0.826
X		2.491	4.339	3.029	-0.023	0.347	0.333	0.000	0.825
σ		0.109	0.231	0.264	0.345	0.544	0.308	0.000	0.011
%RSD		4.371	5.317	8.717	1497.000	157.000	92.280	0.000	1.362
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:55:53	92.724%	2386.000	2292.000	85.847%	0.017	0.031	2.763	0.222
2	09:56:20	95.315%	2458.000	2346.000	86.426%	0.018	0.013	2.421	0.186
3	09:56:46	95.397%	2467.000	2374.000	86.469%	-0.028	-0.002	2.379	0.335
X		94.479%	2437.000	2337.000	86.247%	0.002	0.014	2.521	0.247
σ		1.520%	44.060	42.020	0.347%	0.026	0.017	0.211	0.078
%RSD		1.609	1.808	1.798	0.402	1054.000	121.400	8.371	31.410
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:55:53	88.548%	-0.408	-0.077	-0.057	0.218	0.144	91.298%	93.381%
2	09:56:20	88.799%	-0.395	-0.093	-0.072	0.160	0.164	93.873%	94.326%
3	09:56:46	90.120%	-0.297	-0.055	-0.057	0.133	0.134	95.870%	96.315%
X		89.155%	-0.367	-0.075	-0.062	0.170	0.147	93.680%	94.674%
σ		0.845%	0.061	0.019	0.008	0.043	0.015	2.292%	1.498%
%RSD		0.947	16.550	25.520	13.620	25.430	10.280	2.447	1.582
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:55:53	0.016	0.021	0.296	0.250	0.282	92.315%		
2	09:56:20	0.026	0.018	0.292	0.293	0.312	88.362%		
3	09:56:46	0.016	0.019	0.292	0.337	0.313	87.231%		
X		0.019	0.019	0.293	0.293	0.302	89.303%		
σ		0.006	0.002	0.002	0.044	0.018	2.669%		
%RSD		28.790	9.068	0.764	14.900	5.943	2.989		

ICSAB 1488333

3/12/2015 9:59:45 AM

QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:00:11	89.109%	19.860	52.650	53.800	0.000	99820.000	99380.000	100500.000
2	10:00:38	85.022%	19.230	54.750	49.490	0.000	101200.000	103800.000	101700.000
3	10:01:04	86.176%	20.040	46.680	49.300	0.000	99490.000	103300.000	101900.000
X		86.769%	98.553%	102.720%	101.727%	0.000	100.179%	102.166%	101.368%
σ		2.107%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.428	2.146	8.156	5.003	0.000	0.918	2.376	0.790
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:00:11	94650.000	622.200	0.000	101200.000	99520.000	99400.000	87.515%	2142.000
2	10:00:38	97250.000	588.200	0.000	99080.000	98430.000	100400.000	87.820%	2126.000
3	10:01:04	96790.000	585.400	0.000	98540.000	98250.000	100600.000	85.131%	2164.000
X		96.229%	119.716%	0.000	99.601%	98.734%	100.128%	86.822%	107.212%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.473%	n/a
%RSD		1.442	3.423	0.000	1.400	0.697	0.635	1.696	0.889
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:00:11	18.650	19.100	22.530	103800.000	103200.000	20.470	21.250	21.830
2	10:00:38	19.290	19.270	22.870	106000.000	106000.000	20.850	21.140	22.030
3	10:01:04	19.120	19.780	23.160	108000.000	108000.000	20.900	21.150	22.550
X		95.095%	96.916%	114.274%	105.944%	105.731%	103.696%	105.902%	110.696%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.730	1.810	1.363	1.963	2.266	1.127	0.301	1.678
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:00:11	22.170	23.450	21.010	20.870	52.370	55.630	0.000	20.580
2	10:00:38	22.820	23.080	21.080	20.650	55.410	55.630	0.000	21.130
3	10:01:04	22.440	23.470	21.720	21.790	51.360	57.390	0.000	20.920
X		112.387%	93.336%	85.087%	105.530%	106.091%	112.431%	0.000	104.389%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.461	0.950	1.830	2.855	3.975	1.804	0.000	1.334
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:00:11	90.000%	2247.000	2175.000	85.648%	19.200	19.420	22.730	19.820
2	10:00:38	91.501%	2327.000	2213.000	87.578%	19.310	19.290	22.730	19.880
3	10:01:04	92.327%	2341.000	2238.000	87.191%	19.920	19.670	22.150	20.180
X		91.276%	115.254%	110.432%	86.806%	97.396%	97.292%	112.676%	99.802%
σ		1.180%	n/a	n/a	1.021%	n/a	n/a	n/a	n/a
%RSD		1.293	2.217	1.440	1.176	1.993	0.988	1.488	0.972
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:00:11	89.194%	100.700	20.340	20.070	19.470	19.720	95.093%	95.417%
2	10:00:38	89.735%	103.400	21.150	20.700	20.360	20.090	95.670%	97.966%
3	10:01:04	90.044%	103.500	20.570	20.740	19.860	20.140	100.124%	99.774%
X		89.658%	102.515%	103.441%	102.522%	99.486%	99.924%	96.962%	97.719%
σ		0.430%	n/a	n/a	n/a	n/a	n/a	2.753%	2.189%
%RSD		0.480	1.544	1.997	1.830	2.239	1.137	2.839	2.240
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:00:11	21.190	20.530	21.790	21.200	21.570	87.035%		
2	10:00:38	21.470	21.080	21.800	22.190	22.000	89.075%		
3	10:01:04	22.150	21.070	22.110	22.640	22.410	90.043%		
X		108.018%	104.466%	109.487%	110.041%	109.971%	88.718%		
σ		n/a	n/a	n/a	n/a	n/a	1.536%		
%RSD		2.287	1.504	0.827	3.344	1.917	1.731		

CCV 1487954 3/12/2015 10:07:08 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:35	90.306%	97.430	104.500	106.000	0.000	48220.000	48070.000	47880.000
2	10:08:02	91.336%	95.030	103.600	102.000	0.000	47240.000	48310.000	48930.000
3	10:08:28	92.153%	98.650	100.600	101.200	0.000	47360.000	49030.000	48570.000
X		91.265%	97.035%	102.894%	103.045%	0.000	95.217%	96.933%	96.918%
σ		0.925%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.014	1.898	1.987	2.504	0.000	1.121	1.030	1.094
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:35	470.000	5191.000	0.000	47480.000	47240.000	47200.000	95.935%	96.170
2	10:08:02	476.700	5159.000	0.000	48650.000	48680.000	48350.000	93.940%	99.120
3	10:08:28	479.800	5132.000	0.000	47990.000	47790.000	47630.000	93.854%	98.810
X		95.101%	103.215%	0.000	96.080%	95.811%	95.453%	94.577%	98.032%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.177%	n/a
%RSD		1.054	0.577	0.000	1.220	1.517	1.211	1.244	1.651
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:35	96.400	95.640	528.300	24610.000	26660.000	97.960	99.000	97.610
2	10:08:02	99.340	100.300	552.700	25730.000	27930.000	101.700	102.800	103.300
3	10:08:28	97.490	100.700	555.300	25950.000	28240.000	101.000	102.900	102.300
X		97.745%	98.871%	109.085%	101.705%	110.426%	100.221%	101.558%	101.099%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.516	2.837	2.731	2.829	3.031	1.994	2.181	3.026
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:35	98.670	98.650	100.700	96.490	96.470	98.310	0.000	95.750
2	10:08:02	101.600	102.100	101.100	98.670	100.900	98.430	0.000	97.520
3	10:08:28	101.900	101.300	101.400	97.650	99.830	98.840	0.000	97.710
X		100.723%	100.671%	101.096%	97.604%	99.052%	98.526%	0.000	96.993%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.768	1.781	0.352	1.120	2.317	0.279	0.000	1.111
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:35	96.522%	101.900	101.900	91.715%	98.310	98.280	96.580	97.500
2	10:08:02	97.493%	103.200	104.800	92.400%	98.570	99.040	100.200	98.220
3	10:08:28	97.553%	104.100	107.100	93.122%	98.730	98.900	99.590	98.230
X		97.189%	103.063%	104.614%	92.412%	98.537%	98.739%	98.786%	97.983%
σ		0.579%	n/a	n/a	0.704%	n/a	n/a	n/a	n/a
%RSD		0.595	1.070	2.483	0.761	0.216	0.413	1.957	0.427
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:35	92.836%	97.400	98.290	98.840	95.260	96.370	95.782%	96.128%
2	10:08:02	94.224%	99.940	100.200	98.710	97.780	96.470	99.133%	98.064%
3	10:08:28	94.832%	98.990	98.680	99.230	97.810	97.950	96.988%	98.005%
X		93.964%	98.778%	99.058%	98.924%	96.946%	96.932%	97.301%	97.399%
σ		1.023%	n/a	n/a	n/a	n/a	n/a	1.697%	1.101%
%RSD		1.088	1.301	1.023	0.271	1.510	0.914	1.744	1.130
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:07:35	101.600	98.990	101.000	101.100	100.800	93.566%		
2	10:08:02	105.000	102.300	104.000	103.600	104.000	92.703%		
3	10:08:28	105.100	102.700	104.500	105.200	104.500	92.685%		
X		103.906%	101.326%	103.134%	103.277%	103.063%	92.985%		
σ		n/a	n/a	n/a	n/a	n/a	0.504%		
%RSD		1.885	2.011	1.839	2.006	1.943	0.542		

CCB1 3/12/2015 10:14:32 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:58	98.851%	-0.031	-0.918	0.611	0.000	6.081	2.421	2.521
2	10:15:24	98.145%	-0.013	-3.688	-3.146	0.000	5.825	2.553	2.209
3	10:15:51	98.780%	-0.014	-4.508	-3.862	0.000	5.463	2.457	2.764
X		98.592%	-0.019	-3.038	-2.132	0.000	5.789	2.477	2.498
σ		0.389%	0.010	1.881	2.403	0.000	0.311	0.068	0.278
%RSD		0.394	52.150	61.910	112.700	0.000	5.363	2.738	11.150
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:58	-0.711	38.330	0.000	-2.689	-1.013	2.317	98.164%	-0.356
2	10:15:24	-0.669	4.127	0.000	-1.652	-3.155	0.725	94.747%	-0.377
3	10:15:51	-0.659	0.618	0.000	-2.560	1.792	3.170	93.849%	-0.376
X		-0.679	14.360	0.000	-2.301	-0.792	2.070	95.587%	-0.370
σ		0.028	20.830	0.000	0.565	2.481	1.241	2.277%	0.012
%RSD		4.113	145.100	0.000	24.570	313.300	59.940	2.382	3.118
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:58	0.027	0.022	0.026	12.860	9.965	0.003	-0.006	-0.066
2	10:15:24	0.031	0.066	0.027	15.010	8.167	0.008	-0.008	-0.060
3	10:15:51	0.029	0.044	0.036	12.590	4.712	0.003	-0.034	-0.052
X		0.029	0.044	0.030	13.490	7.614	0.005	-0.016	-0.059
σ		0.002	0.022	0.005	1.326	2.670	0.003	0.016	0.007
%RSD		7.099	50.160	18.130	9.834	35.060	65.910	96.780	11.960
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:58	-0.037	-0.092	-0.068	0.040	0.148	0.494	0.000	0.007
2	10:15:24	-0.075	-0.060	0.134	-0.043	-0.106	-0.447	0.000	0.012
3	10:15:51	-0.036	0.033	0.006	-0.001	0.539	0.230	0.000	0.010
X		-0.049	-0.040	0.024	-0.001	0.194	0.092	0.000	0.010
σ		0.022	0.065	0.102	0.041	0.325	0.485	0.000	0.002
%RSD		44.770	163.100	426.800	2778.000	167.900	525.000	0.000	24.030
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:58	99.811%	0.658	0.535	99.290%	-0.058	-0.062	0.015	-0.068
2	10:15:24	102.117%	0.530	0.611	100.510%	-0.043	-0.055	-0.002	-0.039
3	10:15:51	103.261%	0.586	0.484	101.060%	-0.047	-0.057	0.004	-0.041
X		101.730%	0.591	0.543	100.286%	-0.049	-0.058	0.006	-0.049
σ		1.757%	0.064	0.064	0.906%	0.008	0.004	0.008	0.016
%RSD		1.728	10.870	11.710	0.903	15.910	6.234	153.600	33.130
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:58	98.960%	-0.733	-0.098	-0.112	0.029	0.000	100.425%	100.545%
2	10:15:24	101.213%	-0.811	-0.127	-0.135	0.007	-0.001	102.978%	103.555%
3	10:15:51	102.349%	-0.720	-0.131	-0.142	0.013	-0.005	103.585%	103.907%
X		100.841%	-0.755	-0.119	-0.130	0.016	-0.002	102.329%	102.669%
σ		1.725%	0.049	0.018	0.016	0.011	0.003	1.677%	1.848%
%RSD		1.710	6.488	15.440	12.300	70.640	147.400	1.639	1.800
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:14:58	0.008	0.006	0.007	-0.028	-0.013	102.948%		
2	10:15:24	0.007	0.010	-0.014	-0.022	-0.008	102.408%		
3	10:15:51	0.000	0.009	-0.010	0.013	0.001	102.749%		
X		0.005	0.008	-0.006	-0.012	-0.007	102.702%		
σ		0.004	0.002	0.011	0.022	0.007	0.273%		
%RSD		81.600	21.670	187.800	182.100	99.070	0.266		

MB 180-134585/1-A

3/12/2015 10:18:47 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:14	96.943%	-0.039	-1.580	-1.451	0.000	5.516	1.426	1.428
2	10:19:40	95.906%	-0.022	-3.342	-3.317	0.000	5.129	1.379	0.983
3	10:20:07	94.878%	-0.039	-4.951	-3.686	0.000	4.492	0.507	0.686
X		95.909%	-0.033	-3.291	-2.818	0.000	5.046	1.104	1.033
σ		1.032%	0.010	1.686	1.198	0.000	0.517	0.518	0.373
%RSD		1.077	30.730	51.230	42.520	0.000	10.250	46.900	36.160
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:14	-0.470	25.130	0.000	-3.351	4.108	6.113	94.916%	0.195
2	10:19:40	-0.549	3.276	0.000	-2.340	0.566	4.779	94.019%	-0.481
3	10:20:07	-0.533	-0.029	0.000	-1.261	3.132	4.908	93.121%	-0.335
X		-0.517	9.458	0.000	-2.318	2.602	5.267	94.019%	-0.207
σ		0.042	13.670	0.000	1.045	1.829	0.736	0.898%	0.356
%RSD		8.096	144.500	0.000	45.080	70.300	13.980	0.955	172.000
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:14	0.006	0.015	0.012	6.720	1.029	0.001	-0.012	-0.045
2	10:19:40	0.015	0.012	0.005	6.063	0.434	0.003	0.018	-0.072
3	10:20:07	0.021	0.013	0.021	6.207	0.377	-0.001	0.004	-0.027
X		0.014	0.013	0.013	6.330	0.613	0.001	0.003	-0.048
σ		0.007	0.002	0.008	0.346	0.361	0.002	0.015	0.022
%RSD		52.410	13.360	62.120	5.459	58.890	164.500	425.900	46.490
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:14	-0.061	0.744	0.570	-0.052	0.052	-0.285	0.000	0.022
2	10:19:40	-0.022	0.773	0.707	0.064	0.354	0.438	0.000	0.019
3	10:20:07	-0.061	0.650	0.542	0.133	0.945	0.499	0.000	0.014
X		-0.048	0.722	0.607	0.048	0.450	0.218	0.000	0.018
σ		0.022	0.064	0.088	0.094	0.454	0.436	0.000	0.004
%RSD		46.350	8.868	14.560	193.800	100.900	200.300	0.000	20.870
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:14	100.136%	0.212	0.247	99.377%	-0.055	-0.064	-0.002	-0.092
2	10:19:40	102.353%	0.237	0.225	100.695%	-0.060	-0.064	0.004	-0.083
3	10:20:07	102.537%	0.347	0.293	101.232%	-0.040	-0.049	0.004	4.040
X		101.675%	0.265	0.255	100.435%	-0.051	-0.059	0.002	1.288
σ		1.336%	0.072	0.035	0.955%	0.010	0.009	0.003	2.383
%RSD		1.314	27.000	13.760	0.951	20.130	14.630	174.500	185.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:14	99.690%	-0.801	-0.140	-0.153	0.036	0.012	100.924%	101.360%
2	10:19:40	101.089%	-0.798	-0.144	-0.166	0.069	-0.005	103.316%	104.714%
3	10:20:07	102.583%	-0.740	-0.146	-0.154	0.047	0.010	106.057%	105.809%
X		101.121%	-0.780	-0.143	-0.158	0.051	0.006	103.432%	103.961%
σ		1.447%	0.035	0.003	0.007	0.017	0.009	2.568%	2.318%
%RSD		1.431	4.440	2.386	4.579	33.920	155.900	2.483	2.230
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:19:14	-0.002	0.002	-0.000	0.002	0.002	103.448%		
2	10:19:40	0.007	0.005	-0.009	-0.013	0.006	103.450%		
3	10:20:07	0.003	0.001	0.004	0.011	0.016	103.815%		
X		0.003	0.003	-0.002	-0.000	0.008	103.571%		
σ		0.005	0.002	0.007	0.012	0.007	0.211%		
%RSD		182.700	78.310	399.900	4412.000	89.000	0.204		

LCS 180-134585/2-A

3/12/2015 10:23:00 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:26	107.396%	41.850	943.300	961.700	0.000	42490.000	43730.000	44070.000
2	10:23:53	105.363%	42.890	956.100	987.800	0.000	43210.000	45320.000	45140.000
3	10:24:19	109.065%	41.100	924.800	937.000	0.000	42710.000	44410.000	43800.000
X		107.275%	41.950	941.400	962.200	0.000	42800.000	44490.000	44340.000
σ		1.854%	0.903	15.780	25.390	0.000	368.800	800.800	705.900
%RSD		1.728	2.153	1.677	2.639	0.000	0.862	1.800	1.592
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:26	1650.000	9301.000	0.000	46260.000	46500.000	46780.000	81.291%	963.100
2	10:23:53	1697.000	9489.000	0.000	46770.000	47940.000	48820.000	79.550%	1001.000
3	10:24:19	1661.000	9159.000	0.000	44730.000	45900.000	46820.000	80.077%	997.600
X		1669.000	9316.000	0.000	45920.000	46780.000	47480.000	80.306%	987.300
σ		24.980	165.100	0.000	1061.000	1050.000	1163.000	0.893%	21.030
%RSD		1.496	1.772	0.000	2.310	2.244	2.450	1.111	2.130
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:26	509.800	198.400	531.900	1043.000	1400.000	528.000	514.500	251.400
2	10:23:53	537.900	211.300	556.200	1088.000	1440.000	543.200	524.200	259.900
3	10:24:19	532.000	209.400	558.100	1081.000	1418.000	544.100	526.000	258.400
X		526.600	206.300	548.700	1070.000	1419.000	538.400	521.600	256.500
σ		14.840	6.979	14.560	24.250	19.880	9.023	6.155	4.490
%RSD		2.819	3.382	2.654	2.266	1.401	1.676	1.180	1.750
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:26	252.700	490.000	483.600	36.550	8.569	10.040	0.000	921.200
2	10:23:53	259.700	502.700	500.100	36.500	9.658	9.607	0.000	935.900
3	10:24:19	257.300	498.700	498.900	35.900	7.796	10.230	0.000	942.100
X		256.500	497.100	494.200	36.320	8.674	9.961	0.000	933.000
σ		3.527	6.493	9.154	0.363	0.935	0.320	0.000	10.750
%RSD		1.375	1.306	1.852	0.999	10.780	3.215	0.000	1.152
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:26	88.714%	1003.000	1018.000	84.894%	48.010	48.460	49.140	40.430
2	10:23:53	90.120%	1028.000	1053.000	86.235%	48.540	48.560	49.070	40.600
3	10:24:19	89.965%	1033.000	1054.000	86.816%	48.010	49.170	50.400	41.830
X		89.600%	1021.000	1041.000	85.982%	48.190	48.730	49.540	40.950
σ		0.771%	15.920	20.720	0.986%	0.308	0.384	0.746	0.764
%RSD		0.861	1.558	1.989	1.147	0.640	0.788	1.506	1.866
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:26	84.840%	2052.000	492.700	483.600	1874.000	1911.000	90.753%	91.554%
2	10:23:53	85.947%	2107.000	496.400	488.400	1898.000	1938.000	93.412%	93.919%
3	10:24:19	85.534%	2105.000	500.000	493.400	1919.000	1947.000	95.271%	95.822%
X		85.440%	2088.000	496.400	488.500	1897.000	1932.000	93.145%	93.765%
σ		0.559%	31.130	3.657	4.905	22.480	18.400	2.271%	2.138%
%RSD		0.654	1.491	0.737	1.004	1.185	0.953	2.438	2.280
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:23:26	50.260	49.690	21.260	21.430	21.180	83.410%		
2	10:23:53	51.960	50.730	21.130	21.310	21.040	85.364%		
3	10:24:19	52.860	51.340	21.280	21.330	21.310	86.023%		
X		51.690	50.590	21.230	21.360	21.170	84.932%		
σ		1.321	0.833	0.084	0.063	0.138	1.359%		
%RSD		2.555	1.647	0.396	0.296	0.653	1.600		

180-41613-B-4-A 3/12/2015 10:27:15 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:27:41	106.897%	0.017	309.900	325.200	0.000	49160.000	15400.000	15250.000
2	10:28:07	103.963%	-0.023	311.100	321.300	0.000	50910.000	16060.000	15770.000
3	10:28:33	99.846%	-0.031	315.800	318.500	0.000	50710.000	16000.000	15790.000
X		103.569%	-0.012	312.300	321.700	0.000	50260.000	15820.000	15600.000
σ		3.542%	0.026	3.065	3.366	0.000	956.900	364.900	307.900
%RSD		3.420	210.300	0.982	1.046	0.000	1.904	2.306	1.974
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:27:41	6.895	5125.000	0.000	9466.000	121600.000	122700.000	80.375%	1.519
2	10:28:07	7.742	5139.000	0.000	9677.000	123300.000	125800.000	77.405%	1.069
3	10:28:33	6.809	5113.000	0.000	9438.000	122400.000	126300.000	76.696%	1.163
X		7.149	5126.000	0.000	9527.000	122400.000	124900.000	78.159%	1.250
σ		0.516	13.270	0.000	130.800	882.200	1962.000	1.952%	0.237
%RSD		7.213	0.259	0.000	1.373	0.721	1.571	2.497	18.990
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:27:41	-0.018	92.060	0.977	65.150	1037.000	0.969	2.342	1.061
2	10:28:07	-0.057	94.740	1.040	67.620	1061.000	0.956	2.223	1.124
3	10:28:33	-0.894	95.070	1.090	67.430	1034.000	0.976	2.356	1.030
X		-0.323	93.950	1.036	66.740	1044.000	0.967	2.307	1.072
σ		0.495	1.649	0.056	1.374	14.700	0.010	0.073	0.048
%RSD		153.300	1.755	5.448	2.059	1.408	1.027	3.162	4.483
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:27:41	0.699	3.889	3.960	-0.393	-1.225	0.419	0.000	247.300
2	10:28:07	0.830	3.975	4.231	0.051	-1.424	0.505	0.000	250.000
3	10:28:33	0.870	3.815	3.564	-0.003	-0.427	0.560	0.000	254.000
X		0.800	3.893	3.918	-0.115	-1.025	0.495	0.000	250.400
σ		0.090	0.080	0.336	0.242	0.528	0.071	0.000	3.370
%RSD		11.210	2.056	8.567	210.800	51.480	14.270	0.000	1.346
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:27:41	88.354%	5.326	5.626	84.520%	-0.052	-0.051	0.076	-0.063
2	10:28:07	89.404%	3.776	3.819	85.932%	-0.031	-0.037	0.005	-0.060
3	10:28:33	88.637%	2.895	2.860	84.990%	-0.035	-0.063	0.011	-0.058
X		88.798%	3.999	4.101	85.147%	-0.039	-0.050	0.030	-0.061
σ		0.543%	1.230	1.405	0.719%	0.011	0.013	0.039	0.003
%RSD		0.612	30.770	34.250	0.844	27.860	26.430	129.500	4.307
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:27:41	85.656%	7.166	0.078	0.060	47.300	47.980	91.489%	92.062%
2	10:28:07	86.080%	5.432	0.066	0.117	48.250	49.150	92.470%	93.997%
3	10:28:33	87.283%	4.010	0.038	0.062	48.820	47.220	92.988%	95.625%
X		86.340%	5.536	0.061	0.080	48.120	48.110	92.316%	93.895%
σ		0.844%	1.580	0.020	0.032	0.769	0.974	0.761%	1.784%
%RSD		0.978	28.540	33.720	40.590	1.597	2.024	0.825	1.900
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:27:41	0.200	0.239	0.327	0.281	0.320	84.188%		
2	10:28:07	0.126	0.109	0.301	0.287	0.314	86.007%		
3	10:28:33	0.076	0.066	0.320	0.318	0.331	90.858%		
X		0.134	0.138	0.316	0.295	0.322	87.018%		
σ		0.062	0.090	0.014	0.020	0.009	3.447%		
%RSD		46.530	65.250	4.293	6.721	2.652	3.962		

180-41613-B-4-A SD@5

3/12/2015 10:31:30 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:56	101.691%	-0.031	62.710	63.820	0.000	10260.000	3203.000	3218.000
2	10:32:23	102.750%	0.002	61.970	58.940	0.000	10400.000	3264.000	3282.000
3	10:32:49	103.717%	-0.015	58.320	59.840	0.000	10110.000	3257.000	3217.000
X		102.719%	-0.015	61.000	60.870	0.000	10260.000	3241.000	3239.000
σ		1.013%	0.017	2.348	2.598	0.000	147.800	33.310	37.630
%RSD		0.987	113.500	3.849	4.268	0.000	1.441	1.028	1.162
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:56	0.991	1133.000	0.000	1947.000	24130.000	24860.000	88.364%	-0.213
2	10:32:23	0.905	1091.000	0.000	1936.000	24220.000	25240.000	88.763%	-0.048
3	10:32:49	1.499	1080.000	0.000	1892.000	23860.000	25290.000	87.945%	-0.030
X		1.132	1101.000	0.000	1925.000	24070.000	25130.000	88.358%	-0.097
σ		0.321	27.930	0.000	29.230	188.800	234.500	0.409%	0.101
%RSD		28.390	2.536	0.000	1.518	0.785	0.933	0.463	104.400
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:56	-0.875	17.840	0.169	19.830	208.700	0.195	0.574	0.143
2	10:32:23	0.041	18.190	0.194	19.270	204.200	0.196	0.509	0.150
3	10:32:49	-0.396	18.420	0.208	19.140	205.300	0.191	0.471	0.142
X		-0.410	18.150	0.190	19.410	206.100	0.194	0.518	0.145
σ		0.459	0.294	0.019	0.363	2.378	0.003	0.052	0.005
%RSD		111.900	1.617	10.250	1.867	1.154	1.302	9.989	3.133
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:56	0.135	1.064	0.982	-0.159	-0.317	0.760	0.000	47.730
2	10:32:23	0.089	1.142	0.873	0.594	-1.364	0.236	0.000	47.800
3	10:32:49	0.105	1.365	1.036	-0.155	-0.090	-0.101	0.000	47.890
X		0.110	1.190	0.964	0.094	-0.590	0.298	0.000	47.800
σ		0.023	0.156	0.083	0.434	0.679	0.434	0.000	0.081
%RSD		21.400	13.110	8.616	463.400	115.100	145.500	0.000	0.170
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:56	93.555%	0.436	0.399	91.969%	-0.052	-0.081	0.004	0.008
2	10:32:23	95.921%	0.421	0.398	93.435%	-0.057	-0.068	-0.002	0.003
3	10:32:49	96.109%	0.409	0.386	93.659%	-0.054	-0.049	0.004	0.013
X		95.195%	0.422	0.394	93.021%	-0.054	-0.066	0.002	0.008
σ		1.424%	0.014	0.007	0.918%	0.003	0.016	0.003	0.005
%RSD		1.495	3.218	1.869	0.987	5.371	24.520	160.500	60.270
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:56	91.697%	-0.279	-0.150	-0.157	9.287	9.668	96.426%	96.262%
2	10:32:23	93.123%	-0.281	-0.148	-0.145	10.040	9.854	97.884%	98.149%
3	10:32:49	93.847%	-0.323	-0.142	-0.160	9.883	10.000	99.219%	99.040%
X		92.889%	-0.294	-0.146	-0.154	9.736	9.841	97.843%	97.817%
σ		1.094%	0.025	0.004	0.008	0.397	0.166	1.397%	1.419%
%RSD		1.178	8.526	2.854	5.135	4.074	1.691	1.428	1.450
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:31:56	0.023	0.016	0.078	0.030	0.062	91.732%		
2	10:32:23	0.026	0.027	0.065	0.078	0.075	91.833%		
3	10:32:49	0.019	0.014	0.052	0.029	0.059	95.244%		
X		0.023	0.019	0.065	0.046	0.065	92.936%		
σ		0.003	0.007	0.013	0.028	0.009	1.999%		
%RSD		14.700	35.750	20.640	61.120	13.560	2.151		

180-41613-B-4-B MS

3/12/2015 10:35:42 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:08	99.658%	44.260	1327.000	1337.000	0.000	93270.000	61250.000	60290.000
2	10:36:35	97.220%	44.140	1301.000	1363.000	0.000	94580.000	62620.000	61080.000
3	10:37:02	96.254%	43.210	1289.000	1308.000	0.000	95150.000	62190.000	62080.000
X		97.710%	43.870	1306.000	1336.000	0.000	94330.000	62020.000	61150.000
σ		1.754%	0.572	19.400	27.410	0.000	963.900	703.500	895.800
%RSD		1.795	1.304	1.486	2.052	0.000	1.022	1.134	1.465
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:08	1695.000	14330.000	0.000	54060.000	163300.000	166500.000	76.415%	958.900
2	10:36:35	1741.000	14390.000	0.000	54200.000	163600.000	170200.000	75.368%	979.500
3	10:37:02	1754.000	14590.000	0.000	54490.000	170600.000	174100.000	72.957%	1004.000
X		1730.000	14440.000	0.000	54250.000	165900.000	170300.000	74.913%	980.900
σ		30.830	136.700	0.000	219.600	4110.000	3808.000	1.773%	22.820
%RSD		1.782	0.947	0.000	0.405	2.478	2.236	2.367	2.326
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:08	514.500	290.700	537.700	1102.000	2410.000	519.600	501.000	246.100
2	10:36:35	536.500	300.800	562.100	1131.000	2454.000	528.800	517.100	252.000
3	10:37:02	543.500	308.000	568.400	1159.000	2387.000	542.300	519.300	255.100
X		531.500	299.800	556.100	1131.000	2417.000	530.200	512.500	251.100
σ		15.140	8.668	16.220	28.430	34.160	11.410	9.994	4.569
%RSD		2.848	2.891	2.918	2.514	1.413	2.152	1.950	1.820
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:08	243.700	473.100	471.800	36.670	9.757	11.710	0.000	1174.000
2	10:36:35	248.000	486.300	482.200	35.250	8.423	10.630	0.000	1191.000
3	10:37:02	250.900	493.900	484.600	35.350	8.747	12.430	0.000	1188.000
X		247.500	484.500	479.500	35.760	8.976	11.590	0.000	1184.000
σ		3.596	10.520	6.800	0.794	0.696	0.905	0.000	9.422
%RSD		1.453	2.171	1.418	2.221	7.754	7.808	0.000	0.795
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:08	84.849%	996.200	998.600	84.615%	46.160	46.020	47.540	39.880
2	10:36:35	85.570%	1019.000	1028.000	85.225%	46.360	46.510	47.960	40.430
3	10:37:02	85.956%	1041.000	1077.000	80.877%	48.180	47.760	50.070	41.100
X		85.458%	1019.000	1035.000	83.572%	46.900	46.760	48.520	40.470
σ		0.562%	22.410	39.620	2.354%	1.114	0.899	1.357	0.614
%RSD		0.658	2.200	3.829	2.816	2.375	1.922	2.797	1.517
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:08	80.808%	2071.000	496.700	488.300	1927.000	1962.000	87.964%	90.521%
2	10:36:35	81.613%	2104.000	502.500	493.800	1954.000	1976.000	91.733%	92.255%
3	10:37:02	81.928%	2120.000	506.600	498.200	1964.000	1989.000	92.145%	91.928%
X		81.450%	2098.000	501.900	493.500	1949.000	1976.000	90.614%	91.568%
σ		0.577%	24.780	5.000	4.957	19.090	13.560	2.304%	0.922%
%RSD		0.709	1.181	0.996	1.005	0.980	0.686	2.543	1.007
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:36:08	48.940	48.200	20.030	20.280	20.020	87.226%		
2	10:36:35	52.930	51.760	21.760	22.450	22.030	83.089%		
3	10:37:02	51.830	51.620	22.010	22.280	21.960	84.156%		
X		51.230	50.530	21.270	21.670	21.340	84.823%		
σ		2.062	2.018	1.082	1.206	1.140	2.148%		
%RSD		4.025	3.994	5.089	5.563	5.344	2.532		

180-41613-B-4-C MSD

3/12/2015 10:39:57 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:24	96.864%	44.150	1346.000	1354.000	0.000	96240.000	62780.000	62130.000
2	10:40:50	91.759%	45.300	1347.000	1376.000	0.000	95700.000	63790.000	63260.000
3	10:41:17	94.168%	43.740	1334.000	1332.000	0.000	94270.000	62660.000	62470.000
X		94.264%	44.400	1342.000	1354.000	0.000	95400.000	63080.000	62620.000
σ		2.554%	0.805	7.405	21.580	0.000	1019.000	616.700	579.400
%RSD		2.709	1.812	0.552	1.594	0.000	1.069	0.978	0.925
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:24	1731.000	14980.000	0.000	55530.000	167600.000	170500.000	75.111%	961.200
2	10:40:50	1784.000	14740.000	0.000	55750.000	168500.000	171400.000	73.908%	989.900
3	10:41:17	1737.000	14510.000	0.000	54430.000	167100.000	170300.000	73.941%	984.300
X		1750.000	14740.000	0.000	55240.000	167700.000	170700.000	74.320%	978.500
σ		28.830	237.200	0.000	707.000	718.400	598.100	0.685%	15.180
%RSD		1.647	1.609	0.000	1.280	0.428	0.350	0.922	1.551
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:24	522.900	293.300	546.100	1140.000	2498.000	531.500	521.600	249.000
2	10:40:50	539.600	303.700	563.100	1174.000	2462.000	539.100	515.200	252.800
3	10:41:17	533.800	301.600	560.800	1172.000	2476.000	539.600	519.900	252.800
X		532.100	299.500	556.700	1162.000	2479.000	536.700	518.900	251.500
σ		8.462	5.512	9.210	19.020	18.170	4.532	3.349	2.220
%RSD		1.590	1.840	1.655	1.636	0.733	0.844	0.645	0.882
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:24	247.900	485.700	481.600	36.070	7.566	11.240	0.000	1177.000
2	10:40:50	250.600	490.400	488.200	38.040	8.036	10.510	0.000	1191.000
3	10:41:17	249.200	492.200	490.200	36.390	8.213	10.950	0.000	1186.000
X		249.200	489.400	486.700	36.830	7.939	10.900	0.000	1185.000
σ		1.332	3.336	4.486	1.058	0.334	0.370	0.000	6.664
%RSD		0.534	0.682	0.922	2.873	4.211	3.392	0.000	0.563
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:24	83.675%	1026.000	1048.000	79.450%	47.930	48.310	50.220	40.780
2	10:40:50	84.050%	1033.000	1064.000	80.191%	47.750	48.850	49.920	40.830
3	10:41:17	84.857%	1057.000	1083.000	79.719%	48.470	48.790	50.880	42.050
X		84.194%	1039.000	1065.000	79.787%	48.050	48.650	50.340	41.220
σ		0.604%	16.410	17.340	0.375%	0.372	0.299	0.491	0.717
%RSD		0.717	1.580	1.628	0.470	0.774	0.614	0.975	1.739
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:40:24	79.618%	2087.000	500.800	490.600	1915.000	1948.000	88.776%	88.831%
2	10:40:50	79.501%	2148.000	511.500	503.700	1952.000	1989.000	91.683%	91.896%
3	10:41:17	79.058%	2159.000	515.000	505.500	1991.000	2013.000	90.811%	91.749%
X		79.393%	2131.000	509.100	499.900	1953.000	1983.000	90.423%	90.826%
σ		0.295%	38.620	7.414	8.115	38.040	32.890	1.491%	1.729%
%RSD		0.372	1.812	1.456	1.623	1.948	1.658	1.649	1.903
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:40:24	49.010	47.970	20.700	20.410	20.430	85.601%		
2	10:40:50	52.950	52.360	22.010	21.910	21.900	81.608%		
3	10:41:17	53.040	51.770	21.760	22.560	22.130	82.782%		
X		51.670	50.700	21.490	21.630	21.490	83.330%		
σ		2.299	2.382	0.696	1.107	0.921	2.052%		
%RSD		4.449	4.698	3.239	5.117	4.285	2.463		

180-41613-B-4-A PDS

3/12/2015 10:44:12 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	95.030%	43.600	1334.000	1331.000	0.000	94620.000	63260.000	62360.000
2	10:45:05	93.330%	45.560	1348.000	1345.000	0.000	96150.000	63820.000	64340.000
3	10:45:32	89.855%	47.120	1360.000	1404.000	0.000	96700.000	65560.000	64990.000
X		92.738%	45.430	1347.000	1360.000	0.000	95820.000	64210.000	63900.000
σ		2.638%	1.765	13.510	38.630	0.000	1076.000	1200.000	1371.000
%RSD		2.844	3.886	1.003	2.841	0.000	1.123	1.869	2.146
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	1729.000	14970.000	0.000	56660.000	163800.000	165200.000	75.131%	1017.000
2	10:45:05	1756.000	15240.000	0.000	57020.000	169100.000	171400.000	73.649%	1048.000
3	10:45:32	1771.000	15300.000	0.000	56720.000	165000.000	166600.000	73.167%	1030.000
X		1752.000	15170.000	0.000	56800.000	166000.000	167800.000	73.982%	1032.000
σ		21.370	178.500	0.000	191.400	2760.000	3270.000	1.024%	15.380
%RSD		1.220	1.177	0.000	0.337	1.663	1.949	1.384	1.490
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	527.100	290.700	552.600	1115.000	2457.000	531.800	513.100	251.400
2	10:45:05	537.100	303.100	563.100	1149.000	2415.000	539.800	519.200	254.800
3	10:45:32	537.200	301.600	567.500	1153.000	2435.000	540.700	521.600	251.600
X		533.800	298.500	561.100	1139.000	2435.000	537.400	518.000	252.600
σ		5.839	6.784	7.665	20.780	21.030	4.918	4.380	1.875
%RSD		1.094	2.273	1.366	1.824	0.863	0.915	0.846	0.742
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	249.400	491.300	479.200	35.410	7.834	10.600	0.000	1164.000
2	10:45:05	250.500	494.300	489.600	37.670	9.183	9.855	0.000	1190.000
3	10:45:32	249.700	495.400	491.800	36.660	8.586	10.730	0.000	1192.000
X		249.800	493.600	486.900	36.580	8.534	10.400	0.000	1182.000
σ		0.553	2.104	6.752	1.134	0.676	0.473	0.000	15.560
%RSD		0.221	0.426	1.387	3.100	7.918	4.548	0.000	1.317
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	83.629%	1077.000	1094.000	78.851%	46.360	46.350	49.670	40.710
2	10:45:05	84.026%	1100.000	1124.000	79.626%	45.770	45.760	50.430	40.320
3	10:45:32	84.212%	1101.000	1128.000	79.549%	46.290	45.540	50.350	41.810
X		83.956%	1093.000	1116.000	79.342%	46.140	45.890	50.150	40.950
σ		0.297%	13.770	18.890	0.427%	0.322	0.417	0.415	0.775
%RSD		0.354	1.260	1.693	0.538	0.698	0.909	0.826	1.892
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:38	79.362%	2197.000	523.300	516.000	1938.000	1965.000	88.923%	90.225%
2	10:45:05	79.459%	2249.000	530.300	521.700	1953.000	1996.000	90.963%	90.526%
3	10:45:32	79.325%	2265.000	529.500	527.600	1966.000	2020.000	90.606%	91.595%
X		79.382%	2237.000	527.700	521.800	1953.000	1993.000	90.164%	90.782%
σ		0.069%	35.890	3.843	5.778	13.880	27.400	1.090%	0.720%
%RSD		0.087	1.604	0.728	1.107	0.711	1.375	1.208	0.793
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:44:38	49.120	48.500	20.530	20.540	20.220	86.996%		
2	10:45:05	52.980	52.250	21.810	21.730	21.890	82.549%		
3	10:45:32	53.630	52.860	22.520	21.840	22.210	82.823%		
X		51.910	51.210	21.620	21.370	21.440	84.123%		
σ		2.441	2.362	1.009	0.719	1.071	2.492%		
%RSD		4.702	4.612	4.666	3.366	4.997	2.962		

180-41613-B-5-A 3/12/2015 10:48:27 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:54	98.853%	0.013	157.400	160.200	0.000	48310.000	30740.000	30260.000
2	10:49:20	97.749%	0.032	150.800	155.600	0.000	48930.000	30550.000	30260.000
3	10:49:47	97.399%	0.006	144.700	154.600	0.000	48730.000	31100.000	30690.000
X		98.000%	0.017	151.000	156.800	0.000	48660.000	30800.000	30400.000
σ		0.759%	0.014	6.365	3.010	0.000	315.400	277.900	246.400
%RSD		0.774	79.960	4.215	1.920	0.000	0.648	0.902	0.810
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:54	692.800	5664.000	0.000	24100.000	103000.000	103100.000	75.639%	21.600
2	10:49:20	709.100	5698.000	0.000	23760.000	103200.000	105300.000	74.022%	19.770
3	10:49:47	715.800	5719.000	0.000	23850.000	101400.000	105100.000	73.400%	21.160
X		705.900	5694.000	0.000	23900.000	102600.000	104500.000	74.354%	20.850
σ		11.800	27.930	0.000	174.900	981.800	1223.000	1.156%	0.955
%RSD		1.671	0.491	0.000	0.732	0.957	1.170	1.554	4.580
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:54	2.712	9.908	37.960	978.700	1805.000	1.765	5.785	4.287
2	10:49:20	2.503	10.140	39.620	1008.000	1835.000	1.781	6.228	4.241
3	10:49:47	3.915	10.260	39.570	1016.000	2047.000	1.774	6.479	4.267
X		3.043	10.110	39.050	1001.000	1895.000	1.773	6.164	4.265
σ		0.762	0.182	0.943	19.650	131.900	0.008	0.352	0.023
%RSD		25.030	1.798	2.415	1.964	6.958	0.476	5.704	0.548
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:54	4.273	14.510	14.440	-0.607	-0.647	1.204	0.000	624.300
2	10:49:20	4.177	14.800	14.710	-0.244	-1.663	0.846	0.000	631.800
3	10:49:47	4.175	15.950	14.740	-2.352	-0.860	0.345	0.000	630.300
X		4.208	15.080	14.630	-1.067	-1.057	0.798	0.000	628.800
σ		0.056	0.763	0.167	1.127	0.536	0.432	0.000	3.978
%RSD		1.338	5.057	1.141	105.600	50.700	54.050	0.000	0.633
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:54	83.569%	7.500	8.044	85.189%	0.004	-0.019	0.092	0.067
2	10:49:20	84.912%	5.974	6.009	85.294%	-0.002	0.002	0.071	0.113
3	10:49:47	84.877%	4.693	4.652	81.695%	0.028	-0.016	0.113	0.041
X		84.453%	6.056	6.235	84.060%	0.010	-0.011	0.092	0.074
σ		0.766%	1.405	1.707	2.048%	0.016	0.011	0.021	0.036
%RSD		0.907	23.210	27.380	2.437	159.700	102.600	22.410	48.840
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:48:54	80.169%	8.728	2.461	2.525	69.850	68.720	86.962%	87.628%
2	10:49:20	81.227%	7.062	1.847	1.804	69.500	69.270	89.404%	90.499%
3	10:49:47	81.515%	5.422	1.433	1.493	71.090	70.280	92.162%	92.025%
X		80.970%	7.071	1.914	1.940	70.150	69.420	89.509%	90.051%
σ		0.709%	1.653	0.517	0.529	0.837	0.795	2.602%	2.233%
%RSD		0.876	23.380	27.030	27.270	1.194	1.145	2.907	2.479
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:48:54	0.141	0.113	1.629	1.639	1.593	85.620%		
2	10:49:20	0.119	0.116	1.788	1.533	1.679	83.340%		
3	10:49:47	0.136	0.112	1.749	1.633	1.690	83.621%		
X		0.132	0.114	1.722	1.602	1.654	84.194%		
σ		0.012	0.002	0.083	0.059	0.053	1.243%		
%RSD		8.722	1.744	4.822	3.706	3.217	1.476		

