TestAmerica
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ANALYTICAL REPORT

Job Number: 180-45946-1

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
7/29/2015 9:48 AM

Carrie L Gamber, Senior Project Manager
301 Alpha Drive, Pittsburgh, PA, 15238
(412)963-2428
carrie.gamber@testamericainc.com
07/29/2015

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^c	CCV Recovery is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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.

General Chemistry

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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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: 180-45946-1

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 07/16/2015; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.8º C and 2.8º C.

VOLATILES
cis-1,2-Dichloroethene failed the recovery criteria high for the MS of sample HD-COD-SW-17-0/1-0 (180-45946-12) in batch 180-148334.

METALS
Calcium and Potassium were detected in method blank MB 180-148049/1-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.

ALKALINITY
Bicarbonate Alkalinity as CaCO3 and Total Alkalinity as CaCO3 to pH 4.5 were detected in method blank MB 180-148162/2 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.

IC
Nitrate as N was detected in method blank MB 180-147937/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Chloride and Nitrate as N were detected in method blank MB 180-147963/6 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.

Chloride failed the recovery criteria low for the MSD of sample HD-COD-SW-17-0/1-0 (180-45946-12) in batch 180-147963. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

The continuing calibration blank (CCB) for analytical batch 147963 contained Chloride above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

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Client Sample ID: HD-COD-SW-6-0/1-0 — Lab Sample ID: 180-45946-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.3	J	5.0	2.5	ug/L	1		8260C	Total/NA
Nitrate as N	1.8	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	46		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	11		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	31000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	2800	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	6300		500	1.2	ug/L	1		6020A	Total/NA
Sodium	21000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	76	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	76	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-7-0/1-0 — Lab Sample ID: 180-45946-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	2.7	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	59		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	38		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	36000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	4300	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	10000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	35000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	110	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	110	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-8-0/1-0 — Lab Sample ID: 180-45946-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.7	J	5.0	2.5	ug/L	1		8260C	Total/NA
Trichloroethene	0.15	J	1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	0.16	J	1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	2.2	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	45		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	26		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	30000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	3600	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	6900		500	1.2	ug/L	1		6020A	Total/NA
Sodium	27000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	86	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	86	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-9-0/1-0 — Lab Sample ID: 180-45946-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.28	J	1.0	0.24	ug/L	1		8260C	Total/NA
Trichloroethene	0.28	J	1.0	0.14	ug/L	1		8260C	Total/NA
Toluene	0.16	J	1.0	0.15	ug/L	1		8260C	Total/NA
Tetrachloroethene	0.15	J	1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	4.0	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	84		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	38		1.0	0.21	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-9-0/1-0 (Continued) — Lab Sample ID: 180-45946-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	50000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	8000	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	11000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	49000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	140	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	140	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-10-0/1-0 — Lab Sample ID: 180-45946-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	2.5	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	100		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	29		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	90000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	7100	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	12000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	35000		500	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-COD-SW-11-0/1-0 — Lab Sample ID: 180-45946-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.28	J	1.0	0.17	ug/L	1		8260C	Total/NA
Nitrate as N	4.1	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	68		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	19		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	71000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	2100	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	16000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	28000		500	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

Client Sample ID: HD-COD-SW-12-0/1-0 — Lab Sample ID: 180-45946-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.26	J	1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	6.3	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	140		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	43		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	67000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	16000	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	11000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	74000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	190	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	190	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-13-0/1-0 — Lab Sample ID: 180-45946-8

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-13-0/1-0 (Continued) — Lab Sample ID: 180-45946-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.8	J	5.0	2.5	ug/L	1		8260C	Total/NA
Trichloroethene	0.19	J	1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	0.20	J	1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	2.3	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	46	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	27		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	31000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	3700	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	6800		500	1.2	ug/L	1		6020A	Total/NA
Sodium	27000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	110	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	110	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-15-0/1-0 — Lab Sample ID: 180-45946-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.48	J	1.0	0.30	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	9.6		1.0	0.24	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane	0.36	J	1.0	0.29	ug/L	1		8260C	Total/NA
Trichloroethene	8.4		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	5.4		1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	3.3	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	33		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	89000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	5400	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	18000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	57000		500	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

Client Sample ID: HD-QC1-0/1-2 — Lab Sample ID: 180-45946-10

No Detections.

Client Sample ID: HD-COD-SW-16-0/1-0 — Lab Sample ID: 180-45946-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.18	J	1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	0.22	J	1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	2.4	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	47	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	32000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	4000	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	7300		500	1.2	ug/L	1		6020A	Total/NA
Sodium	30000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	88	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	88	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Client Sample ID: HD-COD-SW-17-0/1-0 — Lab Sample ID: 180-45946-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.74	J	1.0	0.30	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	0.36	J	1.0	0.12	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	13	F1	1.0	0.24	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane	1.8		1.0	0.29	ug/L	1		8260C	Total/NA
Trichloroethene	15		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	28		1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	3.3	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	33		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	95000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	5400	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	19000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	58000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	250	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	250	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-20-0/1-0 — Lab Sample ID: 180-45946-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	1.7	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	46	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	9.1		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	29000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	2600	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	5700		500	1.2	ug/L	1		6020A	Total/NA
Sodium	20000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	80	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	80	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-26-0/1-0 — Lab Sample ID: 180-45946-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	2.5	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	64	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	35		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	40000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	4200	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	11000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	36000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	130	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	130	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-27-0/1-0 — Lab Sample ID: 180-45946-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.26	J	1.0	0.24	ug/L	1		8260C	Total/NA
Trichloroethene	0.20	J	1.0	0.14	ug/L	1		8260C	Total/NA
Nitrate as N	2.1	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	27		1.0	0.21	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-27-0/1-0 (Continued) — Lab Sample ID: 180-45946-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	51000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	4200	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	11000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	33000		500	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-COD-SW-28-0/1-0 — Lab Sample ID: 180-45946-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.25	J	1.0	0.24	ug/L	1		8260C	Total/NA
Trichloroethene	0.21	J	1.0	0.14	ug/L	1		8260C	Total/NA
Toluene	0.16	J	1.0	0.15	ug/L	1		8260C	Total/NA
Tetrachloroethene	0.17	J	1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	4.0	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	82	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	35		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	50000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	8000	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	11000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	47000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	150	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	150	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-29-0/1-0 — Lab Sample ID: 180-45946-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.7	J	5.0	2.5	ug/L	1		8260C	Total/NA
Toluene	0.17	J	1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	2.3	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	48	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	28		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	32000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	3800	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	7600		500	1.2	ug/L	1		6020A	Total/NA
Sodium	29000		500	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	84	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	84	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-QC1-0/1-1 — Lab Sample ID: 180-45946-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.53	J	1.0	0.30	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	0.14	J	1.0	0.12	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	9.7		1.0	0.24	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane	0.37	J	1.0	0.29	ug/L	1		8260C	Total/NA
Trichloroethene	8.8		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	5.7		1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	3.3	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

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-QC1-0/1-1 (Continued) — Lab Sample ID: 180-45946-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	33		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	89000	B	500	2.8	ug/L	1		6020A	Total/NA
Potassium	5400	B	500	5.8	ug/L	1		6020A	Total/NA
Magnesium	18000		500	1.2	ug/L	1		6020A	Total/NA
Sodium	56000		500	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

Client Sample ID: HD-QC2-0/1-2 — Lab Sample ID: 180-45946-19

No Detections.

This Detection Summary does not include radiochemical test results.

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

Client Sample ID: HD-COD-SW-6-0/1-0
Date Collected: 07/15/15 10:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			07/17/15 21:06	1
Vinyl chloride	ND		1.0	0.23	ug/L			07/17/15 21:06	1
Bromomethane	ND		1.0	0.31	ug/L			07/17/15 21:06	1
Chloroethane	ND		1.0	0.21	ug/L			07/17/15 21:06	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/17/15 21:06	1
Acetone	**4.3**	**J**	5.0	2.5	ug/L			07/17/15 21:06	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/17/15 21:06	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/17/15 21:06	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/17/15 21:06	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/17/15 21:06	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/17/15 21:06	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/17/15 21:06	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/17/15 21:06	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			07/17/15 21:06	1
Chloroform	ND		1.0	0.17	ug/L			07/17/15 21:06	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/17/15 21:06	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/17/15 21:06	1
Benzene	ND		1.0	0.11	ug/L			07/17/15 21:06	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/17/15 21:06	1
Trichloroethene	ND		1.0	0.14	ug/L			07/17/15 21:06	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/17/15 21:06	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/17/15 21:06	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/17/15 21:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/17/15 21:06	1
Toluene	ND		1.0	0.15	ug/L			07/17/15 21:06	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/17/15 21:06	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/17/15 21:06	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/17/15 21:06	1
2-Hexanone	ND		5.0	0.16	ug/L			07/17/15 21:06	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/17/15 21:06	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/17/15 21:06	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/17/15 21:06	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/17/15 21:06	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/17/15 21:06	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/17/15 21:06	1
Styrene	ND		1.0	0.097	ug/L			07/17/15 21:06	1
Bromoform	ND		1.0	0.19	ug/L			07/17/15 21:06	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/17/15 21:06	1
Acrylonitrile	ND		20	0.55	ug/L			07/17/15 21:06	1
1,4-Dioxane	ND		200	34	ug/L			07/17/15 21:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*64 - 135*		*07/17/15 21:06*	*1*
Toluene-d8 (Surr)	*97*		*71 - 118*		*07/17/15 21:06*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 118*		*07/17/15 21:06*	*1*
Dibromofluoromethane (Surr)	*115*		*70 - 128*		*07/17/15 21:06*	*1*

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

Client Sample ID: HD-COD-SW-7-0/1-0
Date Collected: 07/15/15 11:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			07/17/15 21:29	1
Vinyl chloride	ND		1.0	0.23	ug/L			07/17/15 21:29	1
Bromomethane	ND		1.0	0.31	ug/L			07/17/15 21:29	1
Chloroethane	ND		1.0	0.21	ug/L			07/17/15 21:29	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/17/15 21:29	1
Acetone	ND		5.0	2.5	ug/L			07/17/15 21:29	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/17/15 21:29	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/17/15 21:29	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/17/15 21:29	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/17/15 21:29	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/17/15 21:29	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/17/15 21:29	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/17/15 21:29	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			07/17/15 21:29	1
Chloroform	ND		1.0	0.17	ug/L			07/17/15 21:29	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/17/15 21:29	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/17/15 21:29	1
Benzene	ND		1.0	0.11	ug/L			07/17/15 21:29	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/17/15 21:29	1
Trichloroethene	ND		1.0	0.14	ug/L			07/17/15 21:29	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/17/15 21:29	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/17/15 21:29	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/17/15 21:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/17/15 21:29	1
Toluene	ND		1.0	0.15	ug/L			07/17/15 21:29	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/17/15 21:29	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/17/15 21:29	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/17/15 21:29	1
2-Hexanone	ND		5.0	0.16	ug/L			07/17/15 21:29	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/17/15 21:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/17/15 21:29	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/17/15 21:29	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/17/15 21:29	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/17/15 21:29	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/17/15 21:29	1
Styrene	ND		1.0	0.097	ug/L			07/17/15 21:29	1
Bromoform	ND		1.0	0.19	ug/L			07/17/15 21:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/17/15 21:29	1
Acrylonitrile	ND		20	0.55	ug/L			07/17/15 21:29	1
1,4-Dioxane	ND		200	34	ug/L			07/17/15 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*64 - 135*		*07/17/15 21:29*	*1*
Toluene-d8 (Surr)	*96*		*71 - 118*		*07/17/15 21:29*	*1*
4-Bromofluorobenzene (Surr)	*87*		*70 - 118*		*07/17/15 21:29*	*1*
Dibromofluoromethane (Surr)	*117*		*70 - 128*		*07/17/15 21:29*	*1*

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

Client Sample ID: HD-COD-SW-8-0/1-0
Date Collected: 07/15/15 08:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			07/17/15 21:53	1
Vinyl chloride	ND		1.0	0.23	ug/L			07/17/15 21:53	1
Bromomethane	ND		1.0	0.31	ug/L			07/17/15 21:53	1
Chloroethane	ND		1.0	0.21	ug/L			07/17/15 21:53	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/17/15 21:53	1
Acetone	**3.7**	**J**	5.0	2.5	ug/L			07/17/15 21:53	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/17/15 21:53	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/17/15 21:53	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/17/15 21:53	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/17/15 21:53	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/17/15 21:53	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/17/15 21:53	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/17/15 21:53	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			07/17/15 21:53	1
Chloroform	ND		1.0	0.17	ug/L			07/17/15 21:53	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/17/15 21:53	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/17/15 21:53	1
Benzene	ND		1.0	0.11	ug/L			07/17/15 21:53	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/17/15 21:53	1
Trichloroethene	**0.15**	**J**	1.0	0.14	ug/L			07/17/15 21:53	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/17/15 21:53	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/17/15 21:53	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/17/15 21:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/17/15 21:53	1
Toluene	ND		1.0	0.15	ug/L			07/17/15 21:53	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/17/15 21:53	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/17/15 21:53	1
Tetrachloroethene	**0.16**	**J**	1.0	0.15	ug/L			07/17/15 21:53	1
2-Hexanone	ND		5.0	0.16	ug/L			07/17/15 21:53	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/17/15 21:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/17/15 21:53	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/17/15 21:53	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/17/15 21:53	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/17/15 21:53	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/17/15 21:53	1
Styrene	ND		1.0	0.097	ug/L			07/17/15 21:53	1
Bromoform	ND		1.0	0.19	ug/L			07/17/15 21:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/17/15 21:53	1
Acrylonitrile	ND		20	0.55	ug/L			07/17/15 21:53	1
1,4-Dioxane	ND		200	34	ug/L			07/17/15 21:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*64 - 135*		*07/17/15 21:53*	*1*
Toluene-d8 (Surr)	*97*		*71 - 118*		*07/17/15 21:53*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 118*		*07/17/15 21:53*	*1*
Dibromofluoromethane (Surr)	*117*		*70 - 128*		*07/17/15 21:53*	*1*

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

Client Sample ID: HD-COD-SW-9-0/1-0
Date Collected: 07/15/15 12:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			07/17/15 22:17	1
Vinyl chloride	ND		1.0	0.23	ug/L			07/17/15 22:17	1
Bromomethane	ND		1.0	0.31	ug/L			07/17/15 22:17	1
Chloroethane	ND		1.0	0.21	ug/L			07/17/15 22:17	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/17/15 22:17	1
Acetone	ND		5.0	2.5	ug/L			07/17/15 22:17	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/17/15 22:17	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/17/15 22:17	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/17/15 22:17	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/17/15 22:17	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/17/15 22:17	1
cis-1,2-Dichloroethene	**0.28**	**J**	1.0	0.24	ug/L			07/17/15 22:17	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/17/15 22:17	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			07/17/15 22:17	1
Chloroform	ND		1.0	0.17	ug/L			07/17/15 22:17	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/17/15 22:17	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/17/15 22:17	1
Benzene	ND		1.0	0.11	ug/L			07/17/15 22:17	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/17/15 22:17	1
Trichloroethene	**0.28**	**J**	1.0	0.14	ug/L			07/17/15 22:17	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/17/15 22:17	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/17/15 22:17	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/17/15 22:17	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/17/15 22:17	1
Toluene	**0.16**	**J**	1.0	0.15	ug/L			07/17/15 22:17	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/17/15 22:17	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/17/15 22:17	1
Tetrachloroethene	**0.15**	**J**	1.0	0.15	ug/L			07/17/15 22:17	1
2-Hexanone	ND		5.0	0.16	ug/L			07/17/15 22:17	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/17/15 22:17	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/17/15 22:17	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/17/15 22:17	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/17/15 22:17	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/17/15 22:17	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/17/15 22:17	1
Styrene	ND		1.0	0.097	ug/L			07/17/15 22:17	1
Bromoform	ND		1.0	0.19	ug/L			07/17/15 22:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/17/15 22:17	1
Acrylonitrile	ND		20	0.55	ug/L			07/17/15 22:17	1
1,4-Dioxane	ND		200	34	ug/L			07/17/15 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*122*		*64 - 135*		*07/17/15 22:17*	*1*
Toluene-d8 (Surr)	*99*		*71 - 118*		*07/17/15 22:17*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 118*		*07/17/15 22:17*	*1*
Dibromofluoromethane (Surr)	*119*		*70 - 128*		*07/17/15 22:17*	*1*

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

Client Sample ID: HD-COD-SW-10-0/1-0
Date Collected: 07/15/15 09:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			07/17/15 22:40	1
Vinyl chloride	ND		1.0	0.23	ug/L			07/17/15 22:40	1
Bromomethane	ND		1.0	0.31	ug/L			07/17/15 22:40	1
Chloroethane	ND		1.0	0.21	ug/L			07/17/15 22:40	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/17/15 22:40	1
Acetone	ND		5.0	2.5	ug/L			07/17/15 22:40	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/17/15 22:40	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/17/15 22:40	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/17/15 22:40	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/17/15 22:40	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/17/15 22:40	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/17/15 22:40	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/17/15 22:40	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			07/17/15 22:40	1
Chloroform	ND		1.0	0.17	ug/L			07/17/15 22:40	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/17/15 22:40	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/17/15 22:40	1
Benzene	ND		1.0	0.11	ug/L			07/17/15 22:40	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/17/15 22:40	1
Trichloroethene	ND		1.0	0.14	ug/L			07/17/15 22:40	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/17/15 22:40	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/17/15 22:40	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/17/15 22:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/17/15 22:40	1
Toluene	ND		1.0	0.15	ug/L			07/17/15 22:40	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/17/15 22:40	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/17/15 22:40	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/17/15 22:40	1
2-Hexanone	ND		5.0	0.16	ug/L			07/17/15 22:40	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/17/15 22:40	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/17/15 22:40	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/17/15 22:40	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/17/15 22:40	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/17/15 22:40	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/17/15 22:40	1
Styrene	ND		1.0	0.097	ug/L			07/17/15 22:40	1
Bromoform	ND		1.0	0.19	ug/L			07/17/15 22:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/17/15 22:40	1
Acrylonitrile	ND		20	0.55	ug/L			07/17/15 22:40	1
1,4-Dioxane	ND		200	34	ug/L			07/17/15 22:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*122*		*64 - 135*		*07/17/15 22:40*	*1*
Toluene-d8 (Surr)	*102*		*71 - 118*		*07/17/15 22:40*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 118*		*07/17/15 22:40*	*1*
Dibromofluoromethane (Surr)	*120*		*70 - 128*		*07/17/15 22:40*	*1*

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

Client Sample ID: HD-COD-SW-11-0/1-0
Date Collected: 07/15/15 12:45
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			07/17/15 23:04	1
Vinyl chloride	ND		1.0	0.23	ug/L			07/17/15 23:04	1
Bromomethane	ND		1.0	0.31	ug/L			07/17/15 23:04	1
Chloroethane	ND		1.0	0.21	ug/L			07/17/15 23:04	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/17/15 23:04	1
Acetone	ND		5.0	2.5	ug/L			07/17/15 23:04	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/17/15 23:04	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/17/15 23:04	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/17/15 23:04	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/17/15 23:04	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/17/15 23:04	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/17/15 23:04	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/17/15 23:04	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			07/17/15 23:04	1
Chloroform	**0.28**	**J**	1.0	0.17	ug/L			07/17/15 23:04	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/17/15 23:04	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/17/15 23:04	1
Benzene	ND		1.0	0.11	ug/L			07/17/15 23:04	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/17/15 23:04	1
Trichloroethene	ND		1.0	0.14	ug/L			07/17/15 23:04	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/17/15 23:04	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/17/15 23:04	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/17/15 23:04	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/17/15 23:04	1
Toluene	ND		1.0	0.15	ug/L			07/17/15 23:04	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/17/15 23:04	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/17/15 23:04	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/17/15 23:04	1
2-Hexanone	ND		5.0	0.16	ug/L			07/17/15 23:04	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/17/15 23:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/17/15 23:04	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/17/15 23:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/17/15 23:04	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/17/15 23:04	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/17/15 23:04	1
Styrene	ND		1.0	0.097	ug/L			07/17/15 23:04	1
Bromoform	ND		1.0	0.19	ug/L			07/17/15 23:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/17/15 23:04	1
Acrylonitrile	ND		20	0.55	ug/L			07/17/15 23:04	1
1,4-Dioxane	ND		200	34	ug/L			07/17/15 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*122*		*64 - 135*		*07/17/15 23:04*	*1*
Toluene-d8 (Surr)	*97*		*71 - 118*		*07/17/15 23:04*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 118*		*07/17/15 23:04*	*1*
Dibromofluoromethane (Surr)	*116*		*70 - 128*		*07/17/15 23:04*	*1*

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

Client Sample ID: HD-COD-SW-12-0/1-0
Date Collected: 07/15/15 13:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 16:32	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 16:32	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 16:32	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 16:32	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 16:32	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 16:32	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 16:32	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 16:32	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 16:32	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 16:32	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 16:32	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/21/15 16:32	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 16:32	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 16:32	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 16:32	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 16:32	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 16:32	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 16:32	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 16:32	1
Trichloroethene	ND		1.0	0.14	ug/L			07/21/15 16:32	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 16:32	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 16:32	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 16:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 16:32	1
Toluene	**0.26**	**J**	1.0	0.15	ug/L			07/21/15 16:32	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 16:32	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 16:32	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/21/15 16:32	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 16:32	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 16:32	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 16:32	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 16:32	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 16:32	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 16:32	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 16:32	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 16:32	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 16:32	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 16:32	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 16:32	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*64 - 135*		*07/21/15 16:32*	*1*
Toluene-d8 (Surr)	*110*		*71 - 118*		*07/21/15 16:32*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 118*		*07/21/15 16:32*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 128*		*07/21/15 16:32*	*1*