180-41613-B-6-A 3/12/2015 10:52:45 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:53:11	101.464%	0.020	20.630	21.020	0.000	24780.000	20880.000	20650.000
2	10:53:38	99.192%	-0.031	14.210	17.210	0.000	25280.000	21300.000	21080.000
3	10:54:05	99.373%	0.004	14.310	15.400	0.000	24620.000	21140.000	21010.000
X		100.010%	-0.002	16.390	17.880	0.000	24900.000	21110.000	20910.000
σ		1.263%	0.026	3.680	2.867	0.000	342.100	214.300	232.100
%RSD		1.263	1397.000	22.460	16.040	0.000	1.374	1.015	1.110
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:53:11	45.960	6204.000	0.000	4242.000	97360.000	100100.000	77.142%	2.022
2	10:53:38	46.870	6166.000	0.000	4278.000	98980.000	101300.000	76.335%	1.675
3	10:54:05	47.770	6179.000	0.000	4208.000	98890.000	102200.000	74.502%	1.924
X		46.870	6183.000	0.000	4243.000	98410.000	101200.000	75.993%	1.874
σ		0.907	19.660	0.000	35.270	910.400	1075.000	1.353%	0.179
%RSD		1.935	0.318	0.000	0.831	0.925	1.062	1.780	9.556
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:53:11	0.981	3.945	29.220	434.500	1189.000	0.480	1.468	1.177
2	10:53:38	2.106	3.832	29.630	440.700	1231.000	0.489	1.914	1.142
3	10:54:05	4.171	3.989	30.440	449.000	1221.000	0.496	1.544	1.111
X		2.419	3.922	29.760	441.400	1213.000	0.488	1.642	1.144
σ		1.618	0.081	0.625	7.266	21.860	0.008	0.239	0.033
%RSD		66.880	2.069	2.099	1.646	1.802	1.625	14.530	2.861
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:53:11	1.137	12.530	12.970	-0.011	-1.768	0.261	0.000	194.900
2	10:53:38	1.204	12.520	13.040	0.486	-0.983	0.776	0.000	199.600
3	10:54:05	1.151	13.020	11.620	-0.851	-1.336	0.662	0.000	197.500
X		1.164	12.690	12.540	-0.126	-1.362	0.566	0.000	197.300
σ		0.035	0.285	0.802	0.676	0.393	0.270	0.000	2.356
%RSD		3.004	2.245	6.395	538.100	28.840	47.720	0.000	1.194
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:53:11	82.931%	0.856	0.795	85.034%	-0.052	-0.060	0.012	-0.011
2	10:53:38	84.321%	0.850	0.811	80.934%	-0.030	-0.033	0.025	-0.013
3	10:54:05	84.811%	0.706	0.772	82.065%	-0.024	-0.057	0.012	-0.002
X		84.021%	0.804	0.792	82.678%	-0.036	-0.050	0.016	-0.009
σ		0.975%	0.085	0.020	2.117%	0.015	0.015	0.008	0.006
%RSD		1.161	10.520	2.461	2.561	41.880	29.660	48.850	70.340
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:53:11	80.462%	0.650	0.094	0.149	35.490	35.200	87.479%	87.917%
2	10:53:38	81.598%	0.712	0.149	0.090	35.330	35.940	88.931%	89.215%
3	10:54:05	82.454%	0.735	0.057	0.152	35.100	37.160	90.277%	91.564%
X		81.504%	0.699	0.100	0.130	35.310	36.100	88.896%	89.565%
σ		0.999%	0.044	0.046	0.035	0.195	0.989	1.399%	1.849%
%RSD		1.226	6.301	45.860	26.980	0.553	2.740	1.574	2.064
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:53:11	0.026	0.017	0.480	0.464	0.459	81.496%		
2	10:53:38	0.024	0.022	0.496	0.426	0.456	83.663%		
3	10:54:05	0.017	0.017	0.499	0.425	0.452	85.416%		
X		0.022	0.019	0.492	0.438	0.456	83.525%		
σ		0.005	0.003	0.010	0.023	0.004	1.964%		
%RSD		21.660	16.580	2.084	5.163	0.824	2.351		

180-41613-B-7-A 3/12/2015 10:57:03 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:30	100.528%	0.030	7.960	8.279	0.000	4955.000	4153.000	4194.000
2	10:57:56	99.379%	0.013	4.706	5.380	0.000	4792.000	4180.000	4123.000
3	10:58:23	99.176%	-0.004	2.253	3.621	0.000	4746.000	4169.000	4124.000
X		99.694%	0.013	4.973	5.760	0.000	4831.000	4168.000	4147.000
σ		0.729%	0.017	2.863	2.352	0.000	109.800	13.610	40.600
%RSD		0.731	131.800	57.570	40.840	0.000	2.272	0.327	0.979
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:30	290.700	5227.000	0.000	1771.000	54750.000	56200.000	75.443%	6.907
2	10:57:56	301.300	5167.000	0.000	1735.000	52660.000	54540.000	76.520%	7.468
3	10:58:23	293.300	5142.000	0.000	1746.000	53310.000	56200.000	74.581%	7.217
X		295.100	5179.000	0.000	1751.000	53570.000	55650.000	75.515%	7.197
σ		5.497	43.860	0.000	18.160	1068.000	955.500	0.972%	0.281
%RSD		1.863	0.847	0.000	1.037	1.993	1.717	1.287	3.900
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:30	0.600	4.308	35.940	1069.000	1497.000	0.535	1.833	1.123
2	10:57:56	0.960	4.432	36.330	1085.000	1502.000	0.569	2.190	1.145
3	10:58:23	0.875	4.447	36.830	1118.000	1511.000	0.520	1.953	1.165
X		0.812	4.396	36.370	1091.000	1503.000	0.541	1.992	1.144
σ		0.188	0.077	0.446	25.130	7.452	0.025	0.182	0.021
%RSD		23.200	1.741	1.227	2.303	0.496	4.573	9.138	1.831
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:30	1.034	4.893	4.718	-1.291	-0.898	0.864	0.000	112.000
2	10:57:56	1.081	4.795	5.035	1.249	-1.557	0.926	0.000	114.600
3	10:58:23	1.100	4.791	4.447	0.430	-0.425	0.501	0.000	114.000
X		1.072	4.826	4.733	0.129	-0.960	0.764	0.000	113.500
σ		0.034	0.058	0.294	1.297	0.568	0.229	0.000	1.361
%RSD		3.179	1.206	6.210	1004.000	59.200	30.040	0.000	1.199
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:30	84.014%	0.512	0.652	82.103%	-0.050	-0.055	0.012	-0.025
2	10:57:56	83.940%	0.585	0.498	83.098%	-0.053	-0.054	0.012	-0.034
3	10:58:23	85.032%	0.536	0.498	83.545%	-0.061	-0.067	0.005	-0.066
X		84.329%	0.544	0.549	82.915%	-0.055	-0.059	0.009	-0.042
σ		0.610%	0.037	0.089	0.738%	0.006	0.007	0.004	0.021
%RSD		0.724	6.818	16.130	0.891	10.090	11.900	42.140	51.450
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:57:30	81.663%	-0.077	-0.039	-0.005	21.370	22.020	88.881%	87.928%
2	10:57:56	81.946%	-0.028	-0.007	-0.016	21.410	22.430	90.283%	90.659%
3	10:58:23	83.179%	0.034	-0.066	-0.051	22.020	22.040	90.834%	91.547%
X		82.262%	-0.023	-0.037	-0.024	21.600	22.160	89.999%	90.044%
σ		0.806%	0.056	0.029	0.024	0.366	0.228	1.007%	1.886%
%RSD		0.980	239.400	79.120	100.800	1.696	1.029	1.119	2.095
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:57:30	0.017	0.009	0.484	0.457	0.468	83.977%		
2	10:57:56	0.015	0.016	0.509	0.475	0.476	86.157%		
3	10:58:23	0.032	0.020	0.504	0.448	0.463	87.618%		
X		0.022	0.015	0.499	0.460	0.469	85.917%		
σ		0.009	0.006	0.013	0.013	0.007	1.832%		
%RSD		42.900	37.830	2.659	2.933	1.388	2.132		

CCV 1487954 3/12/2015 11:01:21 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:47	98.822%	94.160	98.800	102.300	0.000	47160.000	47280.000	47430.000
2	11:02:13	93.650%	100.700	106.300	106.300	0.000	47800.000	48610.000	48730.000
3	11:02:39	98.057%	97.220	101.900	100.200	0.000	46480.000	47980.000	48060.000
X		96.843%	97.363%	102.328%	102.906%	0.000	94.291%	95.917%	96.140%
σ		2.791%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.882	3.366	3.675	3.007	0.000	1.405	1.381	1.353
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:47	470.500	5157.000	0.000	47910.000	47480.000	48200.000	92.328%	98.060
2	11:02:13	481.500	5159.000	0.000	48290.000	48010.000	48180.000	92.091%	95.750
3	11:02:39	475.100	5126.000	0.000	48440.000	48410.000	48220.000	92.320%	99.290
X		95.139%	102.945%	0.000	96.426%	95.932%	96.398%	92.246%	97.701%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.135%	n/a
%RSD		1.156	0.355	0.000	0.567	0.977	0.050	0.146	1.839
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:47	95.040	96.460	534.600	24830.000	27020.000	99.940	100.800	101.400
2	11:02:13	98.110	100.000	545.600	25800.000	27790.000	101.500	104.000	101.900
3	11:02:39	97.830	99.770	550.000	25920.000	27980.000	102.400	103.600	102.400
X		96.996%	98.746%	108.682%	102.073%	110.390%	101.290%	102.789%	101.890%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.749	2.008	1.459	2.338	1.834	1.251	1.663	0.499
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:47	100.500	99.250	99.310	96.570	99.740	99.990	0.000	95.830
2	11:02:13	101.700	102.400	103.300	97.960	96.210	100.000	0.000	97.030
3	11:02:39	102.700	102.100	104.300	98.170	95.990	104.000	0.000	97.070
X		101.643%	101.221%	102.330%	97.566%	97.315%	101.322%	0.000	96.643%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.104	1.690	2.604	0.890	2.160	2.259	0.000	0.732
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:47	89.735%	96.390	96.300	86.165%	97.070	97.340	97.290	95.860
2	11:02:13	90.895%	100.400	99.980	86.882%	97.960	97.800	98.840	97.520
3	11:02:39	91.461%	100.900	102.800	87.736%	98.090	98.290	99.140	98.560
X		90.697%	99.208%	99.688%	86.928%	97.708%	97.812%	98.420%	97.315%
σ		0.880%	n/a	n/a	0.786%	n/a	n/a	n/a	n/a
%RSD		0.970	2.473	3.259	0.904	0.568	0.487	1.009	1.398
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:47	86.586%	95.800	97.740	97.210	95.870	95.740	89.419%	90.711%
2	11:02:13	88.088%	96.380	98.690	98.410	97.290	98.110	91.304%	91.584%
3	11:02:39	87.685%	98.240	100.100	98.170	95.640	96.950	92.280%	92.513%
X		87.453%	96.809%	98.838%	97.929%	96.268%	96.934%	91.001%	91.603%
σ		0.777%	n/a	n/a	n/a	n/a	n/a	1.454%	0.901%
%RSD		0.889	1.316	1.192	0.653	0.928	1.221	1.598	0.984
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:01:47	102.300	101.800	102.800	104.200	103.200	84.326%		
2	11:02:13	106.300	105.300	108.300	108.200	108.500	83.854%		
3	11:02:39	106.200	103.600	106.400	108.300	107.700	85.108%		
X		104.975%	103.548%	105.835%	106.891%	106.466%	84.429%		
σ		n/a	n/a	n/a	n/a	n/a	0.633%		
%RSD		2.173	1.674	2.681	2.162	2.679	0.750		

CCB2 3/12/2015 11:08:44 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:11	102.116%	-0.015	0.735	0.326	0.000	4.769	3.077	2.856
2	11:09:37	102.795%	-0.040	-2.088	-2.203	0.000	4.090	3.028	2.849
3	11:10:04	99.970%	-0.040	-3.696	-2.690	0.000	4.226	2.399	2.890
X		101.627%	-0.031	-1.683	-1.522	0.000	4.362	2.835	2.865
σ		1.474%	0.014	2.243	1.619	0.000	0.359	0.378	0.022
%RSD		1.451	46.020	133.300	106.300	0.000	8.236	13.340	0.757
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:11	-0.597	39.000	0.000	3.761	-4.468	3.692	96.641%	-0.418
2	11:09:37	-0.687	6.116	0.000	2.146	-3.195	2.272	95.190%	-0.442
3	11:10:04	-0.641	3.251	0.000	3.156	0.525	4.663	94.234%	-0.441
X		-0.642	16.120	0.000	3.021	-2.379	3.542	95.355%	-0.434
σ		0.045	19.860	0.000	0.816	2.594	1.203	1.212%	0.014
%RSD		7.026	123.200	0.000	27.020	109.000	33.950	1.271	3.223
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:11	0.024	-0.058	0.053	4.273	5.302	0.003	-0.003	-0.057
2	11:09:37	0.008	-0.042	0.040	4.173	6.377	0.009	-0.055	-0.056
3	11:10:04	0.025	0.009	0.047	2.657	3.916	0.006	-0.025	-0.036
X		0.019	-0.030	0.047	3.701	5.198	0.006	-0.028	-0.050
σ		0.009	0.035	0.007	0.906	1.234	0.003	0.026	0.012
%RSD		49.220	115.700	14.770	24.460	23.730	55.320	93.720	24.160
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:11	-0.029	-0.087	-0.077	0.227	-0.486	1.155	0.000	0.008
2	11:09:37	-0.065	-0.024	0.026	0.031	-0.312	0.153	0.000	0.015
3	11:10:04	-0.088	0.101	-0.076	0.172	-0.465	1.099	0.000	0.009
X		-0.061	-0.004	-0.042	0.143	-0.421	0.802	0.000	0.011
σ		0.030	0.096	0.059	0.101	0.095	0.563	0.000	0.004
%RSD		49.370	2705.000	140.400	70.690	22.590	70.160	0.000	34.750
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:11	94.538%	0.279	0.259	93.934%	-0.061	-0.070	0.010	-0.046
2	11:09:37	96.194%	0.273	0.274	94.984%	-0.052	-0.065	0.010	0.037
3	11:10:04	96.436%	0.236	0.212	95.352%	-0.051	-0.055	0.010	-0.067
X		95.723%	0.263	0.248	94.757%	-0.055	-0.063	0.010	-0.025
σ		1.033%	0.024	0.032	0.736%	0.006	0.008	0.000	0.055
%RSD		1.079	8.993	13.060	0.777	11.020	12.310	1.418	215.700
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:11	92.730%	-0.797	-0.109	-0.076	-0.005	0.003	92.895%	93.653%
2	11:09:37	94.231%	-0.823	-0.108	-0.129	0.016	-0.011	97.281%	95.997%
3	11:10:04	95.370%	-0.782	-0.114	-0.122	-0.014	0.005	97.178%	97.290%
X		94.110%	-0.800	-0.110	-0.109	-0.001	-0.001	95.785%	95.647%
σ		1.324%	0.021	0.003	0.029	0.015	0.009	2.503%	1.844%
%RSD		1.407	2.564	2.826	26.140	1862.000	812.500	2.613	1.928
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:09:11	0.006	0.011	0.006	-0.009	0.002	94.487%		
2	11:09:37	0.018	0.008	0.002	-0.016	-0.008	96.011%		
3	11:10:04	0.002	0.013	-0.011	0.005	0.005	94.755%		
X		0.009	0.011	-0.001	-0.006	-0.000	95.084%		
σ		0.008	0.003	0.009	0.011	0.007	0.814%		
%RSD		92.770	25.330	799.400	165.900	2159.000	0.856		

180-41613-B-8-A 3/12/2015 11:13:05 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:31	98.929%	-0.004	101.100	103.500	0.000	29880.000	8918.000	8933.000
2	11:13:57	96.650%	0.024	103.700	100.200	0.000	30230.000	9243.000	9138.000
3	11:14:24	97.327%	0.005	102.400	98.500	0.000	29950.000	9139.000	9083.000
X		97.635%	0.008	102.400	100.700	0.000	30020.000	9100.000	9051.000
σ		1.170%	0.014	1.278	2.554	0.000	185.300	166.000	105.900
%RSD		1.199	173.000	1.248	2.536	0.000	0.617	1.825	1.170
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:31	100.200	4810.000	0.000	3069.000	101700.000	103700.000	79.862%	2.508
2	11:13:57	104.800	4831.000	0.000	3113.000	103200.000	105300.000	76.698%	2.513
3	11:14:24	103.000	4842.000	0.000	3136.000	102500.000	106600.000	75.437%	2.692
X		102.700	4828.000	0.000	3106.000	102400.000	105200.000	77.332%	2.571
σ		2.314	16.100	0.000	33.820	754.200	1451.000	2.280%	0.105
%RSD		2.254	0.334	0.000	1.089	0.736	1.379	2.948	4.074
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:31	0.484	3.051	673.800	587.800	1393.000	1.305	3.026	1.274
2	11:13:57	1.277	3.046	701.700	610.400	1404.000	1.352	3.061	1.340
3	11:14:24	2.608	3.008	707.000	623.600	1387.000	1.330	2.979	1.352
X		1.456	3.035	694.200	607.300	1395.000	1.329	3.022	1.322
σ		1.073	0.024	17.820	18.120	8.862	0.024	0.041	0.042
%RSD		73.680	0.782	2.567	2.983	0.635	1.769	1.363	3.201
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:31	1.153	22.230	21.940	-2.116	-1.260	1.327	0.000	173.800
2	11:13:57	1.332	23.470	22.040	1.011	-0.475	1.382	0.000	175.600
3	11:14:24	1.256	23.510	22.960	-0.166	-0.760	1.659	0.000	177.700
X		1.247	23.070	22.310	-0.424	-0.832	1.456	0.000	175.700
σ		0.090	0.728	0.563	1.579	0.398	0.178	0.000	1.966
%RSD		7.186	3.156	2.525	372.700	47.790	12.210	0.000	1.119
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:31	85.337%	0.476	0.490	82.363%	-0.027	-0.051	0.051	0.042
2	11:13:57	86.302%	0.506	0.398	83.491%	-0.025	-0.041	0.050	0.005
3	11:14:24	86.759%	0.385	0.459	83.287%	-0.054	-0.074	0.077	-0.005
X		86.133%	0.456	0.449	83.047%	-0.035	-0.056	0.060	0.014
σ		0.726%	0.063	0.047	0.601%	0.016	0.017	0.015	0.025
%RSD		0.843	13.810	10.440	0.724	45.480	30.700	25.160	179.800
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:31	82.621%	-0.194	0.029	0.057	43.620	43.660	88.201%	89.674%
2	11:13:57	84.344%	-0.143	0.038	-0.002	44.200	44.400	89.211%	91.515%
3	11:14:24	83.964%	-0.212	0.006	-0.006	44.820	44.610	91.132%	92.202%
X		83.643%	-0.183	0.024	0.016	44.210	44.220	89.514%	91.130%
σ		0.905%	0.036	0.016	0.035	0.601	0.496	1.489%	1.307%
%RSD		1.082	19.600	67.060	215.300	1.360	1.121	1.663	1.434
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:13:31	0.006	0.015	0.674	0.716	0.689	85.221%		
2	11:13:57	0.012	0.015	0.779	0.663	0.722	86.086%		
3	11:14:24	0.013	0.013	0.696	0.714	0.708	87.708%		
X		0.010	0.014	0.716	0.697	0.706	86.339%		
σ		0.004	0.001	0.055	0.030	0.017	1.262%		
%RSD		39.190	5.720	7.703	4.291	2.367	1.462		

180-41613-B-9-A 3/12/2015 11:17:20 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:46	98.347%	-0.004	66.860	67.250	0.000	39810.000	19220.000	19460.000
2	11:18:12	95.212%	0.007	64.210	69.980	0.000	40340.000	20050.000	19800.000
3	11:18:39	95.085%	-0.030	60.390	67.800	0.000	39970.000	19660.000	19470.000
X		96.215%	-0.009	63.820	68.340	0.000	40040.000	19640.000	19580.000
σ		1.848%	0.019	3.253	1.447	0.000	271.800	413.100	189.200
%RSD		1.920	206.100	5.097	2.117	0.000	0.679	2.103	0.966
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:46	74.820	4457.000	0.000	6975.000	87830.000	91860.000	76.070%	2.719
2	11:18:12	75.870	4462.000	0.000	6755.000	90910.000	93640.000	74.818%	2.259
3	11:18:39	75.880	4459.000	0.000	6728.000	89020.000	94380.000	74.682%	2.314
X		75.530	4460.000	0.000	6820.000	89250.000	93290.000	75.190%	2.431
σ		0.608	2.586	0.000	135.300	1555.000	1297.000	0.765%	0.251
%RSD		0.805	0.058	0.000	1.984	1.742	1.391	1.017	10.340
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:46	2.568	3.379	361.000	398.400	1117.000	0.699	2.009	1.114
2	11:18:12	0.713	3.287	374.900	403.200	1140.000	0.739	1.991	1.223
3	11:18:39	0.690	3.206	376.500	403.300	1084.000	0.673	2.151	1.224
X		1.323	3.291	370.800	401.600	1113.000	0.704	2.050	1.187
σ		1.078	0.087	8.529	2.823	28.140	0.033	0.088	0.063
%RSD		81.460	2.629	2.300	0.703	2.528	4.713	4.291	5.296
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:46	0.825	77.320	76.350	-0.038	-1.419	0.873	0.000	245.500
2	11:18:12	1.151	78.360	78.630	1.048	-1.094	0.649	0.000	251.100
3	11:18:39	1.059	78.790	79.170	-0.117	-0.536	2.128	0.000	251.300
X		1.012	78.150	78.050	0.297	-1.016	1.216	0.000	249.300
σ		0.168	0.758	1.499	0.651	0.447	0.797	0.000	3.303
%RSD		16.600	0.970	1.921	218.900	43.930	65.550	0.000	1.325
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:46	83.734%	0.559	0.718	82.109%	-0.053	-0.064	0.025	0.070
2	11:18:12	84.951%	0.644	0.612	82.661%	-0.064	-0.060	0.025	-0.043
3	11:18:39	84.986%	0.614	0.672	82.933%	-0.045	-0.076	0.031	-0.027
X		84.557%	0.606	0.667	82.568%	-0.054	-0.067	0.027	-0.000
σ		0.713%	0.043	0.053	0.420%	0.009	0.008	0.004	0.061
%RSD		0.844	7.103	7.991	0.509	17.510	12.030	13.340	30290.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:17:46	80.827%	-0.456	0.048	0.018	52.720	53.640	88.635%	89.203%
2	11:18:12	82.299%	-0.316	-0.010	0.035	54.690	54.280	91.607%	92.127%
3	11:18:39	82.964%	-0.404	-0.023	0.034	53.530	53.770	93.439%	92.784%
X		82.030%	-0.392	0.005	0.029	53.650	53.900	91.227%	91.371%
σ		1.094%	0.070	0.038	0.009	0.993	0.338	2.424%	1.906%
%RSD		1.333	17.940	729.800	31.850	1.852	0.627	2.657	2.086
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:17:46	0.023	0.014	0.459	0.419	0.416	88.793%		
2	11:18:12	0.026	0.013	0.518	0.435	0.461	85.639%		
3	11:18:39	0.015	0.014	0.437	0.456	0.442	87.025%		
X		0.021	0.014	0.471	0.436	0.440	87.152%		
σ		0.006	0.000	0.042	0.019	0.022	1.581%		
%RSD		27.280	2.979	8.941	4.277	5.111	1.814		

180-41616-G-9-A 3/12/2015 11:21:35 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:01	104.106%	-0.023	8.340	8.875	0.000	66.210	10.730	9.504
2	11:22:28	102.242%	0.020	5.262	5.980	0.000	65.320	9.163	8.493
3	11:22:54	102.943%	-0.040	4.588	5.852	0.000	62.390	9.674	9.388
X		103.097%	-0.014	6.064	6.902	0.000	64.640	9.857	9.128
σ		0.941%	0.031	2.000	1.710	0.000	2.001	0.801	0.554
%RSD		0.913	215.200	32.990	24.770	0.000	3.096	8.128	6.065
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:01	2.528	38.960	0.000	10.800	81.170	88.750	79.254%	-0.162
2	11:22:28	2.594	11.840	0.000	8.568	67.300	83.280	78.805%	-0.223
3	11:22:54	2.348	8.110	0.000	7.661	75.010	82.790	78.305%	-0.237
X		2.490	19.640	0.000	9.008	74.490	84.940	78.788%	-0.208
σ		0.127	16.840	0.000	1.613	6.953	3.306	0.475%	0.040
%RSD		5.112	85.740	0.000	17.900	9.334	3.892	0.603	19.150
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:01	0.786	3.025	0.814	26.860	12.250	0.013	0.187	0.136
2	11:22:28	2.060	2.993	0.897	26.810	13.720	0.004	0.108	0.070
3	11:22:54	1.490	2.893	0.902	26.060	12.870	0.007	0.100	0.137
X		1.445	2.970	0.871	26.580	12.940	0.008	0.132	0.114
σ		0.639	0.069	0.049	0.446	0.736	0.004	0.048	0.038
%RSD		44.180	2.321	5.652	1.677	5.689	56.820	36.830	33.720
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:01	0.110	2.148	1.981	-0.604	-2.650	1.398	0.000	0.741
2	11:22:28	0.069	2.117	2.306	-0.028	-0.576	1.339	0.000	0.768
3	11:22:54	0.113	2.031	2.034	-0.210	-0.733	0.656	0.000	0.798
X		0.097	2.099	2.107	-0.281	-1.320	1.131	0.000	0.769
σ		0.024	0.061	0.174	0.294	1.155	0.413	0.000	0.028
%RSD		24.960	2.888	8.267	104.800	87.500	36.460	0.000	3.700
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:01	87.038%	0.030	0.023	89.133%	-0.057	-0.076	-0.002	-0.011
2	11:22:28	89.337%	0.043	0.014	89.853%	-0.055	-0.064	0.011	-0.028
3	11:22:54	89.268%	0.008	0.037	90.983%	-0.059	-0.065	0.017	0.017
X		88.547%	0.027	0.025	89.990%	-0.057	-0.068	0.008	-0.007
σ		1.308%	0.018	0.012	0.932%	0.002	0.006	0.009	0.022
%RSD		1.477	67.090	47.020	1.036	3.832	9.298	111.000	304.300
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:22:01	86.286%	-0.594	-0.127	-0.110	0.140	0.118	93.097%	93.561%
2	11:22:28	87.674%	-0.477	-0.125	-0.092	0.050	0.155	94.603%	94.429%
3	11:22:54	88.058%	-0.466	-0.134	-0.082	0.151	0.171	96.368%	97.087%
X		87.339%	-0.512	-0.128	-0.095	0.114	0.148	94.689%	95.026%
σ		0.933%	0.071	0.005	0.014	0.055	0.028	1.637%	1.837%
%RSD		1.068	13.900	3.714	15.050	48.480	18.600	1.729	1.933
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:22:01	0.004	0.001	0.213	0.193	0.207	90.908%		
2	11:22:28	-0.001	0.002	0.220	0.180	0.194	94.021%		
3	11:22:54	0.003	0.003	0.216	0.170	0.204	95.509%		
X		0.002	0.002	0.216	0.181	0.201	93.480%		
σ		0.003	0.001	0.003	0.011	0.007	2.348%		
%RSD		121.600	45.940	1.575	6.121	3.378	2.512		

180-41616-G-15-A 3/12/2015 11:25:50 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:17	103.976%	-0.040	13.180	15.000	0.000	1614.000	119.900	118.500
2	11:26:43	100.504%	-0.022	11.320	12.450	0.000	1615.000	122.400	119.900
3	11:27:10	102.024%	0.003	9.475	10.370	0.000	1628.000	123.600	122.000
X		102.168%	-0.020	11.320	12.610	0.000	1619.000	122.000	120.100
σ		1.740%	0.022	1.853	2.323	0.000	8.043	1.893	1.738
%RSD		1.703	109.600	16.360	18.420	0.000	0.497	1.552	1.447
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:17	10.860	66.360	0.000	81.280	470.100	463.200	78.509%	0.061
2	11:26:43	10.510	36.490	0.000	79.590	431.400	459.000	79.356%	0.225
3	11:27:10	10.750	32.030	0.000	80.380	437.200	463.800	77.435%	0.242
X		10.710	44.960	0.000	80.420	446.200	462.000	78.434%	0.176
σ		0.183	18.670	0.000	0.842	20.880	2.606	0.963%	0.100
%RSD		1.707	41.520	0.000	1.047	4.679	0.564	1.228	56.930
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:17	0.141	2.413	0.428	31.510	25.170	0.000	0.168	0.683
2	11:26:43	0.960	2.494	0.436	34.190	27.470	0.012	0.185	0.776
3	11:27:10	2.536	2.496	0.489	34.910	23.910	0.005	0.163	0.754
X		1.212	2.468	0.451	33.540	25.520	0.006	0.172	0.738
σ		1.217	0.048	0.033	1.791	1.806	0.006	0.012	0.048
%RSD		100.400	1.926	7.340	5.342	7.076	103.000	6.788	6.569
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:17	0.643	6.490	6.886	-0.120	-1.644	1.379	0.000	5.797
2	11:26:43	0.698	6.461	6.889	0.664	-1.737	0.810	0.000	5.814
3	11:27:10	0.717	6.691	6.868	-0.568	-0.687	0.638	0.000	5.932
X		0.686	6.547	6.881	-0.008	-1.356	0.943	0.000	5.848
σ		0.039	0.125	0.011	0.623	0.581	0.387	0.000	0.073
%RSD		5.642	1.914	0.166	7776.000	42.880	41.110	0.000	1.253
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:17	86.190%	0.011	0.007	88.507%	-0.062	-0.074	0.005	0.002
2	11:26:43	89.052%	0.039	0.028	90.606%	-0.048	-0.077	-0.002	-0.016
3	11:27:10	89.490%	0.015	0.042	90.894%	-0.043	-0.075	0.017	-0.050
X		88.244%	0.022	0.025	90.002%	-0.051	-0.075	0.006	-0.021
σ		1.793%	0.015	0.018	1.303%	0.010	0.002	0.009	0.026
%RSD		2.031	69.520	68.980	1.448	19.560	2.417	145.100	121.900
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:17	85.108%	-0.634	-0.143	-0.150	0.181	0.311	92.806%	93.632%
2	11:26:43	87.390%	-0.501	-0.095	-0.114	0.381	0.258	94.984%	95.567%
3	11:27:10	88.687%	-0.454	-0.131	-0.142	0.321	0.228	95.899%	97.578%
X		87.062%	-0.530	-0.123	-0.135	0.295	0.266	94.563%	95.592%
σ		1.812%	0.093	0.025	0.019	0.102	0.042	1.589%	1.973%
%RSD		2.081	17.630	20.240	13.860	34.760	15.850	1.680	2.064
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:26:17	0.004	0.004	0.324	0.262	0.323	90.982%		
2	11:26:43	-0.002	0.004	0.342	0.334	0.351	93.070%		
3	11:27:10	0.005	0.003	0.383	0.306	0.346	93.797%		
X		0.002	0.004	0.350	0.301	0.340	92.616%		
σ		0.004	0.000	0.031	0.036	0.015	1.461%		
%RSD		182.800	9.284	8.773	11.990	4.376	1.578		

180-41629-K-1-A 3/12/2015 11:30:05 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:32	94.271%	-0.021	78.900	80.780	0.000	74830.000	39760.000	39630.000
2	11:30:59	92.436%	-0.020	75.800	77.680	0.000	76540.000	40970.000	40520.000
3	11:31:25	91.003%	-0.001	76.830	77.860	0.000	75790.000	41110.000	40560.000
X		92.570%	-0.014	77.180	78.770	0.000	75720.000	40610.000	40240.000
σ		1.638%	0.011	1.579	1.742	0.000	858.400	740.900	523.800
%RSD		1.770	82.440	2.046	2.211	0.000	1.134	1.824	1.302
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:32	326.800	13040.000	0.000	11660.000	59880.000	63870.000	75.920%	12.120
2	11:30:59	332.300	13300.000	0.000	11810.000	62120.000	64180.000	74.932%	12.710
3	11:31:25	352.700	13520.000	0.000	11610.000	62610.000	65280.000	74.834%	12.870
X		337.300	13290.000	0.000	11690.000	61540.000	64440.000	75.229%	12.570
σ		13.620	237.300	0.000	101.600	1454.000	740.300	0.601%	0.397
%RSD		4.039	1.786	0.000	0.869	2.363	1.149	0.799	3.155
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:32	1.956	2.721	4683.000	2199.000	2675.000	2.842	9.778	8.552
2	11:30:59	0.714	2.824	4846.000	2299.000	2717.000	3.034	9.527	8.733
3	11:31:25	1.276	2.787	4904.000	2327.000	2727.000	2.915	9.862	8.987
X		1.315	2.777	4811.000	2275.000	2706.000	2.930	9.723	8.757
σ		0.622	0.052	114.900	67.240	27.440	0.097	0.174	0.219
%RSD		47.300	1.877	2.389	2.955	1.014	3.302	1.791	2.499
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:32	7.952	131.200	130.900	3.974	-0.690	3.760	0.000	408.100
2	11:30:59	8.064	133.100	133.600	4.988	-0.201	4.413	0.000	417.500
3	11:31:25	8.366	132.400	133.000	4.403	-1.489	3.869	0.000	421.000
X		8.127	132.200	132.500	4.455	-0.793	4.014	0.000	415.500
σ		0.214	0.944	1.406	0.509	0.651	0.350	0.000	6.692
%RSD		2.631	0.714	1.061	11.430	82.020	8.718	0.000	1.611
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:32	84.029%	4.928	4.784	81.374%	-0.014	-0.003	0.426	0.370
2	11:30:59	85.830%	5.445	5.148	82.605%	-0.002	-0.023	0.404	0.474
3	11:31:25	86.456%	5.315	5.140	83.474%	0.003	-0.035	0.407	0.315
X		85.438%	5.229	5.024	82.484%	-0.005	-0.020	0.413	0.386
σ		1.260%	0.269	0.208	1.055%	0.009	0.016	0.012	0.080
%RSD		1.475	5.140	4.142	1.279	189.800	78.720	2.942	20.810
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:32	80.567%	-0.604	0.270	0.291	94.290	95.250	89.284%	90.990%
2	11:30:59	82.598%	-0.562	0.290	0.308	96.860	96.140	92.642%	93.685%
3	11:31:25	83.195%	-0.601	0.268	0.313	97.260	96.290	94.082%	95.772%
X		82.120%	-0.589	0.276	0.304	96.140	95.890	92.003%	93.482%
σ		1.378%	0.024	0.012	0.011	1.613	0.559	2.462%	2.397%
%RSD		1.678	4.001	4.420	3.700	1.678	0.582	2.676	2.564
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:30:32	0.015	0.010	1.695	1.651	1.670	85.467%		
2	11:30:59	0.012	0.017	1.793	1.734	1.714	87.172%		
3	11:31:25	0.018	0.011	1.668	1.522	1.622	89.324%		
X		0.015	0.013	1.719	1.636	1.669	87.321%		
σ		0.003	0.004	0.066	0.106	0.046	1.933%		
%RSD		19.570	28.770	3.819	6.507	2.771	2.214		

MB 180-135038/1-A

3/12/2015 11:37:29 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:56	105.112%	-0.032	-2.555	-1.174	0.000	1.255	0.695	0.553
2	11:38:22	104.467%	-0.024	-3.223	-3.477	0.000	0.906	0.380	0.214
3	11:38:49	103.066%	-0.015	-5.232	-4.346	0.000	0.885	0.618	0.285
X		104.215%	-0.023	-3.670	-2.999	0.000	1.015	0.564	0.351
σ		1.046%	0.008	1.393	1.639	0.000	0.208	0.164	0.179
%RSD		1.004	36.100	37.970	54.640	0.000	20.490	29.130	50.860
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:56	-0.892	30.500	0.000	-1.132	-2.032	3.081	95.665%	-0.494
2	11:38:22	-0.874	2.503	0.000	-1.705	-6.808	2.139	95.035%	-0.468
3	11:38:49	-0.876	0.690	0.000	-1.196	0.484	2.786	94.510%	-0.455
X		-0.881	11.230	0.000	-1.344	-2.786	2.669	95.070%	-0.472
σ		0.010	16.710	0.000	0.314	3.704	0.482	0.578%	0.020
%RSD		1.098	148.800	0.000	23.360	133.000	18.060	0.608	4.253
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:56	0.091	0.023	0.083	1.698	1.314	0.001	0.012	-0.070
2	11:38:22	-0.059	-0.033	0.044	2.592	-0.604	0.002	-0.011	-0.061
3	11:38:49	0.009	0.042	0.028	2.405	-0.857	0.003	-0.003	-0.051
X		0.014	0.010	0.051	2.232	-0.049	0.002	-0.001	-0.061
σ		0.075	0.039	0.028	0.472	1.187	0.001	0.012	0.009
%RSD		550.400	372.700	54.830	21.130	2424.000	59.190	2130.000	15.290
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:56	-0.082	0.353	0.373	0.400	0.195	2.226	0.000	0.008
2	11:38:22	-0.079	0.366	0.395	0.350	0.120	1.680	0.000	0.008
3	11:38:49	-0.033	0.246	0.368	0.052	0.132	1.204	0.000	0.001
X		-0.064	0.321	0.379	0.268	0.149	1.703	0.000	0.006
σ		0.028	0.066	0.014	0.188	0.040	0.512	0.000	0.004
%RSD		42.920	20.510	3.791	70.310	27.200	30.030	0.000	70.330
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:56	95.183%	-0.039	-0.075	94.926%	-0.063	-0.080	-0.002	-0.088
2	11:38:22	97.315%	-0.044	-0.055	96.248%	-0.065	-0.075	-0.002	-0.052
3	11:38:49	97.782%	-0.023	-0.062	97.503%	-0.051	-0.070	-0.002	-0.064
X		96.760%	-0.035	-0.064	96.226%	-0.060	-0.075	-0.002	-0.068
σ		1.386%	0.011	0.010	1.288%	0.007	0.005	0.000	0.018
%RSD		1.432	31.530	15.480	1.339	12.200	6.567	0.000	27.030
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:56	93.870%	-0.991	-0.204	-0.201	-0.021	-0.002	95.201%	95.837%
2	11:38:22	95.599%	-1.007	-0.190	-0.204	0.023	-0.012	98.592%	98.947%
3	11:38:49	96.880%	-0.997	-0.191	-0.186	0.015	-0.016	100.594%	99.266%
X		95.450%	-0.998	-0.195	-0.197	0.006	-0.010	98.129%	98.017%
σ		1.510%	0.008	0.008	0.010	0.023	0.007	2.726%	1.894%
%RSD		1.582	0.796	4.095	4.911	404.800	69.320	2.778	1.932
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:37:56	0.002	0.002	0.003	-0.012	-0.003	97.109%		
2	11:38:22	0.003	-0.000	0.004	-0.015	-0.010	98.193%		
3	11:38:49	-0.001	0.000	0.004	-0.001	0.005	97.871%		
X		0.001	0.001	0.004	-0.009	-0.003	97.725%		
σ		0.002	0.001	0.001	0.007	0.007	0.556%		
%RSD		148.300	189.300	19.620	80.620	285.000	0.569		

LCS 180-135038/2-A 3/12/2015 11:41:47 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:42:14	98.931%	44.860	1035.000	1040.000	0.000	44970.000	45800.000	45480.000
2	11:42:40	99.961%	43.800	992.800	1015.000	0.000	44120.000	45360.000	44940.000
3	11:43:07	96.168%	44.050	1029.000	1029.000	0.000	43500.000	45550.000	45130.000
X		98.353%	44.240	1019.000	1028.000	0.000	44190.000	45570.000	45180.000
σ		1.961%	0.554	22.940	12.370	0.000	738.500	220.900	273.700
%RSD		1.994	1.253	2.251	1.203	0.000	1.671	0.485	0.606
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:42:14	1692.000	9464.000	0.000	45720.000	45540.000	46530.000	76.096%	951.400
2	11:42:40	1704.000	9359.000	0.000	44930.000	44840.000	46480.000	74.972%	981.700
3	11:43:07	1678.000	9323.000	0.000	43690.000	43410.000	45390.000	77.233%	946.800
X		1692.000	9382.000	0.000	44780.000	44600.000	46130.000	76.100%	960.000
σ		12.760	73.150	0.000	1022.000	1085.000	647.100	1.131%	18.960
%RSD		0.754	0.780	0.000	2.281	2.432	1.403	1.486	1.975
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:42:14	513.300	203.600	536.100	1051.000	1383.000	528.700	511.700	251.200
2	11:42:40	528.700	206.500	555.500	1085.000	1423.000	530.800	513.000	255.800
3	11:43:07	515.400	202.500	545.600	1064.000	1370.000	524.600	508.400	247.800
X		519.100	204.200	545.700	1067.000	1392.000	528.100	511.000	251.600
σ		8.341	2.093	9.706	17.130	27.510	3.150	2.389	4.006
%RSD		1.607	1.025	1.779	1.605	1.976	0.597	0.468	1.592
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:42:14	248.300	488.800	484.400	36.120	10.510	11.840	0.000	906.400
2	11:42:40	249.800	489.900	485.100	37.240	7.839	11.990	0.000	919.000
3	11:43:07	246.000	480.700	481.100	36.380	10.460	12.710	0.000	917.500
X		248.000	486.500	483.500	36.580	9.603	12.180	0.000	914.300
σ		1.921	5.023	2.143	0.584	1.528	0.465	0.000	6.890
%RSD		0.775	1.032	0.443	1.596	15.910	3.813	0.000	0.754
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:42:14	84.019%	981.200	1004.000	82.156%	47.130	47.430	48.280	40.890
2	11:42:40	85.960%	1007.000	1026.000	82.777%	46.900	47.680	48.380	39.220
3	11:43:07	86.254%	1016.000	1039.000	83.108%	47.760	47.960	49.110	39.780
X		85.411%	1001.000	1023.000	82.680%	47.260	47.690	48.590	39.960
σ		1.214%	18.010	17.960	0.484%	0.442	0.267	0.454	0.853
%RSD		1.422	1.799	1.756	0.585	0.936	0.559	0.933	2.134
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:42:14	80.156%	2029.000	485.300	480.600	1810.000	1842.000	88.991%	89.473%
2	11:42:40	83.233%	2019.000	486.900	478.800	1833.000	1869.000	90.675%	93.363%
3	11:43:07	81.229%	2089.000	501.100	493.000	1854.000	1896.000	93.426%	93.409%
X		81.539%	2046.000	491.100	484.100	1833.000	1869.000	91.031%	92.082%
σ		1.562%	37.850	8.681	7.737	21.750	26.890	2.239%	2.260%
%RSD		1.915	1.850	1.768	1.598	1.187	1.439	2.459	2.454
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:42:14	49.960	48.910	20.560	20.640	20.720	82.773%		
2	11:42:40	49.970	49.410	20.410	20.680	20.610	86.509%		
3	11:43:07	50.730	50.690	21.690	20.990	21.070	86.067%		
X		50.220	49.670	20.880	20.770	20.800	85.116%		
σ		0.441	0.917	0.702	0.191	0.240	2.041%		
%RSD		0.877	1.846	3.363	0.919	1.153	2.398		

LCSD 180-135038/3-A 3/12/2015 11:46:04 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:31	101.576%	42.710	985.000	1009.000	0.000	43030.000	44760.000	44880.000
2	11:46:58	96.845%	44.810	1039.000	1044.000	0.000	44470.000	46680.000	46250.000
3	11:47:24	99.675%	43.260	968.400	1000.000	0.000	42780.000	45390.000	44850.000
X		99.365%	43.590	997.400	1018.000	0.000	43430.000	45610.000	45330.000
σ		2.380%	1.091	36.760	23.470	0.000	914.300	975.500	799.800
%RSD		2.395	2.504	3.685	2.306	0.000	2.105	2.139	1.765
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:31	1672.000	9493.000	0.000	45750.000	45790.000	47030.000	76.207%	969.100
2	11:46:58	1702.000	9466.000	0.000	45000.000	44800.000	46000.000	76.027%	981.000
3	11:47:24	1690.000	9242.000	0.000	44430.000	44520.000	45770.000	75.560%	969.100
X		1688.000	9401.000	0.000	45060.000	45030.000	46270.000	75.932%	973.100
σ		15.200	137.700	0.000	660.400	668.200	670.200	0.334%	6.876
%RSD		0.901	1.465	0.000	1.466	1.484	1.449	0.439	0.707
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:31	520.600	201.600	544.900	1071.000	1626.000	537.300	518.800	257.800
2	11:46:58	524.400	205.400	555.300	1087.000	1410.000	540.500	520.700	260.700
3	11:47:24	524.600	208.600	560.700	1095.000	1402.000	535.100	526.900	260.500
X		523.200	205.200	553.600	1084.000	1480.000	537.600	522.100	259.700
σ		2.259	3.481	8.080	12.430	127.000	2.726	4.250	1.618
%RSD		0.432	1.697	1.459	1.146	8.586	0.507	0.814	0.623
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:31	253.200	498.300	492.100	37.700	8.473	12.580	0.000	950.700
2	11:46:58	255.200	498.800	496.100	38.240	8.003	12.430	0.000	963.100
3	11:47:24	257.000	502.500	503.100	36.910	9.264	13.180	0.000	970.500
X		255.100	499.800	497.100	37.620	8.580	12.730	0.000	961.500
σ		1.879	2.295	5.587	0.665	0.637	0.394	0.000	10.020
%RSD		0.736	0.459	1.124	1.769	7.427	3.099	0.000	1.042
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:31	80.551%	1017.000	1030.000	82.060%	47.120	47.490	47.330	41.350
2	11:46:58	81.906%	1041.000	1043.000	83.240%	47.150	47.770	49.440	40.030
3	11:47:24	82.034%	1046.000	1058.000	82.686%	46.780	47.290	48.440	40.620
X		81.497%	1034.000	1044.000	82.662%	47.010	47.520	48.400	40.670
σ		0.822%	15.370	13.640	0.590%	0.205	0.244	1.056	0.661
%RSD		1.008	1.486	1.307	0.714	0.435	0.513	2.182	1.626
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:46:31	81.149%	2013.000	485.700	478.200	1815.000	1843.000	90.155%	90.561%
2	11:46:58	81.241%	2082.000	495.400	491.400	1863.000	1894.000	91.574%	92.186%
3	11:47:24	82.351%	2058.000	495.600	485.500	1866.000	1895.000	93.176%	94.177%
X		81.580%	2051.000	492.200	485.000	1848.000	1878.000	91.635%	92.308%
σ		0.669%	35.080	5.655	6.640	28.450	29.640	1.511%	1.811%
%RSD		0.820	1.711	1.149	1.369	1.539	1.578	1.649	1.962
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:46:31	50.150	49.440	20.510	20.380	20.630	83.560%		
2	11:46:58	51.740	50.150	21.120	20.950	20.920	84.678%		
3	11:47:24	50.600	49.490	20.560	20.800	20.550	87.094%		
X		50.830	49.690	20.730	20.710	20.700	85.111%		
σ		0.820	0.398	0.337	0.299	0.197	1.806%		
%RSD		1.612	0.800	1.627	1.442	0.952	2.122		

180-41727-I-1-A 3/12/2015 11:50:22 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:49	95.290%	-0.030	358.500	374.000	0.000	208800.000	4996.000	5033.000
2	11:51:15	93.738%	-0.048	372.200	387.300	0.000	211600.000	5105.000	5188.000
3	11:51:42	91.604%	0.037	371.600	377.600	0.000	209900.000	5229.000	5098.000
X		93.544%	-0.014	367.400	379.600	0.000	210100.000	5110.000	5106.000
σ		1.851%	0.045	7.753	6.919	0.000	1392.000	116.700	77.420
%RSD		1.978	326.100	2.110	1.823	0.000	0.663	2.284	1.516
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:49	29.670	2768.000	0.000	2826.000	14010.000	14060.000	76.196%	1.194
2	11:51:15	31.150	2682.000	0.000	2850.000	14320.000	14640.000	75.035%	1.153
3	11:51:42	31.140	2670.000	0.000	2815.000	14340.000	14430.000	73.960%	1.010
X		30.650	2707.000	0.000	2830.000	14220.000	14380.000	75.064%	1.119
σ		0.852	53.360	0.000	17.630	186.700	297.500	1.118%	0.097
%RSD		2.781	1.971	0.000	0.623	1.312	2.070	1.490	8.625
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:49	0.703	2.050	21.120	74.470	170.800	0.186	0.961	3.833
2	11:51:15	0.628	2.138	21.590	76.380	174.800	0.190	0.993	4.065
3	11:51:42	1.737	2.095	22.060	77.530	169.800	0.172	0.935	4.353
X		1.023	2.094	21.590	76.130	171.800	0.183	0.963	4.083
σ		0.620	0.044	0.472	1.543	2.608	0.009	0.029	0.261
%RSD		60.570	2.099	2.186	2.026	1.518	5.052	3.018	6.388
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:49	1.661	3.140	2.647	1.027	5.544	10.000	0.000	1349.000
2	11:51:15	1.966	3.012	3.373	-0.022	6.221	11.560	0.000	1393.000
3	11:51:42	1.963	3.348	3.361	1.624	5.632	9.815	0.000	1378.000
X		1.863	3.166	3.127	0.876	5.799	10.460	0.000	1373.000
σ		0.176	0.170	0.416	0.833	0.368	0.959	0.000	22.560
%RSD		9.421	5.355	13.290	95.090	6.345	9.172	0.000	1.643
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:49	84.387%	25.370	24.960	82.137%	-0.061	-0.060	0.039	0.043
2	11:51:15	84.524%	23.950	24.060	81.995%	-0.063	-0.071	0.052	-0.060
3	11:51:42	84.940%	22.430	22.200	86.855%	-0.053	-0.064	0.024	-0.091
X		84.617%	23.920	23.740	83.662%	-0.059	-0.065	0.038	-0.036
σ		0.288%	1.468	1.409	2.766%	0.005	0.005	0.014	0.070
%RSD		0.341	6.137	5.934	3.306	8.969	8.408	36.060	194.600
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:50:49	81.473%	6.135	1.436	1.504	152.300	153.600	89.717%	89.859%
2	11:51:15	81.586%	4.763	1.497	1.574	158.000	159.500	90.807%	90.835%
3	11:51:42	82.580%	3.163	1.403	1.509	158.700	157.500	90.789%	92.756%
X		81.879%	4.687	1.445	1.529	156.300	156.900	90.438%	91.150%
σ		0.609%	1.487	0.048	0.039	3.494	2.973	0.624%	1.474%
%RSD		0.744	31.730	3.314	2.547	2.235	1.895	0.690	1.617
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:50:49	0.225	0.248	0.434	0.370	0.405	84.261%		
2	11:51:15	0.089	0.109	0.373	0.379	0.366	86.989%		
3	11:51:42	0.087	0.092	0.377	0.400	0.410	85.873%		
X		0.134	0.150	0.395	0.383	0.394	85.708%		
σ		0.079	0.086	0.034	0.015	0.024	1.372%		
%RSD		59.210	57.140	8.618	3.993	6.176	1.601		

180-41730-I-1-A 3/12/2015 11:54:42 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:09	96.256%	-0.012	50.670	53.050	0.000	99880.000	29160.000	28950.000
2	11:55:35	98.334%	-0.013	49.920	50.460	0.000	99260.000	29220.000	29210.000
3	11:56:02	98.964%	-0.013	46.750	48.720	0.000	100800.000	29960.000	28830.000
X		97.851%	-0.013	49.110	50.740	0.000	99990.000	29450.000	29000.000
σ		1.417%	0.000	2.079	2.179	0.000	787.400	447.700	192.000
%RSD		1.448	3.580	4.233	4.294	0.000	0.788	1.520	0.662
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:09	37.970	4480.000	0.000	2639.000	196100.000	198900.000	77.422%	1.407
2	11:55:35	36.940	4502.000	0.000	2627.000	198100.000	204000.000	77.211%	1.315
3	11:56:02	41.700	4435.000	0.000	2625.000	202100.000	203800.000	76.713%	1.036
X		38.870	4472.000	0.000	2630.000	198800.000	202200.000	77.116%	1.253
σ		2.503	34.410	0.000	7.578	3075.000	2925.000	0.364%	0.193
%RSD		6.439	0.769	0.000	0.288	1.547	1.446	0.472	15.410
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:09	0.123	2.491	259.400	161.400	1822.000	1.389	4.273	2.188
2	11:55:35	0.775	2.447	266.300	163.700	1760.000	1.390	3.706	2.241
3	11:56:02	0.378	2.515	272.000	170.700	1795.000	1.374	4.345	2.216
X		0.426	2.484	265.900	165.300	1792.000	1.384	4.108	2.215
σ		0.329	0.035	6.328	4.856	31.290	0.009	0.350	0.027
%RSD		77.240	1.398	2.380	2.938	1.746	0.656	8.515	1.213
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:09	1.680	5.780	6.197	0.077	6.756	13.600	0.000	712.600
2	11:55:35	1.625	6.186	5.304	1.641	5.284	14.860	0.000	712.000
3	11:56:02	1.516	6.020	5.873	-0.348	4.681	14.570	0.000	713.600
X		1.607	5.996	5.791	0.456	5.574	14.340	0.000	712.700
σ		0.084	0.204	0.452	1.047	1.067	0.658	0.000	0.802
%RSD		5.200	3.405	7.802	229.500	19.150	4.586	0.000	0.113
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:09	83.455%	2.825	2.632	84.072%	-0.065	-0.068	0.046	-0.027
2	11:55:35	85.462%	2.792	2.792	80.620%	-0.071	-0.074	0.039	-0.007
3	11:56:02	86.439%	2.693	2.527	80.987%	-0.063	-0.061	0.012	-0.044
X		85.119%	2.770	2.650	81.893%	-0.066	-0.067	0.032	-0.026
σ		1.521%	0.069	0.134	1.896%	0.004	0.006	0.018	0.019
%RSD		1.787	2.481	5.044	2.315	5.708	9.000	56.300	72.300
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:09	79.605%	0.207	0.209	0.330	230.200	230.300	87.201%	88.439%
2	11:55:35	81.347%	0.129	0.261	0.227	231.400	232.200	90.300%	91.347%
3	11:56:02	82.574%	0.075	0.201	0.307	232.200	231.000	90.691%	91.408%
X		81.175%	0.137	0.224	0.288	231.300	231.200	89.397%	90.398%
σ		1.492%	0.066	0.033	0.054	1.021	0.949	1.912%	1.697%
%RSD		1.838	48.340	14.810	18.780	0.442	0.410	2.139	1.877
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:55:09	0.045	0.030	0.102	0.113	0.116	84.739%		
2	11:55:35	0.031	0.023	0.105	0.110	0.125	82.789%		
3	11:56:02	0.035	0.033	0.107	0.091	0.115	84.078%		
X		0.037	0.028	0.104	0.105	0.119	83.869%		
σ		0.007	0.005	0.003	0.012	0.006	0.992%		
%RSD		19.540	18.820	2.399	11.250	4.832	1.183		

CCV 1487954 3/12/2015 11:59:00 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:26	101.774%	98.080	111.700	106.700	0.000	48460.000	48000.000	47960.000
2	11:59:53	99.652%	99.750	100.300	103.800	0.000	48280.000	48930.000	49240.000
3	12:00:20	100.719%	96.310	110.900	101.500	0.000	47990.000	48700.000	49050.000
X		100.715%	98.047%	107.645%	104.018%	0.000	96.483%	97.082%	97.500%
σ		1.061%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.054	1.759	5.893	2.505	0.000	0.487	1.002	1.420
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:26	476.600	5231.000	0.000	49050.000	47470.000	48160.000	95.922%	100.300
2	11:59:53	483.800	5289.000	0.000	49040.000	49160.000	49210.000	95.696%	101.800
3	12:00:20	484.300	5233.000	0.000	48870.000	48540.000	49340.000	95.154%	100.100
X		96.312%	105.027%	0.000	97.976%	96.784%	97.810%	95.591%	100.719%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.395%	n/a
%RSD		0.892	0.628	0.000	0.207	1.762	1.319	0.413	0.962
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:26	97.270	97.810	533.100	24850.000	27060.000	99.970	98.770	100.400
2	11:59:53	100.200	101.700	553.300	25770.000	28110.000	102.100	103.600	103.600
3	12:00:20	99.530	101.000	560.500	26050.000	28370.000	102.800	104.600	103.400
X		98.988%	100.158%	109.792%	102.231%	111.374%	101.635%	102.314%	102.486%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.535	2.065	2.589	2.453	2.496	1.461	3.038	1.777
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:26	100.200	101.100	99.390	100.100	97.170	104.100	0.000	95.590
2	11:59:53	102.800	101.200	101.300	98.210	98.310	100.800	0.000	97.230
3	12:00:20	102.800	104.200	101.200	100.800	100.200	102.600	0.000	96.700
X		101.959%	102.162%	100.641%	99.690%	98.546%	102.510%	0.000	96.504%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.456	1.719	1.075	1.337	1.529	1.654	0.000	0.866
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:26	92.454%	97.760	97.700	88.320%	97.440	97.750	97.010	96.110
2	11:59:53	93.470%	101.200	100.900	88.789%	98.290	98.570	99.140	99.520
3	12:00:20	94.868%	102.200	103.100	89.549%	98.560	98.800	99.050	98.490
X		93.597%	100.389%	100.549%	88.886%	98.096%	98.375%	98.402%	98.041%
σ		1.212%	n/a	n/a	0.621%	n/a	n/a	n/a	n/a
%RSD		1.294	2.331	2.696	0.698	0.594	0.559	1.223	1.785
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:26	87.732%	96.730	98.000	98.810	95.760	95.040	92.543%	91.469%
2	11:59:53	89.415%	97.370	100.300	98.860	96.290	97.630	93.613%	92.958%
3	12:00:20	89.422%	98.770	100.700	99.200	99.580	99.530	94.632%	94.783%
X		88.856%	97.624%	99.670%	98.956%	97.209%	97.400%	93.596%	93.070%
σ		0.974%	n/a	n/a	n/a	n/a	n/a	1.044%	1.660%
%RSD		1.096	1.071	1.467	0.211	2.128	2.311	1.116	1.783
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:59:26	105.000	103.200	104.500	105.500	104.200	84.201%		
2	11:59:53	105.800	104.600	107.200	107.200	106.900	85.369%		
3	12:00:20	105.900	105.500	109.100	107.800	107.300	85.714%		
X		105.555%	104.427%	106.942%	106.821%	106.143%	85.095%		
σ		n/a	n/a	n/a	n/a	n/a	0.793%		
%RSD		0.458	1.071	2.164	1.128	1.588	0.932		

CCB3 3/12/2015 12:06:24 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:50	103.940%	-0.040	0.898	0.688	0.000	5.970	4.078	3.220
2	12:07:17	106.510%	-0.000	-2.815	-1.510	0.000	5.488	3.978	3.374
3	12:07:43	105.735%	-0.024	-3.697	-2.937	0.000	5.328	2.816	3.300
X		105.395%	-0.021	-1.871	-1.253	0.000	5.595	3.624	3.298
σ		1.318%	0.020	2.439	1.826	0.000	0.334	0.701	0.077
%RSD		1.251	94.420	130.300	145.700	0.000	5.971	19.350	2.344
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:50	-0.623	47.530	0.000	7.687	11.090	4.498	101.929%	-0.447
2	12:07:17	-0.591	9.962	0.000	6.671	-0.015	5.047	99.726%	-0.470
3	12:07:43	-0.584	5.296	0.000	6.623	1.230	5.380	98.821%	-0.457
X		-0.599	20.930	0.000	6.994	4.102	4.975	100.159%	-0.458
σ		0.021	23.150	0.000	0.601	6.084	0.446	1.599%	0.012
%RSD		3.518	110.600	0.000	8.596	148.300	8.960	1.596	2.558
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:50	-0.043	-0.048	0.032	6.828	11.200	0.014	-0.018	-0.034
2	12:07:17	0.015	-0.002	0.035	7.317	7.374	0.012	0.033	-0.053
3	12:07:43	0.006	-0.016	0.026	5.417	5.656	0.010	0.056	-0.057
X		-0.007	-0.022	0.031	6.520	8.078	0.012	0.024	-0.048
σ		0.032	0.024	0.005	0.986	2.840	0.002	0.038	0.012
%RSD		440.100	109.400	14.740	15.130	35.150	19.410	157.800	25.210
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:50	-0.053	0.096	-0.063	0.342	0.478	2.275	0.000	0.014
2	12:07:17	-0.047	-0.091	-0.112	0.524	0.218	2.609	0.000	0.016
3	12:07:43	-0.089	0.088	-0.018	0.551	0.538	2.996	0.000	0.021
X		-0.063	0.031	-0.065	0.472	0.411	2.626	0.000	0.017
σ		0.023	0.106	0.047	0.114	0.171	0.361	0.000	0.003
%RSD		35.840	341.600	72.680	24.090	41.460	13.740	0.000	20.570
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:50	94.966%	0.232	0.196	95.013%	-0.049	-0.067	0.004	0.004
2	12:07:17	97.875%	0.232	0.182	96.030%	-0.049	-0.064	0.004	-0.042
3	12:07:43	98.862%	0.179	0.193	96.621%	-0.046	-0.059	0.010	0.002
X		97.234%	0.214	0.191	95.888%	-0.048	-0.063	0.006	-0.012
σ		2.025%	0.031	0.007	0.813%	0.002	0.004	0.003	0.026
%RSD		2.083	14.330	3.933	0.848	3.776	5.725	55.070	213.100
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:50	94.098%	-0.853	-0.128	-0.135	0.002	0.006	94.541%	94.900%
2	12:07:17	94.722%	-0.782	-0.126	-0.126	0.038	0.022	97.748%	98.045%
3	12:07:43	96.736%	-0.813	-0.136	-0.149	0.015	0.005	98.551%	98.679%
X		95.185%	-0.816	-0.130	-0.137	0.019	0.011	96.947%	97.208%
σ		1.379%	0.035	0.005	0.012	0.018	0.010	2.122%	2.024%
%RSD		1.449	4.336	3.827	8.844	99.360	86.770	2.189	2.082
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:06:50	0.012	0.022	-0.008	-0.022	-0.007	96.548%		
2	12:07:17	0.010	0.007	0.001	-0.008	0.000	97.207%		
3	12:07:43	0.020	0.014	-0.019	-0.004	-0.002	96.878%		
X		0.014	0.014	-0.009	-0.011	-0.003	96.878%		
σ		0.005	0.007	0.010	0.009	0.004	0.330%		
%RSD		37.530	50.260	114.700	81.100	139.300	0.340		

180-41767-H-1-A 3/12/2015 12:10:44 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:11	103.503%	-0.023	48.420	44.720	0.000	8545.000	27690.000	27080.000
2	12:11:38	99.198%	-0.031	47.350	46.780	0.000	8573.000	28630.000	27980.000
3	12:12:04	99.259%	-0.022	43.280	43.450	0.000	8500.000	28430.000	28390.000
X		100.653%	-0.025	46.350	44.990	0.000	8539.000	28250.000	27820.000
σ		2.468%	0.005	2.710	1.679	0.000	36.790	492.400	673.300
%RSD		2.452	18.960	5.846	3.732	0.000	0.431	1.743	2.420
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:11	1.734	8190.000	0.000	2356.000	99040.000	102300.000	83.182%	1.188
2	12:11:38	1.894	8352.000	0.000	2390.000	102800.000	104500.000	79.979%	1.269
3	12:12:04	2.049	8307.000	0.000	2358.000	100800.000	105100.000	77.458%	0.783
X		1.893	8283.000	0.000	2368.000	100900.000	104000.000	80.206%	1.080
σ		0.158	83.490	0.000	19.070	1905.000	1486.000	2.868%	0.260
%RSD		8.339	1.008	0.000	0.805	1.888	1.429	3.576	24.090
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:11	2.297	2.646	147.900	157.000	1025.000	0.363	0.650	0.299
2	12:11:38	0.615	2.407	152.600	163.300	1028.000	0.350	0.522	0.303
3	12:12:04	0.353	2.437	154.800	162.400	970.500	0.347	0.508	0.344
X		1.088	2.497	151.800	160.900	1008.000	0.353	0.560	0.316
σ		1.055	0.130	3.496	3.362	32.340	0.009	0.078	0.025
%RSD		96.910	5.202	2.303	2.090	3.209	2.411	13.920	7.923
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:11	0.471	2.613	2.545	0.168	-1.687	3.039	0.000	1112.000
2	12:11:38	0.593	2.874	2.751	2.717	-1.111	3.768	0.000	1134.000
3	12:12:04	0.549	2.987	2.274	2.614	-1.258	3.208	0.000	1136.000
X		0.537	2.825	2.524	1.833	-1.352	3.339	0.000	1128.000
σ		0.062	0.191	0.239	1.443	0.299	0.382	0.000	13.410
%RSD		11.550	6.774	9.472	78.740	22.150	11.440	0.000	1.189
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:11	85.659%	1.134	0.938	82.597%	-0.039	-0.062	0.012	-0.039
2	12:11:38	85.760%	1.064	0.897	82.910%	-0.046	-0.062	0.025	-0.091
3	12:12:04	86.804%	1.001	0.933	83.907%	-0.054	-0.085	0.005	-0.010
X		86.074%	1.066	0.923	83.138%	-0.046	-0.069	0.014	-0.047
σ		0.634%	0.066	0.023	0.684%	0.008	0.013	0.010	0.041
%RSD		0.737	6.231	2.461	0.823	16.340	19.310	73.950	88.450
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:11	81.632%	-0.149	-0.033	0.012	176.800	180.100	87.554%	88.010%
2	12:11:38	82.257%	-0.062	-0.070	0.038	182.700	181.600	90.059%	91.056%
3	12:12:04	81.929%	-0.094	-0.029	0.048	183.200	184.900	91.151%	92.324%
X		81.939%	-0.102	-0.044	0.033	180.900	182.200	89.588%	90.463%
σ		0.313%	0.044	0.022	0.018	3.544	2.460	1.844%	2.217%
%RSD		0.382	43.550	50.850	56.090	1.959	1.350	2.058	2.451
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:11:11	0.008	0.016	0.052	0.031	0.060	82.982%		
2	12:11:38	0.007	0.009	0.078	0.065	0.073	84.952%		
3	12:12:04	0.002	0.006	0.049	0.044	0.051	87.376%		
X		0.006	0.010	0.060	0.046	0.061	85.103%		
σ		0.003	0.005	0.016	0.017	0.011	2.201%		
%RSD		50.810	45.510	27.340	37.140	18.150	2.586		

180-41767-H-2-A

3/12/2015 12:15:02 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:29	99.929%	0.004	36.920	35.950	0.000	8285.000	30430.000	30110.000
2	12:15:55	100.164%	0.021	30.410	29.850	0.000	8340.000	31030.000	30590.000
3	12:16:22	99.359%	-0.039	28.820	29.880	0.000	8184.000	30800.000	29970.000
X		99.817%	-0.005	32.050	31.900	0.000	8270.000	30750.000	30230.000
σ		0.414%	0.031	4.294	3.514	0.000	79.240	299.200	324.500
%RSD		0.415	668.400	13.400	11.020	0.000	0.958	0.973	1.074
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:29	1.074	6913.000	0.000	1634.000	88710.000	91380.000	78.552%	0.767
2	12:15:55	1.221	6870.000	0.000	1626.000	88690.000	94010.000	76.216%	0.804
3	12:16:22	1.121	6746.000	0.000	1597.000	89200.000	92780.000	76.787%	0.779
X		1.139	6843.000	0.000	1619.000	88870.000	92720.000	77.185%	0.783
σ		0.075	86.990	0.000	19.470	289.400	1316.000	1.218%	0.019
%RSD		6.607	1.271	0.000	1.203	0.326	1.419	1.578	2.419
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:29	2.654	2.522	351.100	171.200	888.400	0.384	0.765	0.188
2	12:15:55	-0.338	2.601	368.400	183.000	902.300	0.409	0.657	0.237
3	12:16:22	1.103	2.545	366.300	177.500	867.900	0.351	0.677	0.309
X		1.140	2.556	361.900	177.200	886.200	0.381	0.700	0.245
σ		1.496	0.040	9.481	5.908	17.330	0.029	0.057	0.061
%RSD		131.300	1.579	2.620	3.333	1.955	7.612	8.185	24.820
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:29	0.239	2.661	2.619	0.183	-2.334	2.969	0.000	733.300
2	12:15:55	0.378	2.791	2.648	1.081	-0.819	4.045	0.000	744.000
3	12:16:22	0.397	2.982	3.090	0.224	-1.211	3.600	0.000	754.000
X		0.338	2.812	2.786	0.496	-1.455	3.538	0.000	743.700
σ		0.086	0.162	0.264	0.507	0.787	0.541	0.000	10.340
%RSD		25.520	5.748	9.481	102.200	54.070	15.280	0.000	1.390
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:29	85.573%	0.749	0.717	82.867%	-0.064	-0.074	-0.002	-0.028
2	12:15:55	86.739%	0.710	0.669	83.721%	-0.051	-0.062	0.025	-0.066
3	12:16:22	86.374%	0.743	0.798	84.131%	-0.057	-0.064	-0.002	-0.075
X		86.228%	0.734	0.728	83.573%	-0.057	-0.067	0.007	-0.056
σ		0.596%	0.021	0.065	0.645%	0.006	0.006	0.015	0.025
%RSD		0.691	2.870	8.935	0.771	11.160	9.656	218.300	45.060
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:15:29	82.151%	-0.221	-0.070	-0.024	132.100	131.100	91.868%	91.528%
2	12:15:55	83.104%	-0.137	-0.082	0.027	132.500	135.000	93.159%	93.243%
3	12:16:22	83.280%	-0.148	-0.079	-0.005	135.700	136.500	92.586%	93.773%
X		82.845%	-0.169	-0.077	-0.001	133.500	134.200	92.538%	92.848%
σ		0.607%	0.046	0.006	0.026	1.934	2.782	0.647%	1.173%
%RSD		0.733	27.170	8.399	4488.000	1.449	2.073	0.699	1.264
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:15:29	0.009	0.005	0.062	0.040	0.053	86.753%		
2	12:15:55	0.007	0.008	0.073	0.031	0.070	88.723%		
3	12:16:22	0.005	0.006	0.060	0.030	0.041	89.711%		
X		0.007	0.006	0.065	0.034	0.055	88.396%		
σ		0.002	0.001	0.007	0.005	0.014	1.506%		
%RSD		24.330	20.970	10.990	15.760	26.480	1.704		

180-41767-H-3-A 3/12/2015 12:19:20 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:46	102.523%	-0.023	24.500	26.680	0.000	16680.000	21160.000	20950.000
2	12:20:13	99.168%	-0.004	23.710	24.150	0.000	16400.000	21290.000	21330.000
3	12:20:39	104.613%	-0.031	21.650	23.150	0.000	16400.000	21110.000	20980.000
X		102.101%	-0.020	23.280	24.660	0.000	16490.000	21190.000	21090.000
σ		2.747%	0.014	1.472	1.821	0.000	159.900	89.960	210.300
%RSD		2.691	70.630	6.321	7.383	0.000	0.969	0.425	0.997
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:46	1.334	6474.000	0.000	1349.000	89190.000	90950.000	79.797%	0.749
2	12:20:13	1.467	6379.000	0.000	1353.000	89850.000	92350.000	78.598%	0.562
3	12:20:39	1.352	6367.000	0.000	1321.000	88980.000	92280.000	77.790%	0.445
X		1.385	6407.000	0.000	1341.000	89340.000	91860.000	78.728%	0.585
σ		0.072	58.590	0.000	17.550	456.000	787.400	1.010%	0.153
%RSD		5.209	0.915	0.000	1.308	0.510	0.857	1.282	26.150
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:46	2.113	2.627	497.800	29.070	773.700	0.326	1.040	0.337
2	12:20:13	1.775	2.671	512.800	27.660	755.700	0.365	1.009	0.324
3	12:20:39	2.493	2.636	525.500	29.880	772.300	0.356	1.023	0.403
X		2.127	2.645	512.000	28.870	767.200	0.349	1.024	0.355
σ		0.359	0.023	13.830	1.124	9.994	0.021	0.015	0.042
%RSD		16.890	0.871	2.702	3.895	1.303	5.909	1.484	11.930
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:46	0.549	5.015	4.227	-0.063	-0.837	3.893	0.000	470.700
2	12:20:13	0.420	4.716	4.667	-0.580	-1.101	2.866	0.000	470.400
3	12:20:39	0.608	5.201	5.057	2.574	-0.793	4.440	0.000	478.900
X		0.526	4.977	4.650	0.644	-0.911	3.733	0.000	473.300
σ		0.096	0.245	0.415	1.692	0.166	0.799	0.000	4.785
%RSD		18.210	4.919	8.924	262.700	18.260	21.410	0.000	1.011
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:46	83.524%	0.051	0.051	81.958%	-0.060	-0.078	0.018	-0.001
2	12:20:13	86.151%	0.106	0.011	83.163%	-0.058	-0.075	-0.002	-0.070
3	12:20:39	87.263%	0.062	0.058	84.201%	-0.067	-0.085	0.005	-0.050
X		85.646%	0.073	0.040	83.107%	-0.062	-0.080	0.007	-0.040
σ		1.920%	0.029	0.025	1.123%	0.005	0.005	0.010	0.036
%RSD		2.242	39.600	62.520	1.351	7.644	6.157	145.300	88.560
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:46	80.865%	-0.576	-0.150	-0.088	188.500	187.100	86.048%	86.311%
2	12:20:13	81.506%	-0.502	-0.140	-0.097	191.000	189.900	89.873%	89.852%
3	12:20:39	83.782%	-0.504	-0.142	-0.080	189.300	189.200	91.793%	92.420%
X		82.051%	-0.528	-0.144	-0.088	189.600	188.700	89.238%	89.528%
σ		1.533%	0.042	0.005	0.009	1.273	1.440	2.925%	3.067%
%RSD		1.868	7.958	3.763	9.899	0.671	0.763	3.277	3.426
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:19:46	0.006	0.003	0.106	0.137	0.119	82.108%		
2	12:20:13	0.011	0.007	0.153	0.137	0.135	84.021%		
3	12:20:39	0.001	0.006	0.093	0.113	0.116	85.861%		
X		0.006	0.005	0.117	0.129	0.123	83.996%		
σ		0.005	0.002	0.031	0.014	0.011	1.876%		
%RSD		83.860	39.570	26.670	10.950	8.675	2.234		

180-41767-H-4-A 3/12/2015 12:23:38 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:04	101.373%	-0.031	17.340	20.100	0.000	18570.000	21570.000	21490.000
2	12:24:30	101.588%	-0.014	15.720	16.470	0.000	18850.000	22360.000	22140.000
3	12:24:57	99.055%	0.048	17.830	16.760	0.000	19130.000	22410.000	22120.000
X		100.672%	0.001	16.960	17.780	0.000	18850.000	22110.000	21920.000
σ		1.405%	0.042	1.104	2.018	0.000	282.400	470.800	371.700
%RSD		1.395	4130.000	6.511	11.350	0.000	1.498	2.129	1.696
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:04	1.603	5547.000	0.000	2173.000	135200.000	138400.000	83.127%	0.550
2	12:24:30	1.635	5616.000	0.000	2232.000	138400.000	141000.000	79.553%	0.782
3	12:24:57	1.558	5580.000	0.000	2173.000	139300.000	143900.000	79.125%	0.648
X		1.599	5581.000	0.000	2193.000	137700.000	141100.000	80.602%	0.660
σ		0.039	34.640	0.000	34.010	2158.000	2726.000	2.198%	0.116
%RSD		2.440	0.621	0.000	1.551	1.568	1.932	2.727	17.580
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:04	1.268	2.710	290.000	516.000	1609.000	0.528	2.069	0.852
2	12:24:30	0.406	2.880	307.100	548.300	1637.000	0.587	2.210	0.963
3	12:24:57	1.526	2.539	310.000	554.200	1597.000	0.576	1.956	0.901
X		1.066	2.710	302.400	539.500	1614.000	0.564	2.079	0.905
σ		0.587	0.171	10.800	20.590	20.760	0.031	0.127	0.056
%RSD		55.010	6.295	3.571	3.816	1.286	5.536	6.124	6.137
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:04	1.020	7.646	7.594	-0.426	-1.132	5.851	0.000	411.200
2	12:24:30	1.211	7.827	7.802	1.518	0.082	5.322	0.000	417.600
3	12:24:57	1.086	8.101	8.466	0.846	-0.365	5.296	0.000	416.900
X		1.106	7.858	7.954	0.646	-0.472	5.490	0.000	415.200
σ		0.097	0.229	0.455	0.987	0.614	0.313	0.000	3.503
%RSD		8.760	2.913	5.726	152.800	130.100	5.701	0.000	0.844
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:04	84.912%	0.124	0.095	82.870%	-0.074	-0.083	0.012	-0.023
2	12:24:30	86.401%	0.166	0.111	83.756%	-0.061	-0.070	0.005	0.069
3	12:24:57	87.246%	0.152	0.150	84.222%	-0.051	-0.071	0.011	-0.005
X		86.186%	0.148	0.118	83.616%	-0.062	-0.075	0.009	0.014
σ		1.182%	0.021	0.028	0.687%	0.011	0.007	0.004	0.049
%RSD		1.371	14.530	23.680	0.822	18.310	9.734	41.820	356.900
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:04	81.047%	-0.655	-0.143	-0.106	272.200	270.700	86.788%	87.995%
2	12:24:30	83.076%	-0.526	-0.112	-0.081	272.000	276.500	89.752%	90.901%
3	12:24:57	83.817%	-0.607	-0.124	-0.054	275.400	275.200	91.764%	93.165%
X		82.647%	-0.596	-0.127	-0.080	273.200	274.100	89.435%	90.687%
σ		1.434%	0.065	0.015	0.026	1.909	3.031	2.503%	2.592%
%RSD		1.735	10.920	12.240	31.830	0.699	1.106	2.798	2.858
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:24:04	0.039	0.038	0.067	0.064	0.069	85.660%		
2	12:24:30	0.047	0.039	0.101	0.082	0.091	82.453%		
3	12:24:57	0.030	0.034	0.090	0.046	0.073	84.983%		
X		0.039	0.037	0.086	0.064	0.078	84.365%		
σ		0.009	0.003	0.017	0.018	0.012	1.690%		
%RSD		22.560	7.337	20.030	27.940	15.180	2.004		

180-41767-H-5-A 3/12/2015 12:27:53 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:28:19	103.887%	0.002	30.740	35.610	0.000	8416.000	30490.000	30370.000
2	12:28:46	100.030%	0.021	31.510	31.280	0.000	8448.000	31460.000	31260.000
3	12:29:12	102.181%	0.003	32.780	30.050	0.000	8367.000	31370.000	30950.000
X		102.032%	0.009	31.680	32.310	0.000	8410.000	31110.000	30860.000
σ		1.933%	0.011	1.033	2.919	0.000	40.950	540.100	450.700
%RSD		1.894	125.300	3.260	9.033	0.000	0.487	1.736	1.460
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:28:19	1.331	7026.000	0.000	1625.000	87660.000	93350.000	81.543%	0.660
2	12:28:46	1.451	7034.000	0.000	1666.000	90420.000	92450.000	79.067%	0.648
3	12:29:12	1.176	6881.000	0.000	1606.000	88880.000	91640.000	80.201%	0.647
X		1.319	6980.000	0.000	1632.000	88990.000	92480.000	80.270%	0.652
σ		0.138	86.310	0.000	30.530	1387.000	854.800	1.240%	0.007
%RSD		10.470	1.236	0.000	1.870	1.559	0.924	1.544	1.120
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:28:19	2.377	2.553	348.400	179.700	919.900	0.368	0.753	0.271
2	12:28:46	1.481	2.707	360.300	188.500	908.800	0.421	0.761	0.210
3	12:29:12	-0.182	2.722	361.200	186.300	900.400	0.372	0.719	0.222
X		1.225	2.661	356.600	184.800	909.700	0.387	0.744	0.235
σ		1.298	0.094	7.133	4.552	9.775	0.029	0.022	0.032
%RSD		106.000	3.518	2.000	2.462	1.075	7.544	2.965	13.670
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:28:19	0.453	3.854	3.295	1.576	-0.617	4.591	0.000	732.800
2	12:28:46	0.525	3.713	3.573	0.199	-0.478	4.303	0.000	743.700
3	12:29:12	0.479	3.346	3.509	0.005	-1.189	2.932	0.000	747.600
X		0.486	3.638	3.459	0.594	-0.761	3.942	0.000	741.400
σ		0.036	0.262	0.146	0.856	0.377	0.887	0.000	7.691
%RSD		7.499	7.212	4.212	144.200	49.500	22.490	0.000	1.037
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:28:19	86.326%	0.634	0.674	83.574%	-0.060	-0.073	0.011	-0.112
2	12:28:46	87.838%	0.770	0.696	85.438%	-0.059	-0.082	0.011	-0.019
3	12:29:12	88.420%	0.642	0.661	86.365%	-0.056	-0.068	-0.002	-0.030
X		87.528%	0.682	0.677	85.126%	-0.058	-0.074	0.007	-0.054
σ		1.081%	0.076	0.018	1.422%	0.002	0.007	0.008	0.051
%RSD		1.235	11.180	2.597	1.670	3.005	9.952	109.300	95.380
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:28:19	83.213%	-0.343	-0.100	-0.024	134.900	131.600	88.518%	88.590%
2	12:28:46	83.782%	-0.360	-0.083	-0.013	134.800	134.900	90.994%	92.433%
3	12:29:12	85.056%	-0.339	-0.088	-0.029	133.900	133.600	91.422%	93.358%
X		84.017%	-0.347	-0.090	-0.022	134.500	133.400	90.311%	91.460%
σ		0.944%	0.011	0.009	0.008	0.534	1.698	1.568%	2.528%
%RSD		1.123	3.160	9.533	38.320	0.397	1.273	1.736	2.765
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:28:19	0.006	0.006	0.128	0.137	0.152	83.042%		
2	12:28:46	0.012	0.006	0.153	0.145	0.163	86.478%		
3	12:29:12	0.001	0.004	0.152	0.117	0.151	85.893%		
X		0.006	0.005	0.144	0.133	0.155	85.138%		
σ		0.006	0.001	0.014	0.014	0.007	1.839%		
%RSD		88.770	23.030	9.991	10.810	4.222	2.160		

180-41770-C-1-A 3/12/2015 12:32:08 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:34	85.530%	0.032	435.900	450.800	0.000	810100.000	9587.000	9521.000
2	12:33:00	88.792%	0.000	427.300	442.000	0.000	797100.000	9503.000	9442.000
3	12:33:27	85.644%	-0.028	431.100	444.800	0.000	801900.000	9596.000	9546.000
X		86.655%	0.002	431.400	445.800	0.000	803000.000	9562.000	9503.000
σ		1.851%	0.030	4.301	4.519	0.000	6587.000	51.230	54.210
%RSD		2.136	1899.000	0.997	1.014	0.000	0.820	0.536	0.570
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:34	48.750	3207.000	0.000	3910.000	18140.000	17700.000	74.444%	1.103
2	12:33:00	50.020	3135.000	0.000	3887.000	18530.000	17830.000	73.395%	0.755
3	12:33:27	53.150	3191.000	0.000	3876.000	18340.000	17870.000	71.890%	0.848
X		50.640	3178.000	0.000	3891.000	18330.000	17800.000	73.243%	0.902
σ		2.266	37.810	0.000	17.190	194.600	90.990	1.284%	0.180
%RSD		4.474	1.190	0.000	0.442	1.061	0.511	1.753	19.960
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:34	0.754	2.743	12.690	102.100	215.700	0.225	1.955	15.840
2	12:33:00	1.446	2.528	13.440	102.100	226.700	0.201	1.851	16.110
3	12:33:27	0.581	2.555	13.510	106.200	220.400	0.200	2.058	16.430
X		0.927	2.608	13.210	103.500	220.900	0.209	1.955	16.130
σ		0.458	0.118	0.450	2.359	5.494	0.014	0.103	0.295
%RSD		49.430	4.503	3.406	2.280	2.487	6.903	5.286	1.831
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:34	7.488	16.320	15.160	3.866	-0.819	12.590	0.000	2904.000
2	12:33:00	7.821	16.240	15.090	4.282	1.010	11.510	0.000	2940.000
3	12:33:27	7.774	16.120	14.710	4.934	0.729	12.690	0.000	2929.000
X		7.694	16.230	14.990	4.361	0.307	12.270	0.000	2924.000
σ		0.180	0.105	0.242	0.538	0.985	0.656	0.000	18.650
%RSD		2.344	0.648	1.612	12.350	320.900	5.345	0.000	0.638
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:34	80.759%	2.500	2.407	79.557%	-0.059	-0.050	0.012	-0.015
2	12:33:00	81.838%	2.431	2.484	80.604%	-0.026	-0.055	0.040	0.024
3	12:33:27	83.066%	2.533	2.537	80.984%	-0.027	-0.063	0.026	0.059
X		81.888%	2.488	2.476	80.382%	-0.037	-0.056	0.026	0.023
σ		1.154%	0.052	0.065	0.739%	0.019	0.007	0.014	0.037
%RSD		1.410	2.093	2.629	0.919	50.980	12.160	53.300	162.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:34	76.756%	-0.203	1.086	1.316	1230.000	1245.000	81.461%	83.106%
2	12:33:00	77.158%	-0.082	1.107	1.302	1245.000	1262.000	83.641%	85.079%
3	12:33:27	77.709%	-0.166	1.099	1.256	1248.000	1260.000	85.392%	86.694%
X		77.208%	-0.150	1.097	1.291	1241.000	1256.000	83.498%	84.960%
σ		0.478%	0.062	0.011	0.032	9.467	9.282	1.969%	1.797%
%RSD		0.620	41.180	0.961	2.440	0.763	0.739	2.358	2.115
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:32:34	0.015	0.005	0.406	0.297	0.367	78.199%		
2	12:33:00	0.008	0.008	0.390	0.292	0.378	81.099%		
3	12:33:27	0.008	0.005	0.363	0.339	0.368	83.141%		
X		0.010	0.006	0.386	0.309	0.371	80.813%		
σ		0.004	0.002	0.022	0.026	0.006	2.484%		
%RSD		42.350	31.290	5.697	8.330	1.673	3.073		

180-41770-C-1-A SD@5

3/12/2015 12:36:23 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:49	97.710%	-0.022	82.460	79.560	0.000	158300.000	1728.000	1725.000
2	12:37:16	94.482%	-0.021	74.200	78.370	0.000	155900.000	1754.000	1750.000
3	12:37:42	97.134%	-0.030	72.960	77.980	0.000	155100.000	1739.000	1745.000
X		96.442%	-0.024	76.540	78.640	0.000	156400.000	1740.000	1740.000
σ		1.721%	0.005	5.166	0.825	0.000	1703.000	12.650	13.630
%RSD		1.785	21.540	6.749	1.050	0.000	1.088	0.727	0.783
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:49	8.691	678.000	0.000	828.500	3590.000	3403.000	87.207%	-0.350
2	12:37:16	8.884	646.300	0.000	818.900	3728.000	3433.000	85.654%	-0.260
3	12:37:42	8.674	635.600	0.000	821.900	3737.000	3470.000	84.587%	-0.330
X		8.750	653.300	0.000	823.100	3685.000	3436.000	85.816%	-0.313
σ		0.117	22.040	0.000	4.948	82.200	33.500	1.318%	0.047
%RSD		1.335	3.374	0.000	0.601	2.231	0.975	1.535	15.010
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:49	0.473	0.646	2.424	24.760	49.910	0.031	0.409	3.106
2	12:37:16	0.309	0.529	2.511	24.270	40.560	0.049	0.435	3.104
3	12:37:42	-0.194	0.602	2.585	25.130	44.300	0.026	0.443	3.213
X		0.196	0.592	2.507	24.720	44.920	0.035	0.429	3.141
σ		0.348	0.059	0.081	0.431	4.706	0.012	0.018	0.063
%RSD		177.300	9.979	3.214	1.744	10.480	34.560	4.174	1.990
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:49	1.455	3.043	3.067	1.248	-0.193	5.197	0.000	603.000
2	12:37:16	1.515	3.311	2.496	1.292	0.205	4.189	0.000	589.000
3	12:37:42	1.390	3.585	2.542	0.229	-0.249	5.333	0.000	586.000
X		1.453	3.313	2.701	0.923	-0.079	4.906	0.000	592.600
σ		0.062	0.271	0.317	0.602	0.248	0.625	0.000	9.072
%RSD		4.295	8.171	11.750	65.150	314.000	12.740	0.000	1.531
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:49	85.363%	0.505	0.406	82.506%	-0.074	-0.071	-0.002	0.046
2	12:37:16	87.083%	0.457	0.447	83.663%	-0.054	-0.071	-0.002	-0.037
3	12:37:42	87.887%	0.419	0.416	84.634%	-0.059	-0.072	-0.002	-0.009
X		86.778%	0.461	0.423	83.601%	-0.062	-0.071	-0.002	0.000
σ		1.289%	0.043	0.021	1.065%	0.010	0.000	0.000	0.042
%RSD		1.486	9.322	4.996	1.274	16.860	0.530	0.000	78310.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:49	82.711%	-0.826	0.005	0.071	245.200	245.000	87.576%	87.018%
2	12:37:16	83.458%	-0.824	0.053	0.044	246.100	247.800	90.070%	90.703%
3	12:37:42	84.971%	-0.763	0.075	0.106	248.400	247.700	89.835%	90.375%
X		83.713%	-0.804	0.044	0.074	246.600	246.800	89.160%	89.365%
σ		1.151%	0.036	0.036	0.031	1.644	1.571	1.377%	2.039%
%RSD		1.375	4.473	81.020	42.520	0.667	0.636	1.545	2.282
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:36:49	-0.001	-0.001	0.052	0.034	0.051	86.239%		
2	12:37:16	0.001	0.002	0.094	0.068	0.092	82.565%		
3	12:37:42	0.003	0.000	0.102	0.077	0.093	83.100%		
X		0.001	0.001	0.083	0.060	0.079	83.968%		
σ		0.002	0.001	0.027	0.023	0.024	1.985%		
%RSD		173.300	285.100	32.340	37.790	30.590	2.364		

CCV 1487954 3/12/2015 12:48:10 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:48:36	97.429%	100.400	104.600	102.600	0.000	49250.000	46930.000	46960.000
2	12:49:03	100.691%	98.550	107.200	96.320	0.000	47280.000	46070.000	46270.000
3	12:49:29	100.352%	95.750	97.300	94.950	0.000	47670.000	45940.000	46670.000
X		99.491%	98.217%	103.012%	97.939%	0.000	96.138%	92.630%	93.273%
σ		1.793%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.802	2.361	4.966	4.137	0.000	2.172	1.166	0.739
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:48:36	464.700	5120.000	0.000	48270.000	46800.000	47200.000	98.070%	94.830
2	12:49:03	461.200	5029.000	0.000	48000.000	47680.000	48160.000	100.178%	98.260
3	12:49:29	461.500	5012.000	0.000	47500.000	47990.000	48550.000	99.428%	98.700
X		92.496%	101.073%	0.000	95.848%	94.980%	95.940%	99.226%	97.263%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.068%	n/a
%RSD		0.419	1.147	0.000	0.818	1.296	1.446	1.077	2.178
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:48:36	93.670	93.750	508.400	23960.000	25900.000	96.400	97.430	97.250
2	12:49:03	94.680	95.470	517.200	24230.000	26360.000	97.160	98.400	98.410
3	12:49:29	95.450	95.780	527.500	24650.000	26830.000	97.940	98.950	99.420
X		94.600%	94.998%	103.544%	97.129%	105.455%	97.170%	98.260%	98.356%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.947	1.153	1.840	1.430	1.756	0.791	0.783	1.104
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:48:36	97.550	98.050	95.790	97.560	102.000	102.500	0.000	94.880
2	12:49:03	99.680	99.750	98.320	97.920	94.750	102.500	0.000	95.720
3	12:49:29	100.900	98.420	100.400	100.400	98.620	101.900	0.000	95.600
X		99.388%	98.739%	98.182%	98.635%	98.463%	102.306%	0.000	95.397%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.724	0.907	2.367	1.582	3.694	0.355	0.000	0.475
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:48:36	90.814%	94.410	95.890	86.389%	95.560	95.670	94.290	93.280
2	12:49:03	91.813%	98.790	97.860	87.470%	95.550	96.600	96.500	95.710
3	12:49:29	93.119%	100.900	100.500	88.146%	96.410	96.600	95.680	95.350
X		91.915%	98.037%	98.082%	87.335%	95.839%	96.291%	95.493%	94.780%
σ		1.156%	n/a	n/a	0.886%	n/a	n/a	n/a	n/a
%RSD		1.258	3.387	2.359	1.015	0.514	0.556	1.169	1.381
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:48:36	86.391%	94.740	97.480	96.530	95.060	95.290	89.068%	87.978%
2	12:49:03	88.014%	95.480	98.350	97.380	96.100	97.350	90.633%	90.213%
3	12:49:29	89.422%	96.450	97.630	97.560	96.370	96.290	92.826%	91.123%
X		87.942%	95.557%	97.818%	97.155%	95.845%	96.310%	90.842%	89.771%
σ		1.517%	n/a	n/a	n/a	n/a	n/a	1.888%	1.618%
%RSD		1.725	0.899	0.476	0.563	0.720	1.069	2.078	1.803
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:48:36	93.320	91.820	92.620	93.320	92.000	89.754%		
2	12:49:03	98.070	95.930	96.920	97.610	97.800	88.053%		
3	12:49:29	99.210	97.030	97.630	99.090	98.710	88.402%		
X		96.867%	94.926%	95.722%	96.672%	96.172%	88.736%		
σ		n/a	n/a	n/a	n/a	n/a	0.899%		
%RSD		3.228	2.893	2.830	3.095	3.783	1.013		