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

Client Sample ID: HD-COD-SW-13-0/1-0
Date Collected: 07/15/15 09:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 16:56	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 16:56	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 16:56	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 16:56	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 16:56	1
Acetone	**2.8**	**J**	5.0	2.5	ug/L			07/21/15 16:56	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 16:56	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 16:56	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 16:56	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 16:56	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 16:56	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/21/15 16:56	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 16:56	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 16:56	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 16:56	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 16:56	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 16:56	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 16:56	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 16:56	1
Trichloroethene	**0.19**	**J**	1.0	0.14	ug/L			07/21/15 16:56	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 16:56	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 16:56	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 16:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 16:56	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 16:56	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 16:56	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 16:56	1
Tetrachloroethene	**0.20**	**J**	1.0	0.15	ug/L			07/21/15 16:56	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 16:56	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 16:56	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 16:56	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 16:56	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 16:56	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 16:56	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 16:56	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 16:56	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 16:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 16:56	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 16:56	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*64 - 135*		*07/21/15 16:56*	*1*
Toluene-d8 (Surr)	*111*		*71 - 118*		*07/21/15 16:56*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 118*		*07/21/15 16:56*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 128*		*07/21/15 16:56*	*1*

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

Client Sample ID: HD-COD-SW-15-0/1-0
Date Collected: 07/15/15 13:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 17:20	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 17:20	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 17:20	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 17:20	1
1,1-Dichloroethene	**0.48**	**J**	1.0	0.30	ug/L			07/21/15 17:20	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 17:20	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 17:20	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 17:20	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 17:20	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 17:20	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 17:20	1
cis-1,2-Dichloroethene	**9.6**		1.0	0.24	ug/L			07/21/15 17:20	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 17:20	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 17:20	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 17:20	1
1,1,1-Trichloroethane	**0.36**	**J**	1.0	0.29	ug/L			07/21/15 17:20	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 17:20	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 17:20	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 17:20	1
Trichloroethene	**8.4**		1.0	0.14	ug/L			07/21/15 17:20	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 17:20	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 17:20	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 17:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 17:20	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 17:20	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 17:20	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 17:20	1
Tetrachloroethene	**5.4**		1.0	0.15	ug/L			07/21/15 17:20	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 17:20	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 17:20	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 17:20	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 17:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 17:20	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 17:20	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 17:20	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 17:20	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 17:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 17:20	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 17:20	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*64 - 135*		*07/21/15 17:20*	*1*
Toluene-d8 (Surr)	*111*		*71 - 118*		*07/21/15 17:20*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 118*		*07/21/15 17:20*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 128*		*07/21/15 17:20*	*1*

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

Client Sample ID: HD-QC1-0/1-2
Date Collected: 07/15/15 12:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 17:43	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 17:43	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 17:43	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 17:43	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 17:43	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 17:43	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 17:43	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 17:43	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 17:43	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 17:43	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 17:43	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/21/15 17:43	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 17:43	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 17:43	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 17:43	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 17:43	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 17:43	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 17:43	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 17:43	1
Trichloroethene	ND		1.0	0.14	ug/L			07/21/15 17:43	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 17:43	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 17:43	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 17:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 17:43	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 17:43	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 17:43	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 17:43	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/21/15 17:43	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 17:43	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 17:43	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 17:43	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 17:43	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 17:43	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 17:43	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 17:43	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 17:43	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 17:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 17:43	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 17:43	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 135*		*07/21/15 17:43*	*1*
Toluene-d8 (Surr)	*113*		*71 - 118*		*07/21/15 17:43*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 118*		*07/21/15 17:43*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 128*		*07/21/15 17:43*	*1*

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

Client Sample ID: HD-COD-SW-16-0/1-0
Date Collected: 07/15/15 10:25
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 18:07	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 18:07	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 18:07	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 18:07	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 18:07	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 18:07	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 18:07	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 18:07	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 18:07	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 18:07	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 18:07	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/21/15 18:07	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 18:07	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 18:07	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 18:07	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 18:07	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 18:07	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 18:07	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 18:07	1
Trichloroethene	**0.18**	**J**	1.0	0.14	ug/L			07/21/15 18:07	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 18:07	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 18:07	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 18:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 18:07	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 18:07	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 18:07	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 18:07	1
Tetrachloroethene	**0.22**	**J**	1.0	0.15	ug/L			07/21/15 18:07	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 18:07	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 18:07	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 18:07	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 18:07	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 18:07	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 18:07	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 18:07	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 18:07	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 18:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 18:07	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 18:07	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*		*07/21/15 18:07*	*1*
Toluene-d8 (Surr)	*112*		*71 - 118*		*07/21/15 18:07*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 118*		*07/21/15 18:07*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 128*		*07/21/15 18:07*	*1*

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

Client Sample ID: HD-COD-SW-17-0/1-0
Date Collected: 07/15/15 10:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 14:41	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 14:41	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 14:41	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 14:41	1
1,1-Dichloroethene	**0.74**	**J**	1.0	0.30	ug/L			07/21/15 14:41	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 14:41	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 14:41	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 14:41	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 14:41	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 14:41	1
1,1-Dichloroethane	**0.36**	**J**	1.0	0.12	ug/L			07/21/15 14:41	1
cis-1,2-Dichloroethene	**13**	**F1**	1.0	0.24	ug/L			07/21/15 14:41	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 14:41	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 14:41	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 14:41	1
1,1,1-Trichloroethane	**1.8**		1.0	0.29	ug/L			07/21/15 14:41	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 14:41	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 14:41	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 14:41	1
Trichloroethene	**15**		1.0	0.14	ug/L			07/21/15 14:41	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 14:41	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 14:41	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 14:41	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 14:41	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 14:41	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 14:41	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 14:41	1
Tetrachloroethene	**28**		1.0	0.15	ug/L			07/21/15 14:41	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 14:41	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 14:41	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 14:41	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 14:41	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 14:41	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 14:41	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 14:41	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 14:41	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 14:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 14:41	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 14:41	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*64 - 135*		*07/21/15 14:41*	*1*
Toluene-d8 (Surr)	*111*		*71 - 118*		*07/21/15 14:41*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 118*		*07/21/15 14:41*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 128*		*07/21/15 14:41*	*1*

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

Client Sample ID: HD-COD-SW-20-0/1-0
Date Collected: 07/15/15 10:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 18:31	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 18:31	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 18:31	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 18:31	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 18:31	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 18:31	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 18:31	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 18:31	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 18:31	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 18:31	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 18:31	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/21/15 18:31	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 18:31	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 18:31	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 18:31	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 18:31	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 18:31	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 18:31	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 18:31	1
Trichloroethene	ND		1.0	0.14	ug/L			07/21/15 18:31	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 18:31	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 18:31	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 18:31	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 18:31	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 18:31	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 18:31	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 18:31	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/21/15 18:31	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 18:31	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 18:31	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 18:31	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 18:31	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 18:31	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 18:31	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 18:31	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 18:31	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 18:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 18:31	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 18:31	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 135*		*07/21/15 18:31*	*1*
Toluene-d8 (Surr)	*112*		*71 - 118*		*07/21/15 18:31*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 118*		*07/21/15 18:31*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 128*		*07/21/15 18:31*	*1*

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

Client Sample ID: HD-COD-SW-26-0/1-0
Date Collected: 07/15/15 11:15
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 18:55	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 18:55	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 18:55	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 18:55	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 18:55	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 18:55	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 18:55	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 18:55	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 18:55	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 18:55	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 18:55	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/21/15 18:55	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 18:55	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 18:55	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 18:55	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 18:55	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 18:55	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 18:55	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 18:55	1
Trichloroethene	ND		1.0	0.14	ug/L			07/21/15 18:55	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 18:55	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 18:55	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 18:55	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 18:55	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 18:55	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 18:55	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 18:55	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/21/15 18:55	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 18:55	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 18:55	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 18:55	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 18:55	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 18:55	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 18:55	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 18:55	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 18:55	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 18:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 18:55	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 18:55	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*64 - 135*		*07/21/15 18:55*	*1*
Toluene-d8 (Surr)	*109*		*71 - 118*		*07/21/15 18:55*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 118*		*07/21/15 18:55*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 128*		*07/21/15 18:55*	*1*

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

Client Sample ID: HD-COD-SW-27-0/1-0
Date Collected: 07/15/15 13:30
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 19:19	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 19:19	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 19:19	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 19:19	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 19:19	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 19:19	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 19:19	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 19:19	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 19:19	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 19:19	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 19:19	1
cis-1,2-Dichloroethene	**0.26**	**J**	1.0	0.24	ug/L			07/21/15 19:19	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 19:19	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 19:19	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 19:19	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 19:19	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 19:19	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 19:19	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 19:19	1
Trichloroethene	**0.20**	**J**	1.0	0.14	ug/L			07/21/15 19:19	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 19:19	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 19:19	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 19:19	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 19:19	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 19:19	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 19:19	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 19:19	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/21/15 19:19	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 19:19	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 19:19	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 19:19	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 19:19	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 19:19	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 19:19	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 19:19	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 19:19	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 19:19	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 19:19	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 19:19	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*64 - 135*		*07/21/15 19:19*	*1*
Toluene-d8 (Surr)	*109*		*71 - 118*		*07/21/15 19:19*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 118*		*07/21/15 19:19*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 128*		*07/21/15 19:19*	*1*

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

Client Sample ID: HD-COD-SW-28-0/1-0
Date Collected: 07/15/15 12:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 19:43	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 19:43	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 19:43	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 19:43	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 19:43	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 19:43	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 19:43	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 19:43	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 19:43	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 19:43	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 19:43	1
cis-1,2-Dichloroethene	**0.25**	**J**	1.0	0.24	ug/L			07/21/15 19:43	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 19:43	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 19:43	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 19:43	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 19:43	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 19:43	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 19:43	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 19:43	1
Trichloroethene	**0.21**	**J**	1.0	0.14	ug/L			07/21/15 19:43	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 19:43	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 19:43	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 19:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 19:43	1
Toluene	**0.16**	**J**	1.0	0.15	ug/L			07/21/15 19:43	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 19:43	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 19:43	1
Tetrachloroethene	**0.17**	**J**	1.0	0.15	ug/L			07/21/15 19:43	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 19:43	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 19:43	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 19:43	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 19:43	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 19:43	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 19:43	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 19:43	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 19:43	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 19:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 19:43	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 19:43	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*		*07/21/15 19:43*	*1*
Toluene-d8 (Surr)	*107*		*71 - 118*		*07/21/15 19:43*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 118*		*07/21/15 19:43*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 128*		*07/21/15 19:43*	*1*

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

Client Sample ID: HD-COD-SW-29-0/1-0
Date Collected: 07/15/15 08:40
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 20:07	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 20:07	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 20:07	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 20:07	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 20:07	1
Acetone	**2.7**	**J**	5.0	2.5	ug/L			07/21/15 20:07	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 20:07	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 20:07	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 20:07	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 20:07	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 20:07	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/21/15 20:07	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 20:07	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 20:07	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 20:07	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 20:07	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 20:07	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 20:07	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 20:07	1
Trichloroethene	ND		1.0	0.14	ug/L			07/21/15 20:07	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 20:07	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 20:07	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 20:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 20:07	1
Toluene	**0.17**	**J**	1.0	0.15	ug/L			07/21/15 20:07	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 20:07	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 20:07	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/21/15 20:07	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 20:07	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 20:07	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 20:07	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 20:07	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 20:07	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 20:07	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 20:07	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 20:07	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 20:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 20:07	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 20:07	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*		*07/21/15 20:07*	*1*
Toluene-d8 (Surr)	*111*		*71 - 118*		*07/21/15 20:07*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 118*		*07/21/15 20:07*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 128*		*07/21/15 20:07*	*1*

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

Client Sample ID: HD-QC1-0/1-1
Date Collected: 07/15/15 08:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-18
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 20:31	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 20:31	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 20:31	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 20:31	1
1,1-Dichloroethene	**0.53**	**J**	1.0	0.30	ug/L			07/21/15 20:31	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 20:31	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 20:31	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 20:31	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 20:31	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 20:31	1
1,1-Dichloroethane	**0.14**	**J**	1.0	0.12	ug/L			07/21/15 20:31	1
cis-1,2-Dichloroethene	**9.7**		1.0	0.24	ug/L			07/21/15 20:31	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 20:31	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 20:31	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 20:31	1
1,1,1-Trichloroethane	**0.37**	**J**	1.0	0.29	ug/L			07/21/15 20:31	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 20:31	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 20:31	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 20:31	1
Trichloroethene	**8.8**		1.0	0.14	ug/L			07/21/15 20:31	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 20:31	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 20:31	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 20:31	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 20:31	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 20:31	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 20:31	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 20:31	1
Tetrachloroethene	**5.7**		1.0	0.15	ug/L			07/21/15 20:31	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 20:31	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 20:31	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 20:31	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 20:31	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 20:31	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 20:31	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 20:31	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 20:31	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 20:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 20:31	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 20:31	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 135*		*07/21/15 20:31*	*1*
Toluene-d8 (Surr)	*111*		*71 - 118*		*07/21/15 20:31*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 118*		*07/21/15 20:31*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 128*		*07/21/15 20:31*	*1*

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

Client Sample ID: HD-QC2-0/1-2
Date Collected: 07/15/15 12:01
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-19
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	^c	1.0	0.28	ug/L			07/21/15 15:05	1
Vinyl chloride	ND	^c	1.0	0.23	ug/L			07/21/15 15:05	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 15:05	1
Chloroethane	ND	^c	1.0	0.21	ug/L			07/21/15 15:05	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 15:05	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 15:05	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 15:05	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 15:05	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 15:05	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 15:05	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 15:05	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/21/15 15:05	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 15:05	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			07/21/15 15:05	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 15:05	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 15:05	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 15:05	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 15:05	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 15:05	1
Trichloroethene	ND		1.0	0.14	ug/L			07/21/15 15:05	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 15:05	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 15:05	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 15:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 15:05	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 15:05	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 15:05	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 15:05	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/21/15 15:05	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			07/21/15 15:05	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 15:05	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 15:05	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 15:05	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 15:05	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 15:05	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 15:05	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 15:05	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 15:05	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 15:05	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 15:05	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*64 - 135*		*07/21/15 15:05*	*1*
Toluene-d8 (Surr)	*110*		*71 - 118*		*07/21/15 15:05*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 118*		*07/21/15 15:05*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 128*		*07/21/15 15:05*	*1*

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-6-0/1-0
Date Collected: 07/15/15 10:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.8	B	0.10	0.0062	mg/L			07/16/15 23:29	1
Chloride	46		1.0	0.20	mg/L			07/16/15 23:29	1
Sulfate	11		1.0	0.21	mg/L			07/16/15 23:29	1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-7-0/1-0
Date Collected: 07/15/15 11:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**2.7**	**B**	0.10	0.0062	mg/L			07/16/15 23:46	1
Chloride	**59**		1.0	0.20	mg/L			07/16/15 23:46	1
Sulfate	**38**		1.0	0.21	mg/L			07/16/15 23:46	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-8-0/1-0
Date Collected: 07/15/15 08:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.2	B	0.10	0.0062	mg/L			07/17/15 00:04	1
Chloride	45		1.0	0.20	mg/L			07/17/15 00:04	1
Sulfate	26		1.0	0.21	mg/L			07/17/15 00:04	1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-9-0/1-0
Date Collected: 07/15/15 12:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	4.0	B	0.10	0.0062	mg/L			07/17/15 00:21	1
Chloride	84		1.0	0.20	mg/L			07/17/15 00:21	1
Sulfate	38		1.0	0.21	mg/L			07/17/15 00:21	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-10-0/1-0
Date Collected: 07/15/15 09:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.5	B	0.10	0.0062	mg/L			07/17/15 00:38	1
Chloride	100		1.0	0.20	mg/L			07/17/15 00:38	1
Sulfate	29		1.0	0.21	mg/L			07/17/15 00:38	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-11-0/1-0
Date Collected: 07/15/15 12:45
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	4.1	B	0.10	0.0062	mg/L			07/17/15 00:55	1
Chloride	68		1.0	0.20	mg/L			07/17/15 00:55	1
Sulfate	19		1.0	0.21	mg/L			07/17/15 00:55	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-12-0/1-0
Date Collected: 07/15/15 13:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	6.3	B	0.10	0.0062	mg/L			07/17/15 01:13	1
Chloride	140		1.0	0.20	mg/L			07/17/15 01:13	1
Sulfate	43		1.0	0.21	mg/L			07/17/15 01:13	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-13-0/1-0
Date Collected: 07/15/15 09:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.3	B	0.10	0.0062	mg/L			07/16/15 16:36	1
Chloride	46	B	1.0	0.20	mg/L			07/16/15 16:36	1
Sulfate	27		1.0	0.21	mg/L			07/16/15 16:36	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-15-0/1-0
Date Collected: 07/15/15 13:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.3	B	0.10	0.0062	mg/L			07/16/15 16:53	1
Chloride	130	B	1.0	0.20	mg/L			07/16/15 16:53	1
Sulfate	33		1.0	0.21	mg/L			07/16/15 16:53	1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-16-0/1-0
Date Collected: 07/15/15 10:25
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.4	B	0.10	0.0062	mg/L			07/16/15 17:11	1
Chloride	47	B	1.0	0.20	mg/L			07/16/15 17:11	1
Sulfate	30		1.0	0.21	mg/L			07/16/15 17:11	1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-17-0/1-0
Date Collected: 07/15/15 10:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.3	B	0.10	0.0062	mg/L			07/16/15 19:29	1
Chloride	130	B ^	1.0	0.20	mg/L			07/16/15 19:29	1
Sulfate	33		1.0	0.21	mg/L			07/16/15 19:29	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-20-0/1-0
Date Collected: 07/15/15 10:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.7	B	0.10	0.0062	mg/L			07/16/15 17:28	1
Chloride	46	B	1.0	0.20	mg/L			07/16/15 17:28	1
Sulfate	9.1		1.0	0.21	mg/L			07/16/15 17:28	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-26-0/1-0
Date Collected: 07/15/15 11:15
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.5	B	0.10	0.0062	mg/L			07/16/15 17:45	1
Chloride	64	B	1.0	0.20	mg/L			07/16/15 17:45	1
Sulfate	35		1.0	0.21	mg/L			07/16/15 17:45	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-27-0/1-0
Date Collected: 07/15/15 13:30
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.1	B	0.10	0.0062	mg/L			07/16/15 20:21	1
Chloride	60	B ^	1.0	0.20	mg/L			07/16/15 20:21	1
Sulfate	27		1.0	0.21	mg/L			07/16/15 20:21	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-28-0/1-0
Date Collected: 07/15/15 12:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	4.0	B	0.10	0.0062	mg/L			07/16/15 18:03	1
Chloride	82	B	1.0	0.20	mg/L			07/16/15 18:03	1
Sulfate	35		1.0	0.21	mg/L			07/16/15 18:03	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-29-0/1-0
Date Collected: 07/15/15 08:40
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.3	B	0.10	0.0062	mg/L			07/16/15 18:20	1
Chloride	48	B	1.0	0.20	mg/L			07/16/15 18:20	1
Sulfate	28		1.0	0.21	mg/L			07/16/15 18:20	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-QC1-0/1-1
Date Collected: 07/15/15 08:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-18
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.3	B	0.10	0.0062	mg/L			07/16/15 18:37	1
Chloride	130	B	1.0	0.20	mg/L			07/16/15 18:37	1
Sulfate	33		1.0	0.21	mg/L			07/16/15 18:37	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-6-0/1-0
Date Collected: 07/15/15 10:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	31000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 16:05	1
Potassium	2800	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 16:05	1
Magnesium	6300		500	1.2	ug/L		07/17/15 10:19	07/20/15 16:05	1
Sodium	21000		500	3.8	ug/L		07/17/15 10:19	07/20/15 16:05	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-7-0/1-0
Date Collected: 07/15/15 11:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	36000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 16:10	1
Potassium	4300	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 16:10	1
Magnesium	10000		500	1.2	ug/L		07/17/15 10:19	07/20/15 16:10	1
Sodium	35000		500	3.8	ug/L		07/17/15 10:19	07/20/15 16:10	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-8-0/1-0
Date Collected: 07/15/15 08:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	30000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 16:15	1
Potassium	3600	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 16:15	1
Magnesium	6900		500	1.2	ug/L		07/17/15 10:19	07/20/15 16:15	1
Sodium	27000		500	3.8	ug/L		07/17/15 10:19	07/20/15 16:15	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-9-0/1-0
Date Collected: 07/15/15 12:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	50000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 16:20	1
Potassium	8000	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 16:20	1
Magnesium	11000		500	1.2	ug/L		07/17/15 10:19	07/20/15 16:20	1
Sodium	49000		500	3.8	ug/L		07/17/15 10:19	07/20/15 16:20	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-10-0/1-0
Date Collected: 07/15/15 09:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	90000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 16:39	1
Potassium	7100	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 16:39	1
Magnesium	12000		500	1.2	ug/L		07/17/15 10:19	07/20/15 16:39	1
Sodium	35000		500	3.8	ug/L		07/17/15 10:19	07/20/15 16:39	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-11-0/1-0
Date Collected: 07/15/15 12:45
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	71000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 16:44	1
Potassium	2100	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 16:44	1
Magnesium	16000		500	1.2	ug/L		07/17/15 10:19	07/20/15 16:44	1
Sodium	28000		500	3.8	ug/L		07/17/15 10:19	07/20/15 16:44	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-12-0/1-0
Date Collected: 07/15/15 13:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	67000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 16:49	1
Potassium	16000	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 16:49	1
Magnesium	11000		500	1.2	ug/L		07/17/15 10:19	07/20/15 16:49	1
Sodium	74000		500	3.8	ug/L		07/17/15 10:19	07/20/15 16:49	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-13-0/1-0
Date Collected: 07/15/15 09:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	31000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 16:55	1
Potassium	3700	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 16:55	1
Magnesium	6800		500	1.2	ug/L		07/17/15 10:19	07/20/15 16:55	1
Sodium	27000		500	3.8	ug/L		07/17/15 10:19	07/20/15 16:55	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-15-0/1-0
Date Collected: 07/15/15 13:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	89000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 17:00	1
Potassium	5400	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 17:00	1
Magnesium	18000		500	1.2	ug/L		07/17/15 10:19	07/20/15 17:00	1
Sodium	57000		500	3.8	ug/L		07/17/15 10:19	07/20/15 17:00	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-16-0/1-0
Date Collected: 07/15/15 10:25
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	32000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 17:05	1
Potassium	4000	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 17:05	1
Magnesium	7300		500	1.2	ug/L		07/17/15 10:19	07/20/15 17:05	1
Sodium	30000		500	3.8	ug/L		07/17/15 10:19	07/20/15 17:05	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-17-0/1-0
Date Collected: 07/15/15 10:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	95000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 17:10	1
Potassium	5400	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 17:10	1
Magnesium	19000		500	1.2	ug/L		07/17/15 10:19	07/20/15 17:10	1
Sodium	58000		500	3.8	ug/L		07/17/15 10:19	07/20/15 17:10	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-20-0/1-0
Date Collected: 07/15/15 10:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	29000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 17:49	1
Potassium	2600	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 17:49	1
Magnesium	5700		500	1.2	ug/L		07/17/15 10:19	07/20/15 17:49	1
Sodium	20000		500	3.8	ug/L		07/17/15 10:19	07/20/15 17:49	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-26-0/1-0
Date Collected: 07/15/15 11:15
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	40000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 17:54	1
Potassium	4200	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 17:54	1
Magnesium	11000		500	1.2	ug/L		07/17/15 10:19	07/20/15 17:54	1
Sodium	36000		500	3.8	ug/L		07/17/15 10:19	07/20/15 17:54	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-27-0/1-0
Date Collected: 07/15/15 13:30
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	51000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 18:00	1
Potassium	4200	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 18:00	1
Magnesium	11000		500	1.2	ug/L		07/17/15 10:19	07/20/15 18:00	1
Sodium	33000		500	3.8	ug/L		07/17/15 10:19	07/20/15 18:00	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-28-0/1-0
Date Collected: 07/15/15 12:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	50000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 18:05	1
Potassium	8000	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 18:05	1
Magnesium	11000		500	1.2	ug/L		07/17/15 10:19	07/20/15 18:05	1
Sodium	47000		500	3.8	ug/L		07/17/15 10:19	07/20/15 18:05	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-29-0/1-0
Date Collected: 07/15/15 08:40
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	32000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 18:10	1
Potassium	3800	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 18:10	1
Magnesium	7600		500	1.2	ug/L		07/17/15 10:19	07/20/15 18:10	1
Sodium	29000		500	3.8	ug/L		07/17/15 10:19	07/20/15 18:10	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-QC1-0/1-1
Date Collected: 07/15/15 08:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-18
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	89000	B	500	2.8	ug/L		07/17/15 10:19	07/20/15 18:15	1
Potassium	5400	B	500	5.8	ug/L		07/17/15 10:19	07/20/15 18:15	1
Magnesium	18000		500	1.2	ug/L		07/17/15 10:19	07/20/15 18:15	1
Sodium	56000		500	3.8	ug/L		07/17/15 10:19	07/20/15 18:15	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