CCB4 3/12/2015 12:55:36 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:02	103.053%	-0.048	-1.047	-0.381	0.000	10.110	3.666	3.835
2	12:56:29	102.638%	-0.048	-2.893	-2.583	0.000	9.516	4.370	3.740
3	12:56:55	104.244%	-0.024	-4.237	-3.788	0.000	9.144	3.573	3.659
X		103.312%	-0.040	-2.726	-2.251	0.000	9.591	3.870	3.745
σ		0.834%	0.014	1.601	1.728	0.000	0.489	0.436	0.088
%RSD		0.807	35.390	58.740	76.760	0.000	5.100	11.260	2.359
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:02	-0.526	39.580	0.000	15.300	3.994	6.295	104.632%	-0.473
2	12:56:29	-0.521	10.450	0.000	15.250	8.689	6.611	102.865%	-0.424
3	12:56:55	-0.567	7.780	0.000	14.100	8.851	6.008	101.812%	-0.447
X		-0.538	19.270	0.000	14.880	7.178	6.305	103.103%	-0.448
σ		0.025	17.640	0.000	0.681	2.759	0.301	1.425%	0.024
%RSD		4.676	91.560	0.000	4.579	38.430	4.779	1.382	5.471
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:02	0.025	-0.041	0.024	3.169	9.796	0.004	0.560	-0.053
2	12:56:29	0.032	-0.033	0.051	3.757	8.195	0.007	0.355	-0.041
3	12:56:55	0.012	-0.010	0.041	3.959	7.111	0.005	0.280	-0.034
X		0.023	-0.028	0.038	3.628	8.368	0.005	0.398	-0.042
σ		0.010	0.016	0.014	0.411	1.351	0.002	0.145	0.010
%RSD		44.340	57.260	36.370	11.320	16.140	29.060	36.420	22.820
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:02	-0.039	0.698	0.373	0.589	-0.436	3.563	0.000	0.026
2	12:56:29	-0.033	0.643	0.516	0.300	0.564	1.821	0.000	0.032
3	12:56:55	-0.061	0.470	0.660	0.378	0.105	2.875	0.000	0.029
X		-0.044	0.604	0.516	0.422	0.078	2.753	0.000	0.029
σ		0.015	0.119	0.144	0.149	0.501	0.877	0.000	0.003
%RSD		33.040	19.750	27.820	35.360	643.600	31.860	0.000	9.862
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:02	94.646%	0.126	0.188	93.565%	-0.046	-0.070	0.010	0.075
2	12:56:29	96.833%	0.188	0.141	94.632%	-0.050	-0.069	0.004	0.002
3	12:56:55	96.634%	0.092	0.119	95.398%	-0.050	-0.056	0.004	0.078
X		96.038%	0.135	0.149	94.532%	-0.049	-0.065	0.006	0.052
σ		1.210%	0.049	0.035	0.920%	0.003	0.008	0.003	0.043
%RSD		1.259	35.920	23.680	0.974	5.169	12.010	57.100	83.750
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:02	92.925%	-0.874	-0.127	-0.131	0.010	0.003	91.636%	91.748%
2	12:56:29	92.258%	-0.893	-0.143	-0.142	0.010	0.016	94.072%	94.635%
3	12:56:55	94.552%	-0.881	-0.140	-0.137	-0.006	0.006	95.864%	94.801%
X		93.245%	-0.883	-0.137	-0.137	0.005	0.008	93.857%	93.728%
σ		1.180%	0.010	0.009	0.005	0.009	0.007	2.122%	1.717%
%RSD		1.266	1.097	6.274	3.846	193.800	82.690	2.261	1.831
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:56:02	0.009	0.008	-0.007	-0.023	-0.001	93.890%		
2	12:56:29	0.008	0.009	0.013	-0.025	0.004	92.969%		
3	12:56:55	0.004	0.008	-0.009	-0.017	-0.009	94.796%		
X		0.007	0.008	-0.001	-0.022	-0.002	93.885%		
σ		0.003	0.001	0.012	0.004	0.007	0.914%		
%RSD		44.470	8.508	1164.000	18.180	303.900	0.973		

MB 180-135125/1-A

3/12/2015 12:59:54 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:20	103.019%	-0.023	-2.034	-1.596	0.000	4.007	0.096	0.443
2	13:00:46	104.429%	-0.040	-3.262	-3.434	0.000	3.659	0.623	0.391
3	13:01:12	103.131%	-0.040	-4.087	-4.088	0.000	3.427	0.568	0.135
X		103.527%	-0.034	-3.127	-3.039	0.000	3.697	0.429	0.323
σ		0.784%	0.010	1.033	1.292	0.000	0.292	0.289	0.165
%RSD		0.757	27.750	33.030	42.520	0.000	7.898	67.450	50.940
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:20	-0.786	29.610	0.000	11.530	-1.425	3.314	103.404%	-0.460
2	13:00:46	-0.865	4.836	0.000	10.860	6.439	0.340	102.846%	-0.424
3	13:01:12	-0.927	1.206	0.000	8.150	-2.496	0.895	102.710%	-0.435
X		-0.860	11.880	0.000	10.180	0.840	1.516	102.987%	-0.440
σ		0.071	15.460	0.000	1.788	4.879	1.581	0.368%	0.019
%RSD		8.234	130.100	0.000	17.570	581.100	104.300	0.357	4.226
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:20	-0.016	-0.074	-0.016	-4.527	2.204	-0.000	0.187	-0.060
2	13:00:46	0.016	-0.013	-0.025	-5.156	-0.353	-0.000	0.267	-0.049
3	13:01:12	0.024	0.022	-0.003	-4.732	-0.977	-0.003	0.075	-0.071
X		0.008	-0.022	-0.015	-4.805	0.292	-0.001	0.176	-0.060
σ		0.021	0.049	0.011	0.321	1.686	0.002	0.097	0.011
%RSD		273.000	221.700	77.730	6.675	578.200	169.300	54.910	17.700
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:20	-0.076	0.383	0.344	0.117	-0.113	2.039	0.000	0.008
2	13:00:46	-0.103	0.463	0.436	0.458	-0.425	2.841	0.000	0.004
3	13:01:12	-0.090	0.447	0.315	0.475	0.402	2.557	0.000	0.009
X		-0.089	0.431	0.365	0.350	-0.045	2.479	0.000	0.007
σ		0.013	0.042	0.064	0.202	0.418	0.407	0.000	0.002
%RSD		14.920	9.819	17.460	57.780	924.500	16.410	0.000	36.260
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:20	93.582%	-0.011	0.009	93.036%	-0.062	-0.078	0.010	0.083
2	13:00:46	95.880%	-0.028	-0.022	94.477%	-0.069	-0.077	-0.002	0.018
3	13:01:12	96.143%	-0.010	-0.032	95.404%	-0.064	-0.076	0.004	0.030
X		95.201%	-0.017	-0.015	94.306%	-0.065	-0.077	0.004	0.043
σ		1.409%	0.010	0.022	1.193%	0.004	0.001	0.006	0.035
%RSD		1.480	60.390	143.900	1.265	5.401	1.288	145.800	79.860
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:00:20	91.024%	-1.002	-0.186	-0.166	0.019	0.008	91.027%	89.652%
2	13:00:46	92.884%	-0.942	-0.180	-0.170	-0.013	0.011	94.258%	92.479%
3	13:01:12	94.532%	-0.974	-0.183	-0.181	-0.013	-0.019	92.073%	94.387%
X		92.813%	-0.973	-0.183	-0.172	-0.003	-0.000	92.453%	92.173%
σ		1.755%	0.030	0.003	0.007	0.018	0.017	1.649%	2.382%
%RSD		1.891	3.109	1.621	4.328	723.200	5757.000	1.783	2.584
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:00:20	-0.001	0.003	0.001	-0.039	-0.013	93.028%		
2	13:00:46	0.001	0.001	0.007	-0.023	-0.010	93.835%		
3	13:01:12	0.002	0.003	-0.022	0.001	0.002	95.103%		
X		0.001	0.002	-0.005	-0.020	-0.007	93.989%		
σ		0.001	0.001	0.015	0.020	0.008	1.046%		
%RSD		232.400	53.190	322.500	99.380	113.800	1.113		

PB 180-135024/1-B 3/12/2015 1:04:09 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:04:35	103.385%	-0.040	-1.516	-1.197	0.000	2.763	0.541	0.222
2	13:05:02	102.676%	-0.007	-5.127	-3.392	0.000	2.305	0.418	0.358
3	13:05:28	100.979%	-0.031	-3.527	-3.892	0.000	2.538	0.302	0.223
X		102.346%	-0.026	-3.390	-2.827	0.000	2.535	0.420	0.268
σ		1.236%	0.017	1.810	1.434	0.000	0.229	0.119	0.078
%RSD		1.208	66.290	53.380	50.710	0.000	9.037	28.400	29.100
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:04:35	-0.852	33.590	0.000	12.890	-1.307	2.341	101.759%	-0.386
2	13:05:02	-0.880	6.693	0.000	13.250	-0.175	1.320	101.778%	-0.422
3	13:05:28	-0.862	2.525	0.000	11.800	-2.397	1.715	101.265%	-0.434
X		-0.865	14.270	0.000	12.640	-1.293	1.792	101.601%	-0.414
σ		0.014	16.860	0.000	0.755	1.111	0.515	0.291%	0.025
%RSD		1.636	118.200	0.000	5.972	85.970	28.750	0.286	6.105
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:04:35	-0.000	-0.069	-0.015	-5.528	-1.126	-0.002	0.041	-0.098
2	13:05:02	-0.018	-0.043	-0.015	-5.128	2.597	0.002	0.026	-0.065
3	13:05:28	-0.025	-0.088	0.003	-4.952	-0.663	-0.001	0.065	-0.079
X		-0.014	-0.067	-0.009	-5.203	0.269	-0.000	0.044	-0.080
σ		0.013	0.023	0.010	0.296	2.029	0.002	0.020	0.017
%RSD		90.580	33.820	112.700	5.679	754.200	660.600	45.370	20.820
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:04:35	-0.121	0.332	0.287	0.456	-0.732	2.663	0.000	0.006
2	13:05:02	-0.089	0.425	0.267	0.435	1.493	2.594	0.000	0.002
3	13:05:28	-0.092	0.410	0.534	0.491	-0.475	2.824	0.000	-0.000
X		-0.101	0.389	0.363	0.461	0.095	2.694	0.000	0.003
σ		0.018	0.050	0.149	0.029	1.217	0.118	0.000	0.003
%RSD		17.470	12.840	41.040	6.207	1275.000	4.383	0.000	115.700
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:04:35	94.247%	-0.038	-0.067	92.702%	-0.065	-0.085	0.004	0.027
2	13:05:02	94.954%	-0.050	-0.047	94.204%	-0.067	-0.065	-0.002	-0.037
3	13:05:28	96.167%	-0.039	-0.059	94.818%	-0.058	-0.065	-0.002	-0.012
X		95.123%	-0.042	-0.058	93.908%	-0.063	-0.072	0.000	-0.008
σ		0.971%	0.006	0.010	1.089%	0.005	0.012	0.003	0.032
%RSD		1.021	15.330	17.480	1.160	7.440	16.180	2020.000	423.700
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:04:35	91.894%	-0.976	-0.184	-0.188	0.003	0.003	92.537%	90.410%
2	13:05:02	92.542%	-0.998	-0.183	-0.197	0.017	-0.002	94.335%	92.093%
3	13:05:28	93.248%	-0.979	-0.185	-0.168	0.040	0.006	94.434%	94.096%
X		92.561%	-0.984	-0.184	-0.184	0.020	0.002	93.769%	92.199%
σ		0.677%	0.012	0.001	0.015	0.019	0.004	1.068%	1.845%
%RSD		0.732	1.204	0.521	8.134	94.260	180.000	1.139	2.001
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:04:35	0.004	0.000	-0.009	-0.011	-0.006	94.923%		
2	13:05:02	-0.001	0.001	-0.003	-0.027	-0.000	93.402%		
3	13:05:28	-0.002	0.002	-0.005	0.006	0.009	93.731%		
X		0.000	0.001	-0.005	-0.011	0.001	94.018%		
σ		0.003	0.001	0.003	0.016	0.008	0.800%		
%RSD		2346.000	62.550	58.140	154.800	825.800	0.851		

LCS 180-135125/2-A

3/12/2015 1:08:24 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:50	99.924%	46.670	1020.000	1025.000	0.000	43850.000	44340.000	45010.000
2	13:09:16	99.151%	45.200	1027.000	1007.000	0.000	44410.000	45450.000	44860.000
3	13:09:43	97.133%	45.800	1028.000	1013.000	0.000	44750.000	46180.000	45730.000
X		98.736%	45.890	1025.000	1015.000	0.000	44330.000	45320.000	45200.000
σ		1.441%	0.742	4.252	9.277	0.000	458.100	925.600	463.100
%RSD		1.460	1.617	0.415	0.914	0.000	1.033	2.042	1.025
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:50	1709.000	9824.000	0.000	47430.000	46440.000	47110.000	81.298%	979.200
2	13:09:16	1716.000	9474.000	0.000	45070.000	45270.000	46420.000	81.602%	969.700
3	13:09:43	1744.000	9675.000	0.000	46040.000	46120.000	47450.000	79.885%	987.700
X		1723.000	9657.000	0.000	46180.000	45940.000	47000.000	80.928%	978.900
σ		18.680	175.700	0.000	1185.000	603.900	525.700	0.917%	9.025
%RSD		1.084	1.819	0.000	2.567	1.314	1.119	1.133	0.922
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:50	514.000	200.300	529.000	1033.000	1407.000	518.100	508.100	253.200
2	13:09:16	524.100	203.400	543.300	1067.000	1426.000	527.500	514.600	252.600
3	13:09:43	530.800	206.200	555.700	1086.000	1427.000	534.400	527.200	256.900
X		522.900	203.300	542.600	1062.000	1420.000	526.600	516.600	254.200
σ		8.448	2.921	13.390	26.680	11.110	8.193	9.702	2.305
%RSD		1.615	1.437	2.468	2.511	0.782	1.556	1.878	0.907
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:50	249.700	492.200	479.900	36.790	8.608	13.120	0.000	920.600
2	13:09:16	252.000	495.400	490.200	38.100	7.972	12.900	0.000	935.800
3	13:09:43	253.300	497.400	493.500	38.110	9.834	12.110	0.000	940.400
X		251.700	495.000	487.800	37.670	8.805	12.710	0.000	932.300
σ		1.803	2.626	7.120	0.761	0.947	0.530	0.000	10.350
%RSD		0.716	0.530	1.459	2.021	10.750	4.168	0.000	1.110
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:50	85.600%	994.400	1015.000	82.101%	47.110	47.240	49.170	39.870
2	13:09:16	86.615%	1021.000	1040.000	83.554%	47.010	47.610	49.980	40.360
3	13:09:43	87.480%	1026.000	1054.000	83.936%	47.740	47.970	49.950	41.190
X		86.565%	1014.000	1036.000	83.197%	47.280	47.600	49.700	40.470
σ		0.941%	17.020	19.490	0.968%	0.394	0.361	0.458	0.665
%RSD		1.087	1.679	1.880	1.164	0.832	0.759	0.922	1.643
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:08:50	80.365%	2046.000	495.800	487.800	1864.000	1891.000	88.321%	88.700%
2	13:09:16	82.645%	2079.000	499.600	494.200	1885.000	1903.000	91.300%	91.651%
3	13:09:43	82.931%	2084.000	499.000	495.700	1902.000	1930.000	92.402%	93.592%
X		81.980%	2070.000	498.100	492.600	1884.000	1908.000	90.674%	91.314%
σ		1.406%	20.580	2.043	4.187	18.940	20.180	2.111%	2.463%
%RSD		1.715	0.995	0.410	0.850	1.005	1.057	2.329	2.698
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:08:50	47.510	46.330	19.580	19.790	19.570	85.058%		
2	13:09:16	50.850	49.620	20.720	20.970	20.740	84.107%		
3	13:09:43	51.050	49.130	20.820	20.690	20.700	86.419%		
X		49.800	48.360	20.370	20.480	20.340	85.195%		
σ		1.989	1.775	0.690	0.617	0.666	1.162%		
%RSD		3.993	3.670	3.386	3.013	3.278	1.364		

LCSD 180-135125/3-A

3/12/2015 1:12:42 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:08	100.819%	45.040	1015.000	1021.000	0.000	44980.000	46210.000	46070.000
2	13:13:35	96.712%	46.630	1013.000	1035.000	0.000	45370.000	47490.000	47540.000
3	13:14:01	95.579%	47.140	1021.000	1033.000	0.000	45490.000	47610.000	47320.000
X		97.704%	46.270	1016.000	1030.000	0.000	45280.000	47100.000	46980.000
σ		2.757%	1.097	4.257	7.845	0.000	268.400	779.600	795.000
%RSD		2.822	2.371	0.419	0.762	0.000	0.593	1.655	1.692
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:08	1743.000	9874.000	0.000	47360.000	46710.000	47460.000	80.361%	983.700
2	13:13:35	1785.000	9904.000	0.000	47630.000	47100.000	49080.000	78.182%	1014.000
3	13:14:01	1793.000	9825.000	0.000	47340.000	46920.000	48330.000	77.051%	1006.000
X		1774.000	9868.000	0.000	47450.000	46910.000	48290.000	78.532%	1001.000
σ		26.410	40.070	0.000	157.400	193.600	809.700	1.683%	15.570
%RSD		1.489	0.406	0.000	0.332	0.413	1.677	2.142	1.555
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:08	525.300	203.800	538.700	1066.000	1426.000	530.800	522.200	258.800
2	13:13:35	545.400	216.400	570.400	1115.000	1465.000	547.100	535.000	263.100
3	13:14:01	550.200	213.700	576.900	1122.000	1491.000	555.900	542.900	264.800
X		540.300	211.300	562.000	1101.000	1460.000	544.600	533.400	262.200
σ		13.200	6.646	20.410	30.290	32.490	12.720	10.480	3.077
%RSD		2.443	3.145	3.631	2.752	2.225	2.335	1.964	1.173
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:08	260.400	505.500	504.200	38.110	9.102	14.520	0.000	950.000
2	13:13:35	264.200	516.500	512.100	38.580	9.180	12.180	0.000	963.600
3	13:14:01	265.200	515.500	511.500	40.140	10.210	12.710	0.000	975.900
X		263.300	512.500	509.300	38.940	9.498	13.140	0.000	963.200
σ		2.503	6.089	4.416	1.063	0.619	1.228	0.000	12.940
%RSD		0.951	1.188	0.867	2.729	6.520	9.347	0.000	1.344
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:08	84.646%	1036.000	1047.000	82.177%	48.510	49.390	50.390	42.380
2	13:13:35	85.683%	1049.000	1075.000	82.715%	48.540	48.850	50.950	40.860
3	13:14:01	86.298%	1066.000	1085.000	83.304%	48.670	48.860	51.280	40.450
X		85.542%	1050.000	1069.000	82.732%	48.570	49.030	50.870	41.230
σ		0.835%	15.190	19.650	0.564%	0.082	0.306	0.446	1.016
%RSD		0.976	1.446	1.838	0.681	0.168	0.625	0.877	2.463
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:13:08	79.763%	2129.000	510.600	500.600	1921.000	1962.000	88.346%	89.942%
2	13:13:35	81.965%	2161.000	516.700	512.700	1956.000	1985.000	89.796%	91.957%
3	13:14:01	82.520%	2158.000	517.600	509.800	1937.000	1974.000	92.986%	93.167%
X		81.416%	2149.000	515.000	507.700	1938.000	1974.000	90.376%	91.688%
σ		1.458%	17.600	3.772	6.323	17.260	11.740	2.374%	1.629%
%RSD		1.791	0.819	0.732	1.246	0.891	0.595	2.627	1.777
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:13:08	52.240	51.580	21.670	21.900	21.720	80.927%		
2	13:13:35	52.600	51.370	21.430	21.640	21.540	83.963%		
3	13:14:01	50.990	50.090	20.840	20.760	20.730	89.064%		
X		51.950	51.010	21.310	21.430	21.330	84.651%		
σ		0.844	0.805	0.428	0.597	0.528	4.112%		
%RSD		1.625	1.578	2.010	2.787	2.477	4.858		

180-41734-O-1-A 3/12/2015 1:16:59 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:26	99.062%	0.013	28.960	28.580	0.000	17050.000	30350.000	29650.000
2	13:17:52	96.147%	-0.012	23.650	26.730	0.000	16740.000	30520.000	30410.000
3	13:18:18	98.023%	-0.022	21.510	22.610	0.000	16720.000	30320.000	30740.000
X		97.744%	-0.007	24.700	25.970	0.000	16840.000	30400.000	30270.000
σ		1.477%	0.018	3.833	3.059	0.000	185.300	106.800	563.000
%RSD		1.512	258.600	15.520	11.780	0.000	1.100	0.351	1.860
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:26	2.002	7382.000	0.000	2437.000	148800.000	150900.000	80.399%	1.693
2	13:17:52	1.835	7399.000	0.000	2413.000	146000.000	149900.000	77.929%	1.173
3	13:18:18	1.945	7441.000	0.000	2426.000	148900.000	153300.000	77.098%	1.445
X		1.928	7407.000	0.000	2426.000	147900.000	151400.000	78.475%	1.437
σ		0.085	30.250	0.000	12.010	1632.000	1726.000	1.717%	0.260
%RSD		4.409	0.408	0.000	0.495	1.104	1.140	2.187	18.100
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:26	-0.572	2.148	2966.000	37.580	1292.000	3.605	4.635	0.553
2	13:17:52	1.723	2.018	3051.000	38.530	1330.000	3.615	4.887	0.528
3	13:18:18	1.109	2.052	3130.000	37.910	1275.000	3.773	4.517	0.616
X		0.753	2.073	3049.000	38.000	1299.000	3.664	4.680	0.566
σ		1.188	0.067	82.140	0.482	28.440	0.094	0.189	0.045
%RSD		157.700	3.233	2.694	1.267	2.189	2.559	4.046	8.023
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:26	0.663	6.580	6.503	0.492	-1.635	6.953	0.000	590.100
2	13:17:52	0.750	6.372	6.533	0.992	-0.677	6.733	0.000	594.400
3	13:18:18	0.739	5.999	5.714	0.964	-1.647	6.775	0.000	592.500
X		0.718	6.317	6.250	0.816	-1.320	6.820	0.000	592.300
σ		0.047	0.294	0.464	0.281	0.556	0.117	0.000	2.143
%RSD		6.609	4.658	7.429	34.460	42.150	1.709	0.000	0.362
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:26	82.538%	6.072	5.777	80.781%	-0.049	-0.072	0.445	0.308
2	13:17:52	84.068%	4.206	3.857	81.525%	-0.075	-0.067	0.408	0.323
3	13:18:18	85.097%	2.848	2.961	82.072%	-0.053	-0.068	0.422	0.397
X		83.901%	4.375	4.198	81.459%	-0.059	-0.069	0.425	0.343
σ		1.288%	1.619	1.439	0.648%	0.014	0.002	0.019	0.048
%RSD		1.535	37.000	34.270	0.796	23.440	3.590	4.492	14.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:26	79.416%	6.384	-0.030	0.006	153.100	149.300	85.963%	87.871%
2	13:17:52	80.046%	4.086	-0.034	0.019	152.800	154.900	87.303%	90.175%
3	13:18:18	81.501%	2.958	-0.061	0.011	148.900	150.600	91.027%	90.245%
X		80.321%	4.476	-0.042	0.012	151.600	151.600	88.098%	89.431%
σ		1.070%	1.746	0.017	0.006	2.328	2.900	2.624%	1.351%
%RSD		1.332	39.010	41.000	52.470	1.536	1.913	2.978	1.511
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:17:26	0.274	0.219	0.021	0.003	0.021	86.506%		
2	13:17:52	0.151	0.135	0.026	-0.004	0.011	82.617%		
3	13:18:18	0.082	0.098	0.025	0.002	0.024	84.400%		
X		0.169	0.150	0.024	0.000	0.019	84.508%		
σ		0.098	0.062	0.003	0.004	0.007	1.947%		
%RSD		57.660	41.230	10.860	5680.000	35.430	2.303		

180-41734-O-2-A

3/12/2015 1:21:17 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:21:44	102.161%	-0.006	17.170	16.550	0.000	14200.000	34270.000	34410.000
2	13:22:10	99.670%	0.004	14.230	14.250	0.000	14530.000	35410.000	35080.000
3	13:22:37	101.870%	-0.014	14.430	12.960	0.000	14380.000	35780.000	34860.000
X		101.233%	-0.005	15.280	14.580	0.000	14370.000	35160.000	34780.000
σ		1.362%	0.009	1.643	1.819	0.000	169.300	787.500	337.100
%RSD		1.345	165.400	10.750	12.480	0.000	1.178	2.240	0.969
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:21:44	9.247	3202.000	0.000	2722.000	138200.000	142900.000	84.672%	0.473
2	13:22:10	8.679	3249.000	0.000	2724.000	138700.000	142200.000	83.857%	0.686
3	13:22:37	8.573	3238.000	0.000	2783.000	138800.000	141900.000	83.374%	0.515
X		8.833	3230.000	0.000	2743.000	138600.000	142300.000	83.968%	0.558
σ		0.363	24.480	0.000	34.400	300.900	548.000	0.656%	0.113
%RSD		4.105	0.758	0.000	1.254	0.217	0.385	0.782	20.230
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:21:44	0.806	2.308	6.819	48.700	1257.000	0.407	2.118	1.533
2	13:22:10	0.310	2.183	6.955	53.620	1242.000	0.384	2.060	1.657
3	13:22:37	0.639	2.312	7.190	58.130	1217.000	0.405	2.258	1.540
X		0.585	2.267	6.988	53.490	1239.000	0.399	2.145	1.577
σ		0.253	0.073	0.188	4.715	19.760	0.013	0.102	0.070
%RSD		43.190	3.239	2.688	8.815	1.595	3.271	4.742	4.416
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:21:44	2.076	5.762	5.554	0.787	1.680	3.788	0.000	624.600
2	13:22:10	2.070	6.137	5.803	-1.484	1.684	3.506	0.000	619.300
3	13:22:37	2.100	6.378	5.450	-0.498	0.432	3.149	0.000	625.200
X		2.082	6.092	5.602	-0.399	1.266	3.481	0.000	623.000
σ		0.016	0.311	0.182	1.139	0.722	0.321	0.000	3.219
%RSD		0.747	5.101	3.240	285.700	57.020	9.212	0.000	0.517
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:21:44	85.543%	3.177	3.015	83.362%	-0.054	-0.079	0.005	0.117
2	13:22:10	89.627%	3.255	3.013	85.434%	-0.055	-0.073	0.043	-0.054
3	13:22:37	90.333%	3.100	3.030	87.152%	-0.062	-0.062	0.036	0.028
X		88.501%	3.177	3.019	85.316%	-0.057	-0.071	0.028	0.030
σ		2.586%	0.077	0.010	1.898%	0.005	0.008	0.020	0.086
%RSD		2.921	2.434	0.320	2.224	8.198	11.800	72.900	284.600
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:21:44	82.900%	0.324	0.260	0.335	67.910	68.270	89.238%	88.691%
2	13:22:10	85.339%	0.265	0.345	0.278	70.530	70.610	92.396%	91.510%
3	13:22:37	86.889%	0.311	0.272	0.391	70.510	69.200	92.332%	93.974%
X		85.043%	0.300	0.292	0.335	69.650	69.360	91.322%	91.392%
σ		2.011%	0.031	0.046	0.057	1.506	1.177	1.805%	2.643%
%RSD		2.365	10.390	15.710	16.900	2.162	1.697	1.977	2.892
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:21:44	0.033	0.035	0.064	0.037	0.044	81.736%		
2	13:22:10	0.032	0.034	0.061	0.022	0.062	84.046%		
3	13:22:37	0.034	0.024	0.044	0.047	0.054	86.056%		
X		0.033	0.031	0.056	0.036	0.053	83.946%		
σ		0.001	0.006	0.011	0.012	0.009	2.162%		
%RSD		3.607	19.030	19.190	35.170	17.380	2.575		

180-41734-O-3-A 3/12/2015 1:25:37 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:04	102.747%	-0.023	28.200	27.280	0.000	10270.000	21660.000	21300.000
2	13:26:31	101.574%	0.003	24.710	26.300	0.000	10270.000	21970.000	21720.000
3	13:26:57	98.341%	-0.022	24.800	25.590	0.000	10500.000	22450.000	22050.000
X		100.888%	-0.014	25.900	26.390	0.000	10350.000	22020.000	21690.000
σ		2.282%	0.015	1.988	0.850	0.000	128.900	397.600	377.400
%RSD		2.262	105.300	7.674	3.220	0.000	1.246	1.805	1.740
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:04	1.907	6094.000	0.000	1707.000	113000.000	115700.000	82.943%	0.612
2	13:26:31	1.969	6058.000	0.000	1721.000	115800.000	118900.000	82.120%	0.952
3	13:26:57	2.061	6158.000	0.000	1695.000	113100.000	119300.000	81.510%	0.659
X		1.979	6103.000	0.000	1708.000	113900.000	118000.000	82.191%	0.741
σ		0.078	50.770	0.000	13.120	1578.000	1951.000	0.719%	0.184
%RSD		3.930	0.832	0.000	0.768	1.385	1.654	0.875	24.840
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:04	1.015	2.598	26.170	42.180	1022.000	0.372	1.978	1.186
2	13:26:31	2.606	2.663	27.200	45.630	992.900	0.424	2.116	1.207
3	13:26:57	0.970	2.606	27.550	43.850	960.900	0.353	2.308	1.208
X		1.530	2.622	26.970	43.890	991.800	0.383	2.134	1.200
σ		0.932	0.036	0.720	1.729	30.310	0.037	0.166	0.012
%RSD		60.890	1.356	2.669	3.939	3.056	9.702	7.762	1.018
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:04	1.308	3.959	3.885	0.472	0.534	5.267	0.000	726.900
2	13:26:31	1.371	4.157	3.658	-0.416	-0.435	4.612	0.000	737.200
3	13:26:57	1.436	3.591	4.027	0.815	-0.150	4.390	0.000	738.400
X		1.372	3.902	3.857	0.291	-0.017	4.757	0.000	734.200
σ		0.064	0.287	0.186	0.635	0.498	0.456	0.000	6.303
%RSD		4.663	7.362	4.820	218.600	2905.000	9.591	0.000	0.859
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:04	86.191%	0.417	0.445	84.558%	-0.065	-0.074	0.018	-0.071
2	13:26:31	88.484%	0.450	0.422	85.911%	-0.053	-0.078	0.030	-0.065
3	13:26:57	89.131%	0.318	0.376	86.460%	-0.063	-0.077	-0.002	0.026
X		87.935%	0.395	0.414	85.643%	-0.061	-0.076	0.015	-0.037
σ		1.545%	0.069	0.035	0.979%	0.006	0.002	0.016	0.054
%RSD		1.757	17.360	8.445	1.143	10.650	2.423	104.500	147.300
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:04	82.373%	-0.199	-0.093	-0.030	130.300	134.500	89.275%	89.192%
2	13:26:31	85.664%	-0.208	-0.091	-0.033	136.000	134.800	91.665%	91.476%
3	13:26:57	85.861%	-0.091	-0.067	-0.036	138.000	137.000	93.180%	93.446%
X		84.633%	-0.166	-0.084	-0.033	134.800	135.500	91.373%	91.371%
σ		1.959%	0.065	0.015	0.003	4.005	1.328	1.969%	2.129%
%RSD		2.315	39.000	17.500	8.427	2.972	0.980	2.155	2.330
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:26:04	0.069	0.038	0.033	0.036	0.030	84.393%		
2	13:26:31	0.053	0.043	0.058	0.020	0.046	84.575%		
3	13:26:57	0.057	0.045	0.060	0.041	0.051	89.720%		
X		0.060	0.042	0.050	0.032	0.042	86.229%		
σ		0.008	0.004	0.015	0.011	0.011	3.024%		
%RSD		14.250	9.601	29.330	34.550	25.910	3.507		

180-41734-O-4-A 3/12/2015 1:29:55 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:22	102.426%	-0.040	14.620	15.220	0.000	7618.000	13760.000	12730.000
2	13:30:48	99.708%	-0.039	13.020	12.530	0.000	7544.000	13970.000	12820.000
3	13:31:14	101.668%	-0.014	14.010	11.960	0.000	7562.000	14040.000	13020.000
X		101.267%	-0.031	13.880	13.240	0.000	7575.000	13920.000	12860.000
σ		1.403%	0.015	0.807	1.739	0.000	38.540	145.500	149.100
%RSD		1.385	47.490	5.811	13.140	0.000	0.509	1.045	1.160
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:22	1.203	5851.000	0.000	1846.000	135200.000	138200.000	83.581%	0.604
2	13:30:48	1.059	5842.000	0.000	1873.000	135000.000	136700.000	82.807%	0.657
3	13:31:14	1.923	5848.000	0.000	1857.000	134700.000	138200.000	80.698%	0.687
X		1.395	5847.000	0.000	1858.000	135000.000	137700.000	82.362%	0.649
σ		0.463	4.627	0.000	13.820	244.100	853.500	1.492%	0.042
%RSD		33.170	0.079	0.000	0.744	0.181	0.620	1.812	6.478
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:22	1.821	2.297	307.200	947.000	2095.000	0.687	2.369	0.353
2	13:30:48	1.957	2.127	319.700	977.900	2077.000	0.633	1.708	0.403
3	13:31:14	0.202	2.184	327.500	1012.000	2120.000	0.673	1.317	0.412
X		1.327	2.203	318.100	978.900	2097.000	0.664	1.798	0.389
σ		0.976	0.087	10.230	32.410	21.690	0.028	0.532	0.032
%RSD		73.590	3.927	3.215	3.311	1.034	4.207	29.580	8.110
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:22	0.631	8.275	8.552	1.699	-0.879	5.676	0.000	333.600
2	13:30:48	0.667	8.179	8.789	0.009	-1.045	5.895	0.000	337.900
3	13:31:14	0.634	7.950	8.607	2.117	-0.355	5.328	0.000	344.400
X		0.644	8.135	8.649	1.275	-0.760	5.633	0.000	338.600
σ		0.020	0.167	0.124	1.116	0.361	0.286	0.000	5.444
%RSD		3.127	2.054	1.436	87.530	47.460	5.071	0.000	1.608
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:22	85.740%	0.251	0.191	83.719%	-0.068	-0.080	0.011	-0.012
2	13:30:48	87.892%	0.166	0.188	84.999%	-0.066	-0.078	0.031	-0.011
3	13:31:14	87.930%	0.226	0.139	85.493%	-0.073	-0.069	0.011	-0.020
X		87.187%	0.214	0.172	84.737%	-0.069	-0.076	0.018	-0.014
σ		1.254%	0.043	0.029	0.915%	0.004	0.006	0.011	0.005
%RSD		1.438	20.260	16.850	1.080	5.335	7.930	63.690	34.960
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:22	83.329%	-0.592	-0.136	-0.113	225.900	228.500	88.440%	88.379%
2	13:30:48	83.894%	-0.534	-0.112	-0.116	234.800	233.500	90.252%	91.563%
3	13:31:14	85.012%	-0.567	-0.132	-0.127	235.600	232.500	91.866%	94.685%
X		84.079%	-0.565	-0.127	-0.119	232.100	231.500	90.186%	91.543%
σ		0.857%	0.029	0.013	0.007	5.347	2.649	1.714%	3.153%
%RSD		1.019	5.160	10.420	6.075	2.304	1.144	1.900	3.444
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:30:22	0.022	0.027	0.029	0.005	0.017	82.778%		
2	13:30:48	0.025	0.016	0.026	0.015	0.020	85.097%		
3	13:31:14	0.029	0.024	0.017	0.022	0.017	87.042%		
X		0.025	0.022	0.024	0.014	0.018	84.972%		
σ		0.003	0.006	0.006	0.008	0.002	2.135%		
%RSD		13.000	26.210	26.800	59.950	10.010	2.512		

180-41734-O-5-B

3/12/2015 1:34:13 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:39	103.185%	-0.040	16.700	16.590	0.000	19210.000	33270.000	32950.000
2	13:35:06	103.446%	-0.023	14.580	14.100	0.000	19550.000	33410.000	32630.000
3	13:35:32	99.437%	-0.022	11.900	13.360	0.000	19620.000	33940.000	33040.000
X		102.023%	-0.028	14.390	14.680	0.000	19460.000	33540.000	32880.000
σ		2.243%	0.010	2.408	1.691	0.000	218.000	355.400	215.200
%RSD		2.199	35.100	16.730	11.520	0.000	1.120	1.060	0.655
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:39	1.403	5290.000	0.000	1997.000	134700.000	139800.000	84.884%	0.543
2	13:35:06	1.386	5332.000	0.000	1992.000	138200.000	141700.000	84.381%	0.445
3	13:35:32	1.504	5381.000	0.000	1963.000	137500.000	143900.000	82.597%	0.539
X		1.431	5334.000	0.000	1984.000	136800.000	141800.000	83.954%	0.509
σ		0.064	45.780	0.000	18.640	1860.000	2046.000	1.202%	0.055
%RSD		4.445	0.858	0.000	0.939	1.359	1.443	1.432	10.860
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:39	2.391	2.641	19.870	37.490	1244.000	0.399	2.047	0.512
2	13:35:06	0.832	2.316	20.540	36.020	1177.000	0.416	1.977	0.468
3	13:35:32	1.903	2.494	20.900	38.820	1168.000	0.391	1.620	0.456
X		1.709	2.484	20.440	37.440	1196.000	0.402	1.881	0.479
σ		0.798	0.163	0.522	1.401	41.500	0.013	0.229	0.029
%RSD		46.690	6.569	2.552	3.742	3.469	3.246	12.180	6.136
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:39	0.694	3.636	3.603	-2.519	-0.303	4.968	0.000	671.600
2	13:35:06	0.649	3.564	2.926	0.978	0.713	5.596	0.000	673.100
3	13:35:32	0.764	3.636	3.446	-0.503	-0.467	5.549	0.000	671.700
X		0.703	3.612	3.325	-0.682	-0.019	5.371	0.000	672.100
σ		0.058	0.042	0.355	1.755	0.639	0.350	0.000	0.861
%RSD		8.213	1.153	10.660	257.500	3375.000	6.516	0.000	0.128
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:39	86.634%	0.633	0.668	83.518%	-0.059	-0.080	0.011	0.039
2	13:35:06	89.037%	0.769	0.722	85.919%	-0.056	-0.075	0.011	-0.008
3	13:35:32	90.687%	0.639	0.740	87.644%	-0.072	-0.073	0.011	-0.009
X		88.786%	0.680	0.710	85.694%	-0.063	-0.076	0.011	0.007
σ		2.038%	0.077	0.037	2.072%	0.008	0.004	0.000	0.027
%RSD		2.296	11.340	5.233	2.418	13.330	5.216	3.045	381.100
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:39	82.255%	-0.600	0.239	0.375	61.420	61.630	86.524%	88.195%
2	13:35:06	85.325%	-0.583	0.257	0.345	61.460	61.780	91.433%	92.240%
3	13:35:32	86.711%	-0.556	0.255	0.394	62.340	61.500	92.899%	92.850%
X		84.764%	-0.580	0.250	0.371	61.740	61.640	90.285%	91.095%
σ		2.280%	0.022	0.010	0.025	0.516	0.142	3.339%	2.530%
%RSD		2.690	3.859	3.878	6.662	0.836	0.230	3.698	2.777
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:34:39	0.014	0.016	0.128	0.104	0.122	86.066%		
2	13:35:06	0.012	0.011	0.144	0.130	0.136	85.039%		
3	13:35:32	0.022	0.009	0.140	0.137	0.139	85.893%		
X		0.016	0.012	0.137	0.124	0.133	85.666%		
σ		0.005	0.003	0.008	0.018	0.009	0.550%		
%RSD		31.980	27.970	6.039	14.300	6.853	0.642		

CCV 1487954 3/12/2015 1:38:28 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:54	100.843%	101.800	100.700	102.500	0.000	48310.000	47670.000	48000.000
2	13:39:20	99.452%	102.100	95.070	101.000	0.000	48460.000	48340.000	48310.000
3	13:39:46	100.464%	101.700	97.390	96.380	0.000	47520.000	47610.000	47690.000
X		100.253%	101.850%	97.731%	99.960%	0.000	96.192%	95.752%	95.999%
σ		0.719%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.718	0.189	2.909	3.205	0.000	1.050	0.844	0.651
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:54	473.300	5211.000	0.000	49360.000	47660.000	48220.000	97.478%	95.860
2	13:39:20	476.100	5167.000	0.000	49240.000	49250.000	48930.000	96.488%	99.650
3	13:39:46	469.800	5143.000	0.000	48970.000	48410.000	49190.000	98.178%	99.420
X		94.616%	103.469%	0.000	98.379%	96.882%	97.564%	97.381%	98.308%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.849%	n/a
%RSD		0.670	0.668	0.000	0.404	1.637	1.036	0.872	2.161
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:54	94.890	93.740	510.900	23980.000	25750.000	96.520	98.180	98.480
2	13:39:20	97.390	98.520	531.000	24940.000	26940.000	98.890	99.580	99.590
3	13:39:46	98.100	98.070	537.400	25140.000	27050.000	99.510	100.900	100.500
X		96.794%	96.778%	105.286%	98.742%	106.324%	98.303%	99.565%	99.540%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.741	2.727	2.632	2.508	2.704	1.605	1.382	1.037
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:54	98.580	97.000	96.490	98.810	96.110	101.200	0.000	94.110
2	13:39:20	101.400	99.380	99.380	96.930	97.380	100.900	0.000	95.170
3	13:39:46	100.900	100.700	99.770	97.510	97.110	100.700	0.000	96.150
X		100.302%	99.029%	98.544%	97.750%	96.866%	100.914%	0.000	95.145%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.508	1.894	1.816	0.986	0.692	0.245	0.000	1.072
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:54	91.216%	95.150	96.610	86.329%	95.790	95.890	94.990	95.960
2	13:39:20	93.243%	98.010	98.700	87.385%	95.880	96.220	97.060	96.850
3	13:39:46	92.218%	101.300	101.300	88.172%	95.610	95.590	96.460	96.750
X		92.225%	98.154%	98.884%	87.295%	95.762%	95.900%	96.170%	96.520%
σ		1.014%	n/a	n/a	0.925%	n/a	n/a	n/a	n/a
%RSD		1.099	3.131	2.404	1.059	0.144	0.333	1.108	0.501
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:54	85.449%	95.450	98.690	97.690	97.420	97.110	87.853%	87.550%
2	13:39:20	87.853%	98.170	100.100	98.230	98.040	96.130	88.711%	89.197%
3	13:39:46	88.897%	95.890	98.320	97.480	96.360	96.600	91.466%	91.997%
X		87.399%	96.503%	99.041%	97.801%	97.273%	96.616%	89.343%	89.581%
σ		1.768%	n/a	n/a	n/a	n/a	n/a	1.888%	2.249%
%RSD		2.023	1.511	0.954	0.397	0.869	0.508	2.113	2.510
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:38:54	97.080	96.000	97.480	96.630	96.010	85.328%		
2	13:39:20	96.060	95.090	97.880	96.340	96.400	88.327%		
3	13:39:46	104.100	102.800	105.400	104.500	104.200	81.976%		
X		99.068%	97.978%	100.246%	99.163%	98.881%	85.210%		
σ		n/a	n/a	n/a	n/a	n/a	3.177%		
%RSD		4.396	4.329	4.441	4.681	4.690	3.728		

CCB5 3/12/2015 1:45:51 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:17	106.314%	-0.000	-0.164	0.016	0.000	8.591	4.557	4.713
2	13:46:44	105.695%	-0.016	-2.117	-2.440	0.000	7.860	5.250	4.763
3	13:47:11	105.100%	-0.008	-5.248	-2.878	0.000	8.105	4.463	4.610
X		105.703%	-0.008	-2.510	-1.768	0.000	8.185	4.757	4.696
σ		0.607%	0.008	2.564	1.560	0.000	0.372	0.430	0.078
%RSD		0.574	99.920	102.200	88.240	0.000	4.543	9.032	1.661
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:17	-0.579	41.380	0.000	16.790	9.331	8.931	105.459%	-0.461
2	13:46:44	-0.512	13.620	0.000	15.710	7.347	8.280	104.159%	-0.460
3	13:47:11	-0.495	11.080	0.000	17.010	-1.400	11.230	102.949%	-0.436
X		-0.529	22.020	0.000	16.510	5.093	9.482	104.189%	-0.452
σ		0.044	16.810	0.000	0.695	5.710	1.552	1.255%	0.014
%RSD		8.353	76.330	0.000	4.213	112.100	16.370	1.205	3.197
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:17	-0.023	-0.009	0.037	5.200	10.000	0.012	0.147	-0.075
2	13:46:44	0.038	-0.002	0.069	4.461	10.100	0.008	0.055	-0.043
3	13:47:11	0.057	0.015	0.047	3.932	7.893	0.012	0.098	-0.053
X		0.024	0.001	0.051	4.531	9.330	0.010	0.100	-0.057
σ		0.042	0.012	0.016	0.637	1.245	0.002	0.046	0.016
%RSD		176.200	899.700	31.560	14.060	13.350	23.560	45.590	28.440
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:17	-0.001	0.546	0.618	0.147	0.365	1.327	0.000	0.028
2	13:46:44	-0.046	0.510	0.789	0.453	-0.262	2.513	0.000	0.024
3	13:47:11	-0.040	0.668	0.582	0.403	-0.102	2.242	0.000	0.032
X		-0.029	0.575	0.663	0.334	0.000	2.028	0.000	0.028
σ		0.024	0.083	0.111	0.164	0.326	0.622	0.000	0.004
%RSD		82.820	14.410	16.680	49.100	226500.000	30.670	0.000	15.390
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:17	94.632%	0.246	0.188	93.509%	-0.052	-0.058	0.010	0.058
2	13:46:44	95.862%	0.218	0.213	95.223%	-0.046	-0.061	0.016	0.026
3	13:47:11	97.459%	0.138	0.158	96.176%	-0.035	-0.081	0.010	0.009
X		95.984%	0.201	0.186	94.969%	-0.045	-0.067	0.012	0.031
σ		1.417%	0.056	0.028	1.352%	0.009	0.013	0.003	0.025
%RSD		1.477	27.980	14.910	1.423	19.130	19.210	27.900	79.110
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:17	91.598%	-0.827	-0.131	-0.137	0.011	0.017	90.639%	89.801%
2	13:46:44	93.700%	-0.892	-0.121	-0.128	0.017	0.033	92.996%	91.412%
3	13:47:11	93.724%	-0.868	-0.125	-0.137	0.009	-0.002	95.044%	93.571%
X		93.007%	-0.862	-0.126	-0.134	0.013	0.016	92.893%	91.595%
σ		1.221%	0.033	0.005	0.005	0.004	0.018	2.205%	1.891%
%RSD		1.313	3.819	3.785	3.729	34.310	112.400	2.373	2.065
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:46:17	0.010	0.013	0.012	-0.015	0.000	90.495%		
2	13:46:44	0.008	0.007	0.002	-0.018	-0.005	92.080%		
3	13:47:11	0.011	0.014	0.006	-0.022	-0.000	90.858%		
X		0.010	0.011	0.007	-0.018	-0.002	91.144%		
σ		0.002	0.004	0.005	0.003	0.003	0.831%		
%RSD		15.920	32.490	78.210	18.190	180.000	0.911		

180-41734-O-6-B

3/12/2015 1:50:09 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:35	102.775%	-0.023	17.230	16.820	0.000	7177.000	17130.000	17230.000
2	13:51:02	100.386%	-0.040	14.690	13.110	0.000	7225.000	17500.000	17520.000
3	13:51:28	99.964%	-0.022	13.320	12.980	0.000	7176.000	17720.000	17510.000
X		101.042%	-0.028	15.080	14.300	0.000	7193.000	17450.000	17420.000
σ		1.516%	0.010	1.984	2.182	0.000	28.190	299.300	163.000
%RSD		1.500	34.780	13.150	15.250	0.000	0.392	1.715	0.936
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:35	3.319	4334.000	0.000	1298.000	101700.000	105100.000	84.290%	0.522
2	13:51:02	3.502	4393.000	0.000	1318.000	106300.000	107500.000	82.344%	0.530
3	13:51:28	3.467	4301.000	0.000	1279.000	105700.000	107900.000	81.529%	0.812
X		3.430	4342.000	0.000	1298.000	104600.000	106800.000	82.721%	0.621
σ		0.097	46.460	0.000	19.110	2512.000	1521.000	1.418%	0.165
%RSD		2.836	1.070	0.000	1.472	2.403	1.424	1.715	26.610
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:35	2.129	2.396	3.859	24.920	973.600	0.389	1.339	0.369
2	13:51:02	-0.002	2.475	3.952	23.140	945.400	0.395	0.963	0.440
3	13:51:28	0.996	2.535	4.107	22.340	913.100	0.347	0.803	0.472
X		1.041	2.468	3.973	23.470	944.000	0.377	1.035	0.427
σ		1.066	0.070	0.125	1.318	30.250	0.026	0.275	0.053
%RSD		102.400	2.818	3.148	5.616	3.205	6.880	26.600	12.370
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:35	0.642	2.240	2.317	0.555	-0.406	5.304	0.000	393.500
2	13:51:02	0.624	2.665	2.320	0.485	0.125	5.267	0.000	398.400
3	13:51:28	0.650	2.339	2.287	2.075	-1.491	5.120	0.000	401.800
X		0.639	2.414	2.308	1.038	-0.591	5.230	0.000	397.900
σ		0.013	0.222	0.018	0.898	0.824	0.097	0.000	4.147
%RSD		2.057	9.208	0.790	86.520	139.400	1.862	0.000	1.042
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:35	84.931%	0.350	0.343	82.970%	-0.050	-0.065	0.005	-0.009
2	13:51:02	86.155%	0.418	0.355	84.067%	-0.058	-0.067	0.025	-0.072
3	13:51:28	86.543%	0.264	0.310	84.562%	-0.056	-0.070	0.011	0.026
X		85.876%	0.344	0.336	83.866%	-0.055	-0.067	0.014	-0.018
σ		0.841%	0.077	0.024	0.815%	0.004	0.003	0.010	0.050
%RSD		0.980	22.530	7.049	0.971	7.143	4.047	74.390	273.500
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:35	81.383%	-0.410	0.262	0.320	118.300	119.300	86.736%	86.157%
2	13:51:02	82.011%	-0.411	0.252	0.360	121.400	121.400	88.155%	87.910%
3	13:51:28	83.724%	-0.508	0.255	0.302	121.500	120.800	89.723%	89.995%
X		82.373%	-0.443	0.257	0.328	120.400	120.500	88.205%	88.021%
σ		1.212%	0.056	0.005	0.030	1.832	1.052	1.494%	1.921%
%RSD		1.471	12.680	1.923	9.034	1.522	0.873	1.694	2.183
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:50:35	0.020	0.005	0.153	0.162	0.179	86.005%		
2	13:51:02	0.006	0.010	0.228	0.152	0.193	87.473%		
3	13:51:28	0.015	0.012	0.231	0.184	0.193	86.271%		
X		0.014	0.009	0.204	0.166	0.188	86.583%		
σ		0.007	0.004	0.044	0.016	0.008	0.782%		
%RSD		54.370	42.520	21.710	9.718	4.312	0.903		

180-41734-O-7-B

3/12/2015 1:54:24 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:50	101.785%	-0.040	17.870	19.680	0.000	44180.000	13810.000	13720.000
2	13:55:17	101.949%	-0.048	18.650	17.760	0.000	44310.000	13980.000	13800.000
3	13:55:44	100.166%	-0.022	17.510	17.640	0.000	43150.000	13910.000	13720.000
X		101.300%	-0.037	18.010	18.360	0.000	43880.000	13900.000	13740.000
σ		0.986%	0.013	0.581	1.146	0.000	632.000	89.110	46.150
%RSD		0.973	35.960	3.228	6.243	0.000	1.440	0.641	0.336
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:50	2.735	3916.000	0.000	2118.000	85820.000	87810.000	84.454%	0.169
2	13:55:17	2.584	3863.000	0.000	2089.000	85650.000	88740.000	82.157%	0.441
3	13:55:44	2.833	3801.000	0.000	2112.000	87010.000	87980.000	82.428%	0.453
X		2.718	3860.000	0.000	2106.000	86160.000	88180.000	83.013%	0.354
σ		0.125	57.540	0.000	15.210	741.000	497.700	1.256%	0.161
%RSD		4.614	1.491	0.000	0.722	0.860	0.564	1.512	45.440
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:50	2.029	2.120	100.600	19.070	777.700	0.408	0.999	0.906
2	13:55:17	2.009	2.137	104.800	19.950	785.500	0.419	1.068	0.911
3	13:55:44	0.862	1.924	106.500	19.780	769.200	0.408	0.993	1.035
X		1.633	2.060	104.000	19.600	777.500	0.412	1.020	0.950
σ		0.668	0.118	3.073	0.466	8.156	0.007	0.042	0.073
%RSD		40.880	5.731	2.956	2.379	1.049	1.586	4.111	7.716
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:50	0.741	2.055	2.069	-0.016	0.535	2.967	0.000	406.600
2	13:55:17	0.879	2.200	1.248	0.049	-2.277	3.515	0.000	410.200
3	13:55:44	0.867	2.223	1.742	0.995	-0.720	2.518	0.000	413.600
X		0.829	2.159	1.686	0.343	-0.821	3.000	0.000	410.100
σ		0.076	0.091	0.413	0.566	1.409	0.499	0.000	3.503
%RSD		9.213	4.219	24.490	165.000	171.700	16.650	0.000	0.854
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:50	84.375%	0.821	0.810	83.198%	-0.067	-0.083	0.011	0.064
2	13:55:17	86.911%	1.032	0.888	84.791%	-0.063	-0.081	0.005	-0.040
3	13:55:44	87.417%	0.897	0.911	85.709%	-0.057	-0.081	0.005	-0.051
X		86.234%	0.917	0.870	84.566%	-0.062	-0.082	0.007	-0.009
σ		1.630%	0.107	0.053	1.271%	0.005	0.002	0.004	0.063
%RSD		1.890	11.630	6.125	1.503	7.556	1.906	56.020	710.100
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:50	82.430%	-0.682	0.305	0.361	103.400	104.000	85.429%	86.896%
2	13:55:17	83.197%	-0.630	0.339	0.281	106.900	106.300	90.233%	89.750%
3	13:55:44	83.983%	-0.448	0.345	0.377	106.500	106.900	90.262%	91.147%
X		83.203%	-0.587	0.330	0.340	105.600	105.800	88.641%	89.264%
σ		0.777%	0.123	0.021	0.051	1.906	1.524	2.782%	2.166%
%RSD		0.934	20.960	6.513	15.020	1.805	1.441	3.138	2.427
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:54:50	-0.001	0.005	1.338	1.202	1.250	85.848%		
2	13:55:17	0.001	0.006	1.326	1.259	1.294	83.468%		
3	13:55:44	0.006	0.006	1.306	1.367	1.324	84.429%		
X		0.002	0.006	1.323	1.276	1.289	84.581%		
σ		0.003	0.000	0.016	0.084	0.037	1.197%		
%RSD		167.700	8.056	1.241	6.595	2.899	1.415		

180-41734-O-8-B

3/12/2015 1:58:39 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:05	101.676%	-0.006	17.930	21.010	0.000	40340.000	13640.000	13300.000
2	13:59:32	102.293%	-0.031	17.580	17.330	0.000	40300.000	14440.000	13280.000
3	13:59:58	96.359%	-0.030	18.750	17.590	0.000	40580.000	13840.000	13630.000
X		100.109%	-0.022	18.090	18.640	0.000	40410.000	13970.000	13400.000
σ		3.262%	0.014	0.598	2.051	0.000	153.000	417.000	194.500
%RSD		3.259	64.820	3.303	11.000	0.000	0.379	2.985	1.451
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:05	1.960	3773.000	0.000	2170.000	85460.000	86350.000	83.352%	0.311
2	13:59:32	1.985	3759.000	0.000	2157.000	84130.000	87570.000	82.607%	0.497
3	13:59:58	2.119	3817.000	0.000	2112.000	83550.000	87860.000	81.590%	0.296
X		2.021	3783.000	0.000	2147.000	84380.000	87260.000	82.516%	0.368
σ		0.085	30.450	0.000	30.550	977.900	801.600	0.885%	0.112
%RSD		4.222	0.805	0.000	1.423	1.159	0.919	1.072	30.370
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:05	-0.603	2.176	78.870	24.120	794.100	0.406	0.927	0.853
2	13:59:32	1.799	2.134	80.740	22.450	757.100	0.423	0.952	0.890
3	13:59:58	-0.148	2.149	81.820	24.880	762.100	0.363	0.862	0.882
X		0.349	2.153	80.480	23.820	771.100	0.398	0.914	0.875
σ		1.276	0.021	1.491	1.245	20.100	0.031	0.047	0.019
%RSD		365.200	0.993	1.852	5.228	2.607	7.848	5.118	2.171
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:05	0.683	1.843	2.052	-0.264	-0.391	3.075	0.000	393.800
2	13:59:32	0.722	1.834	1.642	-0.463	-0.270	3.351	0.000	399.500
3	13:59:58	0.695	1.921	2.054	-0.176	0.041	3.983	0.000	401.500
X		0.700	1.866	1.916	-0.301	-0.207	3.470	0.000	398.300
σ		0.020	0.048	0.237	0.147	0.223	0.465	0.000	4.007
%RSD		2.862	2.566	12.380	48.820	108.100	13.410	0.000	1.006
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:05	84.589%	0.902	0.819	82.829%	-0.068	-0.074	-0.002	-0.010
2	13:59:32	86.075%	0.814	0.836	84.352%	-0.061	-0.080	0.005	-0.010
3	13:59:58	87.504%	0.921	0.821	84.916%	-0.066	-0.058	-0.002	-0.050
X		86.056%	0.879	0.825	84.032%	-0.065	-0.071	0.000	-0.024
σ		1.457%	0.057	0.009	1.079%	0.003	0.011	0.004	0.023
%RSD		1.693	6.495	1.098	1.284	5.390	16.120	988.000	97.410
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:59:05	81.444%	-0.744	0.266	0.349	102.100	102.200	86.133%	86.375%
2	13:59:32	82.538%	-0.729	0.340	0.317	102.600	103.200	88.882%	89.303%
3	13:59:58	84.323%	-0.678	0.274	0.421	106.000	103.900	90.069%	90.414%
X		82.768%	-0.717	0.293	0.362	103.600	103.100	88.361%	88.697%
σ		1.453%	0.035	0.041	0.053	2.090	0.876	2.019%	2.086%
%RSD		1.756	4.815	13.960	14.720	2.018	0.850	2.285	2.352
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:59:05	0.007	0.003	0.148	0.111	0.129	84.533%		
2	13:59:32	0.014	0.008	0.146	0.118	0.127	82.305%		
3	13:59:58	0.001	0.004	0.126	0.094	0.118	85.091%		
X		0.008	0.005	0.140	0.108	0.125	83.977%		
σ		0.007	0.003	0.012	0.012	0.006	1.474%		
%RSD		88.650	51.350	8.910	11.410	4.921	1.756		

180-41734-O-9-B

3/12/2015 2:02:54 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:03:21	101.960%	-0.031	21.760	22.530	0.000	40450.000	13620.000	12490.000
2	14:03:48	101.143%	-0.022	18.780	18.270	0.000	39970.000	13090.000	12910.000
3	14:04:15	101.663%	-0.040	16.170	18.790	0.000	39920.000	13720.000	12630.000
X		101.589%	-0.031	18.900	19.860	0.000	40120.000	13480.000	12680.000
σ		0.413%	0.009	2.798	2.325	0.000	293.000	338.900	216.100
%RSD		0.407	27.580	14.800	11.710	0.000	0.730	2.515	1.705
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:03:21	2.945	3890.000	0.000	2177.000	83410.000	83750.000	83.171%	0.253
2	14:03:48	3.184	3811.000	0.000	2161.000	84860.000	87630.000	81.868%	0.264
3	14:04:15	2.741	3803.000	0.000	2176.000	83870.000	85860.000	81.882%	0.459
X		2.957	3835.000	0.000	2171.000	84040.000	85750.000	82.307%	0.325
σ		0.222	48.280	0.000	8.877	743.200	1943.000	0.748%	0.116
%RSD		7.496	1.259	0.000	0.409	0.884	2.267	0.909	35.700
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:03:21	1.158	2.404	64.470	21.820	755.500	0.353	0.903	0.941
2	14:03:48	1.821	2.342	66.820	23.330	749.800	0.353	1.080	0.994
3	14:04:15	1.527	2.595	67.410	22.910	737.200	0.335	0.878	0.938
X		1.502	2.447	66.240	22.690	747.500	0.347	0.954	0.958
σ		0.332	0.132	1.555	0.779	9.397	0.010	0.110	0.031
%RSD		22.130	5.391	2.347	3.433	1.257	2.968	11.530	3.241
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:03:21	0.720	2.297	2.221	-0.918	0.126	2.920	0.000	376.600
2	14:03:48	0.851	2.067	1.850	-1.670	-0.961	3.616	0.000	382.700
3	14:04:15	0.639	2.214	1.931	0.364	-0.740	2.838	0.000	379.700
X		0.736	2.192	2.001	-0.742	-0.525	3.125	0.000	379.700
σ		0.107	0.117	0.195	1.028	0.574	0.428	0.000	3.051
%RSD		14.540	5.317	9.748	138.700	109.400	13.690	0.000	0.804
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:03:21	84.963%	0.786	0.859	82.895%	-0.059	-0.076	0.012	0.089
2	14:03:48	87.023%	0.871	0.914	84.982%	-0.048	-0.073	0.018	0.071
3	14:04:15	87.911%	0.899	0.835	86.367%	-0.060	-0.063	0.018	0.065
X		86.632%	0.852	0.869	84.748%	-0.056	-0.070	0.016	0.075
σ		1.512%	0.059	0.040	1.748%	0.007	0.007	0.004	0.013
%RSD		1.746	6.904	4.659	2.062	11.700	9.462	22.790	16.740
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:03:21	81.851%	-0.743	0.190	0.199	102.000	103.100	86.815%	86.526%
2	14:03:48	83.298%	-0.738	0.168	0.211	102.900	102.000	90.865%	91.041%
3	14:04:15	83.978%	-0.717	0.153	0.233	103.900	104.200	91.112%	92.022%
X		83.042%	-0.733	0.170	0.214	102.900	103.100	89.597%	89.863%
σ		1.086%	0.014	0.018	0.017	0.921	1.114	2.413%	2.931%
%RSD		1.308	1.949	10.750	8.013	0.895	1.081	2.693	3.262
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:03:21	0.004	0.004	0.143	0.086	0.110	80.212%		
2	14:03:48	0.006	0.003	0.154	0.075	0.121	84.161%		
3	14:04:15	0.004	0.007	0.085	0.063	0.088	84.683%		
X		0.005	0.005	0.127	0.075	0.106	83.019%		
σ		0.001	0.002	0.037	0.012	0.017	2.445%		
%RSD		18.210	35.010	29.310	15.840	15.680	2.945		

180-41734-O-10-B 3/12/2015 2:07:09 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:36	101.676%	-0.006	23.870	22.320	0.000	42040.000	13200.000	12960.000
2	14:08:03	102.028%	0.011	19.980	18.430	0.000	42330.000	13350.000	13080.000
3	14:08:29	102.342%	-0.048	16.950	18.400	0.000	42050.000	13290.000	12940.000
X		102.015%	-0.014	20.270	19.710	0.000	42140.000	13280.000	12990.000
σ		0.333%	0.031	3.466	2.256	0.000	164.300	75.710	73.060
%RSD		0.326	214.900	17.100	11.440	0.000	0.390	0.570	0.562
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:36	0.961	3909.000	0.000	2214.000	85720.000	88030.000	85.147%	0.221
2	14:08:03	2.160	3940.000	0.000	2210.000	88000.000	89410.000	83.194%	0.444
3	14:08:29	2.019	3904.000	0.000	2193.000	85330.000	90100.000	82.969%	0.223
X		1.713	3918.000	0.000	2206.000	86350.000	89180.000	83.770%	0.296
σ		0.655	19.570	0.000	11.300	1443.000	1056.000	1.198%	0.128
%RSD		38.250	0.500	0.000	0.512	1.671	1.184	1.430	43.360
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:36	0.757	2.260	56.150	20.710	767.100	0.368	1.068	0.997
2	14:08:03	-0.117	2.225	57.990	22.830	785.500	0.376	0.956	1.093
3	14:08:29	2.366	2.145	58.840	22.120	731.000	0.381	0.899	1.006
X		1.002	2.210	57.660	21.890	761.200	0.375	0.974	1.032
σ		1.259	0.059	1.373	1.077	27.730	0.007	0.086	0.053
%RSD		125.700	2.672	2.380	4.921	3.643	1.796	8.805	5.124
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:36	0.767	2.952	2.709	0.697	-1.208	3.222	0.000	390.500
2	14:08:03	0.813	2.826	2.739	1.174	-0.201	3.103	0.000	395.000
3	14:08:29	0.769	2.577	2.234	-1.216	-1.113	3.398	0.000	395.500
X		0.783	2.785	2.561	0.218	-0.840	3.241	0.000	393.700
σ		0.026	0.191	0.283	1.265	0.556	0.149	0.000	2.729
%RSD		3.284	6.845	11.050	579.300	66.170	4.591	0.000	0.693
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:36	85.820%	0.809	0.895	84.059%	-0.065	-0.083	-0.002	-0.002
2	14:08:03	88.224%	0.930	1.011	86.203%	-0.065	-0.081	0.005	-0.018
3	14:08:29	89.883%	0.851	0.893	87.828%	-0.069	-0.073	0.004	0.025
X		87.976%	0.863	0.933	86.030%	-0.066	-0.079	0.002	0.002
σ		2.043%	0.061	0.068	1.890%	0.002	0.006	0.004	0.022
%RSD		2.322	7.122	7.260	2.197	3.695	7.172	151.700	1300.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:36	82.738%	-0.813	0.253	0.267	108.300	106.900	87.711%	88.062%
2	14:08:03	85.420%	-0.830	0.279	0.294	109.700	108.700	89.576%	91.634%
3	14:08:29	87.132%	-0.779	0.278	0.345	108.700	107.300	90.834%	92.531%
X		85.097%	-0.807	0.270	0.302	108.900	107.600	89.373%	90.742%
σ		2.215%	0.026	0.015	0.039	0.747	0.907	1.571%	2.364%
%RSD		2.602	3.269	5.612	12.990	0.686	0.843	1.758	2.605
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:07:36	0.008	0.006	0.127	0.108	0.137	80.445%		
2	14:08:03	0.007	0.004	0.126	0.115	0.122	83.538%		
3	14:08:29	0.001	0.008	0.135	0.134	0.128	86.567%		
X		0.005	0.006	0.129	0.119	0.129	83.517%		
σ		0.004	0.002	0.005	0.013	0.007	3.061%		
%RSD		73.120	31.430	3.657	11.320	5.741	3.665		

180-41734-O-11-B 3/12/2015 2:11:27 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:53	103.214%	-0.015	17.970	21.820	0.000	37480.000	13480.000	13240.000
2	14:12:20	98.176%	-0.039	19.190	19.470	0.000	37900.000	13880.000	13740.000
3	14:12:46	103.625%	-0.031	16.850	18.270	0.000	37870.000	13800.000	13450.000
X		101.672%	-0.028	18.010	19.850	0.000	37750.000	13720.000	13470.000
σ		3.034%	0.013	1.172	1.804	0.000	234.900	207.600	252.300
%RSD		2.984	44.190	6.509	9.087	0.000	0.622	1.513	1.872
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:53	3.272	4000.000	0.000	2356.000	88380.000	89980.000	85.998%	0.300
2	14:12:20	3.357	4130.000	0.000	2421.000	90620.000	92930.000	83.072%	0.401
3	14:12:46	3.319	4018.000	0.000	2351.000	88690.000	93080.000	83.255%	0.339
X		3.316	4049.000	0.000	2376.000	89230.000	92000.000	84.108%	0.346
σ		0.043	70.430	0.000	39.110	1211.000	1746.000	1.639%	0.051
%RSD		1.290	1.739	0.000	1.646	1.357	1.898	1.949	14.700
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:53	2.500	2.351	32.880	22.320	780.700	0.365	1.021	0.924
2	14:12:20	1.435	2.211	34.290	26.520	778.300	0.396	1.112	1.016
3	14:12:46	2.027	2.073	34.600	26.310	758.700	0.387	0.905	0.992
X		1.987	2.212	33.920	25.050	772.600	0.383	1.013	0.977
σ		0.534	0.139	0.916	2.363	12.060	0.016	0.104	0.048
%RSD		26.860	6.291	2.700	9.431	1.561	4.145	10.220	4.860
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:53	0.802	2.823	2.827	-1.080	0.059	1.999	0.000	407.700
2	14:12:20	0.926	3.147	3.285	-0.661	0.212	3.539	0.000	409.400
3	14:12:46	0.952	2.984	2.754	-1.149	-0.623	2.607	0.000	410.000
X		0.894	2.984	2.955	-0.963	-0.118	2.715	0.000	409.000
σ		0.080	0.162	0.288	0.264	0.445	0.776	0.000	1.191
%RSD		8.941	5.430	9.739	27.380	378.100	28.570	0.000	0.291
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:53	86.599%	0.883	0.889	85.523%	-0.062	-0.081	0.017	0.016
2	14:12:20	88.825%	0.889	0.806	87.080%	-0.062	-0.077	0.005	0.007
3	14:12:46	91.201%	0.837	0.984	88.289%	-0.069	-0.076	-0.002	-0.033
X		88.875%	0.870	0.893	86.964%	-0.064	-0.078	0.007	-0.003
σ		2.302%	0.028	0.089	1.387%	0.004	0.003	0.010	0.026
%RSD		2.590	3.250	9.943	1.595	6.728	3.531	145.900	764.600
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:53	85.528%	-0.804	0.307	0.348	109.600	108.800	89.742%	89.328%
2	14:12:20	85.774%	-0.786	0.320	0.301	113.900	113.500	91.725%	94.099%
3	14:12:46	88.142%	-0.799	0.323	0.313	112.900	112.900	93.222%	94.892%
X		86.482%	-0.796	0.317	0.321	112.100	111.700	91.563%	92.773%
σ		1.443%	0.009	0.009	0.024	2.228	2.573	1.746%	3.010%
%RSD		1.669	1.189	2.746	7.552	1.987	2.303	1.907	3.244
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:11:53	0.004	0.003	0.132	0.133	0.119	83.040%		
2	14:12:20	0.006	0.003	0.150	0.099	0.133	85.776%		
3	14:12:46	0.002	0.004	0.122	0.143	0.133	91.092%		
X		0.004	0.003	0.135	0.125	0.129	86.636%		
σ		0.002	0.001	0.014	0.023	0.008	4.095%		
%RSD		42.760	23.100	10.720	18.330	6.374	4.726		

180-41734-O-12-B 3/12/2015 2:15:42 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:08	103.086%	-0.023	15.790	14.410	0.000	10600.000	14660.000	14570.000
2	14:16:35	102.187%	-0.006	9.653	12.220	0.000	10710.000	14980.000	14940.000
3	14:17:01	102.921%	-0.015	11.910	10.840	0.000	10570.000	14920.000	15080.000
X		102.731%	-0.014	12.450	12.490	0.000	10630.000	14850.000	14860.000
σ		0.479%	0.009	3.107	1.803	0.000	71.810	172.400	263.700
%RSD		0.466	59.420	24.950	14.440	0.000	0.676	1.161	1.774
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:08	1.694	4124.000	0.000	1202.000	115000.000	117700.000	85.831%	0.502
2	14:16:35	1.725	4190.000	0.000	1226.000	122000.000	123600.000	83.310%	0.264
3	14:17:01	1.674	4148.000	0.000	1220.000	126300.000	120800.000	84.586%	0.442
X		1.698	4154.000	0.000	1216.000	121100.000	120700.000	84.576%	0.403
σ		0.025	33.370	0.000	12.490	5676.000	2946.000	1.261%	0.124
%RSD		1.493	0.803	0.000	1.028	4.687	2.441	1.491	30.710
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:08	1.222	2.622	32.180	30.250	1039.000	0.405	1.756	0.802
2	14:16:35	2.736	2.827	33.620	35.380	1042.000	0.365	1.569	0.929
3	14:17:01	1.769	2.529	33.990	34.570	997.700	0.445	1.657	0.791
X		1.909	2.659	33.260	33.400	1027.000	0.405	1.661	0.841
σ		0.767	0.152	0.957	2.761	25.020	0.040	0.093	0.077
%RSD		40.150	5.726	2.877	8.266	2.437	9.834	5.624	9.134
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:08	1.000	4.332	4.692	-0.148	-0.241	3.336	0.000	288.100
2	14:16:35	1.061	4.315	4.005	0.058	-0.693	3.673	0.000	293.900
3	14:17:01	1.159	4.381	3.565	-0.675	0.267	2.807	0.000	294.800
X		1.073	4.342	4.087	-0.255	-0.222	3.272	0.000	292.300
σ		0.080	0.034	0.568	0.378	0.481	0.436	0.000	3.606
%RSD		7.490	0.790	13.900	148.300	216.100	13.330	0.000	1.234
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:08	87.801%	0.012	0.001	85.617%	-0.050	-0.079	0.005	0.014
2	14:16:35	90.196%	0.021	0.003	87.424%	-0.077	-0.073	0.004	-0.035
3	14:17:01	92.018%	0.018	0.035	89.180%	-0.064	-0.072	0.004	-0.021
X		90.005%	0.017	0.013	87.407%	-0.064	-0.074	0.004	-0.014
σ		2.115%	0.005	0.019	1.782%	0.014	0.004	0.000	0.025
%RSD		2.350	28.190	144.200	2.038	21.250	5.619	3.070	183.400
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:08	84.660%	-0.842	0.213	0.239	103.200	101.900	88.249%	89.768%
2	14:16:35	87.588%	-0.771	0.249	0.219	103.500	104.200	92.400%	93.024%
3	14:17:01	88.408%	-0.718	0.210	0.201	103.100	103.600	93.975%	95.029%
X		86.885%	-0.777	0.224	0.220	103.300	103.200	91.542%	92.607%
σ		1.970%	0.062	0.022	0.019	0.247	1.195	2.958%	2.655%
%RSD		2.267	8.034	9.742	8.777	0.239	1.158	3.231	2.867
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:16:08	0.017	0.003	0.104	0.083	0.106	83.544%		
2	14:16:35	0.007	0.003	0.106	0.064	0.088	86.708%		
3	14:17:01	0.007	0.008	0.109	0.069	0.086	88.300%		
X		0.010	0.005	0.106	0.072	0.093	86.184%		
σ		0.006	0.003	0.003	0.010	0.011	2.421%		
%RSD		56.540	64.270	2.660	13.470	11.780	2.809		

180-41734-O-13-B 3/12/2015 2:19:57 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:23	100.614%	-0.040	20.010	23.030	0.000	39900.000	13560.000	13490.000
2	14:20:50	101.959%	-0.031	17.560	18.390	0.000	39790.000	13530.000	13260.000
3	14:21:17	100.855%	-0.005	16.010	17.130	0.000	39740.000	14570.000	13690.000
X		101.143%	-0.025	17.860	19.520	0.000	39810.000	13890.000	13480.000
σ		0.717%	0.018	2.014	3.104	0.000	80.560	592.000	211.200
%RSD		0.709	70.280	11.270	15.900	0.000	0.202	4.262	1.567
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:23	4.227	3860.000	0.000	2160.000	81400.000	84920.000	85.076%	0.627
2	14:20:50	4.214	3686.000	0.000	2052.000	83760.000	87350.000	85.081%	0.437
3	14:21:17	4.192	3875.000	0.000	2139.000	84670.000	88910.000	84.097%	0.417
X		4.211	3807.000	0.000	2117.000	83280.000	87060.000	84.751%	0.494
σ		0.018	104.800	0.000	57.550	1690.000	2011.000	0.567%	0.116
%RSD		0.429	2.754	0.000	2.719	2.029	2.310	0.668	23.460
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:23	0.927	2.476	73.200	27.810	743.200	0.376	1.089	1.136
2	14:20:50	1.075	2.525	75.510	28.220	728.700	0.383	1.089	1.118
3	14:21:17	3.905	2.498	76.440	29.660	705.900	0.357	1.101	1.117
X		1.969	2.500	75.050	28.560	725.900	0.372	1.093	1.124
σ		1.678	0.024	1.671	0.972	18.840	0.014	0.007	0.011
%RSD		85.220	0.967	2.226	3.402	2.595	3.639	0.630	0.956
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:23	1.009	2.223	1.640	0.589	0.511	3.311	0.000	392.100
2	14:20:50	1.007	1.822	1.649	1.012	-0.017	2.316	0.000	396.500
3	14:21:17	0.993	1.904	1.399	-0.206	-1.243	3.813	0.000	397.400
X		1.003	1.983	1.562	0.465	-0.250	3.147	0.000	395.300
σ		0.008	0.212	0.142	0.618	0.900	0.762	0.000	2.834
%RSD		0.834	10.680	9.086	132.900	360.700	24.210	0.000	0.717
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:23	87.838%	0.774	0.889	86.402%	-0.056	-0.081	0.011	0.046
2	14:20:50	90.614%	0.817	0.752	88.405%	-0.063	-0.079	0.011	-0.037
3	14:21:17	93.087%	0.815	0.860	90.127%	-0.055	-0.080	-0.002	0.035
X		90.513%	0.802	0.834	88.311%	-0.058	-0.080	0.007	0.015
σ		2.626%	0.024	0.072	1.865%	0.004	0.001	0.007	0.045
%RSD		2.901	3.014	8.642	2.111	7.052	1.506	110.500	309.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:23	85.682%	-0.763	0.318	0.402	99.840	100.300	89.599%	90.524%
2	14:20:50	88.663%	-0.681	0.317	0.294	102.800	100.700	93.511%	94.359%
3	14:21:17	89.444%	-0.702	0.366	0.292	101.600	102.200	96.823%	96.834%
X		87.930%	-0.715	0.334	0.329	101.400	101.100	93.311%	93.906%
σ		1.985%	0.042	0.028	0.063	1.490	1.003	3.616%	3.180%
%RSD		2.258	5.930	8.358	19.010	1.469	0.992	3.875	3.386
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:20:23	0.003	0.002	0.100	0.072	0.081	83.343%		
2	14:20:50	0.002	0.005	0.084	0.109	0.088	87.638%		
3	14:21:17	0.007	0.002	0.101	0.079	0.094	88.506%		
X		0.004	0.003	0.095	0.087	0.088	86.496%		
σ		0.003	0.002	0.009	0.020	0.007	2.764%		
%RSD		64.880	60.530	9.651	22.910	7.810	3.196		

180-41768-F-1-B

3/12/2015 2:24:15 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:42	107.570%	-0.016	26.040	26.960	0.000	38450.000	3065.000	3059.000
2	14:25:08	105.796%	-0.032	23.940	24.420	0.000	38560.000	3081.000	3041.000
3	14:25:35	103.562%	-0.040	23.900	24.840	0.000	38700.000	3125.000	3092.000
X		105.642%	-0.029	24.630	25.410	0.000	38570.000	3090.000	3064.000
σ		2.008%	0.012	1.225	1.361	0.000	124.900	31.090	26.020
%RSD		1.901	41.770	4.973	5.357	0.000	0.324	1.006	0.849
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:42	2.532	1003.000	0.000	1333.000	35340.000	36880.000	84.778%	0.121
2	14:25:08	2.246	960.800	0.000	1283.000	37550.000	37540.000	86.483%	0.122
3	14:25:35	2.676	958.800	0.000	1259.000	34740.000	36760.000	87.706%	0.071
X		2.484	974.200	0.000	1292.000	35880.000	37060.000	86.322%	0.105
σ		0.219	24.840	0.000	37.850	1479.000	417.600	1.471%	0.029
%RSD		8.801	2.550	0.000	2.931	4.122	1.127	1.704	27.770
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:42	0.445	2.501	1.388	22.890	326.500	0.235	0.807	1.541
2	14:25:08	2.675	2.278	1.450	21.510	315.200	0.257	0.806	1.499
3	14:25:35	0.454	2.244	1.380	22.160	309.300	0.216	0.765	1.513
X		1.191	2.341	1.406	22.190	317.000	0.236	0.793	1.518
σ		1.285	0.140	0.038	0.692	8.755	0.020	0.024	0.022
%RSD		107.800	5.962	2.698	3.117	2.762	8.637	3.060	1.432
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:42	1.314	3.919	2.860	-0.251	0.131	3.844	0.000	958.400
2	14:25:08	1.187	3.628	3.470	-0.180	-0.307	4.151	0.000	973.200
3	14:25:35	1.212	3.725	4.029	0.397	0.232	4.137	0.000	977.900
X		1.238	3.757	3.453	-0.011	0.019	4.044	0.000	969.800
σ		0.068	0.148	0.585	0.355	0.286	0.173	0.000	10.170
%RSD		5.461	3.944	16.930	3116.000	1536.000	4.281	0.000	1.049
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:42	88.338%	3.107	3.020	88.023%	-0.069	-0.072	0.011	-0.005
2	14:25:08	91.741%	3.253	3.033	90.202%	-0.059	-0.076	0.010	0.015
3	14:25:35	92.192%	3.380	3.252	91.073%	-0.059	-0.086	0.004	0.017
X		90.757%	3.247	3.101	89.766%	-0.062	-0.078	0.009	0.009
σ		2.107%	0.137	0.130	1.571%	0.006	0.007	0.004	0.012
%RSD		2.321	4.205	4.200	1.750	9.311	9.055	43.330	130.600
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:42	85.954%	-0.849	0.386	0.351	117.800	118.800	90.440%	91.128%
2	14:25:08	89.222%	-0.785	0.275	0.359	119.400	118.000	94.061%	93.667%
3	14:25:35	89.896%	-0.722	0.270	0.457	120.400	118.900	95.720%	96.182%
X		88.357%	-0.786	0.310	0.389	119.200	118.600	93.407%	93.659%
σ		2.108%	0.063	0.066	0.059	1.290	0.535	2.700%	2.527%
%RSD		2.386	8.074	21.200	15.130	1.082	0.451	2.891	2.698
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:24:42	-0.002	0.001	0.254	0.206	0.245	85.445%		
2	14:25:08	0.001	0.001	0.277	0.266	0.277	88.709%		
3	14:25:35	-0.001	0.004	0.304	0.188	0.260	90.962%		
X		-0.001	0.002	0.278	0.220	0.260	88.372%		
σ		0.002	0.002	0.025	0.041	0.016	2.774%		
%RSD		197.100	107.900	8.872	18.550	6.008	3.139		

CCV 1487954 3/12/2015 2:28:33 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:59	100.681%	102.800	104.100	102.300	0.000	47850.000	47150.000	47290.000
2	14:29:26	99.936%	102.900	97.190	96.040	0.000	47470.000	47080.000	47470.000
3	14:29:52	101.392%	100.000	98.760	97.220	0.000	47050.000	46540.000	46910.000
X		100.670%	101.900%	100.009%	98.530%	0.000	94.915%	93.844%	94.448%
σ		0.728%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.723	1.579	3.605	3.388	0.000	0.849	0.715	0.601
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:59	461.200	5128.000	0.000	49230.000	47660.000	48320.000	97.543%	95.630
2	14:29:26	468.100	5107.000	0.000	48860.000	47670.000	48530.000	97.944%	98.820
3	14:29:52	462.300	5029.000	0.000	48780.000	48000.000	48280.000	98.002%	98.200
X		92.769%	101.758%	0.000	97.917%	95.556%	96.753%	97.830%	97.550%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.250%	n/a
%RSD		0.798	1.032	0.000	0.490	0.410	0.277	0.256	1.730
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:59	94.490	94.960	516.500	24020.000	26030.000	96.200	97.280	98.110
2	14:29:26	95.460	96.940	528.100	24750.000	26700.000	98.250	99.110	100.100
3	14:29:52	95.920	96.750	534.600	24970.000	27130.000	98.760	99.130	100.300
X		95.292%	96.219%	105.278%	98.322%	106.494%	97.738%	98.508%	99.492%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.766	1.134	1.747	2.016	2.087	1.390	1.076	1.202
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:59	97.050	98.010	98.510	99.090	95.720	101.900	0.000	95.010
2	14:29:26	99.670	100.200	100.100	97.990	101.200	100.600	0.000	96.100
3	14:29:52	98.430	100.500	98.400	97.780	95.640	102.600	0.000	96.260
X		98.383%	99.539%	98.985%	98.290%	97.524%	101.679%	0.000	95.790%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.330	1.339	0.935	0.716	3.275	0.993	0.000	0.708
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:59	90.920%	95.510	95.140	87.229%	96.680	97.140	96.900	95.670
2	14:29:26	91.686%	99.440	99.520	88.342%	95.930	96.990	98.090	97.700
3	14:29:52	93.073%	101.200	101.300	89.378%	96.880	97.900	96.880	98.820
X		91.893%	98.705%	98.652%	88.316%	96.495%	97.343%	97.287%	97.399%
σ		1.091%	n/a	n/a	1.075%	n/a	n/a	n/a	n/a
%RSD		1.188	2.932	3.215	1.217	0.520	0.501	0.714	1.640
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:59	86.910%	96.160	99.380	99.170	97.520	96.410	89.294%	88.515%
2	14:29:26	88.609%	97.450	99.690	98.500	95.870	97.300	90.824%	90.045%
3	14:29:52	88.411%	97.780	101.700	98.640	98.980	99.150	91.298%	90.456%
X		87.977%	97.129%	100.254%	98.771%	97.455%	97.623%	90.472%	89.672%
σ		0.929%	n/a	n/a	n/a	n/a	n/a	1.047%	1.023%
%RSD		1.056	0.883	1.256	0.355	1.598	1.430	1.158	1.141
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:28:59	99.780	98.310	99.690	101.500	100.400	83.589%		
2	14:29:26	101.000	100.000	101.600	102.800	102.300	84.685%		
3	14:29:52	103.800	102.100	105.300	105.100	104.500	84.414%		
X		101.552%	100.163%	102.178%	103.126%	102.402%	84.229%		
σ		n/a	n/a	n/a	n/a	n/a	0.571%		
%RSD		2.051	1.909	2.777	1.776	1.999	0.678		

CCB6 3/12/2015 2:35:59 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:26	106.004%	0.008	-0.085	0.121	0.000	9.250	4.725	5.125
2	14:36:52	106.808%	-0.000	-2.121	-2.529	0.000	8.251	5.892	5.208
3	14:37:19	106.536%	0.008	-2.842	-3.073	0.000	8.408	5.308	5.420
X		106.449%	0.005	-1.683	-1.827	0.000	8.636	5.308	5.251
σ		0.409%	0.005	1.430	1.709	0.000	0.537	0.584	0.152
%RSD		0.384	92.290	85.000	93.540	0.000	6.219	10.990	2.903
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:26	-0.413	41.720	0.000	17.180	15.950	11.090	105.175%	-0.461
2	14:36:52	-0.568	14.990	0.000	11.980	6.094	9.635	105.162%	-0.437
3	14:37:19	-0.509	12.550	0.000	13.750	-0.418	10.670	104.537%	-0.437
X		-0.497	23.090	0.000	14.300	7.207	10.460	104.958%	-0.445
σ		0.078	16.180	0.000	2.644	8.238	0.747	0.365%	0.014
%RSD		15.710	70.080	0.000	18.480	114.300	7.141	0.348	3.089
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:26	0.031	-0.039	0.033	2.579	8.584	0.013	0.271	-0.031
2	14:36:52	-0.010	-0.030	0.083	1.039	7.751	0.014	0.241	-0.050
3	14:37:19	0.064	-0.040	0.066	-0.439	6.166	0.010	0.188	-0.046
X		0.028	-0.036	0.060	1.060	7.501	0.012	0.233	-0.042
σ		0.037	0.006	0.026	1.509	1.228	0.002	0.042	0.010
%RSD		130.300	16.080	42.220	142.400	16.380	18.940	17.970	23.500
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:26	-0.059	0.576	0.745	0.365	0.413	2.195	0.000	0.035
2	14:36:52	-0.075	0.612	0.631	0.425	0.784	2.653	0.000	0.042
3	14:37:19	-0.054	0.662	0.643	0.405	0.419	2.209	0.000	0.040
X		-0.063	0.617	0.673	0.398	0.538	2.352	0.000	0.039
σ		0.011	0.043	0.063	0.031	0.212	0.260	0.000	0.004
%RSD		18.100	6.970	9.344	7.753	39.450	11.070	0.000	9.722
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:26	94.903%	0.150	0.151	94.789%	-0.049	-0.069	0.010	0.032
2	14:36:52	96.144%	0.177	0.140	95.276%	-0.053	-0.071	-0.002	0.059
3	14:37:19	97.452%	0.098	0.159	96.399%	-0.057	-0.054	0.021	0.082
X		96.166%	0.142	0.150	95.488%	-0.053	-0.065	0.010	0.058
σ		1.275%	0.041	0.010	0.826%	0.004	0.009	0.011	0.025
%RSD		1.325	28.600	6.459	0.865	7.907	14.380	117.600	43.440
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:26	92.949%	-0.885	-0.135	-0.117	0.026	0.029	91.880%	90.027%
2	14:36:52	95.710%	-0.901	-0.115	-0.128	0.024	0.027	94.558%	93.248%
3	14:37:19	95.886%	-0.871	-0.143	-0.146	0.031	0.031	94.899%	93.421%
X		94.848%	-0.886	-0.131	-0.130	0.027	0.029	93.779%	92.232%
σ		1.647%	0.015	0.014	0.015	0.004	0.002	1.654%	1.912%
%RSD		1.736	1.705	10.730	11.560	14.310	7.030	1.763	2.073
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:36:26	0.013	0.008	0.006	-0.001	0.011	91.591%		
2	14:36:52	0.006	0.006	-0.004	-0.003	0.001	95.134%		
3	14:37:19	0.005	0.007	-0.005	-0.019	-0.005	94.401%		
X		0.008	0.007	-0.001	-0.008	0.002	93.708%		
σ		0.004	0.001	0.006	0.010	0.008	1.870%		
%RSD		51.400	15.950	690.800	130.100	353.900	1.996		