General Chemistry

Client Sample ID: HD-COD-SW-6-0/1-0
Date Collected: 07/15/15 10:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**76**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**76**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

General Chemistry

Client Sample ID: HD-COD-SW-7-0/1-0
Date Collected: 07/15/15 11:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**110**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**110**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

General Chemistry

Client Sample ID: HD-COD-SW-8-0/1-0
Date Collected: 07/15/15 08:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**86**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**86**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

General Chemistry

Client Sample ID: HD-COD-SW-9-0/1-0
Date Collected: 07/15/15 12:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**140**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**140**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

General Chemistry

Client Sample ID: HD-COD-SW-10-0/1-0
Date Collected: 07/15/15 09:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-5
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			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**230**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

General Chemistry

Client Sample ID: HD-COD-SW-11-0/1-0
Date Collected: 07/15/15 12:45
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-6
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			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**220**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

General Chemistry

Client Sample ID: HD-COD-SW-12-0/1-0
Date Collected: 07/15/15 13:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**190**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**190**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

General Chemistry

Client Sample ID: HD-COD-SW-13-0/1-0
Date Collected: 07/15/15 09:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**110**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**110**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

General Chemistry

Client Sample ID: HD-COD-SW-15-0/1-0
Date Collected: 07/15/15 13:20
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-9
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			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**220**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

General Chemistry

Client Sample ID: HD-COD-SW-16-0/1-0
Date Collected: 07/15/15 10:25
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**88**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**88**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

General Chemistry

Client Sample ID: HD-COD-SW-17-0/1-0
Date Collected: 07/15/15 10:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**250**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**250**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

General Chemistry

Client Sample ID: HD-COD-SW-20-0/1-0
Date Collected: 07/15/15 10:55
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**80**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**80**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

General Chemistry

Client Sample ID: HD-COD-SW-26-0/1-0
Date Collected: 07/15/15 11:15
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**130**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**130**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

General Chemistry

Client Sample ID: HD-COD-SW-27-0/1-0
Date Collected: 07/15/15 13:30
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-15
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			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**160**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

General Chemistry

Client Sample ID: HD-COD-SW-28-0/1-0
Date Collected: 07/15/15 12:35
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**150**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	**150**	**B**	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

General Chemistry

Client Sample ID: HD-COD-SW-29-0/1-0
Date Collected: 07/15/15 08:40
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**84**	**B**	5.0	0.41	mg/L			07/20/15 06:22	1
Bicarbonate Alkalinity as CaCO3	**84**	**B**	5.0	0.41	mg/L			07/20/15 06:22	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:22	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

General Chemistry

Client Sample ID: HD-QC1-0/1-1
Date Collected: 07/15/15 08:00
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-18
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			07/20/15 06:22	1
Bicarbonate Alkalinity as CaCO3	**220**	**B**	5.0	0.41	mg/L			07/20/15 06:22	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:22	1

Default Detection Limits

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

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	500	2.8	ug/L	6020A

Default Detection Limits

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

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

Analyte	RL	MDL	Units	Method
Magnesium	500	1.2	ug/L	6020A
Potassium	500	5.8	ug/L	6020A
Sodium	500	3.8	ug/L	6020A

General Chemistry

Analyte	RL	MDL	Units	Method
Bicarbonate Alkalinity as CaCO3	5.0	0.41	mg/L	SM 2320B
Carbonate Alkalinity as CaCO3	5.0	0.41	mg/L	SM 2320B
Total Alkalinity as CaCO3 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: 180-45946-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(64-135)	(71-118)	(70-118)	(70-128)
180-45946-1	HD-COD-SW-6-0/1-0	120	97	93	115
180-45946-2	HD-COD-SW-7-0/1-0	119	96	87	117
180-45946-3	HD-COD-SW-8-0/1-0	121	97	95	117
180-45946-4	HD-COD-SW-9-0/1-0	122	99	94	119
180-45946-5	HD-COD-SW-10-0/1-0	122	102	100	120
180-45946-6	HD-COD-SW-11-0/1-0	122	97	91	116
180-45946-7	HD-COD-SW-12-0/1-0	92	110	101	95
180-45946-8	HD-COD-SW-13-0/1-0	94	111	101	95
180-45946-9	HD-COD-SW-15-0/1-0	92	111	101	93
180-45946-10	HD-QC1-0/1-2	95	113	104	96
180-45946-11	HD-COD-SW-16-0/1-0	97	112	104	99
180-45946-12	HD-COD-SW-17-0/1-0	90	111	103	96
180-45946-12 MS	HD-COD-SW-17-0/1-0	89	110	106	94
180-45946-12 MSD	HD-COD-SW-17-0/1-0	92	105	101	94
180-45946-13	HD-COD-SW-20-0/1-0	95	112	104	96
180-45946-14	HD-COD-SW-26-0/1-0	98	109	101	100
180-45946-15	HD-COD-SW-27-0/1-0	94	109	100	98
180-45946-16	HD-COD-SW-28-0/1-0	97	107	97	100
180-45946-17	HD-COD-SW-29-0/1-0	97	111	101	100
180-45946-18	HD-QC1-0/1-1	95	111	102	98
180-45946-19	HD-QC2-0/1-2	94	110	103	94
LCS 180-148055/7	Lab Control Sample	91	97	93	89
LCS 180-148334/6	Lab Control Sample	91	112	106	98
LCSD 180-148055/8	Lab Control Sample Dup	100	98	98	96
MB 180-148055/6	Method Blank	115	100	92	109
MB 180-148334/5	Method Blank	90	111	104	93

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

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

Lab Sample ID: MB 180-148055/6
Matrix: Water
Analysis Batch: 148055

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			07/17/15 13:13	1
Vinyl chloride	ND		1.0	0.23	ug/L			07/17/15 13:13	1
Bromomethane	ND		1.0	0.31	ug/L			07/17/15 13:13	1
Chloroethane	ND		1.0	0.21	ug/L			07/17/15 13:13	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/17/15 13:13	1
Acetone	ND		5.0	2.5	ug/L			07/17/15 13:13	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/17/15 13:13	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/17/15 13:13	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/17/15 13:13	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/17/15 13:13	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/17/15 13:13	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/17/15 13:13	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/17/15 13:13	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			07/17/15 13:13	1
Chloroform	ND		1.0	0.17	ug/L			07/17/15 13:13	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/17/15 13:13	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/17/15 13:13	1
Benzene	ND		1.0	0.11	ug/L			07/17/15 13:13	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/17/15 13:13	1
Trichloroethene	ND		1.0	0.14	ug/L			07/17/15 13:13	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/17/15 13:13	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/17/15 13:13	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/17/15 13:13	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/17/15 13:13	1
Toluene	ND		1.0	0.15	ug/L			07/17/15 13:13	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/17/15 13:13	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/17/15 13:13	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/17/15 13:13	1
2-Hexanone	ND		5.0	0.16	ug/L			07/17/15 13:13	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/17/15 13:13	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/17/15 13:13	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/17/15 13:13	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/17/15 13:13	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/17/15 13:13	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/17/15 13:13	1
Styrene	ND		1.0	0.097	ug/L			07/17/15 13:13	1
Bromoform	ND		1.0	0.19	ug/L			07/17/15 13:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/17/15 13:13	1
Acrylonitrile	ND		20	0.55	ug/L			07/17/15 13:13	1
1,4-Dioxane	ND		200	34	ug/L			07/17/15 13:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*64 - 135*		*07/17/15 13:13*	*1*
Toluene-d8 (Surr)	*100*		*71 - 118*		*07/17/15 13:13*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 118*		*07/17/15 13:13*	*1*
Dibromofluoromethane (Surr)	*109*		*70 - 128*		*07/17/15 13:13*	*1*

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

Lab Sample ID: LCS 180-148055/7
Matrix: Water
Analysis Batch: 148055

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	10.7		ug/L		107	50 - 139
Vinyl chloride	10.0	10.4		ug/L		104	53 - 138
Bromomethane	10.0	10.4		ug/L		104	33 - 150
Chloroethane	10.0	10.5		ug/L		105	36 - 142
1,1-Dichloroethene	10.0	8.92		ug/L		89	65 - 136
Acetone	20.0	23.4		ug/L		117	22 - 150
Carbon disulfide	10.0	8.40		ug/L		84	54 - 132
Methylene Chloride	10.0	7.98		ug/L		80	63 - 129
trans-1,2-Dichloroethene	10.0	9.20		ug/L		92	73 - 126
Methyl tert-butyl ether	10.0	8.69		ug/L		87	64 - 123
1,1-Dichloroethane	10.0	9.20		ug/L		92	73 - 126
cis-1,2-Dichloroethene	10.0	9.17		ug/L		92	70 - 120
Bromochloromethane	10.0	9.28		ug/L		93	70 - 127
2-Butanone (MEK)	20.0	20.7		ug/L		103	39 - 138
Chloroform	10.0	9.73		ug/L		97	72 - 127
1,1,1-Trichloroethane	10.0	9.25		ug/L		93	63 - 133
Carbon tetrachloride	10.0	9.27		ug/L		93	55 - 150
Benzene	10.0	9.62		ug/L		96	80 - 120
1,2-Dichloroethane	10.0	9.77		ug/L		98	68 - 132
Trichloroethene	10.0	9.45		ug/L		94	73 - 120
1,2-Dichloropropane	10.0	10.0		ug/L		100	76 - 124
Bromodichloromethane	10.0	9.59		ug/L		96	66 - 130
cis-1,3-Dichloropropene	10.0	9.74		ug/L		97	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	17.6		ug/L		88	45 - 145
Toluene	10.0	10.7		ug/L		107	80 - 123
trans-1,3-Dichloropropene	10.0	9.66		ug/L		97	65 - 125
1,1,2-Trichloroethane	10.0	10.6		ug/L		106	77 - 127
Tetrachloroethene	10.0	10.2		ug/L		102	70 - 135
2-Hexanone	20.0	23.2		ug/L		116	25 - 132
Dibromochloromethane	10.0	10.2		ug/L		102	60 - 140
1,2-Dibromoethane (EDB)	10.0	10.7		ug/L		107	74 - 123
Chlorobenzene	10.0	10.5		ug/L		105	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.3		ug/L		103	63 - 140
Ethylbenzene	10.0	10.5		ug/L		105	72 - 126
Xylenes, Total	20.0	21.1		ug/L		106	76 - 128
Styrene	10.0	11.0		ug/L		110	71 - 127
Bromoform	10.0	10.5		ug/L		105	46 - 150
1,1,2,2-Tetrachloroethane	10.0	11.7		ug/L		117	62 - 125
Acrylonitrile	100	104		ug/L		104	30 - 140
1,4-Dioxane	200	240		ug/L		120	10 - 160

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*64 - 135*
Toluene-d8 (Surr)	*97*		*71 - 118*
4-Bromofluorobenzene (Surr)	*93*		*70 - 118*
Dibromofluoromethane (Surr)	*89*		*70 - 128*

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

Lab Sample ID: LCSD 180-148055/8
Matrix: Water
Analysis Batch: 148055

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloromethane			10.0	10.5		ug/L		105	50 - 139	2	35
Vinyl chloride			10.0	9.57		ug/L		96	53 - 138	9	35
Bromomethane			10.0	10.9		ug/L		109	33 - 150	5	35
Chloroethane			10.0	10.6		ug/L		106	36 - 142	0	35
1,1-Dichloroethene			10.0	8.38		ug/L		84	65 - 136	6	35
Acetone			20.0	22.0		ug/L		110	22 - 150	6	35
Carbon disulfide			10.0	8.02		ug/L		80	54 - 132	5	35
Methylene Chloride			10.0	8.20		ug/L		82	63 - 129	3	35
trans-1,2-Dichloroethene			10.0	8.87		ug/L		89	73 - 126	4	35
Methyl tert-butyl ether			10.0	9.07		ug/L		91	64 - 123	4	35
1,1-Dichloroethane			10.0	9.16		ug/L		92	73 - 126	0	35
cis-1,2-Dichloroethene			10.0	9.31		ug/L		93	70 - 120	1	35
Bromochloromethane			10.0	9.59		ug/L		96	70 - 127	3	35
2-Butanone (MEK)			20.0	20.6		ug/L		103	39 - 138	0	35
Chloroform			10.0	9.73		ug/L		97	72 - 127	0	35
1,1,1-Trichloroethane			10.0	8.84		ug/L		88	63 - 133	5	35
Carbon tetrachloride			10.0	8.78		ug/L		88	55 - 150	5	35
Benzene			10.0	9.49		ug/L		95	80 - 120	1	32
1,2-Dichloroethane			10.0	9.96		ug/L		100	68 - 132	2	32
Trichloroethene			10.0	8.99		ug/L		90	73 - 120	5	35
1,2-Dichloropropane			10.0	9.87		ug/L		99	76 - 124	2	34
Bromodichloromethane			10.0	9.72		ug/L		97	66 - 130	1	35
cis-1,3-Dichloropropene			10.0	10.0		ug/L		100	66 - 120	3	35
4-Methyl-2-pentanone (MIBK)			20.0	17.6		ug/L		88	45 - 145	0	35
Toluene			10.0	10.5		ug/L		105	80 - 123	2	35
trans-1,3-Dichloropropene			10.0	9.83		ug/L		98	65 - 125	2	35
1,1,2-Trichloroethane			10.0	10.4		ug/L		104	77 - 127	2	35
Tetrachloroethene			10.0	9.80		ug/L		98	70 - 135	4	35
2-Hexanone			20.0	23.8		ug/L		119	25 - 132	3	35
Dibromochloromethane			10.0	9.97		ug/L		100	60 - 140	3	35
1,2-Dibromoethane (EDB)			10.0	11.0		ug/L		110	74 - 123	3	35
Chlorobenzene			10.0	10.6		ug/L		106	80 - 120	1	29
1,1,1,2-Tetrachloroethane			10.0	10.3		ug/L		103	63 - 140	0	34
Ethylbenzene			10.0	10.4		ug/L		104	72 - 126	2	33
Xylenes, Total			20.0	20.9		ug/L		105	76 - 128	1	32
Styrene			10.0	11.0		ug/L		110	71 - 127	0	34
Bromoform			10.0	10.6		ug/L		106	46 - 150	1	35
1,1,2,2-Tetrachloroethane			10.0	11.5		ug/L		115	62 - 125	2	35
Acrylonitrile			100	105		ug/L		105	30 - 140	0	35
1,4-Dioxane			200	257		ug/L		129	10 - 160	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 135*
Toluene-d8 (Surr)	*98*		*71 - 118*
4-Bromofluorobenzene (Surr)	*98*		*70 - 118*
Dibromofluoromethane (Surr)	*96*		*70 - 128*

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

Lab Sample ID: MB 180-148334/5
Matrix: Water
Analysis Batch: 148334

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			07/21/15 12:44	1
Vinyl chloride	ND		1.0	0.23	ug/L			07/21/15 12:44	1
Bromomethane	ND		1.0	0.31	ug/L			07/21/15 12:44	1
Chloroethane	ND		1.0	0.21	ug/L			07/21/15 12:44	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			07/21/15 12:44	1
Acetone	ND		5.0	2.5	ug/L			07/21/15 12:44	1
Carbon disulfide	ND		1.0	0.21	ug/L			07/21/15 12:44	1
Methylene Chloride	ND		1.0	0.13	ug/L			07/21/15 12:44	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			07/21/15 12:44	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			07/21/15 12:44	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			07/21/15 12:44	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/21/15 12:44	1
Bromochloromethane	ND		1.0	0.18	ug/L			07/21/15 12:44	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			07/21/15 12:44	1
Chloroform	ND		1.0	0.17	ug/L			07/21/15 12:44	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			07/21/15 12:44	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			07/21/15 12:44	1
Benzene	ND		1.0	0.11	ug/L			07/21/15 12:44	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/15 12:44	1
Trichloroethene	ND		1.0	0.14	ug/L			07/21/15 12:44	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			07/21/15 12:44	1
Bromodichloromethane	ND		1.0	0.13	ug/L			07/21/15 12:44	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			07/21/15 12:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			07/21/15 12:44	1
Toluene	ND		1.0	0.15	ug/L			07/21/15 12:44	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			07/21/15 12:44	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			07/21/15 12:44	1
Tetrachloroethene	ND		1.0	0.15	ug/L			07/21/15 12:44	1
2-Hexanone	ND		5.0	0.16	ug/L			07/21/15 12:44	1
Dibromochloromethane	ND		1.0	0.14	ug/L			07/21/15 12:44	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			07/21/15 12:44	1
Chlorobenzene	ND		1.0	0.14	ug/L			07/21/15 12:44	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			07/21/15 12:44	1
Ethylbenzene	ND		1.0	0.23	ug/L			07/21/15 12:44	1
Xylenes, Total	ND		3.0	0.49	ug/L			07/21/15 12:44	1
Styrene	ND		1.0	0.097	ug/L			07/21/15 12:44	1
Bromoform	ND		1.0	0.19	ug/L			07/21/15 12:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			07/21/15 12:44	1
Acrylonitrile	ND		20	0.55	ug/L			07/21/15 12:44	1
1,4-Dioxane	ND		200	34	ug/L			07/21/15 12:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*64 - 135*		*07/21/15 12:44*	*1*
Toluene-d8 (Surr)	*111*		*71 - 118*		*07/21/15 12:44*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 118*		*07/21/15 12:44*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 128*		*07/21/15 12:44*	*1*