180-41769-F-1-B

3/12/2015 2:40:19 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:46	104.984%	-0.032	27.230	23.640	0.000	23010.000	3825.000	3809.000
2	14:41:12	103.087%	-0.023	19.970	20.120	0.000	22970.000	3909.000	3919.000
3	14:41:39	101.181%	0.003	23.700	21.960	0.000	22590.000	3975.000	3877.000
X		103.084%	-0.017	23.630	21.910	0.000	22860.000	3903.000	3868.000
σ		1.902%	0.018	3.629	1.765	0.000	232.800	74.930	55.450
%RSD		1.845	105.200	15.360	8.058	0.000	1.019	1.920	1.433
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:46	6.310	2676.000	0.000	744.700	38510.000	39130.000	85.108%	0.206
2	14:41:12	6.210	2640.000	0.000	749.000	37830.000	39410.000	83.146%	0.133
3	14:41:39	6.940	2589.000	0.000	740.800	37950.000	38890.000	83.779%	0.040
X		6.487	2635.000	0.000	744.800	38100.000	39140.000	84.011%	0.126
σ		0.396	43.910	0.000	4.124	363.500	261.900	1.001%	0.083
%RSD		6.101	1.666	0.000	0.554	0.954	0.669	1.192	66.060
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:46	-0.056	2.413	1.671	16.820	350.500	0.192	0.812	0.857
2	14:41:12	1.551	2.268	1.735	15.060	347.400	0.220	0.738	0.727
3	14:41:39	-0.435	2.089	1.688	11.960	333.300	0.198	0.934	0.909
X		0.354	2.257	1.698	14.610	343.700	0.203	0.828	0.831
σ		1.055	0.163	0.033	2.460	9.161	0.015	0.099	0.094
%RSD		298.400	7.205	1.951	16.830	2.665	7.287	11.970	11.280
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:46	0.745	4.423	3.292	0.585	0.397	3.784	0.000	676.100
2	14:41:12	0.734	4.523	4.513	1.240	-1.294	3.685	0.000	677.900
3	14:41:39	0.703	4.487	4.406	0.469	-0.492	3.300	0.000	684.800
X		0.727	4.478	4.070	0.765	-0.463	3.590	0.000	679.600
σ		0.022	0.051	0.676	0.416	0.846	0.256	0.000	4.583
%RSD		3.008	1.137	16.610	54.340	182.700	7.122	0.000	0.674
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:46	86.648%	0.875	0.850	86.245%	-0.048	-0.062	0.011	0.044
2	14:41:12	88.333%	0.923	0.798	87.444%	-0.054	-0.061	0.049	0.007
3	14:41:39	88.638%	0.806	0.795	88.117%	-0.051	-0.071	0.004	0.103
X		87.873%	0.868	0.815	87.269%	-0.051	-0.065	0.022	0.051
σ		1.072%	0.059	0.031	0.948%	0.003	0.006	0.024	0.049
%RSD		1.220	6.771	3.797	1.086	6.045	9.179	111.900	94.790
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:46	84.734%	-0.440	0.323	0.372	135.700	136.200	88.394%	87.790%
2	14:41:12	85.803%	-0.469	0.273	0.445	139.900	136.100	90.743%	91.370%
3	14:41:39	87.839%	-0.550	0.305	0.334	138.400	137.800	91.394%	92.648%
X		86.125%	-0.487	0.300	0.383	138.000	136.700	90.177%	90.602%
σ		1.578%	0.057	0.025	0.056	2.166	0.954	1.578%	2.518%
%RSD		1.832	11.730	8.427	14.710	1.569	0.698	1.750	2.779
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:40:46	0.014	0.000	0.251	0.224	0.226	83.594%		
2	14:41:12	0.004	0.005	0.273	0.184	0.221	85.996%		
3	14:41:39	0.016	0.009	0.240	0.245	0.241	89.722%		
X		0.011	0.005	0.255	0.218	0.229	86.437%		
σ		0.006	0.004	0.017	0.031	0.010	3.087%		
%RSD		56.490	93.240	6.504	14.230	4.402	3.572		

180-41769-F-2-B

3/12/2015 2:44:37 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:04	101.738%	-0.040	10.100	10.250	0.000	16940.000	5716.000	5795.000
2	14:45:31	102.257%	-0.014	6.474	8.045	0.000	16120.000	5736.000	5754.000
3	14:46:00	100.870%	-0.031	9.168	8.313	0.000	16920.000	5902.000	5859.000
X		101.622%	-0.028	8.579	8.868	0.000	16660.000	5785.000	5803.000
σ		0.701%	0.013	1.881	1.201	0.000	469.300	101.700	53.350
%RSD		0.690	45.390	21.930	13.540	0.000	2.817	1.758	0.920
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:04	2.618	2094.000	0.000	979.000	48610.000	47990.000	85.237%	0.060
2	14:45:31	2.572	2012.000	0.000	943.800	46750.000	48040.000	84.451%	0.094
3	14:46:00	2.519	2046.000	0.000	972.000	47350.000	48410.000	81.464%	0.025
X		2.570	2051.000	0.000	964.900	47570.000	48150.000	83.718%	0.060
σ		0.049	40.820	0.000	18.650	949.800	225.000	1.991%	0.035
%RSD		1.921	1.991	0.000	1.933	1.997	0.467	2.378	57.940
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:04	0.739	2.438	23.130	12.150	446.200	0.259	0.930	0.703
2	14:45:31	-1.176	2.320	23.830	11.250	423.100	0.262	1.005	0.688
3	14:46:00	-0.893	2.372	24.250	11.150	419.100	0.261	1.080	0.693
X		-0.443	2.377	23.740	11.520	429.500	0.261	1.005	0.695
σ		1.034	0.059	0.566	0.552	14.630	0.001	0.075	0.007
%RSD		233.200	2.487	2.384	4.794	3.406	0.432	7.461	1.052
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:04	0.594	3.885	3.917	-0.416	-0.977	3.745	0.000	337.900
2	14:45:31	0.752	3.957	4.101	1.901	-2.358	4.123	0.000	345.100
3	14:46:00	0.685	3.932	4.213	-0.279	-0.655	3.557	0.000	346.300
X		0.677	3.925	4.077	0.402	-1.330	3.808	0.000	343.100
σ		0.079	0.036	0.149	1.300	0.905	0.288	0.000	4.514
%RSD		11.740	0.923	3.660	323.300	68.010	7.560	0.000	1.316
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:04	87.047%	0.378	0.307	85.945%	-0.070	-0.072	0.024	0.039
2	14:45:31	87.466%	0.383	0.397	86.503%	-0.059	-0.073	0.018	0.038
3	14:46:00	87.376%	0.274	0.272	86.696%	-0.061	-0.077	0.005	0.030
X		87.296%	0.345	0.325	86.381%	-0.063	-0.074	0.015	0.036
σ		0.221%	0.062	0.064	0.390%	0.006	0.002	0.010	0.005
%RSD		0.253	17.860	19.830	0.451	9.513	3.344	64.690	13.390
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:04	84.036%	-0.743	0.213	0.274	63.780	64.590	86.921%	86.718%
2	14:45:31	84.586%	-0.707	0.250	0.287	66.200	65.610	89.510%	90.885%
3	14:46:00	86.096%	-0.734	0.259	0.241	64.220	65.570	91.501%	91.055%
X		84.906%	-0.728	0.240	0.267	64.730	65.260	89.311%	89.553%
σ		1.067%	0.019	0.024	0.023	1.287	0.579	2.296%	2.456%
%RSD		1.257	2.598	10.140	8.717	1.988	0.887	2.571	2.743
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:45:04	0.004	0.006	0.273	0.301	0.277	83.361%		
2	14:45:31	-0.001	0.001	0.253	0.219	0.266	87.834%		
3	14:46:00	-0.001	0.003	0.258	0.266	0.276	86.823%		
X		0.001	0.003	0.261	0.262	0.273	86.006%		
σ		0.003	0.003	0.011	0.041	0.006	2.346%		
%RSD		312.000	77.170	4.042	15.700	2.101	2.727		

180-41802-J-1-A 3/12/2015 2:48:58 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	98.818%	-0.048	9.842	10.550	0.000	40210.000	32260.000	31870.000
2	14:49:50	97.703%	-0.039	7.696	8.491	0.000	41440.000	32940.000	32790.000
3	14:50:17	98.176%	-0.048	8.172	7.719	0.000	41440.000	33230.000	33020.000
X		98.232%	-0.045	8.570	8.920	0.000	41030.000	32810.000	32560.000
σ		0.559%	0.005	1.127	1.463	0.000	713.600	494.900	611.800
%RSD		0.569	11.280	13.150	16.400	0.000	1.739	1.508	1.879
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	0.538	6069.000	0.000	1693.000	214000.000	215300.000	84.383%	0.888
2	14:49:50	0.553	6245.000	0.000	1729.000	219800.000	221200.000	81.626%	0.750
3	14:50:17	0.495	6246.000	0.000	1709.000	219400.000	226100.000	79.948%	0.944
X		0.528	6187.000	0.000	1710.000	217700.000	220800.000	81.986%	0.861
σ		0.030	101.800	0.000	17.800	3228.000	5434.000	2.239%	0.100
%RSD		5.646	1.645	0.000	1.040	1.483	2.460	2.731	11.590
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	0.591	3.199	3.035	36.130	1859.000	0.483	4.682	0.537
2	14:49:50	1.209	3.357	3.175	39.990	1847.000	0.537	5.140	0.632
3	14:50:17	1.652	3.190	3.407	44.970	1911.000	0.556	5.279	0.540
X		1.151	3.249	3.206	40.370	1873.000	0.525	5.034	0.570
σ		0.533	0.094	0.188	4.431	33.870	0.038	0.312	0.054
%RSD		46.300	2.898	5.858	10.980	1.809	7.262	6.204	9.414
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	0.685	4.326	4.209	0.623	-0.488	7.715	0.000	676.600
2	14:49:50	0.672	4.320	3.574	-0.886	-0.286	7.957	0.000	676.500
3	14:50:17	0.812	4.087	4.856	1.827	0.233	7.838	0.000	673.900
X		0.723	4.244	4.213	0.521	-0.180	7.837	0.000	675.600
σ		0.077	0.137	0.641	1.360	0.372	0.121	0.000	1.555
%RSD		10.710	3.220	15.220	260.800	206.000	1.543	0.000	0.230
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	83.618%	0.204	0.187	81.808%	-0.047	-0.053	0.005	0.071
2	14:49:50	85.706%	0.187	0.150	82.118%	-0.024	-0.057	0.045	-0.016
3	14:50:17	87.520%	0.176	0.149	84.242%	-0.044	-0.040	0.038	-0.005
X		85.614%	0.189	0.162	82.723%	-0.038	-0.050	0.029	0.017
σ		1.953%	0.014	0.022	1.325%	0.013	0.009	0.021	0.048
%RSD		2.281	7.456	13.340	1.602	32.690	18.420	72.850	285.500
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	80.169%	-0.783	-0.088	-0.063	270.200	266.500	86.233%	85.245%
2	14:49:50	82.439%	-0.711	-0.104	-0.006	271.400	273.400	87.917%	88.383%
3	14:50:17	83.063%	-0.689	-0.130	-0.043	272.900	275.000	88.890%	90.401%
X		81.890%	-0.727	-0.108	-0.038	271.500	271.600	87.680%	88.010%
σ		1.523%	0.049	0.021	0.029	1.355	4.497	1.344%	2.598%
%RSD		1.860	6.725	19.920	77.010	0.499	1.655	1.533	2.952
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:49:24	0.009	0.004	0.021	0.020	0.010	82.105%		
2	14:49:50	0.009	0.007	-0.009	-0.010	-0.005	85.283%		
3	14:50:17	0.004	0.010	0.009	0.010	0.005	83.035%		
X		0.008	0.007	0.007	0.006	0.003	83.474%		
σ		0.003	0.003	0.015	0.015	0.008	1.634%		
%RSD		37.770	37.940	208.700	237.400	227.300	1.958		

180-41802-J-2-A 3/12/2015 2:53:13 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	103.115%	-0.006	7.430	10.750	0.000	41310.000	32260.000	32190.000
2	14:54:06	100.953%	-0.031	8.390	8.617	0.000	40240.000	32210.000	31980.000
3	14:54:32	100.458%	-0.031	6.834	7.546	0.000	40720.000	32740.000	32180.000
X		101.509%	-0.023	7.551	8.971	0.000	40760.000	32400.000	32110.000
σ		1.413%	0.014	0.785	1.632	0.000	534.600	295.200	119.200
%RSD		1.392	62.790	10.390	18.190	0.000	1.312	0.911	0.371
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	3.102	6260.000	0.000	1750.000	219800.000	218200.000	85.181%	0.772
2	14:54:06	3.101	6105.000	0.000	1691.000	213000.000	218100.000	85.269%	0.596
3	14:54:32	2.961	6189.000	0.000	1696.000	209900.000	214900.000	83.981%	0.862
X		3.055	6185.000	0.000	1712.000	214200.000	217100.000	84.810%	0.743
σ		0.082	77.880	0.000	32.600	5107.000	1856.000	0.719%	0.135
%RSD		2.669	1.259	0.000	1.904	2.384	0.855	0.848	18.190
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	2.124	3.647	3.236	55.390	1907.000	0.528	5.804	0.882
2	14:54:06	1.096	3.479	3.337	55.560	1839.000	0.576	5.742	0.855
3	14:54:32	-0.308	3.586	3.403	58.990	1823.000	0.590	5.833	0.918
X		0.971	3.570	3.325	56.650	1856.000	0.565	5.793	0.885
σ		1.221	0.085	0.084	2.032	44.840	0.033	0.046	0.032
%RSD		125.700	2.383	2.517	3.587	2.415	5.776	0.796	3.582
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	1.103	11.130	11.180	-1.561	0.041	7.872	0.000	661.800
2	14:54:06	1.304	11.050	10.940	-1.255	-0.808	8.374	0.000	663.300
3	14:54:32	1.106	11.390	11.320	0.408	-0.076	8.696	0.000	667.200
X		1.171	11.190	11.150	-0.803	-0.281	8.314	0.000	664.100
σ		0.115	0.178	0.193	1.059	0.460	0.415	0.000	2.773
%RSD		9.844	1.589	1.731	132.000	163.700	4.995	0.000	0.418
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	85.766%	0.169	0.205	83.065%	-0.055	-0.055	0.018	-0.021
2	14:54:06	87.631%	0.241	0.182	84.189%	-0.024	-0.053	0.011	-0.007
3	14:54:32	88.597%	0.209	0.217	85.068%	-0.044	-0.072	0.011	0.026
X		87.331%	0.206	0.201	84.107%	-0.041	-0.060	0.014	-0.001
σ		1.439%	0.037	0.018	1.004%	0.016	0.010	0.004	0.024
%RSD		1.648	17.690	8.730	1.194	38.810	16.920	29.820	2858.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	81.524%	-0.762	-0.097	-0.046	266.700	269.200	85.706%	85.420%
2	14:54:06	82.862%	-0.710	-0.083	-0.017	272.800	272.900	88.147%	88.750%
3	14:54:32	84.687%	-0.779	-0.089	-0.028	270.200	265.700	91.203%	90.485%
X		83.024%	-0.751	-0.090	-0.030	269.900	269.300	88.352%	88.219%
σ		1.588%	0.036	0.007	0.015	3.043	3.587	2.754%	2.574%
%RSD		1.913	4.760	7.952	49.050	1.127	1.332	3.117	2.917
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:53:39	0.008	0.007	0.213	0.245	0.222	80.971%		
2	14:54:06	0.009	0.007	0.196	0.169	0.194	85.178%		
3	14:54:32	0.007	0.004	0.230	0.184	0.192	85.440%		
X		0.008	0.006	0.213	0.199	0.203	83.863%		
σ		0.001	0.002	0.017	0.040	0.017	2.508%		
%RSD		10.550	28.800	7.978	20.240	8.153	2.990		

180-41802-J-2-A SD@5

3/12/2015 2:57:28 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:54	104.590%	-0.024	0.206	-0.074	0.000	7997.000	6362.000	6426.000
2	14:58:20	103.448%	-0.040	-1.810	-2.028	0.000	8057.000	6543.000	6577.000
3	14:58:46	104.329%	-0.048	-2.897	-2.555	0.000	8065.000	6521.000	6614.000
X		104.122%	-0.037	-1.500	-1.552	0.000	8040.000	6476.000	6539.000
σ		0.598%	0.012	1.575	1.307	0.000	36.920	98.650	99.240
%RSD		0.575	33.570	105.000	84.230	0.000	0.459	1.523	1.518
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:54	2.358	1300.000	0.000	354.100	40920.000	42060.000	96.038%	-0.223
2	14:58:20	2.300	1302.000	0.000	350.900	42210.000	42620.000	92.930%	-0.147
3	14:58:46	2.270	1291.000	0.000	363.400	42970.000	43790.000	90.656%	0.012
X		2.309	1298.000	0.000	356.100	42040.000	42820.000	93.208%	-0.119
σ		0.045	5.846	0.000	6.474	1034.000	885.600	2.701%	0.120
%RSD		1.942	0.450	0.000	1.818	2.459	2.068	2.898	100.500
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:54	0.658	0.777	0.721	20.570	396.700	0.097	1.496	0.229
2	14:58:20	-0.037	0.717	0.707	23.380	381.700	0.110	1.385	0.249
3	14:58:46	0.881	0.779	0.769	23.200	396.800	0.099	1.569	0.312
X		0.501	0.758	0.732	22.390	391.700	0.102	1.483	0.263
σ		0.479	0.035	0.032	1.574	8.694	0.007	0.092	0.043
%RSD		95.620	4.613	4.433	7.031	2.219	7.244	6.227	16.490
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:54	0.332	3.346	3.423	0.704	-0.344	3.511	0.000	127.800
2	14:58:20	0.261	3.694	3.448	0.568	-0.038	3.440	0.000	129.500
3	14:58:46	0.344	3.769	3.862	0.438	-0.406	4.199	0.000	129.900
X		0.312	3.603	3.578	0.570	-0.263	3.717	0.000	129.100
σ		0.045	0.226	0.247	0.133	0.197	0.419	0.000	1.098
%RSD		14.360	6.259	6.894	23.360	74.970	11.280	0.000	0.851
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:54	88.662%	0.009	0.065	88.292%	-0.066	-0.065	0.005	0.114
2	14:58:20	90.000%	0.023	0.050	89.872%	-0.062	-0.087	0.004	-0.015
3	14:58:46	91.647%	0.076	0.027	90.468%	-0.063	-0.073	0.004	0.027
X		90.103%	0.036	0.047	89.544%	-0.064	-0.075	0.004	0.042
σ		1.495%	0.035	0.019	1.124%	0.003	0.011	0.000	0.066
%RSD		1.659	96.800	40.740	1.256	3.977	14.820	2.389	155.200
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:54	86.310%	-0.893	-0.173	-0.166	54.910	54.900	87.479%	88.146%
2	14:58:20	88.584%	-0.867	-0.168	-0.161	54.990	54.020	91.292%	90.701%
3	14:58:46	89.548%	-0.898	-0.172	-0.170	54.070	54.320	92.392%	91.092%
X		88.147%	-0.886	-0.171	-0.166	54.660	54.410	90.388%	89.979%
σ		1.663%	0.017	0.003	0.005	0.514	0.449	2.578%	1.600%
%RSD		1.886	1.893	1.694	2.829	0.941	0.825	2.853	1.778
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:57:54	0.002	0.001	0.076	0.063	0.082	88.059%		
2	14:58:20	0.001	-0.001	0.082	0.060	0.086	84.949%		
3	14:58:46	-0.002	0.001	0.087	0.125	0.105	87.450%		
X		0.000	0.000	0.082	0.083	0.091	86.819%		
σ		0.002	0.001	0.005	0.037	0.012	1.648%		
%RSD		739.000	796.100	6.503	44.450	13.500	1.899		

180-41770-C-1-A @10

3/12/2015 3:01:43 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:02:09	100.289%	-0.031	38.590	36.240	0.000	79210.000	850.700	866.900
2	15:02:36	99.315%	-0.014	36.560	36.750	0.000	80030.000	872.300	853.900
3	15:03:02	102.382%	-0.006	35.310	35.830	0.000	77500.000	849.600	849.900
X		100.662%	-0.017	36.820	36.270	0.000	78910.000	857.500	856.900
σ		1.567%	0.013	1.655	0.463	0.000	1287.000	12.800	8.880
%RSD		1.557	74.280	4.496	1.276	0.000	1.631	1.492	1.036
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:02:09	4.473	340.500	0.000	408.300	1875.000	1677.000	97.266%	-0.341
2	15:02:36	4.477	320.700	0.000	411.000	1862.000	1697.000	95.998%	-0.378
3	15:03:02	4.094	315.600	0.000	407.500	1827.000	1741.000	94.729%	-0.337
X		4.348	325.600	0.000	408.900	1855.000	1705.000	95.998%	-0.352
σ		0.220	13.140	0.000	1.825	24.520	32.740	1.268%	0.023
%RSD		5.061	4.034	0.000	0.446	1.322	1.920	1.321	6.393
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:02:09	0.326	0.264	1.187	8.340	21.700	0.021	0.430	1.519
2	15:02:36	0.191	0.227	1.267	10.540	22.440	0.015	0.564	1.505
3	15:03:02	0.287	0.336	1.227	8.569	18.710	0.027	0.475	1.695
X		0.268	0.276	1.227	9.149	20.950	0.021	0.490	1.573
σ		0.069	0.055	0.040	1.208	1.974	0.006	0.068	0.106
%RSD		25.910	20.010	3.285	13.200	9.422	27.950	13.900	6.721
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:02:09	0.652	2.593	2.460	0.735	-1.397	3.789	0.000	290.600
2	15:02:36	0.779	2.659	2.711	1.527	0.899	4.226	0.000	295.900
3	15:03:02	0.800	3.006	2.799	0.494	1.156	3.595	0.000	297.000
X		0.743	2.752	2.656	0.919	0.219	3.870	0.000	294.500
σ		0.080	0.222	0.176	0.540	1.406	0.323	0.000	3.436
%RSD		10.750	8.067	6.612	58.840	641.100	8.353	0.000	1.167
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:02:09	88.945%	0.170	0.121	86.920%	-0.062	-0.091	0.005	-0.027
2	15:02:36	89.512%	0.127	0.164	88.446%	-0.056	-0.064	0.011	0.028
3	15:03:02	90.788%	0.186	0.164	89.878%	-0.056	-0.075	0.004	0.019
X		89.748%	0.161	0.149	88.415%	-0.058	-0.077	0.006	0.007
σ		0.944%	0.030	0.025	1.479%	0.003	0.014	0.004	0.029
%RSD		1.052	18.870	16.830	1.673	6.020	17.710	54.070	445.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:02:09	85.569%	-0.940	-0.098	-0.092	123.300	124.900	85.780%	85.984%
2	15:02:36	88.980%	-0.940	-0.079	-0.070	125.800	123.400	88.973%	89.395%
3	15:03:02	88.223%	-0.944	-0.075	-0.090	126.000	125.500	91.025%	91.150%
X		87.591%	-0.942	-0.084	-0.084	125.000	124.600	88.593%	88.843%
σ		1.791%	0.002	0.013	0.012	1.489	1.083	2.643%	2.627%
%RSD		2.045	0.222	14.920	14.140	1.191	0.869	2.984	2.957
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:02:09	0.003	-0.001	0.064	0.048	0.052	83.744%		
2	15:02:36	0.001	0.001	0.043	0.017	0.054	85.384%		
3	15:03:02	0.001	0.001	0.091	0.065	0.071	84.900%		
X		0.001	0.000	0.066	0.043	0.059	84.676%		
σ		0.001	0.001	0.024	0.024	0.010	0.842%		
%RSD		67.090	6396.000	36.600	56.270	17.320	0.995		

180-41770-C-1-A SD@50

3/12/2015 3:06:01 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:06:27	100.988%	-0.040	5.673	6.216	0.000	16260.000	165.800	166.900
2	15:06:53	102.722%	-0.023	3.905	4.298	0.000	16110.000	168.200	170.800
3	15:07:20	101.422%	-0.040	3.790	3.415	0.000	15940.000	167.200	166.500
X		101.711%	-0.034	4.456	4.643	0.000	16100.000	167.100	168.100
σ		0.903%	0.010	1.055	1.432	0.000	158.400	1.179	2.386
%RSD		0.887	27.790	23.680	30.850	0.000	0.984	0.706	1.420
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:06:27	0.361	82.330	0.000	89.690	303.600	329.700	102.007%	-0.459
2	15:06:53	0.139	66.880	0.000	88.070	377.200	351.500	99.653%	-0.495
3	15:07:20	0.135	63.010	0.000	86.290	361.200	339.800	100.671%	-0.483
X		0.212	70.740	0.000	88.020	347.300	340.300	100.777%	-0.479
σ		0.130	10.220	0.000	1.704	38.730	10.910	1.180%	0.018
%RSD		61.150	14.450	0.000	1.936	11.150	3.206	1.171	3.835
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:06:27	0.114	-0.018	0.215	-3.057	2.722	0.002	0.424	0.274
2	15:06:53	-0.047	0.037	0.214	-1.901	6.137	0.007	0.492	0.229
3	15:07:20	0.049	0.079	0.230	-1.791	0.826	0.005	0.373	0.259
X		0.038	0.033	0.220	-2.250	3.228	0.004	0.430	0.254
σ		0.081	0.049	0.009	0.701	2.692	0.002	0.060	0.023
%RSD		210.600	148.200	4.029	31.160	83.390	56.570	13.930	8.976
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:06:27	0.096	0.867	0.336	0.711	0.017	3.435	0.000	55.680
2	15:06:53	0.109	0.836	0.550	0.417	-0.324	2.453	0.000	55.960
3	15:07:20	0.109	0.714	0.830	0.549	-0.300	2.803	0.000	56.300
X		0.105	0.805	0.572	0.559	-0.202	2.897	0.000	55.980
σ		0.007	0.081	0.248	0.147	0.190	0.498	0.000	0.308
%RSD		7.043	10.040	43.320	26.310	94.100	17.180	0.000	0.550
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:06:27	90.127%	-0.028	-0.032	89.685%	-0.064	-0.086	-0.002	0.065
2	15:06:53	92.702%	-0.018	-0.048	91.745%	-0.063	-0.067	-0.002	0.087
3	15:07:20	93.854%	-0.038	-0.018	92.617%	-0.068	-0.077	-0.002	0.042
X		92.227%	-0.028	-0.033	91.349%	-0.065	-0.076	-0.002	0.065
σ		1.908%	0.010	0.015	1.506%	0.002	0.010	0.000	0.022
%RSD		2.069	35.560	45.200	1.648	3.477	12.560	0.000	34.460
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:06:27	87.240%	-0.989	-0.177	-0.193	25.020	24.710	85.651%	85.744%
2	15:06:53	89.887%	-1.024	-0.178	-0.185	25.970	24.370	89.696%	89.237%
3	15:07:20	91.354%	-1.030	-0.166	-0.179	25.970	24.270	90.117%	89.706%
X		89.493%	-1.015	-0.174	-0.186	25.650	24.450	88.488%	88.229%
σ		2.085%	0.022	0.007	0.007	0.548	0.233	2.466%	2.165%
%RSD		2.330	2.172	4.063	3.727	2.135	0.951	2.787	2.453
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:06:27	-0.001	-0.001	0.003	0.005	0.001	86.498%		
2	15:06:53	-0.001	-0.001	-0.003	-0.005	-0.010	87.210%		
3	15:07:20	-0.001	-0.000	-0.004	0.006	-0.005	88.011%		
X		-0.001	-0.000	-0.001	0.002	-0.004	87.240%		
σ		0.000	0.000	0.004	0.006	0.006	0.757%		
%RSD		2.282	74.250	276.600	284.700	126.800	0.868		

CCV 1487954 3/12/2015 3:17:39 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:06	96.808%	109.000	115.000	103.800	0.000	49920.000	46270.000	45250.000
2	15:18:33	98.438%	108.500	105.800	99.580	0.000	47920.000	45770.000	45770.000
3	15:18:59	96.590%	107.900	104.400	101.900	0.000	49230.000	47170.000	46370.000
X		97.279%	108.441%	108.429%	101.747%	0.000	98.043%	92.805%	91.599%
σ		1.010%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.038	0.522	5.315	2.078	0.000	2.077	1.531	1.219
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:06	460.300	5037.000	0.000	48570.000	47690.000	47680.000	102.953%	94.390
2	15:18:33	457.700	4991.000	0.000	49290.000	48140.000	48570.000	102.552%	97.020
3	15:18:59	463.800	5013.000	0.000	49160.000	47950.000	48360.000	102.774%	95.710
X		92.120%	100.272%	0.000	98.013%	95.851%	96.403%	102.760%	95.709%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.201%	n/a
%RSD		0.669	0.454	0.000	0.777	0.477	0.968	0.195	1.373
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:06	92.920	89.970	479.000	22280.000	24200.000	88.040	92.110	93.310
2	15:18:33	94.830	92.620	489.100	23210.000	24630.000	92.370	94.200	95.580
3	15:18:59	94.450	92.350	494.800	23390.000	25290.000	92.900	94.620	95.280
X		94.067%	91.649%	97.525%	91.843%	98.815%	91.102%	93.645%	94.722%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.077	1.589	1.638	2.596	2.222	2.925	1.435	1.303
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:06	95.180	92.740	92.870	97.950	97.660	100.700	0.000	94.000
2	15:18:33	97.880	96.800	96.250	100.100	99.220	103.300	0.000	94.890
3	15:18:59	95.210	94.680	96.950	97.110	98.130	103.400	0.000	94.530
X		96.091%	94.740%	95.358%	98.375%	98.337%	102.478%	0.000	94.473%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.616	2.145	2.288	1.546	0.812	1.538	0.000	0.477
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:06	88.476%	96.450	95.880	83.763%	94.820	95.670	95.110	92.960
2	15:18:33	89.390%	97.990	98.760	85.132%	96.590	97.350	97.340	96.210
3	15:18:59	91.971%	99.780	99.310	86.988%	95.850	96.340	96.740	95.410
X		89.946%	98.077%	97.982%	85.294%	95.752%	96.455%	96.397%	94.861%
σ		1.813%	n/a	n/a	1.619%	n/a	n/a	n/a	n/a
%RSD		2.015	1.697	1.877	1.898	0.928	0.879	1.194	1.784
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:06	83.873%	94.870	98.070	96.790	98.930	96.650	81.517%	81.033%
2	15:18:33	85.438%	96.820	99.040	98.530	98.150	98.810	83.342%	83.238%
3	15:18:59	85.437%	96.880	99.940	100.500	97.940	98.360	87.307%	87.236%
X		84.916%	96.188%	99.016%	98.619%	98.340%	97.940%	84.056%	83.836%
σ		0.903%	n/a	n/a	n/a	n/a	n/a	2.960%	3.145%
%RSD		1.064	1.188	0.945	1.897	0.533	1.162	3.522	3.751
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:18:06	89.760	88.860	89.170	91.030	89.400	85.068%		
2	15:18:33	95.640	93.790	95.310	95.440	94.970	84.259%		
3	15:18:59	98.720	95.480	97.480	97.870	96.770	82.876%		
X		94.704%	92.712%	93.986%	94.779%	93.714%	84.067%		
σ		n/a	n/a	n/a	n/a	n/a	1.109%		
%RSD		4.804	3.709	4.587	3.658	4.102	1.319		

CCB7 3/12/2015 3:25:06 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:25:32	102.531%	-0.032	-0.261	-0.594	0.000	7.031	4.117	3.240
2	15:26:00	106.458%	-0.016	-2.960	-2.686	0.000	6.401	4.023	3.837
3	15:26:26	104.230%	-0.016	-3.618	-3.761	0.000	6.266	2.991	3.079
X		104.406%	-0.021	-2.280	-2.347	0.000	6.566	3.710	3.385
σ		1.970%	0.009	1.779	1.611	0.000	0.408	0.625	0.399
%RSD		1.886	42.970	78.050	68.630	0.000	6.220	16.840	11.790
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:25:32	-0.623	33.110	0.000	20.880	10.380	5.991	105.916%	-0.450
2	15:26:00	-0.616	9.342	0.000	15.360	5.973	5.630	106.070%	-0.438
3	15:26:26	-0.625	7.981	0.000	15.180	8.080	5.178	106.601%	-0.368
X		-0.622	16.810	0.000	17.140	8.144	5.600	106.195%	-0.419
σ		0.005	14.130	0.000	3.244	2.204	0.407	0.360%	0.044
%RSD		0.795	84.060	0.000	18.920	27.060	7.271	0.339	10.490
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:25:32	0.015	-0.048	0.008	-0.774	6.765	0.005	0.321	-0.072
2	15:26:00	-0.038	-0.081	0.011	-2.285	8.139	0.004	0.381	-0.069
3	15:26:26	0.012	-0.059	0.026	-3.821	6.297	0.004	0.319	-0.021
X		-0.004	-0.063	0.015	-2.293	7.067	0.004	0.340	-0.054
σ		0.030	0.017	0.010	1.524	0.957	0.000	0.035	0.029
%RSD		776.300	26.400	63.880	66.450	13.540	11.510	10.260	53.690
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:25:32	-0.099	0.276	0.237	0.342	0.291	2.307	0.000	0.023
2	15:26:00	-0.113	0.318	0.294	0.355	0.346	2.279	0.000	0.014
3	15:26:26	-0.044	0.253	0.468	0.265	0.842	2.534	0.000	0.029
X		-0.086	0.282	0.333	0.320	0.493	2.373	0.000	0.022
σ		0.036	0.033	0.120	0.049	0.303	0.140	0.000	0.008
%RSD		42.580	11.600	36.140	15.150	61.580	5.895	0.000	34.480
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:25:32	93.035%	0.156	0.094	92.516%	-0.067	-0.064	0.010	0.080
2	15:26:00	95.128%	0.107	0.093	93.546%	-0.046	-0.074	-0.002	0.016
3	15:26:26	95.415%	0.127	0.098	94.865%	-0.059	-0.075	-0.002	-0.026
X		94.526%	0.130	0.095	93.642%	-0.057	-0.071	0.002	0.024
σ		1.300%	0.025	0.003	1.178%	0.011	0.006	0.007	0.053
%RSD		1.375	19.000	2.735	1.258	19.050	8.596	313.600	225.300
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:25:32	89.156%	-0.893	-0.154	-0.132	-0.020	0.033	85.996%	85.810%
2	15:26:00	92.123%	-0.871	-0.144	-0.135	-0.013	-0.006	89.126%	88.853%
3	15:26:26	93.601%	-0.880	-0.147	-0.161	0.041	0.016	90.184%	89.406%
X		91.627%	-0.881	-0.148	-0.142	0.003	0.014	88.435%	88.023%
σ		2.264%	0.011	0.005	0.016	0.034	0.019	2.178%	1.936%
%RSD		2.471	1.255	3.327	11.410	1190.000	133.200	2.463	2.200
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:25:32	0.010	0.005	-0.016	-0.000	-0.007	87.537%		
2	15:26:00	0.007	0.006	-0.016	0.003	-0.005	88.604%		
3	15:26:26	0.004	0.009	-0.010	-0.012	-0.012	88.819%		
X		0.007	0.007	-0.014	-0.003	-0.008	88.320%		
σ		0.003	0.002	0.003	0.008	0.004	0.687%		
%RSD		45.440	33.310	23.300	264.800	46.170	0.777		

MB 180-134806/1-A

3/12/2015 3:29:26 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:53	102.239%	-0.032	-1.670	-1.274	0.000	7.347	1.247	0.465
2	15:30:20	103.472%	-0.040	-3.997	-3.493	0.000	6.839	0.423	0.622
3	15:30:46	104.874%	-0.032	-4.913	-4.030	0.000	6.516	0.528	0.578
X		103.529%	-0.034	-3.527	-2.933	0.000	6.901	0.732	0.555
σ		1.318%	0.005	1.672	1.461	0.000	0.419	0.449	0.081
%RSD		1.273	13.670	47.400	49.820	0.000	6.070	61.260	14.540
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:53	-0.633	23.050	0.000	14.630	4.590	6.842	108.724%	-0.463
2	15:30:20	-0.660	5.241	0.000	12.020	1.591	6.865	106.660%	-0.473
3	15:30:46	-0.601	3.051	0.000	9.006	-0.725	6.207	108.616%	-0.451
X		-0.631	10.450	0.000	11.880	1.819	6.638	108.000%	-0.462
σ		0.029	10.970	0.000	2.812	2.665	0.373	1.162%	0.011
%RSD		4.674	105.000	0.000	23.660	146.500	5.623	1.076	2.390
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:53	0.009	-0.065	-0.008	-8.204	1.747	0.004	0.371	-0.089
2	15:30:20	-0.004	-0.023	-0.009	-6.480	1.612	0.001	0.369	-0.031
3	15:30:46	0.022	-0.013	0.003	-10.190	1.723	0.002	0.390	-0.049
X		0.009	-0.034	-0.004	-8.290	1.694	0.002	0.377	-0.056
σ		0.013	0.028	0.007	1.854	0.072	0.002	0.011	0.030
%RSD		151.500	83.070	154.000	22.360	4.264	71.260	3.048	53.060
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:53	-0.085	1.398	1.119	0.321	-0.468	1.997	0.000	0.015
2	15:30:20	-0.072	1.375	1.328	0.443	-0.042	3.074	0.000	0.015
3	15:30:46	-0.071	1.161	1.465	0.358	-0.180	2.321	0.000	0.014
X		-0.076	1.311	1.304	0.374	-0.230	2.464	0.000	0.015
σ		0.008	0.131	0.174	0.063	0.218	0.552	0.000	0.001
%RSD		10.090	9.966	13.340	16.780	94.540	22.420	0.000	5.903
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:53	92.721%	-0.034	-0.013	92.831%	-0.074	-0.071	-0.002	0.028
2	15:30:20	94.720%	-0.035	-0.015	93.954%	-0.054	-0.073	-0.002	0.053
3	15:30:46	95.680%	-0.028	-0.027	94.684%	-0.071	-0.077	-0.002	0.067
X		94.374%	-0.032	-0.018	93.823%	-0.066	-0.074	-0.002	0.050
σ		1.509%	0.004	0.007	0.933%	0.011	0.003	0.000	0.020
%RSD		1.599	11.270	40.500	0.995	16.550	4.204	0.000	39.740
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:53	90.804%	-0.978	-0.165	-0.185	-0.004	0.042	84.843%	84.737%
2	15:30:20	92.470%	-0.997	-0.183	-0.178	-0.013	0.012	89.756%	88.425%
3	15:30:46	93.050%	-0.951	-0.160	-0.178	-0.005	-0.015	90.438%	90.255%
X		92.108%	-0.975	-0.169	-0.180	-0.007	0.013	88.345%	87.806%
σ		1.166%	0.023	0.012	0.004	0.005	0.028	3.052%	2.811%
%RSD		1.266	2.401	7.057	2.407	65.000	217.500	3.455	3.201
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:29:53	-0.001	-0.001	0.003	-0.019	-0.003	89.689%		
2	15:30:20	0.001	-0.000	-0.003	-0.008	0.005	89.714%		
3	15:30:46	0.001	0.001	0.002	0.006	0.011	91.302%		
X		0.000	0.000	0.001	-0.007	0.004	90.235%		
σ		0.001	0.001	0.003	0.012	0.007	0.924%		
%RSD		364.400	1134.000	329.900	172.500	164.400	1.024		

PB 180-134716/1-D

3/12/2015 3:33:44 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:11	103.815%	-0.040	-1.168	-1.456	0.000	5.672	0.419	0.383
2	15:34:37	103.933%	-0.024	-4.359	-3.277	0.000	5.098	0.760	0.387
3	15:35:04	104.381%	-0.040	-4.487	-4.718	0.000	4.549	0.576	0.435
X		104.043%	-0.035	-3.338	-3.150	0.000	5.107	0.585	0.402
σ		0.298%	0.009	1.880	1.635	0.000	0.561	0.171	0.029
%RSD		0.287	27.310	56.330	51.890	0.000	10.990	29.190	7.146
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:11	-0.563	22.360	0.000	13.940	4.772	5.761	107.140%	-0.497
2	15:34:37	-0.621	3.973	0.000	13.220	5.962	5.284	106.290%	-0.438
3	15:35:04	-0.622	1.352	0.000	11.650	-0.499	5.228	105.682%	-0.508
X		-0.602	9.227	0.000	12.940	3.411	5.424	106.370%	-0.481
σ		0.034	11.450	0.000	1.170	3.439	0.293	0.732%	0.038
%RSD		5.606	124.000	0.000	9.045	100.800	5.397	0.688	7.829
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:11	0.007	-0.083	-0.017	-9.410	2.959	-0.000	0.368	-0.034
2	15:34:37	0.029	-0.075	0.006	-8.959	0.976	0.001	0.450	-0.043
3	15:35:04	0.001	-0.034	0.014	-8.459	-0.390	0.003	0.382	-0.057
X		0.013	-0.064	0.001	-8.943	1.182	0.001	0.400	-0.045
σ		0.015	0.026	0.016	0.476	1.684	0.002	0.044	0.012
%RSD		115.700	40.640	1633.000	5.322	142.500	135.800	10.910	26.060
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:11	-0.039	1.203	1.351	0.415	0.995	2.466	0.000	0.010
2	15:34:37	-0.087	1.411	1.419	0.268	-0.781	2.649	0.000	0.011
3	15:35:04	-0.037	1.400	1.504	0.341	0.193	2.091	0.000	0.011
X		-0.055	1.338	1.425	0.341	0.136	2.402	0.000	0.011
σ		0.028	0.117	0.077	0.073	0.889	0.285	0.000	0.001
%RSD		51.960	8.753	5.375	21.500	654.900	11.860	0.000	7.149
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:11	92.665%	-0.045	-0.053	91.532%	-0.063	-0.083	0.004	0.090
2	15:34:37	93.728%	-0.064	-0.042	92.746%	-0.073	-0.064	0.004	0.096
3	15:35:04	95.184%	-0.046	-0.049	93.958%	-0.064	-0.080	-0.002	0.102
X		93.859%	-0.052	-0.048	92.745%	-0.067	-0.076	0.002	0.096
σ		1.265%	0.011	0.006	1.213%	0.005	0.010	0.003	0.006
%RSD		1.347	21.050	11.760	1.308	8.005	13.270	158.300	6.122
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:34:11	90.215%	-1.024	-0.175	-0.189	-0.012	0.009	86.001%	84.526%
2	15:34:37	91.686%	-0.971	-0.181	-0.199	0.034	0.061	90.262%	87.868%
3	15:35:04	91.392%	-0.987	-0.192	-0.173	0.050	0.008	90.271%	88.913%
X		91.098%	-0.994	-0.183	-0.187	0.024	0.026	88.845%	87.102%
σ		0.778%	0.027	0.009	0.013	0.032	0.031	2.462%	2.291%
%RSD		0.854	2.740	4.842	7.002	134.600	117.400	2.772	2.631
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:34:11	-0.002	-0.000	0.000	-0.012	-0.004	88.230%		
2	15:34:37	0.002	0.003	0.016	-0.017	-0.006	89.003%		
3	15:35:04	-0.002	0.002	-0.002	-0.004	-0.001	89.193%		
X		-0.001	0.002	0.004	-0.011	-0.003	88.808%		
σ		0.003	0.002	0.010	0.007	0.003	0.510%		
%RSD		353.000	98.280	219.700	61.420	74.610	0.574		

LCS 180-134806/2-A 3/12/2015 3:38:02 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:28	79.671%	47.180	1034.000	977.500	0.000	56980.000	56410.000	55680.000
2	15:38:55	78.839%	44.870	1008.000	960.900	0.000	54580.000	54940.000	55770.000
3	15:39:21	76.893%	47.740	1020.000	999.700	0.000	56900.000	57390.000	56350.000
X		78.468%	46.600	1021.000	979.400	0.000	56150.000	56250.000	55940.000
σ		1.425%	1.522	13.090	19.500	0.000	1362.000	1236.000	364.200
%RSD		1.816	3.267	1.283	1.991	0.000	2.425	2.198	0.651
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:28	1576.000	11030.000	0.000	57850.000	58060.000	57320.000	70.986%	1089.000
2	15:38:55	1558.000	10680.000	0.000	56830.000	56440.000	57410.000	69.729%	1112.000
3	15:39:21	1704.000	10740.000	0.000	56620.000	55390.000	57670.000	67.189%	1101.000
X		1613.000	10820.000	0.000	57100.000	56630.000	57470.000	69.302%	1100.000
σ		79.520	187.400	0.000	656.500	1347.000	183.200	1.934%	11.790
%RSD		4.930	1.732	0.000	1.150	2.379	0.319	2.791	1.072
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:28	457.600	175.900	451.700	1027.000	1376.000	449.100	452.300	222.800
2	15:38:55	458.200	181.100	469.400	1048.000	1401.000	456.300	450.200	224.200
3	15:39:21	466.100	184.100	476.700	1075.000	1437.000	471.600	471.300	230.300
X		460.600	180.400	466.000	1050.000	1405.000	459.000	458.000	225.700
σ		4.728	4.160	12.860	24.120	30.920	11.490	11.640	3.992
%RSD		1.026	2.307	2.760	2.298	2.201	2.503	2.542	1.769
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:28	223.300	429.500	431.500	33.950	8.846	13.450	0.000	855.100
2	15:38:55	224.500	439.000	437.400	35.010	8.959	14.080	0.000	861.600
3	15:39:21	230.200	448.800	441.900	35.260	9.095	13.280	0.000	868.000
X		226.000	439.100	436.900	34.740	8.966	13.600	0.000	861.600
σ		3.683	9.672	5.197	0.696	0.125	0.425	0.000	6.441
%RSD		1.629	2.203	1.190	2.004	1.391	3.122	0.000	0.748
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:28	70.548%	1120.000	1131.000	70.652%	42.050	43.010	43.750	35.900
2	15:38:55	71.284%	1141.000	1151.000	71.586%	42.250	42.910	44.200	34.890
3	15:39:21	71.485%	1143.000	1152.000	71.949%	42.320	43.140	45.030	35.780
X		71.106%	1135.000	1144.000	71.396%	42.210	43.020	44.330	35.520
σ		0.494%	12.860	11.560	0.669%	0.141	0.116	0.649	0.549
%RSD		0.694	1.134	1.010	0.938	0.333	0.269	1.464	1.544
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:28	66.376%	2319.000	561.500	555.800	1699.000	1727.000	71.910%	85.517%
2	15:38:55	68.797%	2315.000	557.000	544.700	1679.000	1702.000	74.555%	88.010%
3	15:39:21	68.034%	2331.000	564.500	560.700	1703.000	1723.000	74.953%	89.321%
X		67.736%	2321.000	561.000	553.800	1694.000	1718.000	73.806%	87.616%
σ		1.238%	8.119	3.810	8.185	13.030	13.690	1.654%	1.932%
%RSD		1.828	0.350	0.679	1.478	0.769	0.797	2.241	2.205
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:38:28	41.990	41.440	17.740	17.480	17.710	67.996%		
2	15:38:55	43.120	42.640	17.630	18.040	17.830	70.313%		
3	15:39:21	42.340	42.090	17.720	17.570	17.640	72.759%		
X		42.480	42.060	17.690	17.700	17.730	70.356%		
σ		0.578	0.600	0.059	0.302	0.094	2.382%		
%RSD		1.361	1.426	0.331	1.705	0.531	3.385		