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

Lab Sample ID: LCS 180-148334/6
Matrix: Water
Analysis Batch: 148334

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	7.01		ug/L		70	50 - 139
Vinyl chloride	10.0	7.52		ug/L		75	53 - 138
Bromomethane	10.0	8.72		ug/L		87	33 - 150
Chloroethane	10.0	7.38		ug/L		74	36 - 142
1,1-Dichloroethene	10.0	10.7		ug/L		107	65 - 136
Acetone	20.0	16.9		ug/L		85	22 - 150
Carbon disulfide	10.0	9.99		ug/L		100	54 - 132
Methylene Chloride	10.0	10.1		ug/L		101	63 - 129
trans-1,2-Dichloroethene	10.0	11.0		ug/L		110	73 - 126
Methyl tert-butyl ether	10.0	9.69		ug/L		97	64 - 123
1,1-Dichloroethane	10.0	9.89		ug/L		99	73 - 126
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	70 - 120
Bromochloromethane	10.0	9.79		ug/L		98	70 - 127
2-Butanone (MEK)	20.0	15.7		ug/L		78	39 - 138
Chloroform	10.0	10.5		ug/L		105	72 - 127
1,1,1-Trichloroethane	10.0	9.99		ug/L		100	63 - 133
Carbon tetrachloride	10.0	9.39		ug/L		94	55 - 150
Benzene	10.0	10.6		ug/L		106	80 - 120
1,2-Dichloroethane	10.0	9.47		ug/L		95	68 - 132
Trichloroethene	10.0	10.2		ug/L		102	73 - 120
1,2-Dichloropropane	10.0	9.96		ug/L		100	76 - 124
Bromodichloromethane	10.0	10.0		ug/L		100	66 - 130
cis-1,3-Dichloropropene	10.0	9.31		ug/L		93	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	17.9		ug/L		90	45 - 145
Toluene	10.0	11.1		ug/L		111	80 - 123
trans-1,3-Dichloropropene	10.0	9.57		ug/L		96	65 - 125
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	77 - 127
Tetrachloroethene	10.0	10.1		ug/L		101	70 - 135
2-Hexanone	20.0	13.6		ug/L		68	25 - 132
Dibromochloromethane	10.0	9.65		ug/L		97	60 - 140
1,2-Dibromoethane (EDB)	10.0	10.5		ug/L		105	74 - 123
Chlorobenzene	10.0	10.4		ug/L		104	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.3		ug/L		103	63 - 140
Ethylbenzene	10.0	10.6		ug/L		106	72 - 126
Xylenes, Total	20.0	21.1		ug/L		106	76 - 128
Styrene	10.0	10.8		ug/L		108	71 - 127
Bromoform	10.0	9.08		ug/L		91	46 - 150
1,1,2,2-Tetrachloroethane	10.0	10.6		ug/L		106	62 - 125
Acrylonitrile	100	95.6		ug/L		96	30 - 140
1,4-Dioxane	200	172	J	ug/L		86	10 - 160

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*64 - 135*
Toluene-d8 (Surr)	*112*		*71 - 118*
4-Bromofluorobenzene (Surr)	*106*		*70 - 118*
Dibromofluoromethane (Surr)	*98*		*70 - 128*

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

Lab Sample ID: 180-45946-12 MS
Matrix: Water
Analysis Batch: 148334

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	ND	^c	10.0	6.85		ug/L		68	50 - 139
Vinyl chloride	ND	^c	10.0	7.50		ug/L		75	53 - 138
Bromomethane	ND		10.0	9.04		ug/L		90	33 - 150
Chloroethane	ND	^c	10.0	7.34		ug/L		73	36 - 142
1,1-Dichloroethene	0.74	J	10.0	11.0		ug/L		103	65 - 136
Acetone	ND		20.0	23.5		ug/L		117	22 - 150
Carbon disulfide	ND		10.0	10.1		ug/L		101	54 - 132
Methylene Chloride	ND		10.0	10.5		ug/L		105	63 - 129
trans-1,2-Dichloroethene	ND		10.0	10.8		ug/L		108	73 - 126
Methyl tert-butyl ether	ND		10.0	10.1		ug/L		101	64 - 123
1,1-Dichloroethane	0.36	J	10.0	10.7		ug/L		103	73 - 126
cis-1,2-Dichloroethene	13	F1	10.0	26.3	F1	ug/L		128	70 - 120
Bromochloromethane	ND		10.0	10.2		ug/L		102	70 - 127
2-Butanone (MEK)	ND	^c	20.0	19.8		ug/L		99	39 - 138
Chloroform	ND		10.0	10.5		ug/L		105	72 - 127
1,1,1-Trichloroethane	1.8		10.0	11.6		ug/L		98	63 - 133
Carbon tetrachloride	ND		10.0	9.15		ug/L		91	55 - 150
Benzene	ND		10.0	10.5		ug/L		105	80 - 120
1,2-Dichloroethane	ND		10.0	9.77		ug/L		98	68 - 132
Trichloroethene	15		10.0	25.8		ug/L		109	73 - 120
1,2-Dichloropropane	ND		10.0	9.60		ug/L		96	76 - 124
Bromodichloromethane	ND		10.0	9.76		ug/L		98	66 - 130
cis-1,3-Dichloropropene	ND		10.0	9.03		ug/L		90	66 - 120
4-Methyl-2-pentanone (MIBK)	ND		20.0	18.5		ug/L		93	45 - 145
Toluene	ND		10.0	11.0		ug/L		110	80 - 123
trans-1,3-Dichloropropene	ND		10.0	9.69		ug/L		97	65 - 125
1,1,2-Trichloroethane	ND		10.0	11.0		ug/L		110	77 - 127
Tetrachloroethene	28		10.0	39.5		ug/L		111	70 - 135
2-Hexanone	ND	^c	20.0	16.2		ug/L		81	25 - 132
Dibromochloromethane	ND		10.0	9.87		ug/L		99	60 - 140
1,2-Dibromoethane (EDB)	ND		10.0	10.9		ug/L		109	74 - 123
Chlorobenzene	ND		10.0	10.9		ug/L		109	80 - 120
1,1,1,2-Tetrachloroethane	ND		10.0	10.5		ug/L		105	63 - 140
Ethylbenzene	ND		10.0	10.8		ug/L		108	72 - 126
Xylenes, Total	ND		20.0	21.5		ug/L		108	76 - 128
Styrene	ND		10.0	10.9		ug/L		109	71 - 127
Bromoform	ND		10.0	9.71		ug/L		97	46 - 150
1,1,2,2-Tetrachloroethane	ND		10.0	11.7		ug/L		117	62 - 125
Acrylonitrile	ND		100	98.5		ug/L		99	30 - 140
1,4-Dioxane	ND		200	133	J	ug/L		67	10 - 160

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*64 - 135*
Toluene-d8 (Surr)	*110*		*71 - 118*
4-Bromofluorobenzene (Surr)	*106*		*70 - 118*
Dibromofluoromethane (Surr)	*94*		*70 - 128*

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

Lab Sample ID: 180-45946-12 MSD
Matrix: Water
Analysis Batch: 148334

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloromethane	ND	^c	10.0	6.67		ug/L		67	50 - 139	3	35
Vinyl chloride	ND	^c	10.0	7.44		ug/L		74	53 - 138	1	35
Bromomethane	ND		10.0	8.50		ug/L		85	33 - 150	6	35
Chloroethane	ND	^c	10.0	7.04		ug/L		70	36 - 142	4	35
1,1-Dichloroethene	0.74	J	10.0	11.1		ug/L		103	65 - 136	1	35
Acetone	ND		20.0	22.0		ug/L		110	22 - 150	7	35
Carbon disulfide	ND		10.0	9.57		ug/L		96	54 - 132	5	35
Methylene Chloride	ND		10.0	10.5		ug/L		105	63 - 129	0	35
trans-1,2-Dichloroethene	ND		10.0	10.6		ug/L		106	73 - 126	1	35
Methyl tert-butyl ether	ND		10.0	10.2		ug/L		102	64 - 123	1	35
1,1-Dichloroethane	0.36	J	10.0	10.4		ug/L		100	73 - 126	3	35
cis-1,2-Dichloroethene	13	F1	10.0	25.4		ug/L		119	70 - 120	3	35
Bromochloromethane	ND		10.0	10.0		ug/L		100	70 - 127	2	35
2-Butanone (MEK)	ND	^c	20.0	21.2		ug/L		106	39 - 138	7	35
Chloroform	ND		10.0	10.5		ug/L		105	72 - 127	1	35
1,1,1-Trichloroethane	1.8		10.0	11.6		ug/L		98	63 - 133	0	35
Carbon tetrachloride	ND		10.0	9.13		ug/L		91	55 - 150	0	35
Benzene	ND		10.0	10.4		ug/L		104	80 - 120	1	32
1,2-Dichloroethane	ND		10.0	9.47		ug/L		95	68 - 132	3	32
Trichloroethene	15		10.0	25.2		ug/L		103	73 - 120	2	35
1,2-Dichloropropane	ND		10.0	9.47		ug/L		95	76 - 124	1	34
Bromodichloromethane	ND		10.0	9.65		ug/L		96	66 - 130	1	35
cis-1,3-Dichloropropene	ND		10.0	9.03		ug/L		90	66 - 120	0	35
4-Methyl-2-pentanone (MIBK)	ND		20.0	19.6		ug/L		98	45 - 145	5	35
Toluene	ND		10.0	10.7		ug/L		107	80 - 123	3	35
trans-1,3-Dichloropropene	ND		10.0	9.59		ug/L		96	65 - 125	1	35
1,1,2-Trichloroethane	ND		10.0	10.3		ug/L		103	77 - 127	7	35
Tetrachloroethene	28		10.0	37.4		ug/L		90	70 - 135	5	35
2-Hexanone	ND	^c	20.0	16.3		ug/L		82	25 - 132	1	35
Dibromochloromethane	ND		10.0	9.85		ug/L		98	60 - 140	0	35
1,2-Dibromoethane (EDB)	ND		10.0	10.3		ug/L		103	74 - 123	5	35
Chlorobenzene	ND		10.0	10.4		ug/L		104	80 - 120	5	29
1,1,1,2-Tetrachloroethane	ND		10.0	10.3		ug/L		103	63 - 140	2	34
Ethylbenzene	ND		10.0	10.3		ug/L		103	72 - 126	5	33
Xylenes, Total	ND		20.0	20.4		ug/L		102	76 - 128	5	32
Styrene	ND		10.0	10.3		ug/L		103	71 - 127	5	34
Bromoform	ND		10.0	9.70		ug/L		97	46 - 150	0	35
1,1,2,2-Tetrachloroethane	ND		10.0	11.5		ug/L		115	62 - 125	2	35
Acrylonitrile	ND		100	102		ug/L		102	30 - 140	3	35
1,4-Dioxane	ND		200	120	J	ug/L		60	10 - 160	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*64 - 135*
Toluene-d8 (Surr)	*105*		*71 - 118*
4-Bromofluorobenzene (Surr)	*101*		*70 - 118*
Dibromofluoromethane (Surr)	*94*		*70 - 128*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-147937/6
Matrix: Water
Analysis Batch: 147937

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	0.00915	J	0.10	0.0062	mg/L			07/16/15 11:34	1
Chloride	ND		1.0	0.20	mg/L			07/16/15 11:34	1
Sulfate	ND		1.0	0.21	mg/L			07/16/15 11:34	1

Lab Sample ID: LCS 180-147937/5
Matrix: Water
Analysis Batch: 147937

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	2.62		mg/L		105	90 - 110
Chloride	50.0	51.7		mg/L		103	90 - 110
Sulfate	50.0	51.6		mg/L		103	90 - 110

Lab Sample ID: MB 180-147963/6
Matrix: Water
Analysis Batch: 147963

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	0.0135	J	0.10	0.0062	mg/L			07/16/15 16:21	1
Chloride	0.255	J	1.0	0.20	mg/L			07/16/15 16:21	1
Sulfate	ND		1.0	0.21	mg/L			07/16/15 16:21	1

Lab Sample ID: LCS 180-147963/5
Matrix: Water
Analysis Batch: 147963

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	2.51		mg/L		101	90 - 110
Chloride	50.0	50.1		mg/L		100	90 - 110
Sulfate	50.0	49.0		mg/L		98	90 - 110

Lab Sample ID: 180-45946-12 MS
Matrix: Water
Analysis Batch: 147963

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	3.3	B	1.25	4.47		mg/L		90	80 - 120
Chloride	130	B ^	25.0	155	4	mg/L		83	80 - 120
Sulfate	33		25.0	55.5		mg/L		90	80 - 120

Lab Sample ID: 180-45946-12 MSD
Matrix: Water
Analysis Batch: 147963

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	3.3	B	1.25	4.39		mg/L		84	80 - 120	2	20
Chloride	130	B ^	25.0	154	4	mg/L		78	80 - 120	1	20
Sulfate	33		25.0	54.0		mg/L		84	80 - 120	3	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: 180-45946-12 MS
Matrix: Water
Analysis Batch: 148293

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA
Prep Batch: 148049

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	95000	B	50000	139000		ug/L		88	75 - 125
Potassium	5400	B	50000	50400		ug/L		90	75 - 125
Magnesium	19000		50000	59400		ug/L		81	75 - 125
Sodium	58000		50000	97600		ug/L		80	75 - 125

Lab Sample ID: 180-45946-12 MSD
Matrix: Water
Analysis Batch: 148293

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA
Prep Batch: 148049

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	95000	B	50000	145000		ug/L		99	75 - 125	4	20
Potassium	5400	B	50000	52000		ug/L		93	75 - 125	3	20
Magnesium	19000		50000	62000		ug/L		86	75 - 125	4	20
Sodium	58000		50000	101000		ug/L		87	75 - 125	4	20

Lab Sample ID: MB 180-148049/1-A
Matrix: Water
Analysis Batch: 148293

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 148049

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	20.3	J	500	2.8	ug/L		07/17/15 10:19	07/20/15 15:55	1
Potassium	7.48	J	500	5.8	ug/L		07/17/15 10:19	07/20/15 15:55	1
Magnesium	ND		500	1.2	ug/L		07/17/15 10:19	07/20/15 15:55	1
Sodium	ND		500	3.8	ug/L		07/17/15 10:19	07/20/15 15:55	1

Lab Sample ID: LCS 180-148049/2-A
Matrix: Water
Analysis Batch: 148293

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 148049

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	48900		ug/L		98	80 - 120
Potassium	50000	47000		ug/L		94	80 - 120
Magnesium	50000	44700		ug/L		89	80 - 120
Sodium	50000	45000		ug/L		90	80 - 120

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 180-148162/2
Matrix: Water
Analysis Batch: 148162

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	4.02	J	5.0	0.41	mg/L			07/20/15 06:02	1
Bicarbonate Alkalinity as CaCO3	4.02	J	5.0	0.41	mg/L			07/20/15 06:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	0.41	mg/L			07/20/15 06:02	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 180-148162/1
Matrix: Water
Analysis Batch: 148162

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	241		mg/L		96	80 - 120		

Lab Sample ID: 180-45946-12 DU
Matrix: Water
Analysis Batch: 148162

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	250	B		245		mg/L				2	20
Bicarbonate Alkalinity as CaCO3	250	B		245		mg/L				2	20
Carbonate Alkalinity as CaCO3	ND			ND		mg/L				NC	20

GC/MS VOA

Analysis Batch: 148055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-45946-1	HD-COD-SW-6-0/1-0	Total/NA	Water	8260C	
180-45946-2	HD-COD-SW-7-0/1-0	Total/NA	Water	8260C	
180-45946-3	HD-COD-SW-8-0/1-0	Total/NA	Water	8260C	
180-45946-4	HD-COD-SW-9-0/1-0	Total/NA	Water	8260C	
180-45946-5	HD-COD-SW-10-0/1-0	Total/NA	Water	8260C	
180-45946-6	HD-COD-SW-11-0/1-0	Total/NA	Water	8260C	
LCS 180-148055/7	Lab Control Sample	Total/NA	Water	8260C	
LCSD 180-148055/8	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 180-148055/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 148334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-45946-7	HD-COD-SW-12-0/1-0	Total/NA	Water	8260C	
180-45946-8	HD-COD-SW-13-0/1-0	Total/NA	Water	8260C	
180-45946-9	HD-COD-SW-15-0/1-0	Total/NA	Water	8260C	
180-45946-10	HD-QC1-0/1-2	Total/NA	Water	8260C	
180-45946-11	HD-COD-SW-16-0/1-0	Total/NA	Water	8260C	
180-45946-12	HD-COD-SW-17-0/1-0	Total/NA	Water	8260C	
180-45946-12 MS	HD-COD-SW-17-0/1-0	Total/NA	Water	8260C	
180-45946-12 MSD	HD-COD-SW-17-0/1-0	Total/NA	Water	8260C	
180-45946-13	HD-COD-SW-20-0/1-0	Total/NA	Water	8260C	
180-45946-14	HD-COD-SW-26-0/1-0	Total/NA	Water	8260C	
180-45946-15	HD-COD-SW-27-0/1-0	Total/NA	Water	8260C	
180-45946-16	HD-COD-SW-28-0/1-0	Total/NA	Water	8260C	
180-45946-17	HD-COD-SW-29-0/1-0	Total/NA	Water	8260C	
180-45946-18	HD-QC1-0/1-1	Total/NA	Water	8260C	
180-45946-19	HD-QC2-0/1-2	Total/NA	Water	8260C	
LCS 180-148334/6	Lab Control Sample	Total/NA	Water	8260C	
MB 180-148334/5	Method Blank	Total/NA	Water	8260C	

HPLC/IC

Analysis Batch: 147937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-45946-1	HD-COD-SW-6-0/1-0	Total/NA	Water	300.0	
180-45946-2	HD-COD-SW-7-0/1-0	Total/NA	Water	300.0	
180-45946-3	HD-COD-SW-8-0/1-0	Total/NA	Water	300.0	
180-45946-4	HD-COD-SW-9-0/1-0	Total/NA	Water	300.0	
180-45946-5	HD-COD-SW-10-0/1-0	Total/NA	Water	300.0	
180-45946-6	HD-COD-SW-11-0/1-0	Total/NA	Water	300.0	
180-45946-7	HD-COD-SW-12-0/1-0	Total/NA	Water	300.0	
LCS 180-147937/5	Lab Control Sample	Total/NA	Water	300.0	
MB 180-147937/6	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 147963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-45946-8	HD-COD-SW-13-0/1-0	Total/NA	Water	300.0	
180-45946-9	HD-COD-SW-15-0/1-0	Total/NA	Water	300.0	
180-45946-11	HD-COD-SW-16-0/1-0	Total/NA	Water	300.0	
180-45946-12	HD-COD-SW-17-0/1-0	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 147963 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-45946-12 MS	HD-COD-SW-17-0/1-0	Total/NA	Water	300.0	
180-45946-12 MSD	HD-COD-SW-17-0/1-0	Total/NA	Water	300.0	
180-45946-13	HD-COD-SW-20-0/1-0	Total/NA	Water	300.0	
180-45946-14	HD-COD-SW-26-0/1-0	Total/NA	Water	300.0	
180-45946-15	HD-COD-SW-27-0/1-0	Total/NA	Water	300.0	
180-45946-16	HD-COD-SW-28-0/1-0	Total/NA	Water	300.0	
180-45946-17	HD-COD-SW-29-0/1-0	Total/NA	Water	300.0	
180-45946-18	HD-QC1-0/1-1	Total/NA	Water	300.0	
LCS 180-147963/5	Lab Control Sample	Total/NA	Water	300.0	
MB 180-147963/6	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 148049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-45946-1	HD-COD-SW-6-0/1-0	Total/NA	Water	3005A	
180-45946-2	HD-COD-SW-7-0/1-0	Total/NA	Water	3005A	
180-45946-3	HD-COD-SW-8-0/1-0	Total/NA	Water	3005A	
180-45946-4	HD-COD-SW-9-0/1-0	Total/NA	Water	3005A	
180-45946-5	HD-COD-SW-10-0/1-0	Total/NA	Water	3005A	
180-45946-6	HD-COD-SW-11-0/1-0	Total/NA	Water	3005A	
180-45946-7	HD-COD-SW-12-0/1-0	Total/NA	Water	3005A	
180-45946-8	HD-COD-SW-13-0/1-0	Total/NA	Water	3005A	
180-45946-9	HD-COD-SW-15-0/1-0	Total/NA	Water	3005A	
180-45946-11	HD-COD-SW-16-0/1-0	Total/NA	Water	3005A	
180-45946-12	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-45946-12 MS	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-45946-12 MSD	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-45946-12 PDS	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-45946-12 SD	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-45946-13	HD-COD-SW-20-0/1-0	Total/NA	Water	3005A	
180-45946-14	HD-COD-SW-26-0/1-0	Total/NA	Water	3005A	
180-45946-15	HD-COD-SW-27-0/1-0	Total/NA	Water	3005A	
180-45946-16	HD-COD-SW-28-0/1-0	Total/NA	Water	3005A	
180-45946-17	HD-COD-SW-29-0/1-0	Total/NA	Water	3005A	
180-45946-18	HD-QC1-0/1-1	Total/NA	Water	3005A	
LCS 180-148049/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 180-148049/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 148293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-45946-1	HD-COD-SW-6-0/1-0	Total/NA	Water	6020A	148049
180-45946-2	HD-COD-SW-7-0/1-0	Total/NA	Water	6020A	148049
180-45946-3	HD-COD-SW-8-0/1-0	Total/NA	Water	6020A	148049
180-45946-4	HD-COD-SW-9-0/1-0	Total/NA	Water	6020A	148049
180-45946-5	HD-COD-SW-10-0/1-0	Total/NA	Water	6020A	148049
180-45946-6	HD-COD-SW-11-0/1-0	Total/NA	Water	6020A	148049
180-45946-7	HD-COD-SW-12-0/1-0	Total/NA	Water	6020A	148049
180-45946-8	HD-COD-SW-13-0/1-0	Total/NA	Water	6020A	148049
180-45946-9	HD-COD-SW-15-0/1-0	Total/NA	Water	6020A	148049

Metals (Continued)

Analysis Batch: 148293 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-45946-11	HD-COD-SW-16-0/1-0	Total/NA	Water	6020A	148049
180-45946-12	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	148049
180-45946-12 MS	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	148049
180-45946-12 MSD	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	148049
180-45946-12 PDS	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	148049
180-45946-12 SD	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	148049
180-45946-13	HD-COD-SW-20-0/1-0	Total/NA	Water	6020A	148049
180-45946-14	HD-COD-SW-26-0/1-0	Total/NA	Water	6020A	148049
180-45946-15	HD-COD-SW-27-0/1-0	Total/NA	Water	6020A	148049
180-45946-16	HD-COD-SW-28-0/1-0	Total/NA	Water	6020A	148049
180-45946-17	HD-COD-SW-29-0/1-0	Total/NA	Water	6020A	148049
180-45946-18	HD-QC1-0/1-1	Total/NA	Water	6020A	148049
CRI 180-148293/7	DL		Water	6020A	
CRI 180-148293/72	DL		Water	6020A	
ICSA 180-148293/8	ICS		Water	6020A	
ICSAB 180-148293/9	ICS		Water	6020A	
LCS 180-148049/2-A	Lab Control Sample	Total Recoverable	Water	6020A	148049
MB 180-148049/1-A	Method Blank	Total Recoverable	Water	6020A	148049

General Chemistry

Analysis Batch: 148162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-45946-1	HD-COD-SW-6-0/1-0	Total/NA	Water	SM 2320B	
180-45946-2	HD-COD-SW-7-0/1-0	Total/NA	Water	SM 2320B	
180-45946-3	HD-COD-SW-8-0/1-0	Total/NA	Water	SM 2320B	
180-45946-4	HD-COD-SW-9-0/1-0	Total/NA	Water	SM 2320B	
180-45946-5	HD-COD-SW-10-0/1-0	Total/NA	Water	SM 2320B	
180-45946-6	HD-COD-SW-11-0/1-0	Total/NA	Water	SM 2320B	
180-45946-7	HD-COD-SW-12-0/1-0	Total/NA	Water	SM 2320B	
180-45946-8	HD-COD-SW-13-0/1-0	Total/NA	Water	SM 2320B	
180-45946-9	HD-COD-SW-15-0/1-0	Total/NA	Water	SM 2320B	
180-45946-11	HD-COD-SW-16-0/1-0	Total/NA	Water	SM 2320B	
180-45946-12	HD-COD-SW-17-0/1-0	Total/NA	Water	SM 2320B	
180-45946-12 DU	HD-COD-SW-17-0/1-0	Total/NA	Water	SM 2320B	
180-45946-13	HD-COD-SW-20-0/1-0	Total/NA	Water	SM 2320B	
180-45946-14	HD-COD-SW-26-0/1-0	Total/NA	Water	SM 2320B	
180-45946-15	HD-COD-SW-27-0/1-0	Total/NA	Water	SM 2320B	
180-45946-16	HD-COD-SW-28-0/1-0	Total/NA	Water	SM 2320B	
180-45946-17	HD-COD-SW-29-0/1-0	Total/NA	Water	SM 2320B	
180-45946-18	HD-QC1-0/1-1	Total/NA	Water	SM 2320B	
LCS 180-148162/1	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 180-148162/2	Method Blank	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Client Sample ID: HD-COD-SW-6-0/1-0

Lab Sample ID: 180-45946-1

Date Collected: 07/15/15 10:55

Matrix: Water

Date Received: 07/16/15 09:30

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	148055	07/17/15 21:06	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		147937	07/16/15 23:29	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 16:05	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-7-0/1-0

Lab Sample ID: 180-45946-2

Date Collected: 07/15/15 11:35

Matrix: Water

Date Received: 07/16/15 09:30

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	148055	07/17/15 21:29	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		147937	07/16/15 23:46	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 16:10	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-8-0/1-0

Lab Sample ID: 180-45946-3

Date Collected: 07/15/15 08:55

Matrix: Water

Date Received: 07/16/15 09:30

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	148055	07/17/15 21:53	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		147937	07/17/15 00:04	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 16:15	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-9-0/1-0

Lab Sample ID: 180-45946-4

Date Collected: 07/15/15 12:20

Matrix: Water

Date Received: 07/16/15 09:30

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	148055	07/17/15 22:17	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		147937	07/17/15 00:21	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 16:20	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-10-0/1-0

Lab Sample ID: 180-45946-5

Date Collected: 07/15/15 09:35

Matrix: Water

Date Received: 07/16/15 09:30

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	148055	07/17/15 22:40	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		147937	07/17/15 00:38	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 16:39	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-11-0/1-0

Lab Sample ID: 180-45946-6

Date Collected: 07/15/15 12:45

Matrix: Water

Date Received: 07/16/15 09:30

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	148055	07/17/15 23:04	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		147937	07/17/15 00:55	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 16:44	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-12-0/1-0

Lab Sample ID: 180-45946-7

Date Collected: 07/15/15 13:00

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 16:32	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147937	07/17/15 01:13	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 16:49	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-13-0/1-0

Lab Sample ID: 180-45946-8

Date Collected: 07/15/15 09:20

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 16:56	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 16:36	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 16:55	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-15-0/1-0

Lab Sample ID: 180-45946-9

Date Collected: 07/15/15 13:20

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 17:20	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 16:53	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 17:00	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-QC1-0/1-2

Lab Sample ID: 180-45946-10

Date Collected: 07/15/15 12:00

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 17:43	DLF	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: HD-COD-SW-16-0/1-0

Lab Sample ID: 180-45946-11

Date Collected: 07/15/15 10:25

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 18:07	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 17:11	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 17:05	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-17-0/1-0

Lab Sample ID: 180-45946-12

Date Collected: 07/15/15 10:00

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 14:41	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 19:29	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 17:10	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-20-0/1-0

Lab Sample ID: 180-45946-13

Date Collected: 07/15/15 10:55

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 18:31	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 17:28	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT

Client Sample ID: HD-COD-SW-20-0/1-0

Lab Sample ID: 180-45946-13

Date Collected: 07/15/15 10:55

Matrix: Water

Date Received: 07/16/15 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 17:49	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-26-0/1-0

Lab Sample ID: 180-45946-14

Date Collected: 07/15/15 11:15

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 18:55	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 17:45	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 17:54	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-27-0/1-0

Lab Sample ID: 180-45946-15

Date Collected: 07/15/15 13:30

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 19:19	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 20:21	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 18:00	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-28-0/1-0

Lab Sample ID: 180-45946-16

Date Collected: 07/15/15 12:35

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 19:43	DLF	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: HD-COD-SW-28-0/1-0

Lab Sample ID: 180-45946-16

Date Collected: 07/15/15 12:35

Matrix: Water

Date Received: 07/16/15 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 18:03	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 18:05	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:02	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-29-0/1-0

Lab Sample ID: 180-45946-17

Date Collected: 07/15/15 08:40

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 20:07	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 18:20	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 18:10	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:22	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-QC1-0/1-1

Lab Sample ID: 180-45946-18

Date Collected: 07/15/15 08:00

Matrix: Water

Date Received: 07/16/15 09:30

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	148334	07/21/15 20:31	DLF	TAL PIT
	Instrument ID: CHHP6									
Total/NA	Analysis	300.0		1	1 mL		147963	07/16/15 18:37	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	148049	07/17/15 10:19	BMH	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	148293	07/20/15 18:15	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	148162	07/20/15 06:22	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

Client Sample ID: HD-QC2-0/1-2

Date Collected: 07/15/15 12:01
Date Received: 07/16/15 09:30

Lab Sample ID: 180-45946-19

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	148334	07/21/15 15:05	DLF	TAL PIT
	Instrument ID: CHHP6									

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

BMH = Bobbi Hartsock

Batch Type: Analysis

CLL = Cheryl Loheyde

CNF = Caitlin Ferguson

DLF = Donald Ferguson

MJH = Matthew Hartman

Certification Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

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	04-30-16

Method Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-45946-1

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: 180-45946-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-45946-1	HD-COD-SW-6-0/1-0	Water	07/15/15 10:55	07/16/15 09:30
180-45946-2	HD-COD-SW-7-0/1-0	Water	07/15/15 11:35	07/16/15 09:30
180-45946-3	HD-COD-SW-8-0/1-0	Water	07/15/15 08:55	07/16/15 09:30
180-45946-4	HD-COD-SW-9-0/1-0	Water	07/15/15 12:20	07/16/15 09:30
180-45946-5	HD-COD-SW-10-0/1-0	Water	07/15/15 09:35	07/16/15 09:30
180-45946-6	HD-COD-SW-11-0/1-0	Water	07/15/15 12:45	07/16/15 09:30
180-45946-7	HD-COD-SW-12-0/1-0	Water	07/15/15 13:00	07/16/15 09:30
180-45946-8	HD-COD-SW-13-0/1-0	Water	07/15/15 09:20	07/16/15 09:30
180-45946-9	HD-COD-SW-15-0/1-0	Water	07/15/15 13:20	07/16/15 09:30
180-45946-10	HD-QC1-0/1-2	Water	07/15/15 12:00	07/16/15 09:30
180-45946-11	HD-COD-SW-16-0/1-0	Water	07/15/15 10:25	07/16/15 09:30
180-45946-12	HD-COD-SW-17-0/1-0	Water	07/15/15 10:00	07/16/15 09:30
180-45946-13	HD-COD-SW-20-0/1-0	Water	07/15/15 10:55	07/16/15 09:30
180-45946-14	HD-COD-SW-26-0/1-0	Water	07/15/15 11:15	07/16/15 09:30
180-45946-15	HD-COD-SW-27-0/1-0	Water	07/15/15 13:30	07/16/15 09:30
180-45946-16	HD-COD-SW-28-0/1-0	Water	07/15/15 12:35	07/16/15 09:30
180-45946-17	HD-COD-SW-29-0/1-0	Water	07/15/15 08:40	07/16/15 09:30
180-45946-18	HD-QC1-0/1-1	Water	07/15/15 08:00	07/16/15 09:30
180-45946-19	HD-QC2-0/1-2	Water	07/15/15 12:01	07/16/15 09:30

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 145277

Lab Sample ID: IC 180-145277/6 Client Sample ID:

Date Analyzed: 06/17/15 14:07 Lab File ID: 50617006.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acrolein	3.24	Peak Tail	fergusond	06/18/15 09:47

Lab Sample ID: IC 180-145277/8 Client Sample ID:

Date Analyzed: 06/17/15 14:54 Lab File ID: 50617008.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.04	Peak Tail	fergusond	06/18/15 08:49

Lab Sample ID: IC 180-145277/9 Client Sample ID:

Date Analyzed: 06/17/15 15:18 Lab File ID: 50617009.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.93	Peak Tail	fergusond	06/18/15 08:50

Lab Sample ID: IC 180-145277/17 Client Sample ID:

Date Analyzed: 06/17/15 18:04 Lab File ID: 50617017.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.93	Peak Tail	fergusond	06/18/15 09:50

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 148055

Lab Sample ID: MB 180-148055/6 Client Sample ID:

Date Analyzed: 07/17/15 13:13 Lab File ID: 50717006.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.39	Poor chromatography	fergusond	07/17/15 13:48

Lab Sample ID: 180-45946-2 Client Sample ID: HD-COD-SW-7-0/1-0

Date Analyzed: 07/17/15 21:29 Lab File ID: 50717026.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.37	Poor chromatography	fergusond	07/20/15 08:07

Lab Sample ID: 180-45946-3 Client Sample ID: HD-COD-SW-8-0/1-0

Date Analyzed: 07/17/15 21:53 Lab File ID: 50717027.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetrachloroethene	9.52	Split Peak	fergusond	07/20/15 08:08

Lab Sample ID: 180-45946-4 Client Sample ID: HD-COD-SW-9-0/1-0

Date Analyzed: 07/17/15 22:17 Lab File ID: 50717028.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.39	Poor chromatography	fergusond	07/20/15 08:10
Trichloroethene	7.68	Poor chromatography	fergusond	07/20/15 08:10

Lab Sample ID: 180-45946-5 Client Sample ID: HD-COD-SW-10-0/1-0

Date Analyzed: 07/17/15 22:40 Lab File ID: 50717029.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.45	Poor chromatography	fergusond	07/20/15 08:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 143599

Lab Sample ID: ICIS 180-143599/8 Client Sample ID:

Date Analyzed: 06/02/15 16:31 Lab File ID: 60602008.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.03	Peak Tail	fergusond	06/03/15 09:10

Lab Sample ID: IC 180-143599/9 Client Sample ID:

Date Analyzed: 06/02/15 16:55 Lab File ID: 60602009.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.03	Peak Tail	fergusond	06/03/15 09:36

Lab Sample ID: IC 180-143599/10 Client Sample ID:

Date Analyzed: 06/02/15 17:19 Lab File ID: 60602010.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.03	Peak Tail	fergusond	06/03/15 09:38

Lab Sample ID: IC 180-143599/11 Client Sample ID:

Date Analyzed: 06/02/15 17:43 Lab File ID: 60602011.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.03	Peak Tail	fergusond	06/03/15 09:46

Lab Sample ID: IC 180-143599/12 Client Sample ID:

Date Analyzed: 06/02/15 18:07 Lab File ID: 60602012.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.90	Peak Tail	fergusond	06/03/15 09:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 143599

Lab Sample ID: IC 180-143599/17 Client Sample ID:

Date Analyzed: 06/02/15 20:05 Lab File ID: 60602017.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2-Trichloro-1,2,2-trifluoroethane	3.41	Poor chromatography	fergusond	06/03/15 10:24
tert-Butyl alcohol	4.36	Poor chromatography	fergusond	06/03/15 10:24
trans-1,4-Dichloro-2-butene	11.76	Poor chromatography	fergusond	06/03/15 10:28

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 148334

Lab Sample ID: CCVIS 180-148334/3 Client Sample ID:

Date Analyzed: 07/21/15 11:45 Lab File ID: 60721003.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.03	Peak Tail	fergusond	07/21/15 12:28

Lab Sample ID: LCS 180-148334/6 Client Sample ID:

Date Analyzed: 07/21/15 13:31 Lab File ID: 60721006.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.02	Peak Tail	fergusond	07/21/15 13:50

Lab Sample ID: 180-45946-12 Client Sample ID: HD-COD-SW-17-0/1-0

Date Analyzed: 07/21/15 14:41 Lab File ID: 60721007.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.44	Poor chromatography	fergusond	07/21/15 15:39
1,1-Dichloroethane	5.20	Poor chromatography	fergusond	07/21/15 15:39
Toluene	9.01	Poor chromatography	fergusond	07/21/15 15:39

Lab Sample ID: 180-45946-7 Client Sample ID: HD-COD-SW-12-0/1-0

Date Analyzed: 07/21/15 16:32 Lab File ID: 60721011.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.43	Poor chromatography	fergusond	07/22/15 08:27

Lab Sample ID: 180-45946-8 Client Sample ID: HD-COD-SW-13-0/1-0

Date Analyzed: 07/21/15 16:56 Lab File ID: 60721012.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichloroethene	7.68	Split Peak	fergusond	07/22/15 08:29

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 148334

Lab Sample ID: 180-45946-13 Client Sample ID: HD-COD-SW-20-0/1-0

Date Analyzed: 07/21/15 18:31 Lab File ID: 60721016.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.44	Poor chromatography	fergusond	07/22/15 08:35

Lab Sample ID: 180-45946-14 Client Sample ID: HD-COD-SW-26-0/1-0

Date Analyzed: 07/21/15 18:55 Lab File ID: 60721017.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.44	Poor chromatography	fergusond	07/22/15 08:36

Lab Sample ID: 180-45946-15 Client Sample ID: HD-COD-SW-27-0/1-0

Date Analyzed: 07/21/15 19:19 Lab File ID: 60721018.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	5.93	Split Peak	fergusond	07/22/15 08:38
Trichloroethene	7.67	Split Peak	fergusond	07/22/15 08:38
Tetrachloroethene	9.54	Split Peak	fergusond	07/22/15 08:38

Lab Sample ID: 180-45946-16 Client Sample ID: HD-COD-SW-28-0/1-0

Date Analyzed: 07/21/15 19:43 Lab File ID: 60721019.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.43	Split Peak	fergusond	07/22/15 08:40

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 148334

Lab Sample ID: 180-45946-17 Client Sample ID: HD-COD-SW-29-0/1-0

Date Analyzed: 07/21/15 20:07 Lab File ID: 60721020.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.43	Poor chromatography	fergusond	07/22/15 08:41
Trichloroethene	7.68	Poor chromatography	fergusond	07/22/15 08:41

Lab Sample ID: 180-45946-18 Client Sample ID: HD-QC1-0/1-1

Date Analyzed: 07/21/15 20:31 Lab File ID: 60721021.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloroethane	5.19	Missed Peak	fergusond	07/22/15 08:45

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
icccv_01271	07/16/15	07/15/15	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_01303	07/16/15	07/15/15	DI Water, Lot NA	5 mL	ICSECONDSTD1_00006	0.6 mL	Chloride	60 ug/mL
							Nitrate as N	3 ug/mL
							Sulfate	60 ug/mL
.ICSECONDSTD1_00006	03/01/16	inorganic ventures, Lot J2-MEB568059			(Purchased Reagent)		Chloride	500 ug/mL
							Nitrate as N	25 ug/mL
							Sulfate	500 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
ICSTDL2_00171	04/16/15	04/15/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00213	0.1 mL	Bromide	0.2 ug/mL
							Chloride	1 ug/mL
							Fluoride	0.05 ug/mL
							Nitrate as N	0.05 ug/mL
							Orthophosphate as P	0.05 ug/mL
							Sulfate	1 ug/mL
							Nitrite as N	0.05 ug/mL
.ICSTDL6_00213	04/16/15	04/15/15	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
							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
ICSTDL2_00179	05/20/15	05/19/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00228	0.1 mL	Bromide	0.2 ug/mL
							Chloride	1 ug/mL
							Fluoride	0.05 ug/mL
							Nitrate as N	0.05 ug/mL
							Orthophosphate as P	0.05 ug/mL
							Sulfate	1 ug/mL
							Nitrite as N	0.05 ug/mL
.ICSTDL6_00228	05/20/15	05/19/15	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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
ICSTDL3_00209	04/16/15	04/15/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00213	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_00213	04/16/15	04/15/15	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
							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
ICSTDL3_00225	05/20/15	05/19/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00228	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_00228	05/20/15	05/19/15	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
ICSTDL4_00143	04/16/15	04/15/15	DI Water, Lot na	5 mL	ICSTDL7_00141	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_00141	04/16/15	04/15/15	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
ICSTDL4_00150	05/20/15	05/19/15	DI Water, Lot na	5 mL	ICSTDL7_00149	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_00149	05/20/15	05/19/15	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL5_00145	04/16/15	04/15/15	DI Water, Lot SUPER Q	5 mL	ICSTDL7_00141	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_00141	04/16/15	04/15/15	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_00156	05/20/15	05/19/15	DI Water, Lot SUPER Q	5 mL	ICSTDL7_00149	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_00149	05/20/15	05/19/15	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
ICSTDL6_00213	04/16/15	04/15/15	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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
ICSTDL6_00228	05/20/15	05/19/15	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
							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
ICSTDL7_00141	04/16/15	04/15/15	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
ICSTDL7_00149	05/20/15	05/19/15	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