LCSD 180-134806/3-A

3/12/2015 3:42:19 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:46	81.297%	44.150	970.700	943.300	0.000	55490.000	54020.000	54330.000
2	15:43:14	78.257%	45.080	946.400	922.300	0.000	54290.000	55820.000	54120.000
3	15:43:42	78.200%	43.530	918.800	924.100	0.000	54510.000	55530.000	54690.000
X		79.251%	44.250	945.300	929.900	0.000	54760.000	55120.000	54380.000
σ		1.772%	0.780	25.930	11.630	0.000	637.800	968.900	285.700
%RSD		2.235	1.763	2.744	1.251	0.000	1.165	1.758	0.525
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:46	1606.000	10860.000	0.000	56720.000	56010.000	57330.000	68.920%	1083.000
2	15:43:14	1626.000	10700.000	0.000	55530.000	55490.000	56620.000	68.296%	1087.000
3	15:43:42	1607.000	10550.000	0.000	56020.000	55030.000	56380.000	68.040%	1094.000
X		1613.000	10700.000	0.000	56090.000	55510.000	56780.000	68.419%	1088.000
σ		11.360	155.100	0.000	601.100	490.200	491.100	0.453%	5.312
%RSD		0.704	1.449	0.000	1.072	0.883	0.865	0.662	0.488
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:46	444.800	174.400	446.900	1006.000	1356.000	443.100	436.800	216.900
2	15:43:14	454.900	179.300	458.700	1026.000	1386.000	440.200	445.500	221.900
3	15:43:42	448.500	177.800	464.300	1035.000	1389.000	449.100	441.600	219.500
X		449.400	177.200	456.600	1022.000	1377.000	444.100	441.300	219.400
σ		5.121	2.544	8.861	14.980	18.210	4.584	4.349	2.495
%RSD		1.140	1.436	1.941	1.465	1.322	1.032	0.985	1.137
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:46	215.900	425.100	430.100	34.270	8.755	12.930	0.000	839.600
2	15:43:14	220.600	431.500	427.400	33.480	9.521	13.120	0.000	836.400
3	15:43:42	217.900	427.400	424.500	30.750	8.707	13.370	0.000	847.100
X		218.100	428.000	427.300	32.830	8.995	13.140	0.000	841.000
σ		2.375	3.211	2.816	1.845	0.457	0.219	0.000	5.520
%RSD		1.089	0.750	0.659	5.619	5.079	1.668	0.000	0.656
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:46	68.985%	1119.000	1131.000	69.387%	40.950	41.840	42.540	36.280
2	15:43:14	70.888%	1134.000	1149.000	71.062%	41.150	41.300	43.720	35.160
3	15:43:42	70.693%	1137.000	1153.000	71.745%	40.900	41.700	42.950	34.630
X		70.189%	1130.000	1144.000	70.732%	41.000	41.610	43.070	35.360
σ		1.047%	9.617	11.730	1.213%	0.132	0.278	0.597	0.846
%RSD		1.492	0.851	1.025	1.715	0.323	0.667	1.386	2.392
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:42:46	65.659%	2313.000	558.600	555.200	1649.000	1648.000	71.959%	84.143%
2	15:43:14	67.703%	2303.000	553.900	551.600	1634.000	1652.000	74.470%	87.782%
3	15:43:42	68.596%	2338.000	560.400	553.600	1651.000	1668.000	76.177%	89.344%
X		67.320%	2318.000	557.600	553.500	1645.000	1656.000	74.202%	87.090%
σ		1.506%	17.990	3.390	1.811	9.001	10.210	2.122%	2.669%
%RSD		2.237	0.776	0.608	0.327	0.547	0.616	2.860	3.064
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:42:46	40.960	40.670	17.120	16.980	17.260	67.985%		
2	15:43:14	42.170	41.230	16.650	17.450	17.100	71.455%		
3	15:43:42	41.800	41.540	17.030	17.000	17.150	72.455%		
X		41.650	41.150	16.930	17.140	17.170	70.632%		
σ		0.622	0.444	0.248	0.267	0.083	2.346%		
%RSD		1.493	1.078	1.463	1.556	0.486	3.322		

180-41629-L-1-B

3/12/2015 3:46:42 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:09	96.379%	-0.003	83.670	80.600	0.000	73140.000	37460.000	37410.000
2	15:47:35	96.431%	-0.030	77.430	77.860	0.000	74360.000	37740.000	37060.000
3	15:48:02	95.513%	0.006	74.050	76.030	0.000	72920.000	38460.000	37420.000
X		96.108%	-0.009	78.380	78.160	0.000	73470.000	37880.000	37300.000
σ		0.516%	0.019	4.881	2.300	0.000	777.400	514.900	207.200
%RSD		0.537	206.000	6.227	2.942	0.000	1.058	1.359	0.555
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:09	1.934	11710.000	0.000	11700.000	61680.000	62750.000	80.425%	2.139
2	15:47:35	2.135	11750.000	0.000	11270.000	62270.000	64540.000	78.894%	1.499
3	15:48:02	2.186	11820.000	0.000	11750.000	60610.000	63840.000	78.603%	1.741
X		2.085	11760.000	0.000	11570.000	61520.000	63710.000	79.308%	1.793
σ		0.133	55.690	0.000	261.000	841.100	902.200	0.979%	0.323
%RSD		6.369	0.474	0.000	2.255	1.367	1.416	1.234	18.020
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:09	-0.218	2.968	4141.000	32.050	572.600	2.569	9.085	5.639
2	15:47:35	-0.951	2.752	4271.000	32.350	566.300	2.600	9.167	5.788
3	15:48:02	-0.664	2.549	4299.000	35.050	554.700	2.645	9.487	5.990
X		-0.611	2.757	4237.000	33.150	564.500	2.605	9.246	5.805
σ		0.370	0.209	83.870	1.655	9.109	0.038	0.213	0.176
%RSD		60.490	7.598	1.980	4.993	1.614	1.470	2.298	3.034
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:09	5.088	95.420	95.210	2.174	-1.686	5.828	0.000	398.200
2	15:47:35	5.619	98.970	97.250	1.556	1.293	5.303	0.000	406.500
3	15:48:02	5.458	98.190	98.420	0.288	0.258	5.088	0.000	405.300
X		5.388	97.530	96.960	1.339	-0.045	5.406	0.000	403.400
σ		0.272	1.866	1.629	0.962	1.513	0.381	0.000	4.472
%RSD		5.050	1.913	1.680	71.800	3344.000	7.043	0.000	1.109
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:09	82.193%	8.144	8.275	80.551%	-0.063	-0.060	0.276	0.243
2	15:47:35	82.385%	7.478	7.080	81.358%	-0.062	-0.069	0.298	0.223
3	15:48:02	83.227%	6.518	6.648	82.519%	-0.050	-0.055	0.314	0.383
X		82.602%	7.380	7.334	81.476%	-0.058	-0.061	0.296	0.283
σ		0.550%	0.817	0.843	0.989%	0.007	0.007	0.019	0.088
%RSD		0.666	11.080	11.490	1.214	11.880	11.110	6.468	30.950
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:47:09	78.367%	6.109	1.033	1.052	84.220	84.240	82.922%	82.733%
2	15:47:35	80.155%	3.888	1.027	1.059	82.630	84.090	86.173%	86.075%
3	15:48:02	81.306%	2.476	1.070	1.116	86.200	84.100	86.744%	88.172%
X		79.943%	4.158	1.043	1.076	84.350	84.150	85.280%	85.660%
σ		1.481%	1.831	0.023	0.035	1.791	0.083	2.061%	2.743%
%RSD		1.853	44.050	2.227	3.280	2.123	0.099	2.417	3.203
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:47:09	0.153	0.151	0.223	0.149	0.180	79.408%		
2	15:47:35	0.098	0.092	0.145	0.161	0.150	84.794%		
3	15:48:02	0.087	0.070	0.210	0.155	0.184	82.569%		
X		0.113	0.104	0.193	0.155	0.171	82.257%		
σ		0.035	0.042	0.041	0.006	0.019	2.706%		
%RSD		31.310	40.430	21.450	3.878	10.840	3.290		

180-41629-L-1-B SD@5

3/12/2015 3:51:00 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:27	100.425%	-0.040	17.770	14.650	0.000	14660.000	7653.000	7780.000
2	15:51:53	99.852%	-0.014	12.830	11.850	0.000	14340.000	7496.000	7756.000
3	15:52:20	98.146%	-0.039	14.120	11.860	0.000	14600.000	7818.000	7764.000
X		99.474%	-0.031	14.910	12.780	0.000	14530.000	7656.000	7767.000
σ		1.185%	0.015	2.563	1.612	0.000	169.100	160.600	12.070
%RSD		1.192	47.750	17.190	12.610	0.000	1.164	2.098	0.155
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:27	-0.060	2638.000	0.000	2338.000	12270.000	12170.000	94.818%	0.030
2	15:51:53	-0.031	2585.000	0.000	2342.000	12450.000	12190.000	93.219%	-0.028
3	15:52:20	-0.079	2295.000	0.000	2329.000	12420.000	12220.000	91.873%	-0.022
X		-0.057	2506.000	0.000	2337.000	12380.000	12190.000	93.304%	-0.007
σ		0.024	184.500	0.000	6.814	96.540	23.820	1.474%	0.032
%RSD		42.410	7.362	0.000	0.292	0.780	0.195	1.580	485.100
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:27	-0.172	0.566	771.500	0.503	115.200	0.507	2.190	0.977
2	15:51:53	0.426	0.535	797.400	2.231	115.200	0.512	2.309	1.074
3	15:52:20	0.243	0.561	816.100	3.362	107.300	0.535	2.145	1.140
X		0.165	0.554	795.000	2.032	112.600	0.518	2.215	1.064
σ		0.306	0.016	22.380	1.440	4.538	0.015	0.084	0.082
%RSD		185.000	2.946	2.815	70.860	4.031	2.900	3.809	7.727
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:27	1.101	20.210	20.440	0.510	-0.518	2.486	0.000	75.610
2	15:51:53	0.965	21.270	20.530	0.203	-1.299	3.060	0.000	76.170
3	15:52:20	0.960	20.870	21.000	0.944	-1.539	2.820	0.000	77.020
X		1.009	20.780	20.660	0.552	-1.119	2.789	0.000	76.270
σ		0.080	0.537	0.302	0.372	0.534	0.289	0.000	0.709
%RSD		7.920	2.583	1.461	67.350	47.700	10.350	0.000	0.929
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:27	87.279%	1.173	1.264	87.848%	-0.054	-0.080	0.094	0.052
2	15:51:53	90.680%	1.357	1.209	90.160%	-0.074	-0.087	0.066	0.064
3	15:52:20	91.219%	1.192	1.189	90.471%	-0.070	-0.073	0.023	0.122
X		89.726%	1.241	1.220	89.493%	-0.066	-0.080	0.061	0.079
σ		2.136%	0.102	0.039	1.433%	0.010	0.007	0.036	0.037
%RSD		2.380	8.184	3.198	1.601	15.930	8.811	58.590	47.040
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:51:27	85.717%	-0.435	0.076	0.056	17.220	16.940	86.850%	86.515%
2	15:51:53	87.998%	-0.451	0.084	0.010	16.980	17.180	90.246%	90.282%
3	15:52:20	88.612%	-0.545	0.047	0.040	17.030	17.370	91.103%	90.919%
X		87.442%	-0.477	0.069	0.035	17.080	17.160	89.400%	89.239%
σ		1.526%	0.060	0.019	0.023	0.124	0.216	2.249%	2.380%
%RSD		1.745	12.550	27.750	65.280	0.723	1.258	2.516	2.667
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:51:27	0.028	0.027	0.041	0.018	0.036	81.546%		
2	15:51:53	0.016	0.029	0.056	0.036	0.040	84.239%		
3	15:52:20	0.018	0.026	0.011	0.044	0.030	87.206%		
X		0.021	0.027	0.036	0.033	0.035	84.331%		
σ		0.007	0.001	0.023	0.013	0.005	2.831%		
%RSD		31.760	5.417	64.910	40.680	14.300	3.357		

180-41678-B-1-A 3/12/2015 3:55:21 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:47	99.653%	2.614	25.270	27.700	0.000	20900.000	88830.000	88350.000
2	15:56:14	98.601%	2.279	24.850	26.360	0.000	21100.000	91490.000	89080.000
3	15:56:40	97.141%	2.504	21.800	23.520	0.000	20900.000	91780.000	89120.000
X		98.465%	2.466	23.970	25.860	0.000	20970.000	90700.000	88850.000
σ		1.262%	0.171	1.893	2.134	0.000	111.600	1623.000	431.100
%RSD		1.281	6.929	7.898	8.254	0.000	0.532	1.789	0.485
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:47	6230.000	11530.000	0.000	18210.000	161300.000	161600.000	87.238%	1.682
2	15:56:14	6380.000	11580.000	0.000	18170.000	163300.000	166800.000	85.424%	1.697
3	15:56:40	6462.000	11600.000	0.000	18210.000	161100.000	163200.000	85.922%	1.770
X		6357.000	11570.000	0.000	18200.000	161900.000	163800.000	86.195%	1.716
σ		117.900	35.910	0.000	23.400	1188.000	2665.000	0.937%	0.047
%RSD		1.854	0.310	0.000	0.129	0.734	1.627	1.088	2.726
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:47	1.004	2.707	24900.000	157800.000	157800.000	571.100	64.470	609.400
2	15:56:14	2.153	2.555	26330.000	166200.000	167300.000	605.000	68.620	632.400
3	15:56:40	1.386	2.608	26530.000	168100.000	168400.000	610.200	67.470	634.800
X		1.514	2.623	25920.000	164000.000	164500.000	595.400	66.850	625.600
σ		0.586	0.077	892.600	5479.000	5855.000	21.200	2.143	14.010
%RSD		38.670	2.929	3.444	3.341	3.559	3.560	3.205	2.240
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:47	601.100	19400.000	18610.000	0.849	2.538	16.040	0.000	750.200
2	15:56:14	624.900	20110.000	19200.000	0.944	3.458	15.260	0.000	766.300
3	15:56:40	628.600	20150.000	19230.000	1.430	3.754	15.970	0.000	766.300
X		618.200	19890.000	19010.000	1.075	3.250	15.760	0.000	761.000
σ		14.940	422.400	348.100	0.312	0.634	0.433	0.000	9.271
%RSD		2.416	2.124	1.830	29.010	19.510	2.748	0.000	1.218
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:47	0.000	0.626	0.350	82.602%	-0.052	-0.075	6.972	9.090
2	15:56:14	0.000	0.709	0.443	84.507%	-0.057	-0.078	6.715	8.974
3	15:56:40	0.000	0.576	0.388	85.686%	-0.041	-0.068	6.925	8.942
X		0.000	0.637	0.394	84.265%	-0.050	-0.074	6.871	9.002
σ		0.000	0.067	0.047	1.556%	0.008	0.005	0.137	0.078
%RSD		0.000	10.590	11.960	1.846	16.800	7.120	1.998	0.865
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:47	81.745%	-0.170	-0.036	-0.005	16.680	16.320	107.350%	113.273%
2	15:56:14	84.040%	-0.074	-0.072	0.022	17.140	17.020	112.619%	118.848%
3	15:56:40	85.917%	-0.104	-0.046	-0.028	17.480	16.280	113.285%	121.042%
X		83.901%	-0.116	-0.052	-0.004	17.100	16.540	111.085%	117.721%
σ		2.090%	0.049	0.019	0.025	0.401	0.418	3.251%	4.005%
%RSD		2.490	42.140	36.660	720.900	2.347	2.525	2.927	3.402
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:55:47	0.181	0.201	8.905	7.872	8.370	79.359%		
2	15:56:14	0.211	0.217	8.811	8.335	8.626	80.398%		
3	15:56:40	0.210	0.190	8.369	7.716	7.991	86.836%		
X		0.201	0.203	8.695	7.974	8.329	82.198%		
σ		0.017	0.014	0.286	0.322	0.319	4.050%		
%RSD		8.450	6.874	3.291	4.034	3.833	4.927		

180-41678-B-2-A 3/12/2015 3:59:38 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:00:05	96.721%	0.005	19.930	21.080	0.000	20270.000	69050.000	68270.000
2	16:00:31	95.735%	0.015	18.450	18.720	0.000	19850.000	69260.000	69640.000
3	16:00:58	95.681%	-0.021	18.270	18.240	0.000	20140.000	70470.000	68120.000
X		96.045%	-0.000	18.880	19.340	0.000	20090.000	69590.000	68670.000
σ		0.585%	0.019	0.912	1.519	0.000	214.300	766.700	836.600
%RSD		0.610	6231.000	4.831	7.854	0.000	1.067	1.102	1.218
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:00:05	68.300	863.200	0.000	15690.000	335600.000	331600.000	83.218%	0.133
2	16:00:31	68.640	838.500	0.000	15850.000	346200.000	335300.000	79.959%	0.158
3	16:00:58	69.050	816.900	0.000	15440.000	338500.000	333400.000	80.063%	0.295
X		68.660	839.500	0.000	15660.000	340100.000	333400.000	81.080%	0.195
σ		0.379	23.150	0.000	206.200	5464.000	1882.000	1.852%	0.088
%RSD		0.552	2.757	0.000	1.317	1.607	0.564	2.284	44.900
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:00:05	-1.062	2.730	9137.000	1392.000	4212.000	19.870	5.115	5.019
2	16:00:31	-0.455	2.644	9536.000	1422.000	4295.000	20.020	4.650	4.903
3	16:00:58	3.401	2.706	9549.000	1405.000	4185.000	19.930	4.477	5.091
X		0.628	2.693	9407.000	1406.000	4231.000	19.940	4.748	5.004
σ		2.420	0.044	234.200	15.180	57.160	0.073	0.330	0.095
%RSD		385.300	1.648	2.490	1.080	1.351	0.367	6.945	1.892
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:00:05	7.601	170.700	169.500	-2.278	1.471	4.536	0.000	682.100
2	16:00:31	7.246	173.500	168.700	-2.946	0.028	4.134	0.000	685.300
3	16:00:58	7.078	171.200	170.700	-2.316	-0.880	3.849	0.000	690.800
X		7.308	171.800	169.600	-2.513	0.206	4.173	0.000	686.100
σ		0.267	1.483	1.006	0.375	1.185	0.345	0.000	4.405
%RSD		3.653	0.863	0.593	14.930	574.500	8.270	0.000	0.642
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:00:05	87.957%	0.374	0.175	81.576%	-0.056	-0.069	0.187	0.201
2	16:00:31	89.263%	0.350	0.239	83.095%	-0.064	-0.069	0.281	0.273
3	16:00:58	89.124%	0.377	0.195	82.330%	-0.061	-0.076	0.191	0.275
X		88.781%	0.367	0.203	82.334%	-0.060	-0.071	0.220	0.250
σ		0.718%	0.015	0.033	0.760%	0.004	0.004	0.053	0.042
%RSD		0.808	4.019	16.080	0.923	6.451	5.237	24.150	16.910
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:00:05	81.214%	-0.523	-0.150	-0.076	13.300	13.700	83.664%	84.381%
2	16:00:31	80.761%	-0.506	-0.147	-0.057	13.700	13.870	86.086%	85.601%
3	16:00:58	82.620%	-0.501	-0.150	-0.046	13.820	13.450	86.551%	87.357%
X		81.531%	-0.510	-0.149	-0.060	13.610	13.670	85.434%	85.779%
σ		0.969%	0.012	0.002	0.015	0.273	0.213	1.550%	1.496%
%RSD		1.189	2.274	1.377	25.470	2.005	1.559	1.815	1.744
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:00:05	0.163	0.144	0.594	0.598	0.627	79.351%		
2	16:00:31	0.146	0.125	0.681	0.574	0.617	83.355%		
3	16:00:58	0.181	0.156	0.690	0.600	0.670	81.951%		
X		0.163	0.142	0.655	0.591	0.638	81.552%		
σ		0.018	0.015	0.053	0.014	0.028	2.031%		
%RSD		10.760	10.930	8.043	2.451	4.378	2.491		

180-41678-C-2-A 3/12/2015 4:03:56 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:23	94.943%	0.341	11.570	14.270	0.000	10800.000	160800.000	157800.000
2	16:04:49	90.401%	0.445	10.460	11.270	0.000	11090.000	166400.000	163500.000
3	16:05:16	91.857%	0.429	12.420	10.580	0.000	10950.000	165800.000	157200.000
X		92.400%	0.405	11.480	12.040	0.000	10940.000	164400.000	159500.000
σ		2.319%	0.056	0.986	1.964	0.000	146.700	3052.000	3458.000
%RSD		2.510	13.810	8.588	16.320	0.000	1.341	1.857	2.168
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:23	76.990	9885.000	0.000	32800.000	313200.000	308300.000	82.515%	1.235
2	16:04:49	80.240	10190.000	0.000	33810.000	324800.000	314900.000	80.755%	1.211
3	16:05:16	79.130	9868.000	0.000	32540.000	315900.000	315500.000	79.914%	1.056
X		78.790	9980.000	0.000	33050.000	318000.000	312900.000	81.061%	1.167
σ		1.652	180.100	0.000	671.100	6096.000	3992.000	1.327%	0.097
%RSD		2.097	1.805	0.000	2.031	1.917	1.276	1.637	8.336
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:23	-0.180	2.213	31670.000	264400.000	268800.000	267.000	53.070	166.700
2	16:04:49	-1.250	2.342	33230.000	280400.000	283000.000	280.000	55.940	175.200
3	16:05:16	0.035	2.139	33660.000	281100.000	285500.000	279.300	55.070	175.600
X		-0.465	2.231	32860.000	275300.000	279100.000	275.400	54.690	172.500
σ		0.689	0.102	1045.000	9461.000	8989.000	7.318	1.473	5.039
%RSD		148.100	4.586	3.180	3.437	3.221	2.657	2.693	2.921
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:23	174.300	6385.000	6196.000	0.482	0.466	6.984	0.000	1431.000
2	16:04:49	179.100	6629.000	6404.000	-0.915	1.025	7.898	0.000	1506.000
3	16:05:16	177.200	6550.000	6275.000	-0.295	1.121	7.215	0.000	1469.000
X		176.900	6521.000	6292.000	-0.243	0.871	7.366	0.000	1469.000
σ		2.377	124.400	104.800	0.700	0.354	0.475	0.000	37.680
%RSD		1.344	1.908	1.666	288.100	40.640	6.450	0.000	2.566
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:23	0.000	0.375	0.033	81.877%	-0.060	-0.089	3.823	5.282
2	16:04:49	0.000	0.370	0.022	80.539%	-0.056	-0.083	3.905	5.243
3	16:05:16	0.000	0.336	0.024	85.217%	-0.068	-0.076	3.938	5.157
X		0.000	0.360	0.026	82.544%	-0.061	-0.083	3.889	5.228
σ		0.000	0.021	0.006	2.409%	0.007	0.007	0.059	0.064
%RSD		0.000	5.903	22.910	2.919	10.620	7.998	1.520	1.226
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:23	79.327%	-0.575	-0.127	0.026	35.260	35.030	89.883%	92.273%
2	16:04:49	80.823%	-0.612	-0.081	0.019	35.680	34.690	92.953%	93.937%
3	16:05:16	82.320%	-0.581	-0.091	0.045	32.850	35.220	95.244%	96.737%
X		80.824%	-0.589	-0.099	0.030	34.590	34.980	92.693%	94.316%
σ		1.497%	0.020	0.024	0.013	1.528	0.270	2.690%	2.256%
%RSD		1.852	3.330	24.470	43.920	4.418	0.771	2.902	2.392
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:04:23	0.145	0.133	0.039	0.019	0.030	78.169%		
2	16:04:49	0.150	0.139	0.019	-0.001	0.009	77.985%		
3	16:05:16	0.153	0.133	0.027	0.001	0.013	81.892%		
X		0.149	0.135	0.029	0.006	0.017	79.349%		
σ		0.004	0.003	0.010	0.011	0.011	2.205%		
%RSD		2.770	2.369	35.480	173.600	64.040	2.778		

180-41679-B-1-A 3/12/2015 4:08:11 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:37	96.122%	-0.012	22.490	21.150	0.000	21250.000	72070.000	71550.000
2	16:09:04	93.616%	-0.039	21.650	18.320	0.000	20750.000	73370.000	70720.000
3	16:09:30	94.007%	-0.021	15.140	18.370	0.000	20580.000	70310.000	69740.000
X		94.582%	-0.024	19.760	19.280	0.000	20860.000	71920.000	70670.000
σ		1.348%	0.014	4.021	1.616	0.000	344.600	1537.000	907.200
%RSD		1.425	56.890	20.350	8.384	0.000	1.652	2.137	1.284
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:37	10.110	813.100	0.000	16120.000	345400.000	343000.000	82.191%	0.247
2	16:09:04	10.480	783.800	0.000	16280.000	350700.000	339600.000	78.919%	0.012
3	16:09:30	10.010	763.300	0.000	15660.000	347000.000	347900.000	78.218%	0.048
X		10.200	786.700	0.000	16020.000	347700.000	343500.000	79.776%	0.102
σ		0.247	25.020	0.000	319.700	2709.000	4172.000	2.121%	0.127
%RSD		2.425	3.181	0.000	1.996	0.779	1.214	2.658	124.200
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:37	0.599	2.427	9418.000	96.660	3174.000	16.990	4.846	0.543
2	16:09:04	0.895	2.421	9797.000	71.920	3085.000	17.180	4.350	0.617
3	16:09:30	0.336	2.207	9963.000	57.840	2964.000	17.190	3.907	0.643
X		0.610	2.352	9726.000	75.480	3074.000	17.120	4.367	0.601
σ		0.280	0.125	278.900	19.650	105.400	0.116	0.470	0.052
%RSD		45.900	5.321	2.868	26.040	3.429	0.680	10.750	8.639
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:37	2.655	48.260	47.280	-2.097	0.113	3.321	0.000	721.500
2	16:09:04	2.854	49.590	48.150	-4.011	1.058	3.489	0.000	734.200
3	16:09:30	2.935	49.670	48.690	-2.891	0.353	3.988	0.000	733.400
X		2.815	49.170	48.040	-3.000	0.508	3.599	0.000	729.700
σ		0.144	0.793	0.712	0.962	0.491	0.347	0.000	7.144
%RSD		5.116	1.614	1.483	32.060	96.630	9.639	0.000	0.979
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:37	83.683%	0.314	0.206	83.811%	-0.069	-0.080	0.217	0.207
2	16:09:04	83.717%	0.334	0.171	84.421%	-0.070	-0.079	0.206	0.142
3	16:09:30	84.008%	0.258	0.150	84.291%	-0.073	-0.077	0.240	0.330
X		83.803%	0.302	0.176	84.174%	-0.071	-0.079	0.221	0.226
σ		0.179%	0.039	0.028	0.321%	0.002	0.001	0.017	0.096
%RSD		0.214	13.050	15.980	0.382	2.480	1.758	7.729	42.280
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:37	78.701%	-0.624	-0.072	0.007	14.110	14.290	83.396%	82.402%
2	16:09:04	80.636%	-0.620	-0.082	0.033	13.740	13.900	83.573%	84.702%
3	16:09:30	80.741%	-0.624	-0.105	-0.001	14.000	14.170	84.802%	86.271%
X		80.026%	-0.623	-0.087	0.013	13.950	14.120	83.924%	84.458%
σ		1.149%	0.002	0.017	0.018	0.189	0.197	0.766%	1.946%
%RSD		1.436	0.364	19.710	140.400	1.354	1.397	0.913	2.304
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:08:37	0.129	0.141	0.027	0.002	0.010	78.085%		
2	16:09:04	0.115	0.138	0.028	-0.017	0.014	81.767%		
3	16:09:30	0.139	0.131	0.042	0.012	0.027	80.055%		
X		0.128	0.137	0.032	-0.001	0.017	79.969%		
σ		0.012	0.005	0.009	0.015	0.009	1.843%		
%RSD		9.454	3.764	27.170	1291.000	51.040	2.304		

CCV 1487954 3/12/2015 4:12:26 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:12:52	91.461%	104.000	105.000	101.500	0.000	48100.000	46850.000	46650.000
2	16:13:19	93.823%	100.100	106.400	96.400	0.000	46820.000	46190.000	46050.000
3	16:13:46	93.486%	102.200	94.380	94.850	0.000	46570.000	47460.000	46840.000
X		92.923%	102.112%	101.949%	97.579%	0.000	94.331%	93.675%	93.026%
σ		1.278%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.375	1.872	6.465	3.563	0.000	1.734	1.354	0.890
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:12:52	459.400	5089.000	0.000	48720.000	47090.000	48400.000	88.535%	97.910
2	16:13:19	452.800	4892.000	0.000	47320.000	47300.000	47800.000	88.622%	97.090
3	16:13:46	458.700	4947.000	0.000	48710.000	47800.000	48400.000	87.043%	96.700
X		91.396%	99.519%	0.000	96.503%	94.798%	96.400%	88.067%	97.234%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.887%	n/a
%RSD		0.790	2.044	0.000	1.666	0.775	0.720	1.008	0.634
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:12:52	95.800	95.690	513.700	24420.000	26050.000	96.910	100.200	99.360
2	16:13:19	96.160	97.170	532.100	24820.000	26770.000	98.060	101.200	99.450
3	16:13:46	100.500	99.240	537.000	25180.000	27100.000	98.450	101.000	99.690
X		97.492%	97.368%	105.519%	99.230%	106.561%	97.807%	100.789%	99.497%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.695	1.833	2.326	1.545	2.022	0.818	0.550	0.172
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:12:52	99.720	98.790	98.250	99.200	95.540	100.100	0.000	94.900
2	16:13:19	98.630	98.760	101.000	97.120	96.020	103.100	0.000	95.550
3	16:13:46	101.100	100.400	102.000	95.700	93.730	102.800	0.000	95.920
X		99.808%	99.331%	100.393%	97.340%	95.096%	102.020%	0.000	95.457%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.222	0.974	1.917	1.807	1.270	1.609	0.000	0.540
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:12:52	82.698%	95.740	96.050	81.273%	95.860	97.070	95.370	96.440
2	16:13:19	84.311%	98.250	96.080	86.095%	92.980	94.210	95.090	96.560
3	16:13:46	85.312%	99.770	99.970	83.093%	96.050	96.550	97.370	96.540
X		84.107%	97.919%	97.366%	83.487%	94.962%	95.945%	95.941%	96.516%
σ		1.319%	n/a	n/a	2.435%	n/a	n/a	n/a	n/a
%RSD		1.568	2.079	2.320	2.917	1.815	1.587	1.299	0.068
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:12:52	79.846%	94.380	98.150	98.030	95.970	94.860	82.872%	82.749%
2	16:13:19	82.422%	95.720	97.450	97.290	94.450	94.840	85.026%	84.806%
3	16:13:46	83.374%	95.870	99.380	98.530	96.940	96.370	86.221%	86.593%
X		81.880%	95.325%	98.324%	97.949%	95.787%	95.358%	84.707%	84.716%
σ		1.825%	n/a	n/a	n/a	n/a	n/a	1.697%	1.924%
%RSD		2.229	0.860	0.991	0.639	1.309	0.920	2.004	2.271
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:12:52	95.630	93.060	95.760	95.750	95.560	83.095%		
2	16:13:19	95.500	94.300	96.050	97.830	96.910	86.489%		
3	16:13:46	97.860	97.260	98.040	98.880	97.440	85.422%		
X		96.332%	94.874%	96.617%	97.488%	96.636%	85.002%		
σ		n/a	n/a	n/a	n/a	n/a	1.736%		
%RSD		1.373	2.272	1.284	1.633	1.004	2.042		

CCB8 3/12/2015 4:19:53 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:19	100.173%	0.003	-1.533	-0.553	0.000	6.034	4.566	3.537
2	16:20:45	98.122%	-0.022	-3.250	-2.634	0.000	5.533	4.550	3.814
3	16:21:12	100.640%	-0.040	-3.598	-3.070	0.000	5.944	4.590	3.879
X		99.645%	-0.020	-2.793	-2.086	0.000	5.837	4.569	3.743
σ		1.340%	0.021	1.106	1.345	0.000	0.267	0.020	0.182
%RSD		1.345	109.200	39.580	64.480	0.000	4.582	0.443	4.850
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:19	-0.549	30.150	0.000	8.165	2.721	5.837	96.217%	-0.456
2	16:20:45	-0.532	10.700	0.000	8.738	3.015	7.666	93.891%	-0.494
3	16:21:12	-0.634	7.871	0.000	6.601	7.920	4.733	93.701%	-0.428
X		-0.572	16.240	0.000	7.835	4.552	6.079	94.603%	-0.459
σ		0.055	12.130	0.000	1.106	2.921	1.481	1.401%	0.033
%RSD		9.547	74.680	0.000	14.120	64.160	24.360	1.481	7.231
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:19	0.037	-0.011	0.121	5.333	7.807	0.006	0.358	-0.057
2	16:20:45	0.036	-0.056	0.122	6.617	8.225	0.005	0.361	-0.044
3	16:21:12	0.008	0.011	0.114	3.150	4.362	0.005	0.364	-0.036
X		0.027	-0.019	0.119	5.033	6.798	0.005	0.361	-0.045
σ		0.017	0.034	0.004	1.753	2.120	0.001	0.003	0.011
%RSD		62.200	181.400	3.586	34.820	31.190	14.960	0.869	23.690
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:19	-0.048	0.332	0.254	0.336	-0.095	2.140	0.000	0.025
2	16:20:45	-0.075	0.483	0.382	0.389	-0.194	2.302	0.000	0.035
3	16:21:12	-0.048	0.307	0.216	0.347	-0.035	2.688	0.000	0.029
X		-0.057	0.374	0.284	0.357	-0.108	2.377	0.000	0.030
σ		0.016	0.095	0.087	0.028	0.080	0.282	0.000	0.005
%RSD		27.650	25.460	30.570	7.847	74.610	11.860	0.000	17.420
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:19	89.313%	0.138	0.115	90.133%	-0.058	-0.068	-0.002	0.020
2	16:20:45	91.768%	0.116	0.133	92.004%	-0.049	-0.061	0.004	0.005
3	16:21:12	92.354%	0.088	0.091	93.547%	-0.056	-0.071	0.016	0.028
X		91.145%	0.114	0.113	91.894%	-0.054	-0.067	0.006	0.018
σ		1.613%	0.025	0.021	1.710%	0.005	0.005	0.009	0.012
%RSD		1.770	22.030	18.900	1.861	8.353	7.439	148.100	65.950
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:19	88.697%	-0.878	-0.128	-0.141	-0.004	-0.014	87.979%	87.824%
2	16:20:45	91.001%	-0.855	-0.140	-0.149	0.050	0.008	90.028%	89.542%
3	16:21:12	90.192%	-0.888	-0.145	-0.149	0.066	-0.024	92.151%	91.721%
X		89.963%	-0.873	-0.138	-0.146	0.037	-0.010	90.052%	89.695%
σ		1.169%	0.017	0.009	0.005	0.037	0.016	2.086%	1.953%
%RSD		1.299	1.945	6.331	3.298	98.430	162.500	2.316	2.178
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:20:19	0.008	0.007	0.006	-0.015	-0.011	91.192%		
2	16:20:45	0.007	0.011	-0.008	-0.037	-0.016	92.931%		
3	16:21:12	0.004	0.006	0.005	-0.012	-0.006	92.909%		
X		0.006	0.008	0.001	-0.021	-0.011	92.344%		
σ		0.002	0.003	0.008	0.014	0.005	0.998%		
%RSD		38.340	37.220	703.900	63.040	48.180	1.081		

180-41679-B-2-A 3/12/2015 4:24:13 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:39	95.837%	0.006	9.653	12.300	0.000	11820.000	159000.000	156300.000
2	16:25:06	92.517%	-0.048	8.134	10.050	0.000	12050.000	164800.000	161100.000
3	16:25:33	91.204%	-0.020	8.138	8.072	0.000	12040.000	163200.000	162400.000
X		93.186%	-0.021	8.642	10.140	0.000	11970.000	162300.000	159900.000
σ		2.388%	0.027	0.876	2.113	0.000	128.000	2985.000	3248.000
%RSD		2.563	130.300	10.140	20.840	0.000	1.069	1.839	2.031
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:39	5.539	779.600	0.000	34890.000	613700.000	595000.000	80.847%	0.153
2	16:25:06	5.759	789.100	0.000	36110.000	622300.000	605700.000	79.008%	0.339
3	16:25:33	5.655	796.700	0.000	36070.000	622900.000	590700.000	78.968%	0.245
X		5.651	788.500	0.000	35690.000	619600.000	597100.000	79.608%	0.246
σ		0.110	8.551	0.000	693.900	5166.000	7728.000	1.074%	0.093
%RSD		1.953	1.085	0.000	1.944	0.834	1.294	1.349	37.820
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:39	1.737	2.412	10180.000	715.000	5941.000	4.011	3.827	0.749
2	16:25:06	-0.705	2.541	10560.000	753.000	5891.000	4.143	3.757	0.745
3	16:25:33	1.784	2.447	10600.000	760.700	5910.000	4.322	4.301	0.732
X		0.939	2.467	10450.000	742.900	5914.000	4.159	3.961	0.742
σ		1.423	0.067	230.900	24.490	25.220	0.156	0.296	0.008
%RSD		151.600	2.700	2.211	3.297	0.427	3.742	7.470	1.144
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:39	4.995	15.590	12.530	-3.023	-0.594	3.084	0.000	1500.000
2	16:25:06	4.749	14.950	12.960	-0.997	-0.696	3.134	0.000	1499.000
3	16:25:33	4.750	15.550	13.300	-1.989	-0.500	3.794	0.000	1493.000
X		4.831	15.360	12.930	-2.003	-0.596	3.337	0.000	1498.000
σ		0.142	0.363	0.387	1.013	0.098	0.396	0.000	3.990
%RSD		2.935	2.360	2.991	50.570	16.420	11.880	0.000	0.266
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:39	81.902%	0.202	0.057	80.177%	-0.058	-0.060	0.068	0.098
2	16:25:06	84.394%	0.237	0.078	78.991%	-0.043	-0.063	0.033	0.159
3	16:25:33	84.737%	0.159	0.080	79.403%	-0.046	-0.062	0.047	0.002
X		83.678%	0.199	0.071	79.524%	-0.049	-0.062	0.050	0.086
σ		1.547%	0.039	0.013	0.602%	0.008	0.002	0.018	0.079
%RSD		1.849	19.730	17.970	0.758	16.790	2.557	35.770	91.900
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:39	77.411%	-0.339	-0.049	0.090	15.130	16.050	79.692%	79.728%
2	16:25:06	78.228%	-0.428	-0.125	0.073	16.060	15.940	81.231%	82.392%
3	16:25:33	78.462%	-0.511	-0.070	0.064	14.870	16.220	83.271%	83.635%
X		78.033%	-0.426	-0.081	0.076	15.350	16.070	81.398%	81.919%
σ		0.552%	0.086	0.039	0.013	0.623	0.145	1.795%	1.996%
%RSD		0.707	20.180	47.980	17.070	4.057	0.903	2.205	2.437
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:24:39	0.067	0.083	0.097	0.068	0.069	75.239%		
2	16:25:06	0.081	0.057	0.064	0.055	0.063	77.039%		
3	16:25:33	0.073	0.072	0.058	0.100	0.073	78.341%		
X		0.074	0.071	0.073	0.074	0.068	76.873%		
σ		0.007	0.013	0.021	0.023	0.005	1.558%		
%RSD		9.751	18.080	29.080	31.000	7.704	2.026		

180-41679-C-2-A 3/12/2015 4:28:31 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:58	94.923%	-0.030	10.950	12.010	0.000	12380.000	166500.000	164400.000
2	16:29:24	93.360%	-0.002	9.349	10.130	0.000	12560.000	167800.000	163000.000
3	16:29:51	94.269%	-0.021	8.554	8.860	0.000	12410.000	163200.000	161700.000
X		94.184%	-0.018	9.618	10.330	0.000	12450.000	165800.000	163100.000
σ		0.785%	0.014	1.222	1.587	0.000	98.140	2384.000	1349.000
%RSD		0.833	80.850	12.700	15.360	0.000	0.788	1.438	0.828
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:58	6.379	820.500	0.000	37390.000	642100.000	610000.000	81.468%	0.330
2	16:29:24	6.211	790.000	0.000	36220.000	634300.000	615900.000	80.575%	0.032
3	16:29:51	6.474	804.400	0.000	36160.000	642300.000	631400.000	80.411%	0.125
X		6.355	805.000	0.000	36590.000	639600.000	619100.000	80.818%	0.163
σ		0.133	15.270	0.000	694.100	4541.000	11090.000	0.569%	0.153
%RSD		2.092	1.897	0.000	1.897	0.710	1.791	0.704	93.890
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:58	1.569	3.062	10420.000	101.700	5542.000	4.269	3.578	0.961
2	16:29:24	2.104	2.836	10730.000	93.780	5392.000	4.175	4.065	0.882
3	16:29:51	0.140	2.803	10770.000	97.800	5421.000	4.305	3.940	0.866
X		1.271	2.900	10640.000	97.760	5452.000	4.250	3.861	0.903
σ		1.015	0.141	192.200	3.968	79.390	0.067	0.253	0.051
%RSD		79.890	4.858	1.806	4.059	1.456	1.574	6.554	5.628
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:58	5.098	6.597	4.361	0.364	1.053	2.035	0.000	1549.000
2	16:29:24	4.866	6.733	4.222	0.465	-0.397	3.910	0.000	1557.000
3	16:29:51	4.913	6.875	4.466	0.941	0.160	4.398	0.000	1555.000
X		4.959	6.735	4.350	0.590	0.272	3.448	0.000	1554.000
σ		0.123	0.139	0.122	0.308	0.731	1.248	0.000	4.203
%RSD		2.473	2.061	2.811	52.250	268.600	36.190	0.000	0.271
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:58	81.655%	0.128	0.022	77.279%	-0.068	-0.075	0.084	0.082
2	16:29:24	82.804%	0.107	0.059	78.057%	-0.065	-0.082	0.047	-0.024
3	16:29:51	83.295%	0.120	0.051	77.981%	-0.067	-0.077	0.104	0.085
X		82.585%	0.118	0.044	77.772%	-0.067	-0.078	0.079	0.048
σ		0.842%	0.010	0.019	0.429%	0.001	0.004	0.029	0.062
%RSD		1.019	8.629	43.580	0.552	2.084	4.559	36.730	129.200
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:58	76.393%	-0.646	0.006	0.229	17.020	16.120	78.539%	78.627%
2	16:29:24	78.377%	-0.576	-0.053	0.220	15.970	16.140	80.975%	81.635%
3	16:29:51	77.608%	-0.553	-0.000	0.179	15.550	15.660	83.073%	81.440%
X		77.460%	-0.592	-0.016	0.209	16.180	15.970	80.862%	80.567%
σ		1.001%	0.049	0.033	0.027	0.754	0.274	2.269%	1.683%
%RSD		1.292	8.221	207.100	12.720	4.661	1.712	2.806	2.089
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:28:58	0.075	0.079	0.452	0.445	0.461	72.792%		
2	16:29:24	0.079	0.084	0.421	0.352	0.385	77.598%		
3	16:29:51	0.095	0.067	0.408	0.370	0.384	77.524%		
X		0.083	0.076	0.427	0.389	0.410	75.971%		
σ		0.011	0.009	0.022	0.049	0.044	2.754%		
%RSD		12.930	11.660	5.210	12.660	10.790	3.625		