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
ICSTDL8_00112	04/16/15	04/15/15	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
					ICPRIMARYSTDB_00008	0.6 mL	Nitrite as N	7.5 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
ICSTDL8_00118	05/20/15	05/19/15	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
					ICPRIMARYSTDB_00008	0.6 mL	Nitrite as N	7.5 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
ICSTDL9_00115	04/16/15	04/15/15	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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
ICSTDL9_00119	05/20/15	05/19/15	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
							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_00077	08/21/15	07/06/15	2% Nitric Acid, Lot 1241747	500 mL	MCALSPECAREV_00006	10 mL	Calcium	50 ppm
							Magnesium	50 ppm
							Potassium	50 ppm
							Sodium	50 ppm
.MCALSPECAREV_00006	06/01/16	Inorganic Ventures, Lot J2-MEB575123			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MCRIX_00069	08/21/15	07/06/15	HNO3, Lot 1191081	250 mL	MMSCRI-1B_00005	1 mL	Calcium	0.5 ppm
							Magnesium	0.5 ppm
							Potassium	0.5 ppm
							Sodium	0.5 ppm
.MMSCRI-1B_00005	04/01/16	Inorganic Ventures, Lot J2-MEB572092			(Purchased Reagent)		Calcium	125 ppm
							Magnesium	125 ppm
							Potassium	125 ppm
							Sodium	125 ppm
MICSABX_00072	07/19/15	06/19/15	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ni	0.02 ppm
							Zn	0.025 ppm
					MMSICSAB-1_00008	0.2 mL	Ba	0.02 ppm
							Be	0.02 ppm
							Pb	0.02 ppm
							Sr	0.025 ppm
							Tl	0.02 ppm
							V	0.02 ppm
					MMSICSAB-2_00007	0.2 mL	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
							Zn	2.5 ppm
.MMSICSAB-1_00008	06/01/16	Inorganic Ventures, Lot J2-MEB575125			(Purchased Reagent)		Ba	10 ppm
							Be	10 ppm
							Pb	10 ppm
							Sr	12.5 ppm
							Tl	10 ppm
							V	10 ppm
.MMSICSAB-2_00007	06/01/16	Inorganic Ventures, Lot J2-MEB575126			(Purchased Reagent)		B	25 ppm
							Sb	10 ppm
							Se	25 ppm
							Si	250 ppm
							Sn	50 ppm
MICSAX_00068	07/19/15	06/19/15	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							Magnesium	1000 ppm
							Mo	20 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
							Ti	20 ppm
MICVX_00033	07/17/15	06/17/15	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_00048	08/21/15	07/06/15	DI Water, Lot 1241717	250 mL	MCALSPECAREV_00006	10 mg/L	Calcium	100 ppm
							Magnesium	100 ppm
							Potassium	100 ppm
							Sodium	100 ppm
.MCALSPECAREV_00006	06/01/16	Inorganic Ventures, Lot J2-MEB575123			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MTAPITTICPMS_00022	05/01/16	INORGANIC VENTURES, Lot G2-MEB506053			(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
MTAPITTMSA_00023	12/01/15	INORGANIC VENTURES, Lot H2-MEB532044			(Purchased Reagent)		Calcium	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Magnesium	5000 ug/mL
							Potassium	5000 ug/mL
							Sodium	5000 ug/mL
MTAPITTMSA_00024	04/01/16		INORGANIC VENTURES, Lot H2-MEB532044		(Purchased Reagent)		Calcium	5000 ug/mL
							Magnesium	5000 ug/mL
							Potassium	5000 ug/mL
							Sodium	5000 ug/mL
MTAPITTMSC_00030	04/01/16		Inorganic Ventures, Lot H2-MEB532046		(Purchased Reagent)		Mo	100 ug/mL
							Sb	50 ug/mL
							Si	1000 ug/mL
							SiO2	2140 ug/mL
							Sn	200 ug/mL
							Ti	100 ug/mL
VOA8260INT_00037	06/28/15	05/28/15	Methanol, Lot 85233	10 mL	VOA8260INTRES_00047	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_00047	02/01/18		Restek, Lot A093504		(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
VOA8260INT_00038	07/09/15	06/09/15	Methanol, Lot 85233	10 mL	VOA8260INTRES_00041	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_00041	02/01/18		Restek, Lot A093504		(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
VOA8260INT_00039	08/02/15	07/02/15	Methanol, Lot 85233	10 mL	VOA8260INTRES_00067	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_00067	02/01/18		Restek, Lot A093504		(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_00037	06/28/15	05/28/15	Methanol, Lot 85233	100 mL	VOA8260SURRES_00085	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_00085	04/30/19		Restek, Lot A0102817		(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

REAGENT TRACEABILITY SUMMARY

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
VOA8260SURR_00038	07/09/15	06/09/15	Methanol, Lot 85233	100 mL	VOA8260SURRES_00091	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_00091	04/30/19		Restek, Lot A0102817		(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
VOA8260SURR_00039	08/02/15	07/02/15	Methanol, Lot 85233	100 mL	VOA8260SURRES_00066	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_00066	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_00132	07/17/15	07/10/15	Methanol, Lot 85233	10 mL	VOA8260GAS2ND_00104	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00131	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
							Ethylbenzene	25 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylene Chloride	25 ug/mL
							Styrene	25 ug/mL
							Tetrachloroethene	25 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00104	04/30/18		Restek, Lot A0110106		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOA2ND_00131	08/07/15	07/07/15	Methanol, Lot 85233	10 mL	VOA8260MEGA2_00032	1 mL	1,1,1,2-Tetrachloroethane	250 ug/mL
							1,1,1-Trichloroethane	250 ug/mL
							1,1,2,2-Tetrachloroethane	250 ug/mL
							1,1,2-Trichloroethane	250 ug/mL
							1,1-Dichloroethane	250 ug/mL
							1,1-Dichloroethene	250 ug/mL
							1,2-Dibromoethane (EDB)	250 ug/mL
							1,2-Dichloroethane	250 ug/mL
							1,2-Dichloropropane	250 ug/mL
							1,4-Dioxane	5000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzene	250 ug/mL
							Bromochloromethane	250 ug/mL
							Bromodichloromethane	250 ug/mL
							Bromoform	250 ug/mL
							Carbon disulfide	250 ug/mL
							Carbon tetrachloride	250 ug/mL
							Chlorobenzene	250 ug/mL
							Chloroform	250 ug/mL
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Dibromochloromethane	250 ug/mL
							Ethylbenzene	250 ug/mL
							Methyl tert-butyl ether	250 ug/mL
							Methylene Chloride	250 ug/mL
							Styrene	250 ug/mL
							Tetrachloroethene	250 ug/mL
							Toluene	250 ug/mL
							trans-1,2-Dichloroethene	250 ug/mL
							trans-1,3-Dichloropropene	250 ug/mL
							Trichloroethene	250 ug/mL
							Xylenes, Total	500 ug/mL
..VOA8260MEGA2_00032	01/31/17		Restek, Lot A0108163		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane (EDB)	2500 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VOA8260VOA2ND_00133	07/27/15	07/20/15	Methanol, Lot 85233	10 mL	VOA8260GAS2ND_00105	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00131	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

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
.VOA8260GAS2ND_00105	04/30/18		Restek, Lot A0110106		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOA2ND_00131	08/07/15	07/07/15	Methanol, Lot 85233	10 mL	VOA8260MEGA2_00032	1 mL	1,1,1,2-Tetrachloroethane	250 ug/mL
							1,1,1-Trichloroethane	250 ug/mL
							1,1,2,2-Tetrachloroethane	250 ug/mL
							1,1,2-Trichloroethane	250 ug/mL
							1,1-Dichloroethane	250 ug/mL
							1,1-Dichloroethene	250 ug/mL
							1,2-Dibromoethane (EDB)	250 ug/mL
							1,2-Dichloroethane	250 ug/mL
							1,2-Dichloropropane	250 ug/mL
							1,4-Dioxane	5000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzene	250 ug/mL
							Bromochloromethane	250 ug/mL
							Bromodichloromethane	250 ug/mL
							Bromoform	250 ug/mL
							Carbon disulfide	250 ug/mL
							Carbon tetrachloride	250 ug/mL
							Chlorobenzene	250 ug/mL
							Chloroform	250 ug/mL
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Dibromochloromethane	250 ug/mL
							Ethylbenzene	250 ug/mL
							Methyl tert-butyl ether	250 ug/mL
							Methylene Chloride	250 ug/mL
							Styrene	250 ug/mL
							Tetrachloroethene	250 ug/mL
							Toluene	250 ug/mL
							trans-1,2-Dichloroethene	250 ug/mL
							trans-1,3-Dichloropropene	250 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichloroethene	250 ug/mL
							Xylenes, Total	500 ug/mL
..VOA8260MEGA2_00032	01/31/17		Restek, Lot A0108163		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane (EDB)	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VOA8260VOAPRI_00121	06/02/15	05/26/15	Methanol, Lot 85233	10 mL	VOA8260GAS1ST_00100	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_00117	1.25 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

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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_00100	04/30/18		Restek, Lot A011070		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00117	06/15/15	05/15/15	Methanol, Lot 85233	10 mL	VOA8260KET1ST_00044	0.16 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_00028	0.8 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-trifluoroethane	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

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							o-Xylene	200 ug/mL
							sec-Butylbenzene	200 ug/mL
							Styrene	200 ug/mL
							tert-Butylbenzene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							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_00044	04/30/18		Restek, Lot A0110400		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VOA8260MEGA1_00028	02/28/16		Restek, Lot A0108166		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane (EDB)	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
VOA8260VOAPRI_00125	06/23/15	06/16/15	Methanol, Lot 85233	10 mL	VOA 8260VOAPR_00001	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-trifluoroethane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2-Trichloroethane	25 ug/mL
							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

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl acetate	125 ug/mL
							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_00105	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
.VOA 8260VOAPR_00001	07/12/15	06/12/15	Methanol, Lot 85233	10 mL	VOA8260KET1ST_00045	0.2 mL	2-Butanone (MEK)	250 ug/mL
							2-Hexanone	250 ug/mL
							4-Methyl-2-pentanone (MIBK)	250 ug/mL
							Acetone	250 ug/mL
					VOA8260MEGA1_00029	1 mL	1,1,1,2-Tetrachloroethane	250 ug/mL
							1,1,1-Trichloroethane	250 ug/mL
							1,1,2,2-Tetrachloroethane	250 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	250 ug/mL
							1,1,2-Trichloroethane	250 ug/mL
							1,1-Dichloroethane	250 ug/mL
							1,1-Dichloroethene	250 ug/mL
							1,1-Dichloropropene	250 ug/mL
							1,2,3-Trichlorobenzene	250 ug/mL
							1,2,3-Trichloropropane	250 ug/mL
							1,2,4-Trichlorobenzene	250 ug/mL
							1,2,4-Trimethylbenzene	250 ug/mL
							1,2-Dibromo-3-Chloropropane	250 ug/mL
							1,2-Dibromoethane (EDB)	250 ug/mL
							1,2-Dichlorobenzene	250 ug/mL
							1,2-Dichloroethane	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloropropane	250 ug/mL
							1,3,5-Trimethylbenzene	250 ug/mL
							1,3-Dichlorobenzene	250 ug/mL
							1,3-Dichloropropane	250 ug/mL
							1,4-Dichlorobenzene	250 ug/mL
							1,4-Dioxane	5000 ug/mL
							2,2-Dichloropropane	250 ug/mL
							2-Chlorotoluene	250 ug/mL
							2-Methyl-2-propanol	2500 ug/mL
							3-Chloro-1-propene	250 ug/mL
							4-Chlorotoluene	250 ug/mL
							4-Isopropyltoluene	250 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzene	250 ug/mL
							Bromobenzene	250 ug/mL
							Bromochloromethane	250 ug/mL
							Bromodichloromethane	250 ug/mL
							Bromoform	250 ug/mL
							Carbon disulfide	250 ug/mL
							Carbon tetrachloride	250 ug/mL
							Chlorobenzene	250 ug/mL
							Chloroform	250 ug/mL
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Cyclohexane	250 ug/mL
							Dibromochloromethane	250 ug/mL
							Dibromomethane	250 ug/mL
							Ethyl ether	250 ug/mL
							Ethyl methacrylate	250 ug/mL
							Ethylbenzene	250 ug/mL
							Hexachlorobutadiene	250 ug/mL
							Hexane	250 ug/mL
							Iodomethane	250 ug/mL
							Isobutyl alcohol	6250 ug/mL
							Isopropylbenzene	250 ug/mL
							m-Xylene & p-Xylene	250 ug/mL
							Methyl acetate	1250 ug/mL
							Methyl tert-butyl ether	250 ug/mL
							Methylcyclohexane	250 ug/mL
							Methylene Chloride	250 ug/mL
							n-Butylbenzene	250 ug/mL
							n-Heptane	250 ug/mL
							N-Propylbenzene	250 ug/mL
							Naphthalene	250 ug/mL
							o-Xylene	250 ug/mL
							sec-Butylbenzene	250 ug/mL
							Styrene	250 ug/mL
							tert-Butylbenzene	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrachloroethene	250 ug/mL
							Tetrahydrofuran	500 ug/mL
							Toluene	250 ug/mL
							trans-1,2-Dichloroethene	250 ug/mL
							trans-1,3-Dichloropropene	250 ug/mL
							trans-1,4-Dichloro-2-butene	250 ug/mL
							Trichloroethene	250 ug/mL
..VOA8260KET1ST_00045	04/30/18		Restek, Lot A0110400		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VOA8260MEGA1_00029	02/28/16		Restek, Lot A0108166		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane (EDB)	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.VOA8260GAS1ST_00105	04/30/18		Restek, Lot A011070		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VOA8260VOAPRI_00130	07/17/15	07/10/15	Methanol, Lot 85233	10 mL	VOA8260GAS1ST_00108	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					VOA8260VOAPRI_00129	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
							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_00108	04/30/18		Restek, Lot A011070		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00129	08/07/15	07/07/15	Methanol, Lot 85233	10 mL	VOA8260MEGA1_00030	1 mL	1,1,1,2-Tetrachloroethane	250 ug/mL
							1,1,1-Trichloroethane	250 ug/mL
							1,1,2,2-Tetrachloroethane	250 ug/mL
							1,1,2-Trichloroethane	250 ug/mL
							1,1-Dichloroethane	250 ug/mL
							1,1-Dichloroethene	250 ug/mL
							1,2-Dibromoethane (EDB)	250 ug/mL
							1,2-Dichloroethane	250 ug/mL
							1,2-Dichloropropane	250 ug/mL
							1,4-Dioxane	5000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzene	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromochloromethane	250 ug/mL
							Bromodichloromethane	250 ug/mL
							Bromoform	250 ug/mL
							Carbon disulfide	250 ug/mL
							Carbon tetrachloride	250 ug/mL
							Chlorobenzene	250 ug/mL
							Chloroform	250 ug/mL
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Dibromochloromethane	250 ug/mL
							Ethylbenzene	250 ug/mL
							Methyl tert-butyl ether	250 ug/mL
							Methylene Chloride	250 ug/mL
							Styrene	250 ug/mL
							Tetrachloroethene	250 ug/mL
							Toluene	250 ug/mL
							trans-1,2-Dichloroethene	250 ug/mL
							trans-1,3-Dichloropropene	250 ug/mL
							Trichloroethene	250 ug/mL
							Xylenes, Total	500 ug/mL
..VOA8260MEGA1_00030	02/28/16		Restek, Lot A0108166		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane (EDB)	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VOA8260VOAPRI_00132	07/27/15	07/20/15	Methanol, Lot 85233	10 mL	VOA8260GAS1ST_00109	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00129	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
							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_00109	04/30/18		Restek, Lot A011070		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00129	08/07/15	07/07/15	Methanol, Lot 85233	10 mL	VOA8260MEGA1_00030	1 mL	1,1,1,2-Tetrachloroethane	250 ug/mL
							1,1,1-Trichloroethane	250 ug/mL
							1,1,2,2-Tetrachloroethane	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2-Trichloroethane	250 ug/mL
							1,1-Dichloroethane	250 ug/mL
							1,1-Dichloroethene	250 ug/mL
							1,2-Dibromoethane (EDB)	250 ug/mL
							1,2-Dichloroethane	250 ug/mL
							1,2-Dichloropropane	250 ug/mL
							1,4-Dioxane	5000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzene	250 ug/mL
							Bromochloromethane	250 ug/mL
							Bromodichloromethane	250 ug/mL
							Bromoform	250 ug/mL
							Carbon disulfide	250 ug/mL
							Carbon tetrachloride	250 ug/mL
							Chlorobenzene	250 ug/mL
							Chloroform	250 ug/mL
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Dibromochloromethane	250 ug/mL
							Ethylbenzene	250 ug/mL
							Methyl tert-butyl ether	250 ug/mL
							Methylene Chloride	250 ug/mL
							Styrene	250 ug/mL
							Tetrachloroethene	250 ug/mL
							Toluene	250 ug/mL
							trans-1,2-Dichloroethene	250 ug/mL
							trans-1,3-Dichloropropene	250 ug/mL
							Trichloroethene	250 ug/mL
							Xylenes, Total	500 ug/mL
..VOA8260MEGA1_00030	02/28/16		Restek, Lot A0108166		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane (EDB)	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VOAACRLOEINPR_00001	06/22/15	05/22/15	Methanol, Lot 85233	100 mL	VOAACRORES_00071	0.125 mL	Acrolein	25 ug/mL
.VOAACRORES_00071	07/31/15		Restek, Lot A0109948		(Purchased Reagent)		Acrolein	20000 ug/mL
voaWEEmix1st_00001	06/15/15	05/15/15	Methanol, Lot 85233	25 mL	VOARESEE1ST_00024	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_00024	09/30/16		Restek, Lot A0109701		(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
voaWEEmix1st_00002	07/16/15	06/16/15	Methanol, Lot 85233	25 mL	VOARESEE1ST_00022	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorobenzotrifluoride	25 ug/mL
.VOARESEE1ST_00022	09/30/16	Restek, Lot A0109701			(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
voaWket1Reste_00001	08/02/15	07/02/15	Methanol, Lot 85233	50 mL	VOA8260KET1ST_00046	0.1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET1ST_00046	04/30/18	Restek, Lot A0110400			(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
voaWketmix1Re_00001	07/01/15	06/01/15	Methanol, Lot 85233	50 mL	VOA8260KET1ST_00043	0.1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET1ST_00043	04/30/18	Restek, Lot A0110400			(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
voaWVA1st Res_00001	06/16/15	05/16/15	Methanol, Lot 85233	25 mL	VOA8260VARES_00051	0.125 mL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00051	07/31/15	Restek, Lot A0108225			(Purchased Reagent)		Vinyl acetate	5000 ug/mL
voaWVA2nd Res_00007	07/01/15	06/01/15	Methanol, Lot 85233	25 mL	VOA8260VARES2_00051	0.125 mL	Vinyl acetate	25 ug/mL
.VOA8260VARES2_00051	07/31/15	Restek, Lot A0108224			(Purchased Reagent)		Vinyl acetate	5000 ug/mL
WALK125PPMCCV_00088	01/13/16	07/13/15	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_00096	12/29/15	06/29/15	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

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Name:	IC Spike
Part Number:	**SM-606-005 Solution A**
Lot Number:	**1427624**
Matrix:	H_2O
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.

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

Angel Sellers,
Quality Manager

Reagent

ICPRIMARYSTDB_00008

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

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_2O

Certified Value:

NO_2 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

Angel Sellers,
Quality Manager

Reagent

M6020ICS-0A_00005

INORGANIC VENTURES™

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

CERTIFICATE OF ANALYSIS

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."

ACCREDITED Testing Laboratory Certificate 863.01

ACCREDITED Reference Material Producer Certificate 863.02

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.

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

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

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = 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 TRACEBILITY 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.

s	Al		M	Dy	< 0.000100	O	Li	0.002000	M	Pr	< 0.000100	M	Te	< 0.012007
M	Sb	< 0.000600	M	Er	< 0.000100	M	Lu	< 0.000100	M	Re	< 0.000100	M	Tb	< 0.000100
O	As	< 0.020000	M	Eu	< 0.000100	s	Mg		M	Rh	< 0.000100	M	Tl	< 0.000100
O	Ba	< 0.000200	M	Gd	< 0.000100	O	Mn	0.003000	M	Rb	< 0.020012	M	Th	< 0.000100
O	Be	< 0.000090	M	Ga	< 0.001001	O	Hg	< 0.005000	M	Ru	< 0.000100	M	Tm	< 0.000100
M	Bi	< 0.005003	O	Ge	< 0.015000	s	Mo		M	Sm	< 0.000100	M	Sn	< 0.003002
O	B	< 0.005000	M	Au	< 0.001001	M	Nd	< 0.000100	O	Sc	< 0.000700	s	Ti	
O	Cd	0.003400	M	Hf	< 0.002001	O	Ni	< 0.002000	M	Se	< 0.050029	O	W	< 0.007000
s	Ca		M	Ho	< 0.000100	M	Nb	< 0.002001	n	Si		M	U	< 0.000100
M	Ce	< 0.000500	M	In	< 0.001001	n	Os		M	Ag	< 0.001001	O	V	< 0.004000
M	Cs	< 0.001001	M	Ir	< 0.000100	M	Pd	< 0.003002	s	Na		M	Yb	< 0.000100
O	Cr	< 0.010000	s	Fe		s	P		O	Sr	0.005000	M	Y	< 0.000100
M	Co	< 0.001001	M	La	< 0.000200	M	Pt	< 0.000100	s	S		M	Zn	0.016610
O	Cu	< 0.020000	M	Pb	0.002001	s	K		M	Ta	< 0.001001	M	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 01 SEP 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

M6020ICS-0B_00006

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com
tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

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."

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

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	Cadmium, Cd	2.000 ± 0.013 µg/mL	Chromium+3, Cr3	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.