180-41679-B-3-A 3/12/2015 4:32:51 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:18	97.852%	0.022	2.198	2.471	0.000	3603.000	4356.000	4393.000
2	16:33:44	99.328%	0.004	-0.383	-0.213	0.000	3545.000	4380.000	4372.000
3	16:34:11	97.875%	-0.031	-1.291	-0.691	0.000	3590.000	4451.000	4346.000
X		98.352%	-0.001	0.175	0.522	0.000	3579.000	4396.000	4370.000
σ		0.846%	0.027	1.810	1.704	0.000	30.450	49.130	23.620
%RSD		0.860	1797.000	1036.000	326.400	0.000	0.851	1.118	0.541
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:18	14.860	4465.000	0.000	1959.000	14350.000	14760.000	85.651%	0.360
2	16:33:44	14.760	4440.000	0.000	1993.000	14320.000	14630.000	83.233%	0.324
3	16:34:11	15.040	4388.000	0.000	1945.000	14400.000	14690.000	83.394%	0.603
X		14.890	4431.000	0.000	1966.000	14360.000	14690.000	84.092%	0.429
σ		0.145	39.410	0.000	24.700	36.400	65.250	1.352%	0.152
%RSD		0.972	0.889	0.000	1.257	0.254	0.444	1.607	35.380
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:18	0.927	2.556	402.000	291.500	401.700	5.206	1.674	5.676
2	16:33:44	2.293	2.483	415.700	303.000	401.100	5.207	2.032	5.960
3	16:34:11	0.135	2.675	412.400	297.800	387.000	5.192	2.169	5.860
X		1.118	2.571	410.000	297.500	396.600	5.202	1.959	5.832
σ		1.092	0.097	7.170	5.791	8.304	0.008	0.256	0.144
%RSD		97.600	3.769	1.749	1.947	2.094	0.160	13.050	2.469
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:18	5.692	123.100	123.800	-0.082	-1.689	1.640	0.000	41.590
2	16:33:44	5.790	124.900	127.500	1.255	-0.817	2.302	0.000	42.100
3	16:34:11	5.823	122.600	127.000	1.274	-1.378	1.892	0.000	42.190
X		5.768	123.500	126.100	0.816	-1.295	1.944	0.000	41.960
σ		0.068	1.213	1.989	0.778	0.442	0.334	0.000	0.322
%RSD		1.183	0.982	1.578	95.350	34.110	17.170	0.000	0.767
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:18	89.235%	0.006	0.015	85.729%	-0.057	-0.084	0.242	0.184
2	16:33:44	90.528%	0.029	0.040	87.092%	-0.061	-0.074	0.185	0.236
3	16:34:11	91.727%	0.004	0.027	87.252%	-0.061	-0.084	0.210	0.218
X		90.497%	0.013	0.028	86.691%	-0.059	-0.080	0.212	0.213
σ		1.246%	0.014	0.013	0.837%	0.002	0.006	0.029	0.026
%RSD		1.377	104.500	45.460	0.965	3.376	7.338	13.550	12.370
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:18	82.154%	-0.808	-0.070	-0.047	19.910	20.430	85.622%	85.461%
2	16:33:44	84.490%	-0.802	-0.099	-0.073	20.360	21.380	87.163%	88.021%
3	16:34:11	85.071%	-0.866	-0.073	-0.071	20.700	20.460	88.577%	88.829%
X		83.905%	-0.825	-0.081	-0.064	20.320	20.760	87.121%	87.437%
σ		1.544%	0.035	0.016	0.014	0.398	0.540	1.478%	1.758%
%RSD		1.840	4.273	19.550	22.390	1.957	2.603	1.697	2.011
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:33:18	0.027	0.024	0.024	0.001	0.015	86.038%		
2	16:33:44	0.036	0.021	0.037	0.010	0.024	85.032%		
3	16:34:11	0.021	0.026	0.031	0.042	0.029	87.044%		
X		0.028	0.024	0.031	0.018	0.023	86.038%		
σ		0.008	0.002	0.007	0.022	0.007	1.006%		
%RSD		27.170	9.967	21.380	122.100	30.720	1.169		

CRI 1495535 3/12/2015 4:40:20 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:40:46	95.958%	0.891	4.209	5.489	0.000	107.900	100.700	97.130
2	16:41:13	95.305%	1.094	3.671	2.869	0.000	108.600	95.750	99.010
3	16:41:39	96.267%	1.040	2.006	2.490	0.000	106.200	97.670	95.910
X		95.844%	100.836%	65.910%	72.320%	0.000	134.431%	98.036%	97.346%
σ		0.491%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.513	10.460	34.860	45.170	0.000	1.145	2.535	1.604
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:40:46	28.060	538.200	0.000	101.800	113.900	107.200	95.358%	4.056
2	16:41:13	28.370	523.500	0.000	103.500	109.900	109.800	93.702%	4.697
3	16:41:39	27.580	517.600	0.000	99.220	82.600	112.900	92.601%	4.151
X		93.348%	105.288%	0.000	101.537%	102.115%	109.964%	93.887%	86.028%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.388%	n/a
%RSD		1.411	2.019	0.000	2.148	16.670	2.613	1.478	8.031
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:40:46	0.918	1.782	5.010	54.940	51.490	0.473	1.833	2.046
2	16:41:13	1.018	2.033	5.170	56.980	51.310	0.466	1.626	2.064
3	16:41:39	0.890	1.955	5.158	58.490	51.650	0.507	1.619	2.091
X		94.213%	96.178%	102.251%	113.607%	102.969%	96.393%	169.249%	103.341%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		7.151	6.668	1.740	3.134	0.327	4.549	7.193	1.114
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:40:46	1.960	5.934	5.483	1.283	3.807	6.650	0.000	4.615
2	16:41:13	2.016	5.338	5.646	1.156	4.002	7.051	0.000	4.678
3	16:41:39	2.182	5.876	5.690	1.338	3.146	6.813	0.000	4.553
X		102.628%	114.317%	112.128%	125.902%	73.029%	136.763%	0.000	92.309%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		5.616	5.741	1.944	7.394	12.290	2.946	0.000	1.360
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:40:46	91.274%	4.261	4.280	89.953%	0.930	0.895	0.986	0.994
2	16:41:13	93.359%	4.472	4.463	92.144%	0.862	0.937	1.069	1.071
3	16:41:39	94.814%	4.772	4.621	93.225%	0.926	0.921	1.124	1.074
X		93.149%	90.033%	89.097%	91.774%	90.613%	91.778%	105.979%	104.641%
σ		1.779%	n/a	n/a	1.667%	n/a	n/a	n/a	n/a
%RSD		1.910	5.705	3.836	1.817	4.201	2.282	6.527	4.360
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:40:46	87.653%	3.682	1.632	1.539	10.120	9.506	86.459%	86.231%
2	16:41:13	89.375%	3.820	1.791	1.757	9.254	9.863	89.984%	90.544%
3	16:41:39	89.632%	4.076	1.737	1.817	9.975	9.858	91.822%	91.495%
X		88.887%	77.181%	86.000%	85.234%	97.845%	97.420%	89.421%	89.423%
σ		1.076%	n/a	n/a	n/a	n/a	n/a	2.725%	2.806%
%RSD		1.211	5.177	4.722	8.587	4.753	2.101	3.048	3.137
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:40:46	1.028	0.911	0.974	1.029	0.981	90.081%		
2	16:41:13	1.056	0.948	0.990	1.009	1.000	91.302%		
3	16:41:39	1.019	0.980	0.967	0.931	0.969	92.017%		
X		103.421%	94.628%	97.673%	98.973%	98.322%	91.133%		
σ		n/a	n/a	n/a	n/a	n/a	0.979%		
%RSD		1.871	3.617	1.243	5.238	1.583	1.074		

CRI 1495535 3/12/2015 4:44:38 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:45:05	103.551%	0.953	3.702	4.950	0.000	98.750	87.950	82.540
2	16:45:31	105.801%	0.904	1.646	2.303	0.000	96.680	90.220	84.930
3	16:45:58	107.238%	0.742	2.376	1.441	0.000	94.860	89.730	85.320
X		105.530%	86.606%	51.494%	57.959%	0.000	120.956%	89.301%	84.263%
σ		1.858%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.761	12.720	40.470	63.090	0.000	2.014	1.339	1.786
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:45:05	25.000	485.900	0.000	73.680	96.750	92.290	115.860%	3.939
2	16:45:31	24.390	465.500	0.000	77.710	107.000	88.830	111.194%	3.656
3	16:45:58	24.830	455.100	0.000	70.960	62.690	91.650	110.648%	3.989
X		82.461%	93.764%	0.000	74.115%	88.829%	90.925%	112.567%	77.224%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.865%	n/a
%RSD		1.285	3.344	0.000	4.579	26.130	2.022	2.545	4.649
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:45:05	0.699	1.460	4.119	67.280	36.860	0.394	1.339	1.702
2	16:45:31	0.624	1.609	4.285	33.490	37.790	0.442	1.247	1.673
3	16:45:58	0.828	1.600	4.317	33.970	37.320	0.430	1.276	1.732
X		71.698%	77.820%	84.811%	89.825%	74.649%	84.392%	128.702%	85.122%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		14.400	5.354	2.515	43.140	1.248	5.924	3.674	1.746
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:45:05	1.718	4.928	4.662	0.867	2.221	4.921	0.000	3.790
2	16:45:31	1.678	4.858	5.159	0.587	2.520	4.037	0.000	3.787
3	16:45:58	1.796	4.977	4.482	0.676	1.900	3.678	0.000	3.846
X		86.529%	98.412%	95.358%	70.981%	44.269%	84.240%	0.000	76.151%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		3.479	1.214	7.351	20.120	14.000	15.190	0.000	0.882
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:45:05	112.678%	4.201	3.936	95.271%	0.801	0.822	0.937	0.877
2	16:45:31	115.958%	4.221	4.247	96.910%	0.767	0.781	0.934	1.078
3	16:45:58	115.522%	4.147	4.083	97.366%	0.831	0.855	0.997	0.821
X		114.719%	83.791%	81.772%	96.516%	79.966%	81.939%	95.627%	92.542%
σ		1.782%	n/a	n/a	1.102%	n/a	n/a	n/a	n/a
%RSD		1.553	0.906	3.797	1.142	4.000	4.505	3.705	14.550
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:45:05	93.649%	3.440	1.758	1.636	9.011	9.083	86.482%	86.855%
2	16:45:31	95.066%	3.796	1.621	1.569	9.500	9.178	90.561%	90.463%
3	16:45:58	96.522%	3.712	1.569	1.553	9.741	9.202	91.050%	91.381%
X		95.079%	72.986%	82.472%	79.302%	94.171%	91.545%	89.364%	89.566%
σ		1.437%	n/a	n/a	n/a	n/a	n/a	2.508%	2.393%
%RSD		1.511	5.100	5.897	2.787	3.950	0.688	2.807	2.671
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:45:05	0.891	0.878	0.948	0.942	0.953	96.744%		
2	16:45:31	0.944	0.897	0.939	0.899	0.926	97.014%		
3	16:45:58	0.926	0.945	1.022	0.849	0.938	98.052%		
X		92.018%	90.661%	96.963%	89.650%	93.930%	97.270%		
σ		n/a	n/a	n/a	n/a	n/a	0.690%		
%RSD		2.931	3.790	4.728	5.151	1.412	0.710		

CCV 1487954 3/12/2015 4:48:58 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:24	96.520%	106.400	104.800	100.800	0.000	48520.000	47040.000	46350.000
2	16:49:51	97.228%	104.700	104.200	99.420	0.000	46570.000	46230.000	46300.000
3	16:50:18	97.953%	103.900	102.700	95.760	0.000	46990.000	46790.000	46450.000
X		97.234%	105.012%	103.870%	98.660%	0.000	94.716%	93.370%	92.733%
σ		0.717%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.737	1.196	1.034	2.645	0.000	2.170	0.895	0.172
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:24	458.200	4965.000	0.000	48150.000	47120.000	48110.000	94.413%	94.600
2	16:49:51	451.900	4952.000	0.000	48470.000	47730.000	48020.000	95.351%	98.440
3	16:50:18	451.500	4971.000	0.000	48560.000	48080.000	48210.000	93.346%	95.650
X		90.775%	99.256%	0.000	96.783%	95.291%	96.223%	94.370%	96.229%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.003%	n/a
%RSD		0.829	0.190	0.000	0.448	1.018	0.197	1.063	2.062
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:24	96.590	93.470	502.700	23790.000	25480.000	94.480	97.930	96.800
2	16:49:51	96.960	97.190	520.200	24200.000	25950.000	94.720	99.130	98.580
3	16:50:18	97.810	97.250	522.900	24740.000	26700.000	97.190	99.110	99.750
X		97.121%	95.971%	103.051%	96.971%	104.173%	95.459%	98.725%	98.374%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.644	2.257	2.131	1.976	2.363	1.572	0.694	1.509
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:24	99.230	97.510	97.770	99.170	102.100	101.800	0.000	95.360
2	16:49:51	98.070	98.610	99.580	98.230	99.210	101.000	0.000	95.950
3	16:50:18	100.100	99.720	98.760	97.150	96.890	101.200	0.000	95.940
X		99.124%	98.615%	98.705%	98.184%	99.413%	101.305%	0.000	95.746%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.013	1.119	0.916	1.028	2.648	0.410	0.000	0.354
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:24	85.082%	97.170	95.580	83.417%	95.390	96.010	96.090	94.630
2	16:49:51	87.081%	99.490	100.100	84.600%	96.280	97.120	98.350	96.680
3	16:50:18	88.270%	101.100	99.800	86.019%	95.160	96.190	94.760	97.400
X		86.811%	99.259%	98.507%	84.679%	95.612%	96.439%	96.400%	96.236%
σ		1.611%	n/a	n/a	1.303%	n/a	n/a	n/a	n/a
%RSD		1.856	1.993	2.581	1.539	0.619	0.622	1.887	1.495
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:24	81.161%	97.270	97.800	97.330	96.720	96.870	80.998%	81.257%
2	16:49:51	83.008%	97.920	100.300	99.170	98.140	97.250	84.906%	85.464%
3	16:50:18	85.087%	96.600	98.640	97.830	97.980	95.960	85.843%	85.930%
X		83.085%	97.263%	98.916%	98.108%	97.611%	96.693%	83.916%	84.217%
σ		1.964%	n/a	n/a	n/a	n/a	n/a	2.570%	2.574%
%RSD		2.364	0.679	1.287	0.968	0.797	0.683	3.063	3.056
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:49:24	92.310	89.640	92.320	92.720	91.760	85.680%		
2	16:49:51	97.170	94.950	96.290	96.050	95.840	84.911%		
3	16:50:18	97.710	96.460	98.430	98.730	98.390	83.542%		
X		95.731%	93.682%	95.679%	95.832%	95.331%	84.711%		
σ		n/a	n/a	n/a	n/a	n/a	1.083%		
%RSD		3.104	3.827	3.237	3.145	3.508	1.278		

CCB9 3/12/2015 4:56:25 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:51	101.158%	-0.023	-0.756	-0.584	0.000	6.751	5.296	4.774
2	16:57:18	101.884%	-0.023	-2.532	-1.878	0.000	6.031	5.432	4.713
3	16:57:45	99.428%	-0.014	-4.476	-3.829	0.000	5.900	5.252	4.780
X		100.823%	-0.020	-2.588	-2.097	0.000	6.228	5.327	4.755
σ		1.262%	0.005	1.860	1.634	0.000	0.458	0.093	0.037
%RSD		1.252	26.350	71.890	77.910	0.000	7.354	1.754	0.779
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:51	-0.442	30.360	0.000	12.100	6.149	10.180	97.185%	-0.418
2	16:57:18	-0.473	12.090	0.000	11.030	-2.141	10.500	97.367%	-0.431
3	16:57:45	-0.481	10.400	0.000	9.689	0.359	7.678	95.982%	-0.455
X		-0.465	17.620	0.000	10.940	1.455	9.455	96.844%	-0.435
σ		0.021	11.070	0.000	1.206	4.253	1.547	0.753%	0.019
%RSD		4.444	62.830	0.000	11.030	292.200	16.360	0.777	4.400
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:51	-0.042	-0.004	0.238	4.673	9.002	0.007	0.452	-0.073
2	16:57:18	0.077	-0.002	0.195	2.249	6.457	0.013	0.449	-0.029
3	16:57:45	0.005	0.010	0.244	2.001	5.188	0.019	0.620	-0.045
X		0.014	0.002	0.226	2.974	6.882	0.013	0.507	-0.049
σ		0.060	0.008	0.026	1.476	1.942	0.006	0.098	0.023
%RSD		435.100	498.800	11.700	49.640	28.220	47.170	19.250	46.170
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:51	-0.058	0.391	0.394	0.542	-0.863	3.320	0.000	0.038
2	16:57:18	-0.081	0.313	0.180	0.283	-0.104	2.031	0.000	0.035
3	16:57:45	-0.052	0.569	0.146	0.306	-1.216	1.947	0.000	0.031
X		-0.064	0.424	0.240	0.377	-0.728	2.433	0.000	0.035
σ		0.015	0.131	0.134	0.144	0.568	0.770	0.000	0.003
%RSD		23.660	30.880	56.060	38.060	78.060	31.640	0.000	9.596
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:51	88.538%	0.123	0.111	89.993%	-0.071	-0.084	0.004	0.066
2	16:57:18	91.276%	0.102	0.108	92.294%	-0.061	-0.067	0.023	0.003
3	16:57:45	90.602%	0.102	0.065	92.589%	-0.065	-0.077	0.010	0.045
X		90.139%	0.109	0.095	91.625%	-0.065	-0.076	0.012	0.038
σ		1.427%	0.012	0.025	1.421%	0.005	0.009	0.009	0.032
%RSD		1.583	11.310	26.930	1.551	7.797	11.750	74.450	84.610
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:56:51	86.800%	-0.885	-0.159	-0.139	0.030	0.034	85.460%	83.855%
2	16:57:18	89.090%	-0.865	-0.159	-0.137	-0.012	0.018	89.215%	88.317%
3	16:57:45	89.979%	-0.908	-0.138	-0.133	0.035	-0.001	89.991%	89.172%
X		88.623%	-0.886	-0.152	-0.136	0.017	0.017	88.222%	87.115%
σ		1.640%	0.021	0.012	0.003	0.026	0.017	2.423%	2.855%
%RSD		1.851	2.386	8.141	2.084	149.100	102.900	2.747	3.277
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:56:51	0.007	0.003	-0.024	0.004	-0.006	87.719%		
2	16:57:18	0.005	0.008	-0.018	-0.014	-0.015	88.647%		
3	16:57:45	0.004	0.009	-0.009	-0.022	-0.012	91.524%		
X		0.005	0.007	-0.017	-0.011	-0.011	89.297%		
σ		0.002	0.004	0.007	0.013	0.005	1.984%		
%RSD		31.530	53.810	42.290	124.900	43.020	2.222		

Performance Report

Sample details

Sample name : ITUNE

Acquired at : 3/12/2015 8:24:16 AM

Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

Mass Calibration verification

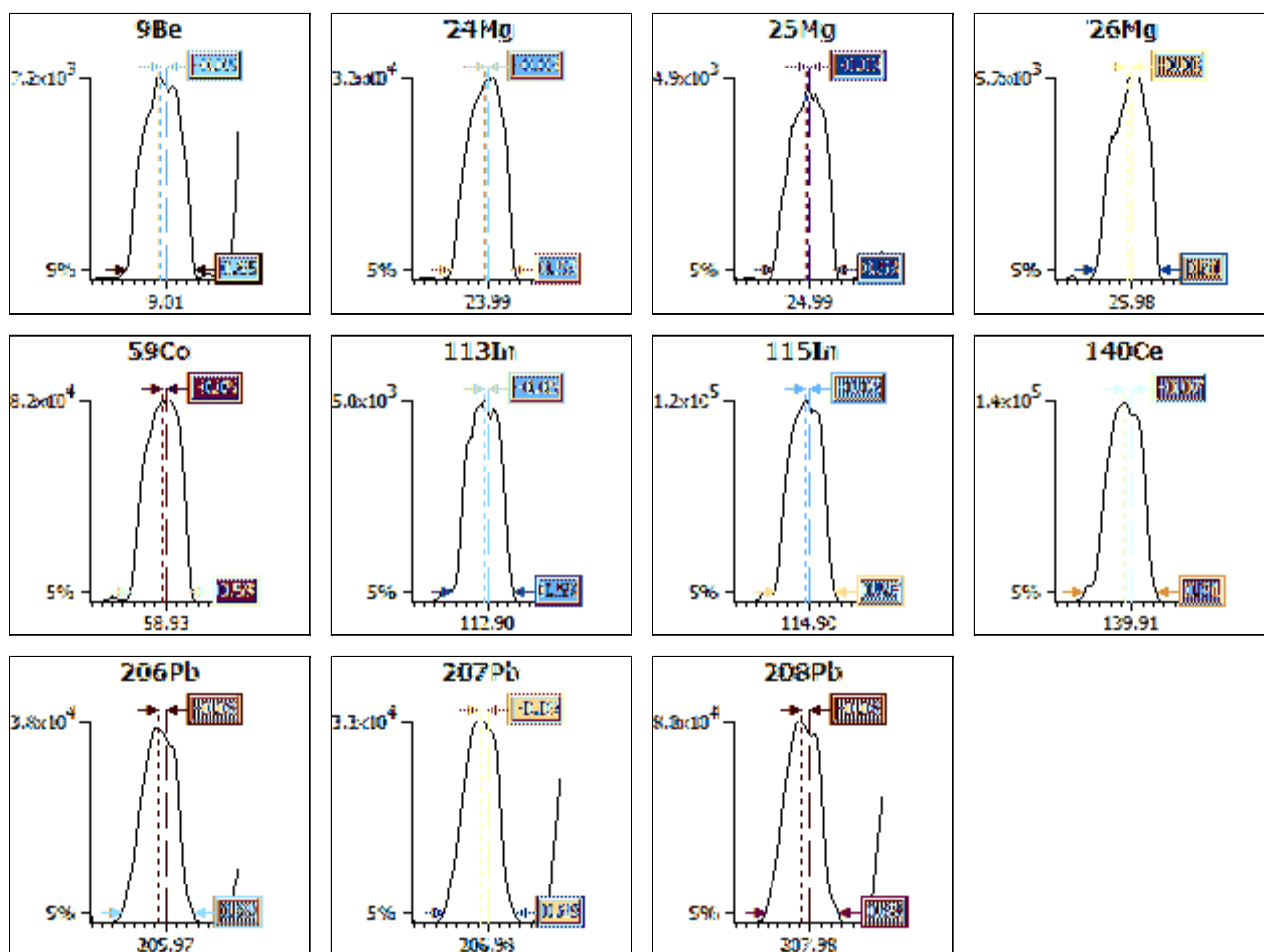
Acquisition parameters

Sweeps : 50

Dwell : 1.0 mSecs

Point spacing : 0.02 amu

Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
⁹Be	0.90	0.40	0.10	0.65	-0.05
²⁴Mg	0.90	0.40	0.10	0.59	-0.03
²⁵Mg	0.90	0.40	0.10	0.59	-0.03
²⁶Mg	0.90	0.40	0.10	0.61	-0.03
⁵⁹Co	0.90	0.40	0.10	0.59	-0.05
¹¹³In	0.90	0.40	0.10	0.59	-0.05
¹¹⁵In	0.90	0.40	0.10	0.57	-0.05
¹⁴⁰Ce	0.90	0.40	0.10	0.71	-0.07
²⁰⁶Pb	0.90	0.40	0.10	0.69	-0.08
²⁰⁷Pb	0.90	0.40	0.10	0.69	-0.09
²⁰⁸Pb	0.90	0.40	0.10	0.69	-0.08

Sample details

Sample name : ITUNE

Acquired at : 3/12/2015 8:24:16 AM

Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

Tune conditions

Major		Minor		Global		Add. Gases	
Extraction	-137	Lens 2	-40.0	Standard resolution	n/a	CCT1	0.00
Lens 1	5.6	Lens 3	-170.2	High resolution	n/a	CCT2	0.00
Focus	25.1	Forward power	1404	Analogue Detector	n/a		
D1	-25.1	Horizontal	32	PC Detector	n/a		
Pole Bias	-0.0	Vertical	453				
Hexapole Bias	-3.4	D2	-121				
Nebuliser	0.96	DA	-80.0				
Sampling Depth	200	Cool	14.0				
		Auxiliary	0.80				

Sensitivity and stability results**Acquisition parameters**

Sweeps : 180

Run	Time	58kg	9Be	24Mg	25Mg	26Mg	59Co	113In	115In
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Countrate	-	>100	>500	>150	>150	>500	>500	>10000
1	8:25:03 AM	0	6845	30126	4531	5692	79300	5015	115597
2	8:26:15 AM	0	6835	30016	4523	5741	78693	4885	116025
3	8:27:27 AM	0	6938	30347	4485	5814	78928	5171	116720
4	8:28:40 AM	0	6995	30552	4700	5854	79059	5126	116460
5	8:29:52 AM	0	7014	30799	4648	5780	78679	5070	116832
x		0	6925	30368	4577	5776	78932	5053	116327
σ		0.07	82.85	317.12	91.74	62.89	261.09	110.80	512.79
%RSD		46.566	1.196	1.044	2.004	1.089	0.331	2.193	0.441

Run	Time	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	5.0%	-	5.0%	5.0%	5.0%	-
	Countrate	>10000	-	>1000	>1000	>5000	-
1	8:25:03 AM	134219	1972	35515	32182	76063	0
2	8:26:15 AM	134606	1931	35813	32509	76591	0
3	8:27:27 AM	135900	1967	36013	33081	77031	0
4	8:28:40 AM	135708	2005	36123	32790	77340	0
5	8:29:52 AM	135839	1947	36315	32645	76825	0
x		135255	1964	35956	32641	76770	0
σ		783.76	27.92	306.09	333.27	481.47	0.06
%RSD		0.579	1.422	0.851	1.021	0.627	100.000

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0600
1	8:25:03 AM	0
2	8:26:15 AM	0
3	8:27:27 AM	0
4	8:28:40 AM	0
5	8:29:52 AM	0
x		0.0145
σ		0.00
%RSD		1.3832

Result : The performance report passed.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Batch Number: 134585 Batch Start Date: 03/03/15 09:35 Batch Analyst: Baikadi, AshwinBatch Method: 3005A Batch End Date: 03/03/15 13:35

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAPITTCPMS 00020	MTAPITTMISA 00023	MTAPITTMSC 00029	
MB 180-134585/1		3005A, 6020A		50 mL	50 mL				
LCS 180-134585/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-41613-B-4	HD-MW-50S-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41613-B-4 MS	HD-MW-50S-0/1-0	3005A, 6020A	T	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-41613-B-4 MSD	HD-MW-50S-0/1-0	3005A, 6020A	T	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-41613-B-5	HD-MW-51D-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41613-B-6	HD-MW-127-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41613-B-7	HD-MW-132-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41613-B-8	HD-MW-95-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41613-B-9	HD-MW-97-0/1-0	3005A, 6020A	T	50 mL	50 mL				

Batch Notes	
Batch Comment	Metals C3
First End time	13:35
Lot # of hydrochloric acid	2.5 ml 1452455
Lot # of Nitric Acid	1.0 ml 1472455
Hot Block ID number	#3
Oven, Bath or Block Temperature 1	95
Pipette ID	L1201611U
Person who witnessed spiking	AB
First Start time	09:35
ID number of the thermometer	IP2-14 CF=0.0 I6
Digestion Tube/Cup Lot #	1408268
Uncorrected Temperature	95 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

6020A

Page 1 of 1

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-41613-1

SDG No.: _____

Project: Harley Davidson

Client Sample ID	Lab Sample ID
<u>HD-MW-50S-0/1-0</u>	<u>180-41613-4</u>
<u>HD-MW-51D-0/1-0</u>	<u>180-41613-5</u>
<u>HD-MW-127-0/1-0</u>	<u>180-41613-6</u>
<u>HD-MW-132-0/1-0</u>	<u>180-41613-7</u>
<u>HD-MW-95-0/1-0</u>	<u>180-41613-8</u>
<u>HD-MW-97-0/1-0</u>	<u>180-41613-9</u>

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-50S-0/1-0 Lab Sample ID: 180-41613-4
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.:
Matrix: Water Date Sampled: 02/27/2015 09:55
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO ₃ to pH 4.5	230	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO ₃	230	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO ₃	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-51D-0/1-0 Lab Sample ID: 180-41613-5
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.: _____
Matrix: Water Date Sampled: 02/27/2015 10:05
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO ₃ to pH 4.5	290	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO ₃	290	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO ₃	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-127-0/1-0 Lab Sample ID: 180-41613-6
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.: _____
Matrix: Water Date Sampled: 02/27/2015 09:35
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO ₃ to pH 4.5	270	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO ₃	270	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO ₃	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-132-0/1-0 Lab Sample ID: 180-41613-7
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.:
Matrix: Water Date Sampled: 02/27/2015 09:40
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	160	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	160	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-95-0/1-0 Lab Sample ID: 180-41613-8
Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG ID.: _____
Matrix: Water Date Sampled: 02/27/2015 11:00
Reporting Basis: WET Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO ₃ to pH 4.5	270	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO ₃	270	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO ₃	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-97-0/1-0

Lab Sample ID: 180-41613-9

Lab Name: TestAmerica Pittsburgh

Job No.: 180-41613-1

SDG ID.:

Matrix: Water

Date Sampled: 02/27/2015 10:45

Reporting Basis: WET

Date Received: 02/28/2015 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO ₃ to pH 4.5	220	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO ₃	220	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO ₃	5.0	5.0	0.41	mg/L	U		1	SM 2320B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Analyst: CLL Batch Start Date: 03/11/2015
 Reporting Units: mg/L Analytical Batch No.: 135183

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	05:30	Total Alkalinity as CaCO3 to pH 4.5	129	125	103	80-120		WALK125PPMCCV_00081
14	CCB	05:30	Total Alkalinity as CaCO3 to pH 4.5	2.04				J	
			Bicarbonate Alkalinity as CaCO3	2.04				J	
			Carbonate Alkalinity as CaCO3	5.0				U	
24	CCV	05:30	Total Alkalinity as CaCO3 to pH 4.5	131	125	104	80-120		WALK125PPMCCV_00081
25	CCB	05:30	Total Alkalinity as CaCO3 to pH 4.5	2.04				J	
			Bicarbonate Alkalinity as CaCO3	2.04				J	
			Carbonate Alkalinity as CaCO3	5.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 135183 Date: 03/11/2015 05:30							
SM 2320B	MB 180-135183/2	Total Alkalinity as CaCO ₃ to pH 4.5	2.04	J	mg/L	5.0	1
SM 2320B	MB 180-135183/2	Bicarbonate Alkalinity as CaCO ₃	2.04	J	mg/L	5.0	1
SM 2320B	MB 180-135183/2	Carbonate Alkalinity as CaCO ₃	5.0	U	mg/L	5.0	1

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 135183 Date: 03/11/2015 05:30								
SM 2320B	HD-MW-50S-0/1-0	180-41613-4	Total Alkalinity as CaCO3 to pH 4.5	230	mg/L			
SM 2320B	HD-MW-50S-0/1-0	180-41613-4 DU	Total Alkalinity as CaCO3 to pH 4.5	233	mg/L	0.9	20	
SM 2320B	HD-MW-50S-0/1-0	180-41613-4	Bicarbonate Alkalinity as CaCO3	230	mg/L			
SM 2320B	HD-MW-50S-0/1-0	180-41613-4 DU	Bicarbonate Alkalinity as CaCO3	233	mg/L	0.9	20	
SM 2320B	HD-MW-50S-0/1-0	180-41613-4	Carbonate Alkalinity as CaCO3	5.0	mg/L			U
SM 2320B	HD-MW-50S-0/1-0	180-41613-4 DU	Carbonate Alkalinity as CaCO3	5.0	mg/L	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
SDG No.: _____
Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 135183 Date: 03/11/2015 05:30			LCS Source: WALK250PPMPi_00090								
SM 2320B	LCS 180-135183/1	Total Alkalinity as CaCO3 to pH 4.5	257		mg/L	250	103	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-41613-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2320B MDL Date: 01/27/2011 15:49

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bicarbonate Alkalinity as CaCO ₃		5	0.4111
Carbonate Alkalinity as CaCO ₃		5	0.4111
Total Alkalinity as CaCO ₃ to pH 4.5		5	0.4111

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-41613-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: SM 2320B XMDL Date: 01/27/2011 15:49

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bicarbonate Alkalinity as CaCO ₃		5	0.4111
Carbonate Alkalinity as CaCO ₃		5	0.4111
Total Alkalinity as CaCO ₃ to pH 4.5		5	0.4111

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1
 SDG No.: _____
 Instrument ID: NOEQUIP Analysis Method: SM 2320B
 Start Date: 03/11/2015 05:30 End Date: 03/11/2015 05:30

Lab Sample Id	D/F	T y p e	Time	Analytes																									
				A l k	B A L K C C	C a r A l k																							
LCS 180-135183/1	1	T	05:30	X																									
MB 180-135183/2	1	T	05:30	X	X	X																							
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
180-41613-4	1	T	05:30	X	X	X																							
180-41613-4 DU	1	T	05:30	X	X	X																							
180-41613-5	1	T	05:30	X	X	X																							
180-41613-6	1	T	05:30	X	X	X																							
180-41613-7	1	T	05:30	X	X	X																							
180-41613-8	1	T	05:30	X	X	X																							
CCV 180-135183/13	1		05:30	X																									
CCB 180-135183/14	1		05:30	X	X	X																							
180-41613-9	1	T	05:30	X	X	X																							
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
CCV 180-135183/24	1		05:30	X																									
CCB 180-135183/25	1		05:30	X	X	X																							
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
ZZZZZZ			05:30																										
CCV 180-135183/29			05:30																										
CCB 180-135183/30			05:30																										

Prep Types: _____
 T = Total/NA

Lab# 031115AK

Analyst: C. Laheyde

Date: 3-11-15

Reviewed By: Seidler

Date: 03-11-15

pH Meter ID: Accumet XL 94102132

AD Batch: 135783

pH 4 Start: 4.05

pH 4 End: 4.07

Job Number(s): 41571 - 41613 - 41678 - 41679 - 41780

Calculations:

(mL of H₂SO₄) (N)(50,000)

Alkalinity as CaCO₃ mg/L = _____
mL of Sample

Alkalinity Relationships:

P = Phenolphthalein Alkalinity (pH 8.3)

T = Total Alkalinity

OH⁻ = Hydroxide Alkalinity as CaCO₃

CO₃²⁻ = Carbonate Alkalinity as CaCO₃

HCO₃⁻ = Bicarbonate Concentration as CaCO₃

Results	OH ⁻	CO ₃ ²⁻	HCO ₃ ⁻	Results	OH ⁻	CO ₃ ²⁻	HCO ₃ ⁻
P = 0	0	0	T	P = ½T	0	2P	0
P < ½T	0	2P	T-2P	P > ½T	2P-T	2(T-P)	0
				P = T	T	0	0

[Signature]

Sample ID	pH	Sample Volume	mL to pH 8.3	Ttl mL pH 4.5 mL 2-11-15	N	T	P	OH ⁻	CO ₃ ²⁻	HCO ₃
CCS	10.83	50	6.5	12.6	0.0204	257.04				
MB	5.83	1	0	0.1		2.04				
180-41571-1	6.16		0	2.7		55.08				
2	6.23		0	4.4		89.76				
3	5.26		0			CM3-11-15				
4	5.75		0			CM3-11-15				
180-41613-4	7.74		0	11.3		230.52				
4X	7.69		0	11.4		232.56				
5	8.03		0	14.2		289.68				
6	7.62		0	13.0		265.2				
7	7.38		0	7.9		161.16				
8	7.25		0	13.2		269.28				
CCU	10.53		3.1	6.3		128.52				
CCB	5.77		0	0.1		2.04				
180-41613-9	7.69		0	10.8		220.32				
180-41678-1	3.11		0	0		ND				
-1X	3.14		0	0		ND				
2	6.59		0	0.9		CM3-11-15				
180-41679-1	4.13					CM3-11-15				
2	8.10		0	4.5		91.8				
3	6.89		0	1.4		CM3-11-15				
180-41780-1	6.16		0	8.3		169.32				
-2	6.09		0	6.2		126.48				
CCU	10.61		3.1	6.4		130.56				
CCB	5.81		0	0.1		2.04				
180-41914-1	7.72		0	9.1		165.24				



Pittsburgh
ALKALINITY LOGSHEET
Method 2320B
NB-2015-012

Sample ID	pH	Sample Volume	mL to pH 8.3	Ttl mL pH 4.5	N	T	P	OH ⁻	CO ₃ ²⁻	HCO ₃
180-41914-1X	7.73	50	0	8.0	0.0204	163.2				
↓ -2	7.33	↓	0	5.6		114.24				
CEW	10.67	↓	3.2	6.4	↓	130.56				
CEB	5.89	↓	0	0.1	↓	2.04				

8.0 on 3-11-15

[Handwritten signature]

[Handwritten signature]

Page 607 of 614

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Batch Number: 135183 Batch Start Date: 03/11/15 05:30 Batch Analyst: Loheyde, CherylBatch Method: SM 2320B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	Initial pH	BuretStart1	BuretStop1	TitrantVolume1	BuretStart2
LCS 180-135183/1		SM 2320B		50 mL	10.83 SU	0 mL	6.5 mL	6.5 mL	0 mL
MB 180-135183/2		SM 2320B		50 mL	5.83 SU	0 mL	0 mL	0 mL	0 mL
180-41613-A-4	HD-MW-50S-0/1-0	SM 2320B	T	50 mL	7.74 SU	0 mL	0 mL	0 mL	0 mL
180-41613-A-4 DU	HD-MW-50S-0/1-0	SM 2320B	T	50 mL	7.69 SU	0 mL	0 mL	0 mL	0 mL
180-41613-A-5	HD-MW-51D-0/1-0	SM 2320B	T	50 mL	8.03 SU	0 mL	0 mL	0 mL	0 mL
180-41613-A-6	HD-MW-127-0/1-0	SM 2320B	T	50 mL	7.62 SU	0 mL	0 mL	0 mL	0 mL
180-41613-A-7	HD-MW-132-0/1-0	SM 2320B	T	50 mL	7.38 SU	0 mL	0 mL	0 mL	0 mL
180-41613-A-8	HD-MW-95-0/1-0	SM 2320B	T	50 mL	7.25 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-135183/13		SM 2320B		50 mL	10.53 SU	0 mL	3.1 mL	3.1 mL	0 mL
CCB 180-135183/14		SM 2320B		50 mL	5.77 SU	0 mL	0 mL	0 mL	0 mL
180-41613-A-9	HD-MW-97-0/1-0	SM 2320B	T	50 mL	7.69 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-135183/24		SM 2320B		50 mL	10.61 SU	0 mL	3.1 mL	3.1 mL	0 mL
CCB 180-135183/25		SM 2320B		50 mL	5.81 SU	0 mL	0 mL	0 mL	0 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStop2	TitrantVolume2	CalcMsg	carb	hydr	bCarb
LCS 180-135183/1		SM 2320B		6.1 mL	6.1 mL	Case 4	248.88 mg/L	8.159999999999999 7 mg/L	0 mg/L
MB 180-135183/2		SM 2320B		0.1 mL	0.1 mL	Case 1	0 mg/L	0 mg/L	2.04 mg/L
180-41613-A-4	HD-MW-50S-0/1-0	SM 2320B	T	11.3 mL	11.3 mL	Case 1	0 mg/L	0 mg/L	230.52 mg/L
180-41613-A-4 DU	HD-MW-50S-0/1-0	SM 2320B	T	11.4 mL	11.4 mL	Case 1	0 mg/L	0 mg/L	232.56 mg/L
180-41613-A-5	HD-MW-51D-0/1-0	SM 2320B	T	14.2 mL	14.2 mL	Case 1	0 mg/L	0 mg/L	289.68 mg/L
180-41613-A-6	HD-MW-127-0/1-0	SM 2320B	T	13.0 mL	13 mL	Case 1	0 mg/L	0 mg/L	265.2 mg/L
180-41613-A-7	HD-MW-132-0/1-0	SM 2320B	T	7.9 mL	7.9 mL	Case 1	0 mg/L	0 mg/L	161.16 mg/L
180-41613-A-8	HD-MW-95-0/1-0	SM 2320B	T	13.2 mL	13.2 mL	Case 1	0 mg/L	0 mg/L	269.28 mg/L
CCV 180-135183/13		SM 2320B		3.2 mL	3.2 mL	Case 2	126.48 mg/L	0 mg/L	2.040000000000000 1 mg/L
CCB 180-135183/14		SM 2320B		0.1 mL	0.1 mL	Case 1	0 mg/L	0 mg/L	2.04 mg/L
180-41613-A-9	HD-MW-97-0/1-0	SM 2320B	T	10.8 mL	10.8 mL	Case 1	0 mg/L	0 mg/L	220.32 mg/L

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

SM 2320B

Page 1 of 3

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Batch Number: 135183 Batch Start Date: 03/11/15 05:30 Batch Analyst: Loheyde, CherylBatch Method: SM 2320B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStop2	TitrantVolume2	CalcMsg	carb	hydr	bCarb
CCV 180-135183/24		SM 2320B		3.3 mL	3.3 mL	Case 2	126.48 mg/L	0 mg/L	4.08 mg/L
CCB 180-135183/25		SM 2320B		0.1 mL	0.1 mL	Case 1	0 mg/L	0 mg/L	2.04 mg/L

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00081	WALK250PPMPi 00090	
LCS 180-135183/1		SM 2320B		132.6 mg/L	257.04 mg/L	50 mL		50 mL	
MB 180-135183/2		SM 2320B		0 mg/L	2.04 mg/L	50 mL			
180-41613-A-4	HD-MW-50S-0/1-0	SM 2320B	T	0 mg/L	230.52 mg/L	50 mL			
180-41613-A-4 DU	HD-MW-50S-0/1-0	SM 2320B	T	0 mg/L	232.56 mg/L	50 mL			
180-41613-A-5	HD-MW-51D-0/1-0	SM 2320B	T	0 mg/L	289.68 mg/L	50 mL			
180-41613-A-6	HD-MW-127-0/1-0	SM 2320B	T	0 mg/L	265.2 mg/L	50 mL			
180-41613-A-7	HD-MW-132-0/1-0	SM 2320B	T	0 mg/L	161.16 mg/L	50 mL			
180-41613-A-8	HD-MW-95-0/1-0	SM 2320B	T	0 mg/L	269.28 mg/L	50 mL			
CCV 180-135183/13		SM 2320B		63.24 mg/L	128.52 mg/L	50 mL	50 mL		
CCB 180-135183/14		SM 2320B		0 mg/L	2.04 mg/L	50 mL			
180-41613-A-9	HD-MW-97-0/1-0	SM 2320B	T	0 mg/L	220.32 mg/L	50 mL			
CCV 180-135183/24		SM 2320B		63.24 mg/L	130.56 mg/L	50 mL	50 mL		
CCB 180-135183/25		SM 2320B		0 mg/L	2.04 mg/L	50 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

SM 2320B

Page 2 of 3

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41613-1

SDG No.: _____

Batch Number: 135183 Batch Start Date: 03/11/15 05:30 Batch Analyst: Loheyde, CherylBatch Method: SM 2320B Batch End Date: _____

Batch Notes	
Batch Comment	PH 4 START: 4.05 PH 4 END: 4.07
pH Buffer 1 ID	1179927
pH Buffer 2 ID	1282792
pH Buffer 3 ID	1393069
pH Buffer 4 ID	1233635
pH Buffer 5 ID	1179928
Sulfuric Acid Lot Number	1473396
Sulfuric Acid Vendor	RICCA
Nominal Amount Used	50 mL
Normality of first Titrant	.0204 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TestAmerica Pittsburgh
301 Alpha Drive

Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2470

Client Contact
Groundwater Sciences Corporation
2601 Market Place St. Suite 310
Harrisburg, PA 17110

Phone
(717) 901-8180

FAX
(717) 657-1611

Project Name: Dry Season Shutdown Event 10

Site: Harley-Davidson, York PA

Quote # 18000557

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Project Manager: Jennifer S. Reese Tel/Fax: 717-901-8181 / (717) 657-1611		Site Contact: Jennifer S. Reese Lab Contact: Carrie Gamber		Date Submitted: 2/27/2015 Carrier: FEDEX		COC No: TAP2015022701 Job No: 1001216	
Analysis Turnaround Time Calendar (C) or Work Days (W) TAT if different from Below Standard ☒ 2 weeks ☐ 1 week ☐ 5 days ☐ 1 day		Barcode 180-41613 Chain of Custody		Container No: 1 SDG No.			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs (8260C)	Alkalinity (Carb/Bicarb), SO ₄ , CL, NO ₃	Total Na, Ca, K, and Mg (SW846 6020A)	Sample Specific Notes:
HD-QC-5-0/1-2	2/27/15	12:00	Trip Blank	Water	2	X			
HD-QC-2-0/1-3	2/27/15	11:55	Rinse Blank	Water	3	X			
HD-QC-2-0/1-4	2/27/15	12:00	Field Blank	Water	3	X			
HD-MW-50S-0/1-0	2/27/15	9:55	Groundwater	Water	5	X	X		
HD-MW-51D-0/1-0	2/27/15	10:05	Groundwater	Water	5	X	X		
HD-MW-127-0/1-0	2/27/15	9:35	Groundwater	Water	5	X	X		
HD-MW-132-0/1-0	2/27/15	9:40	Groundwater	Water	5	X	X		
HD-MW-95-0/1-0	2/27/15	11:00	Groundwater	Water	5	X	X		
HD-MW-97-0/1-0	2/27/15	10:45	Groundwater	Water	5	X	X		

Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant		☐ Poison B ☐ Unknown		Return To Client ☐ Disposal By Lab At ☐ For ☐ Months	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					

Special Instructions/QC Requirements & Comments: CLP Like Deliverables

Relinquished by (Print and Sign): <i>[Signature]</i>	Company: GSC	Date/Time: 2/27/15 12:08	Received by: <i>[Signature]</i>	Company: TA	Date/Time: 2/27/15 12:08
Relinquished by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Date/Time: 2/27/15 2:15	Received by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Date/Time: 2-28-15 9:15
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:



ORIGIN ID: KPDA (61 180-41613 VWaybill
 SAMPLE RECEIPT
 TEST AMERICA
 1008 WEST 9TH AVE

GRD: 8490299/INET3610

KING OF PRUSSIA, PA 19406
 UNITED STATES US

BILL RECIPIENT

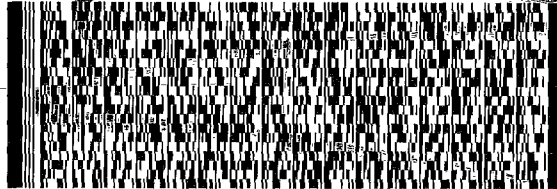
TO **SAMPLE RECEIPT**
TEST AMERICA - PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7058
 INV:
 PO:

REF:

DEPT:



FedEx
 Express



TRK# 7730 1617 9467
 0201

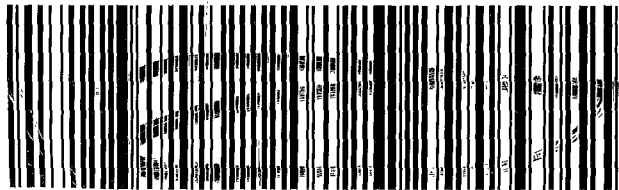
SATURDAY 12:00P
PRIORITY OVERNIGHT

X0 AGCA

temp 21-8
CPAS. 10
21-8
temp 21-8

15238
PA-US PIT

© 156297-435 RIT2 11/14



Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-41613-1

Login Number: 41613

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ ($1/4"$).	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	