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

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

($\bar{x}$) = mean

x_i = individual results

n = number of measurements

2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = 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 TRACEBILITY 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 dally 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 01 SEP 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_00006

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).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-CAL-SPECA-REV
Lot Number:	J2-MEB575123
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	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,
	Tl, V, Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	25.01 ± 0.13 µg/mL	Arsenic, As	5.000 ± 0.032 µg/mL
Barium, Ba	4.997 ± 0.028 µg/mL	Beryllium, Be	5.003 ± 0.032 µg/mL
Cadmium, Cd	4.998 ± 0.032 µg/mL	Calcium, Ca	2 500 ± 11 µg/mL
Chromium+3, Cr3	4.999 ± 0.028 µg/mL	Cobalt, Co	4.999 ± 0.025 µg/mL
Copper, Cu	4.998 ± 0.032 µg/mL	Iron, Fe	1 250 ± 6 µg/mL
Lead, Pb	4.999 ± 0.025 µg/mL	Magnesium, Mg	2 500 ± 12 µg/mL
Manganese, Mn	24.99 ± 0.12 µg/mL	Nickel, Ni	4.998 ± 0.028 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	4.998 ± 0.028 µg/mL
Silver, Ag	4.998 ± 0.036 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Strontium, Sr	5.002 ± 0.032 µg/mL	Thallium, Tl	4.999 ± 0.040 µg/mL
Vanadium, V	5.002 ± 0.032 µg/mL	Zinc, Zn	5.001 ± 0.028 µg/mL

Certified Density: 1.048 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	060502
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
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	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
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
Tl	ICP Assay	3158	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.

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

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$ 2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = 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 stablity.

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 cap tightly sealed when not in use. Store and use at 20 ± 4° 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

April 27, 2015

11.2 Expiration Date

EXPIRES
1 JAN 2016

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

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% HNO_3 / 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:

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 Principals 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
- $U = ku_c$ 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.

SPEX CertiPrep®
Your Science is Our Passion.®

203 Norcross Ave, Metuchen, NJ 08840
www.spexcertiprep.com • E-mail: crmsales@spexcsp.com
Phone: 1-800-LAB-SPEX • Fax: 732-603-9647

Reagent

MMSCRI-1B_00005

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).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MSCRI-1B-REV1
Lot Number:	J2-MEB572092
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	125 µg/mL ea:
	Ca, K, Mg, Na,
	12.5 µg/mL ea:
	Fe,
	7.5 µg/mL ea:
	Al,
	2.5 µg/mL ea:
	Ba,
	1.25 µg/mL ea:
	Mn, Se, Sr, Zn,
	0.5 µg/mL ea:
	Cr3, Cu,
	0.25 µg/mL ea:
	Ag, As, Be, Cd,
	Ni, Pb, Tl, V,
	0.125 µg/mL ea:
	Co

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	7.49 ± 0.05 µg/mL	Arsenic, As	0.2501 ± 0.0021 µg/mL
Barium, Ba	2.500 ± 0.019 µg/mL	Beryllium, Be	0.2500 ± 0.0021 µg/mL
Cadmium, Cd	0.2501 ± 0.0019 µg/mL	Calcium, Ca	125.0 ± 0.6 µg/mL
Chromium+3, Cr3	0.5000 ± 0.0041 µg/mL	Cobalt, Co	0.1250 ± 0.0011 µg/mL
Copper, Cu	0.5003 ± 0.0035 µg/mL	Iron, Fe	12.50 ± 0.07 µg/mL
Lead, Pb	0.2501 ± 0.0017 µg/mL	Magnesium, Mg	125.0 ± 0.6 µg/mL
Manganese, Mn	1.250 ± 0.010 µg/mL	Nickel, Ni	0.2500 ± 0.0020 µg/mL
Potassium, K	125.0 ± 0.6 µg/mL	Selenium, Se	1.250 ± 0.010 µg/mL
Silver, Ag	0.2500 ± 0.0023 µg/mL	Sodium, Na	125.0 ± 0.6 µg/mL
Strontium, Sr	1.250 ± 0.008 µg/mL	Thallium, Tl	0.2501 ± 0.0021 µg/mL
Vanadium, V	0.2499 ± 0.0018 µg/mL	Zinc, Zn	1.250 ± 0.010 µg/mL

Certified Density: 1.019 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	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	892707
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	Calculated		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
Tl	Calculated		See Sec. 4.2
Tl	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.

Certified Value $(\bar{X}) = \frac{\Sigma x_i}{n}$ ($\bar{X}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.

$[\Sigma(s_i)^2]^{1/2}$ = 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

- 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 cap tightly sealed when not in use. Store and use at 20 ± 4° 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

March 20, 2015

11.2 Expiration Date

EXPIRES
01 APR 2016

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:

Zach Saunders
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MMSICSAB-1_00008

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).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MSICSAB-1
Lot Number:	J2-MEB575125
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 µg/mL ea:

Ba, Be, Pb,
Sr, Tl, V

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Barium, Ba	10.00 ± 0.06 µg/mL	Beryllium, Be	10.00 ± 0.06 µg/mL
Lead, Pb	10.00 ± 0.05 µg/mL	Strontium, Sr	10.00 ± 0.06 µg/mL
Thallium, Tl	10.00 ± 0.08 µg/mL	Vanadium, V	10.00 ± 0.06 µg/mL

Certified Density: 1.013 g/mL (measured at 20 ± 1 °C)

Assay Information:

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

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

Uncertainty (±) = $2\,[\,\Sigma(s_i)^2\,]^{1/2}$ 2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = 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

- 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 cap tightly sealed when not in use. Store and use at 20 ± 4° 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

April 27, 2015

11.2 Expiration Date

EXPIRES
1 JAN 2016

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

MMSICSAB-2_00007

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).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MSICSAB-2
Lot Number:	J2-MEB575126
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	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

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	10.00 ± 0.07 µg/mL	Boron, B	25.01 ± 0.17 µg/mL
Selenium, Se	25.00 ± 0.17 µg/mL	Silicon, Si	250.0 ± 1.9 µg/mL
Tin, Sn	50.01 ± 0.23 µg/mL		

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	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	100901
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330

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.

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

Uncertainty (±) = $2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.
$[\Sigma(s_i)^2]^{1/2}$ = 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

- 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 cap tightly sealed when not in use. Store and use at 20 ± 4° 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

April 27, 2015

11.2 Expiration Date

EXPIRES
1 JUN 2016

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

MTAPITTICPMS_00022

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
ii 'o@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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

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

1551024
ID: MTAPITTICPMS_00022
Exp: 05/01/16 Prpd: AB1
TAPITT-MS-ICPMS SPIKE

1551023
ID: MTAPITTICPMS_00022
Exp: 05/01/16 Prpd: AB1
TAPITT-MS-ICPMS SPIKE

Rec 04/28/15
AB

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	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, Cr3	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:

ANALYTE	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	3158	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.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.

$[\Sigma(s_i)^2]^{1/2}$ = 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

- 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 cap tightly sealed when not in use. Store and use at 20 ± 4° 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
1 2016

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

1407255
1407256
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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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

rec. 11/13/14 SLB

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

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.

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

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

($\bar{x}$) = mean
x_i = individual results
n = number of measurements
2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = 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

- 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 ± 4°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
01 02 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

MTAPITTMSA_00024

1507790, 1507791

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 • USA
inorganicventures.com

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

CERTIFICATE OF ANALYSIS

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).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

Recd 3/19/15
a B

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

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Calcium, Ca	5 000 ± 22 µg/mL	Magnesium, Mg	5 000 ± 23 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Sodium, Na	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.

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

Uncertainty $(\pm) = 2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.
$[\Sigma(s_i)^2]^{1/2}$ = 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

- 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

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

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control

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 cap tightly sealed when not in use. Store and use at 20 ± 4° 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 Expiration Date

EXPIRES
1 APR 2016

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

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

MTAPITTMSC_00030

ISO 7793, ISO 7794

INORGANIC VENTURES™

CERTIFICATE OF ANALYSIS

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

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).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

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

Recd 3/19/15
QB

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	49.98 ± 0.38 µg/mL	Molybdenum, Mo	100.0 ± 0.6 µg/mL	Silicon, Si	1 000 ± 7 µg/mL
Tin, Sn	200.0 ± 1.4 µg/mL	Titanium, Ti	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.

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

Uncertainty (±) = 2 [$\Sigma(s_i)^2$]^{½} 2 = the coverage factor.
[$\Sigma(s_i)^2$]^{½} = 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

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

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control

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 cap tightly sealed when not in use. Store and use at 20 ± 4° 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 Expiration Date

EXPIRES
1 APR 2016

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

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

VOA8260GAS1ST_00100

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569722 **Lot No.:** A0110070

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

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : April 30, 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%	2,499.9 µg/mL	+/- 17.9502 µg/mL +/- 30.0934 µg/mL +/- 34.1055 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBC8470V) **Purity** 99%	2,500.1 µg/mL	+/- 17.2963 µg/mL +/- 29.7101 µg/mL +/- 33.7686 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 17542) **Purity** 99%	2,500.2 µg/mL	+/- 16.5642 µg/mL +/- 29.2906 µg/mL +/- 33.4004 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBF3387V) **Purity** 99%	2,500.0 µg/mL	+/- 17.0072 µg/mL +/- 29.5416 µg/mL +/- 33.6200 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,499.8 µg/mL	+/- 18.9451 µg/mL +/- 30.6969 µg/mL +/- 34.6391 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,500.3 µg/mL	+/- 17.6395 µg/mL +/- 29.9122 µg/mL +/- 33.9470 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot Q9B-58) **Purity** 99%	2,500.2 µg/mL	+/- 16.7318 µg/mL +/- 29.3854 µg/mL +/- 33.4835 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,500.3	µg/mL	+/-	16.5866	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBD5121V)			+/-	29.3037	µg/mL	Unstressed
	Purity 99%				+/-	33.4120	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)

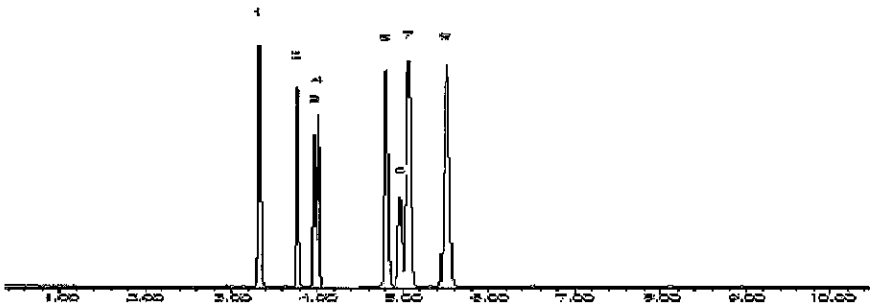
Carrier Gas:
helium-constant flow 2.0 mL/min.

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.

F. Joseph Tallon - Mix Technician

Date Mixed: 02-Apr-2015 **Balance:** B251644995

Tyler Brown - QA Analyst

Date Passed: 08-Apr-2015

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

Reagent

VOA8260GAS1ST_00105

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569722 **Lot No.:** A0110070

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

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : April 30, 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%	2,499.9 µg/mL	+/- 17.9502 µg/mL +/- 30.0934 µg/mL +/- 34.1055 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBC8470V) **Purity** 99%	2,500.1 µg/mL	+/- 17.2963 µg/mL +/- 29.7101 µg/mL +/- 33.7686 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 17542) **Purity** 99%	2,500.2 µg/mL	+/- 16.5642 µg/mL +/- 29.2906 µg/mL +/- 33.4004 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBF3387V) **Purity** 99%	2,500.0 µg/mL	+/- 17.0072 µg/mL +/- 29.5416 µg/mL +/- 33.6200 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,499.8 µg/mL	+/- 18.9451 µg/mL +/- 30.6969 µg/mL +/- 34.6391 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,500.3 µg/mL	+/- 17.6395 µg/mL +/- 29.9122 µg/mL +/- 33.9470 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot Q9B-58) **Purity** 99%	2,500.2 µg/mL	+/- 16.7318 µg/mL +/- 29.3854 µg/mL +/- 33.4835 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,500.3	µg/mL	+/-	16.5866	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBD5121V)			+/-	29.3037	µg/mL	Unstressed
	Purity 99%				+/-	33.4120	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)

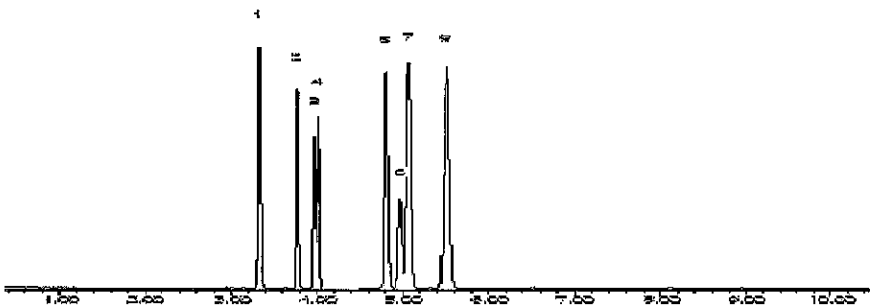
Carrier Gas:
helium-constant flow 2.0 mL/min.

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.

F. Joseph Tallon - Mix Technician

Date Mixed: 02-Apr-2015 **Balance:** B251644995

Tyler Brown - QA Analyst

Date Passed: 08-Apr-2015

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

Reagent

VOA8260GAS1ST_00108

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569722 **Lot No.:** A0110070

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

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : April 30, 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%	2,499.9 µg/mL	+/- 17.9502 µg/mL +/- 30.0934 µg/mL +/- 34.1055 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBC8470V) **Purity** 99%	2,500.1 µg/mL	+/- 17.2963 µg/mL +/- 29.7101 µg/mL +/- 33.7686 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 17542) **Purity** 99%	2,500.2 µg/mL	+/- 16.5642 µg/mL +/- 29.2906 µg/mL +/- 33.4004 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBF3387V) **Purity** 99%	2,500.0 µg/mL	+/- 17.0072 µg/mL +/- 29.5416 µg/mL +/- 33.6200 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,499.8 µg/mL	+/- 18.9451 µg/mL +/- 30.6969 µg/mL +/- 34.6391 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,500.3 µg/mL	+/- 17.6395 µg/mL +/- 29.9122 µg/mL +/- 33.9470 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot Q9B-58) **Purity** 99%	2,500.2 µg/mL	+/- 16.7318 µg/mL +/- 29.3854 µg/mL +/- 33.4835 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,500.3	µg/mL	+/-	16.5866	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBD5121V)			+/-	29.3037	µg/mL	Unstressed
	Purity 99%				+/-	33.4120	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)

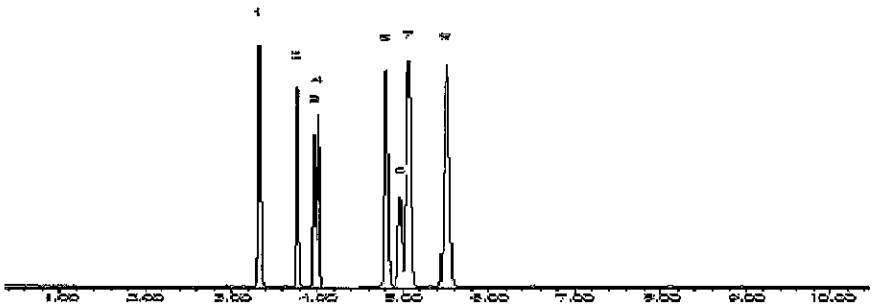
Carrier Gas:
helium-constant flow 2.0 mL/min.

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.

F. Joseph Tallon - Mix Technician

Date Mixed: 02-Apr-2015 **Balance:** B251644995

Tyler Brown - QA Analyst

Date Passed: 08-Apr-2015

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

Reagent

VOA8260GAS1ST_00109

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569722 **Lot No.:** A0110070

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

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : April 30, 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%	2,499.9 µg/mL	+/- 17.9502 µg/mL +/- 30.0934 µg/mL +/- 34.1055 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBC8470V) **Purity** 99%	2,500.1 µg/mL	+/- 17.2963 µg/mL +/- 29.7101 µg/mL +/- 33.7686 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 17542) **Purity** 99%	2,500.2 µg/mL	+/- 16.5642 µg/mL +/- 29.2906 µg/mL +/- 33.4004 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBF3387V) **Purity** 99%	2,500.0 µg/mL	+/- 17.0072 µg/mL +/- 29.5416 µg/mL +/- 33.6200 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,499.8 µg/mL	+/- 18.9451 µg/mL +/- 30.6969 µg/mL +/- 34.6391 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,500.3 µg/mL	+/- 17.6395 µg/mL +/- 29.9122 µg/mL +/- 33.9470 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot Q9B-58) **Purity** 99%	2,500.2 µg/mL	+/- 16.7318 µg/mL +/- 29.3854 µg/mL +/- 33.4835 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,500.3	µg/mL	+/-	16.5866	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBD5121V)			+/-	29.3037	µg/mL	Unstressed
	Purity 99%				+/-	33.4120	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)

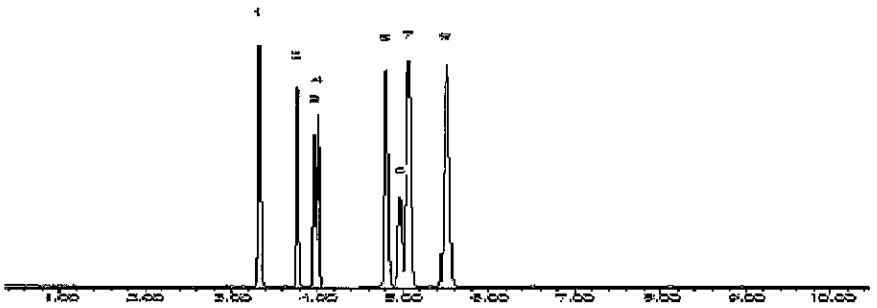
Carrier Gas:
helium-constant flow 2.0 mL/min.

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.

F. Joseph Tallon - Mix Technician

Date Mixed: 02-Apr-2015 **Balance:** B251644995

Tyler Brown - QA Analyst

Date Passed: 08-Apr-2015

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569722.sec **Lot No.:** A0110106

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

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : April 30, 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.SEC (Lot 19630) **Purity** 99%	2,509.4 µg/mL	+/- 20.9236 µg/mL +/- 32.0257 µg/mL +/- 35.8494 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3.SEC (Lot 18343) **Purity** 99%	2,502.7 µg/mL	+/- 23.6266 µg/mL +/- 33.8074 µg/mL +/- 37.4313 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4.SEC (Lot MKBK6872V) **Purity** 99%	2,491.5 µg/mL	+/- 17.2880 µg/mL +/- 29.6375 µg/mL +/- 33.6784 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0.SEC (Lot 18349) **Purity** 99%	2,507.8 µg/mL	+/- 22.8524 µg/mL +/- 33.3069 µg/mL +/- 36.9941 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9.SEC (Lot Q119-46) **Purity** 99%	2,506.8 µg/mL	+/- 26.3554 µg/mL +/- 35.7944 µg/mL +/- 39.2459 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3.SEC (Lot Q18B-13) **Purity** 99%	2,509.1 µg/mL	+/- 21.2389 µg/mL +/- 32.2303 µg/mL +/- 36.0315 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4.SEC (Lot SHBC0858V) **Purity** 99%	2,500.4 µg/mL	+/- 21.7500 µg/mL +/- 32.5072 µg/mL +/- 36.2547 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,504.6	µg/mL	+/-	24.2951	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot Q158-102)			+/-	34.2908	µg/mL	Unstressed
	Purity 99%				+/-	37.8735	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)

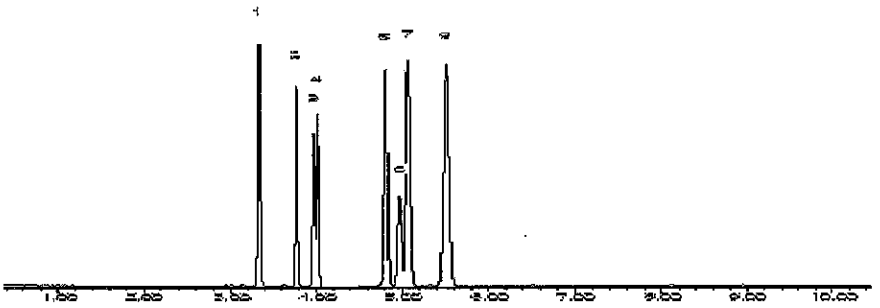
Carrier Gas:
helium-constant flow 2.0 mL/min.

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.

Michael J Maye

Tyler Brown - QA Analyst

Date Mixed: 06-Apr-2015 **Balance:** 1127510105

Date Passed: 08-Apr-2015

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

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569722.sec **Lot No.:** A0110106

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

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : April 30, 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.SEC (Lot 19630) **Purity** 99%	2,509.4 µg/mL	+/- 20.9236 µg/mL +/- 32.0257 µg/mL +/- 35.8494 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3.SEC (Lot 18343) **Purity** 99%	2,502.7 µg/mL	+/- 23.6266 µg/mL +/- 33.8074 µg/mL +/- 37.4313 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4.SEC (Lot MKBK6872V) **Purity** 99%	2,491.5 µg/mL	+/- 17.2880 µg/mL +/- 29.6375 µg/mL +/- 33.6784 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0.SEC (Lot 18349) **Purity** 99%	2,507.8 µg/mL	+/- 22.8524 µg/mL +/- 33.3069 µg/mL +/- 36.9941 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9.SEC (Lot Q119-46) **Purity** 99%	2,506.8 µg/mL	+/- 26.3554 µg/mL +/- 35.7944 µg/mL +/- 39.2459 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3.SEC (Lot Q18B-13) **Purity** 99%	2,509.1 µg/mL	+/- 21.2389 µg/mL +/- 32.2303 µg/mL +/- 36.0315 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4.SEC (Lot SHBC0858V) **Purity** 99%	2,500.4 µg/mL	+/- 21.7500 µg/mL +/- 32.5072 µg/mL +/- 36.2547 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,504.6	µg/mL	+/-	24.2951	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot Q158-102)			+/-	34.2908	µg/mL	Unstressed
	Purity 99%				+/-	37.8735	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)

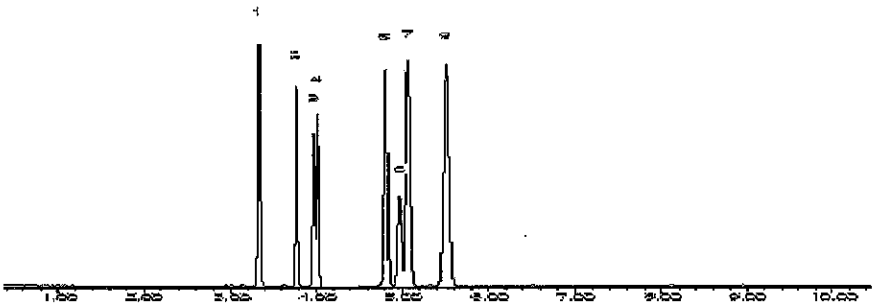
Carrier Gas:
helium-constant flow 2.0 mL/min.

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.

Michael J Maye

Tyler Brown - QA Analyst

Date Mixed: 06-Apr-2015 **Balance:** 1127510105

Date Passed: 08-Apr-2015

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

Reagent

VOA8260INTRES_00041

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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. : 567649 **Lot No.:** A093504

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 : February 2018 **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	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 25725-11-5		+/- 110.6323	µg/mL	Unstressed
	Purity 99%		+/- 111.0833	µg/mL	Stressed
2	Fluorobenzene	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 462-06-6		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed
3	1,4-Dioxane-d8	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 17647-74-4		+/- 110.6323	µg/mL	Unstressed
	Purity 99%		+/- 111.0833	µg/mL	Stressed
4	Chlorobenzene-d5	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 3114-55-4		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed
5	1,4-Dichlorobenzene-d4	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 3855-82-1		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed

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

Reagent

VOA8260INTRES_00047

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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. : 567649 **Lot No.:** A093504

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 : February 2018 **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	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 25725-11-5		+/- 110.6323	µg/mL	Unstressed
	Purity 99%		+/- 111.0833	µg/mL	Stressed
2	Fluorobenzene	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 462-06-6		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed
3	1,4-Dioxane-d8	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 17647-74-4		+/- 110.6323	µg/mL	Unstressed
	Purity 99%		+/- 111.0833	µg/mL	Stressed
4	Chlorobenzene-d5	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 3114-55-4		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed
5	1,4-Dichlorobenzene-d4	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 3855-82-1		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed

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

Reagent

VOA8260INTRES_00067

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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. : 567649 **Lot No.:** A093504

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 : February 2018 **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	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 25725-11-5		+/- 110.6323	µg/mL	Unstressed
	Purity 99%		+/- 111.0833	µg/mL	Stressed
2	Fluorobenzene	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 462-06-6		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed
3	1,4-Dioxane-d8	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 17647-74-4		+/- 110.6323	µg/mL	Unstressed
	Purity 99%		+/- 111.0833	µg/mL	Stressed
4	Chlorobenzene-d5	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 3114-55-4		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed
5	1,4-Dichlorobenzene-d4	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 3855-82-1		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed

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

Reagent

VOA8260KET1ST_00043

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569721 **Lot No.:** A0110400

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

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

Expiration Date : April 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot 07196AK) **Purity** 99%	12,506.8 µg/mL	+/- 73.2301 µg/mL +/- 665.6407 µg/mL +/- 666.3747 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot BCBH7802V) **Purity** 99%	12,504.8 µg/mL	+/- 73.2184 µg/mL +/- 665.5343 µg/mL +/- 666.2681 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBF5332V) **Purity** 99%	12,509.2 µg/mL	+/- 73.2441 µg/mL +/- 665.7684 µg/mL +/- 666.5025 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBN7380V) **Purity** 99%	12,501.6 µg/mL	+/- 73.1996 µg/mL +/- 665.3640 µg/mL +/- 666.0976 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VOA8260KET1ST_00044

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569721 **Lot No.:** A0110400

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

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

Expiration Date : April 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot 07196AK) **Purity** 99%	12,506.8 µg/mL	+/- 73.2301 µg/mL +/- 665.6407 µg/mL +/- 666.3747 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot BCBH7802V) **Purity** 99%	12,504.8 µg/mL	+/- 73.2184 µg/mL +/- 665.5343 µg/mL +/- 666.2681 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBF5332V) **Purity** 99%	12,509.2 µg/mL	+/- 73.2441 µg/mL +/- 665.7684 µg/mL +/- 666.5025 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBN7380V) **Purity** 99%	12,501.6 µg/mL	+/- 73.1996 µg/mL +/- 665.3640 µg/mL +/- 666.0976 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VOA8260KET1ST_00045

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569721 **Lot No.:** A0110400

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

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

Expiration Date : April 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot 07196AK) **Purity** 99%	12,506.8 µg/mL	+/- 73.2301 µg/mL +/- 665.6407 µg/mL +/- 666.3747 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot BCBH7802V) **Purity** 99%	12,504.8 µg/mL	+/- 73.2184 µg/mL +/- 665.5343 µg/mL +/- 666.2681 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBF5332V) **Purity** 99%	12,509.2 µg/mL	+/- 73.2441 µg/mL +/- 665.7684 µg/mL +/- 666.5025 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBN7380V) **Purity** 99%	12,501.6 µg/mL	+/- 73.1996 µg/mL +/- 665.3640 µg/mL +/- 666.0976 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VOA8260KET1ST_00046

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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. : 569721 **Lot No.:** A0110400

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

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

Expiration Date : April 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot 07196AK) **Purity** 99%	12,506.8 µg/mL	+/- 73.2301 µg/mL +/- 665.6407 µg/mL +/- 666.3747 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot BCBH7802V) **Purity** 99%	12,504.8 µg/mL	+/- 73.2184 µg/mL +/- 665.5343 µg/mL +/- 666.2681 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBF5332V) **Purity** 99%	12,509.2 µg/mL	+/- 73.2441 µg/mL +/- 665.7684 µg/mL +/- 666.5025 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBN7380V) **Purity** 99%	12,501.6 µg/mL	+/- 73.1996 µg/mL +/- 665.3640 µg/mL +/- 666.0976 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VOA8260MEGA1_00028

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569720 **Lot No.:** A0108166

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : January 31, 2017 **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 (Lot SHBF3466V) **Purity** 99%	2,521.3 µg/mL	+/- 14.6588 µg/mL +/- 134.1754 µg/mL +/- 134.3233 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00001135) **Purity** 99%	2,522.5 µg/mL	+/- 14.6660 µg/mL +/- 134.2419 µg/mL +/- 134.3899 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethane **CAS #** 75-34-3 (Lot Q179-33) **Purity** 98%	2,499.5 µg/mL	+/- 14.5323 µg/mL +/- 133.0173 µg/mL +/- 133.1640 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot SHBC6893V) **Purity** 99%	25,002.4 µg/mL	+/- 145.3584 µg/mL +/- 1,330.5704 µg/mL +/- 1,332.0378 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot SHBC7288V) **Purity** 99%	2,510.0 µg/mL	+/- 14.5934 µg/mL +/- 133.5767 µg/mL +/- 133.7240 µg/mL	Gravimetric Unstressed Stressed
6	Methyl acetate **CAS #** 79-20-9 (Lot SHBD7134V) **Purity** 98%	12,505.4 µg/mL	+/- 72.7037 µg/mL +/- 665.5101 µg/mL +/- 666.2440 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot MKBG5777V) **Purity** 99%	2,500.0 µg/mL	+/- 19.2743 µg/mL +/- 133.6453 µg/mL +/- 133.7914 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,511.3	µg/mL	+/-	14.6006	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBD4974V)			+/-	133.6432	µg/mL	Unstressed
	Purity 99%				+/-	133.7906	µg/mL	Stressed
9	Carbon disulfide		2,511.7	µg/mL	+/-	14.6035	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot C30Y997)			+/-	133.6693	µg/mL	Unstressed
	Purity 98%				+/-	133.8167	µg/mL	Stressed
10	Acrylonitrile		25,017.1	µg/mL	+/-	145.4441	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot 10172706)			+/-	1,331.3554	µg/mL	Unstressed
	Purity 99%				+/-	1,332.8236	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,503.9	µg/mL	+/-	14.5577	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKBG8424V)			+/-	133.2507	µg/mL	Unstressed
	Purity 99%				+/-	133.3977	µg/mL	Stressed
12	n-Hexane (C6)		2,511.9	µg/mL	+/-	14.6043	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBF0293V)			+/-	133.6764	µg/mL	Unstressed
	Purity 99%				+/-	133.8239	µg/mL	Stressed
13	1,1-dichloroethene		2,521.3	µg/mL	+/-	14.6588	µg/mL	Gravimetric
	CAS # 75-35-4	(Lot SHBD6170V)			+/-	134.1754	µg/mL	Unstressed
	Purity 99%				+/-	134.3233	µg/mL	Stressed
14	2,2-Dichloropropane		2,500.0	µg/mL	+/-	14.5351	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot BCBH9246V)			+/-	133.0434	µg/mL	Unstressed
	Purity 98%				+/-	133.1901	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,505.0	µg/mL	+/-	14.5643	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot MKBH9850V)			+/-	133.3106	µg/mL	Unstressed
	Purity 99%				+/-	133.4576	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,553.8	µg/mL	+/-	363.6739	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot SHBF2852V)			+/-	3,328.9705	µg/mL	Unstressed
	Purity 99%				+/-	3,332.6417	µg/mL	Stressed
17	Methyl-tert-butyl ether (MTBE)		2,504.6	µg/mL	+/-	14.5621	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBF1193V)			+/-	133.2906	µg/mL	Unstressed
	Purity 99%				+/-	133.4376	µg/mL	Stressed
18	Bromochloromethane		2,505.1	µg/mL	+/-	14.5650	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00004559)			+/-	133.3172	µg/mL	Unstressed
	Purity 99%				+/-	133.4642	µg/mL	Stressed
19	Tetrahydrofuran		5,000.7	µg/mL	+/-	29.0746	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBF2660V)			+/-	266.1270	µg/mL	Unstressed
	Purity 97%				+/-	266.4204	µg/mL	Stressed
20	1,1,1-trichloroethane		2,508.1	µg/mL	+/-	14.5825	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot B14Z1114)			+/-	133.4769	µg/mL	Unstressed
	Purity 99%				+/-	133.6241	µg/mL	Stressed
21	Cyclohexane		2,504.0	µg/mL	+/-	14.5585	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot SHBD7873V)			+/-	133.2574	µg/mL	Unstressed
	Purity 99%				+/-	133.4043	µg/mL	Stressed
22	1,1-Dichloropropene		2,502.4	µg/mL	+/-	14.5493	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot PR09161302)			+/-	133.1738	µg/mL	Unstressed
	Purity 98%				+/-	133.3207	µg/mL	Stressed
23	carbon tetrachloride		2,505.3	µg/mL	+/-	14.5657	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBC1410V)			+/-	133.3239	µg/mL	Unstressed
	Purity 99%				+/-	133.4709	µg/mL	Stressed

24	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 99%	(Lot SHBF2321V)	2,501.4	µg/mL	+/- 14.5432 +/- 133.1177 +/- 133.2645	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane **CAS #** 107-06-2 **Purity** 99%	(Lot SHBC6595V)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot SHBD4617V)	2,509.1	µg/mL	+/- 14.5883 +/- 133.5301 +/- 133.6774	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene **CAS #** 79-01-6 **Purity** 99%	(Lot SHBF0943V)	2,504.8	µg/mL	+/- 14.5628 +/- 133.2973 +/- 133.4443	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane **CAS #** 108-87-2 **Purity** 99%	(Lot 50996APV)	2,502.5	µg/mL	+/- 14.5498 +/- 133.1775 +/- 133.3244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane **CAS #** 78-87-5 **Purity** 99%	(Lot 01113D0V)	2,502.4	µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	bromodichloromethane **CAS #** 75-27-4 **Purity** 98%	(Lot MKBL1617V)	2,507.9	µg/mL	+/- 14.5814 +/- 133.4672 +/- 133.6144	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBF2002V)	50,001.4	µg/mL	+/- 290.6971 +/- 2,660.9612 +/- 2,663.8957	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3 **Purity** 99%	(Lot 10169264)	2,508.1	µg/mL	+/- 14.5825 +/- 133.4769 +/- 133.6241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5 **Purity** 99%	(Lot 20936)	2,507.0	µg/mL	+/- 14.5759 +/- 133.4170 +/- 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot SHBF2730V)	2,502.4	µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2 **Purity** 99%	(Lot 69796APV)	2,500.9	µg/mL	+/- 14.5403 +/- 133.0911 +/- 133.2378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6 **Purity** 99%	(Lot C363110)	2,502.1	µg/mL	+/- 14.5476 +/- 133.1576 +/- 133.3044	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5 **Purity** 99%	(Lot FGB01)	2,507.5	µg/mL	+/- 14.5788 +/- 133.4436 +/- 133.5908	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9 **Purity** 99%	(Lot BCBG2162V)	2,505.3	µg/mL	+/- 14.5657 +/- 133.3239 +/- 133.4709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,506.5	µg/mL	+/- 14.5730 +/- 133.3904 +/- 133.5375	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane		2,503.2	µg/mL	+/-	14.5536	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKBP0459V)			+/-	133.2129	µg/mL	Unstressed
	Purity 98%				+/-	133.3598	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,504.3	µg/mL	+/-	14.5599	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBH3877V)			+/-	133.2707	µg/mL	Unstressed
	Purity 99%				+/-	133.4176	µg/mL	Stressed
42	Chlorobenzene		2,510.8	µg/mL	+/-	14.5977	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBD3200V)			+/-	133.6166	µg/mL	Unstressed
	Purity 99%				+/-	133.7639	µg/mL	Stressed
43	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
44	Ethylbenzene		2,509.6	µg/mL	+/-	14.5912	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBC9001V)			+/-	133.5567	µg/mL	Unstressed
	Purity 99%				+/-	133.7040	µg/mL	Stressed
45	m-Xylene		1,252.6	µg/mL	+/-	7.2829	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBF1720V)			+/-	66.6619	µg/mL	Unstressed
	Purity 99%				+/-	66.7355	µg/mL	Stressed
46	o-Xylene		2,503.7	µg/mL	+/-	14.5565	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBC8668V)			+/-	133.2390	µg/mL	Unstressed
	Purity 98%				+/-	133.3859	µg/mL	Stressed
47	p-Xylene		1,253.3	µg/mL	+/-	7.2865	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBF3427V)			+/-	66.6952	µg/mL	Unstressed
	Purity 99%				+/-	66.7688	µg/mL	Stressed
48	Styrene		2,503.5	µg/mL	+/-	14.5556	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot 10182421)			+/-	133.2307	µg/mL	Unstressed
	Purity 99%				+/-	133.3777	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10169400)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
50	bromoform		2,507.8	µg/mL	+/-	14.5803	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBC3410V)			+/-	133.4569	µg/mL	Unstressed
	Purity 99%				+/-	133.6041	µg/mL	Stressed
51	1,1,1,2-Tetrachloroethane		2,510.3	µg/mL	+/-	14.5948	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	133.5900	µg/mL	Unstressed
	Purity 99%				+/-	133.7373	µg/mL	Stressed
52	chloroform		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBB7498V)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot 1428739V)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,499.5	µg/mL	+/-	14.5322	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot MKBP5371V)			+/-	133.0168	µg/mL	Unstressed
	Purity 96%				+/-	133.1635	µg/mL	Stressed
55	n-Propylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBQ8049V)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed

56	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot MKBD4032V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene **CAS #** 95-63-6 **Purity** 98%	(Lot MKBJ1732V)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8 **Purity** 99%	(Lot MKBH8892V)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4 **Purity** 99%	(Lot MKBB7205V)	2,506.4	µg/mL	+/- 14.5723 +/- 133.3837 +/- 133.5308	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6 **Purity** 99%	(Lot S52237V)	2,500.1	µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBJ3305V)	2,503.1	µg/mL	+/- 14.5534 +/- 133.2108 +/- 133.3577	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8 **Purity** 99%	(Lot MKBK3151V)	2,504.0	µg/mL	+/- 14.5585 +/- 133.2574 +/- 133.4043	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) **CAS #** 99-87-6 **Purity** 99%	(Lot MKBK4439V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,506.1	µg/mL	+/- 14.5708 +/- 133.3704 +/- 133.5175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,507.0	µg/mL	+/- 14.5759 +/- 133.4170 +/- 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8 **Purity** 99%	(Lot 09418JJV)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,505.9	µg/mL	+/- 14.5694 +/- 133.3571 +/- 133.5042	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot 26896BM)	2,501.5	µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot K22W009)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,503.4 µg/mL	+/-	14.5548	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	133.2241	µg/mL	Unstressed
	Purity 99%			+/-	133.3710	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)

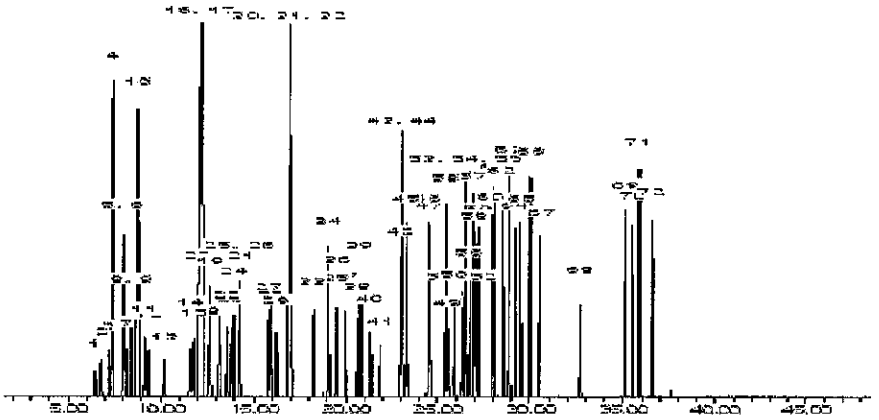
Carrier Gas:
helium-constant pressure 30 psi

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



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 - Mix Technician

Date Mixed: 07-Jan-2015 **Balance:** 1125113331

Tyler Brown - QA Analyst

Date Passed: 14-Jan-2015

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

Reagent

VOA8260MEGA1_00029

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569720 **Lot No.:** A0108166

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : January 31, 2017 **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 (Lot SHBF3466V) **Purity** 99%	2,521.3 µg/mL	+/- 14.6588 µg/mL +/- 134.1754 µg/mL +/- 134.3233 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00001135) **Purity** 99%	2,522.5 µg/mL	+/- 14.6660 µg/mL +/- 134.2419 µg/mL +/- 134.3899 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethane **CAS #** 75-34-3 (Lot Q179-33) **Purity** 98%	2,499.5 µg/mL	+/- 14.5323 µg/mL +/- 133.0173 µg/mL +/- 133.1640 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot SHBC6893V) **Purity** 99%	25,002.4 µg/mL	+/- 145.3584 µg/mL +/- 1,330.5704 µg/mL +/- 1,332.0378 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot SHBC7288V) **Purity** 99%	2,510.0 µg/mL	+/- 14.5934 µg/mL +/- 133.5767 µg/mL +/- 133.7240 µg/mL	Gravimetric Unstressed Stressed
6	Methyl acetate **CAS #** 79-20-9 (Lot SHBD7134V) **Purity** 98%	12,505.4 µg/mL	+/- 72.7037 µg/mL +/- 665.5101 µg/mL +/- 666.2440 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot MKBG5777V) **Purity** 99%	2,500.0 µg/mL	+/- 19.2743 µg/mL +/- 133.6453 µg/mL +/- 133.7914 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,511.3	µg/mL	+/-	14.6006	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBD4974V)			+/-	133.6432	µg/mL	Unstressed
	Purity 99%				+/-	133.7906	µg/mL	Stressed
9	Carbon disulfide		2,511.7	µg/mL	+/-	14.6035	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot C30Y997)			+/-	133.6693	µg/mL	Unstressed
	Purity 98%				+/-	133.8167	µg/mL	Stressed
10	Acrylonitrile		25,017.1	µg/mL	+/-	145.4441	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot 10172706)			+/-	1,331.3554	µg/mL	Unstressed
	Purity 99%				+/-	1,332.8236	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,503.9	µg/mL	+/-	14.5577	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKBG8424V)			+/-	133.2507	µg/mL	Unstressed
	Purity 99%				+/-	133.3977	µg/mL	Stressed
12	n-Hexane (C6)		2,511.9	µg/mL	+/-	14.6043	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBF0293V)			+/-	133.6764	µg/mL	Unstressed
	Purity 99%				+/-	133.8239	µg/mL	Stressed
13	1,1-dichloroethene		2,521.3	µg/mL	+/-	14.6588	µg/mL	Gravimetric
	CAS # 75-35-4	(Lot SHBD6170V)			+/-	134.1754	µg/mL	Unstressed
	Purity 99%				+/-	134.3233	µg/mL	Stressed
14	2,2-Dichloropropane		2,500.0	µg/mL	+/-	14.5351	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot BCBH9246V)			+/-	133.0434	µg/mL	Unstressed
	Purity 98%				+/-	133.1901	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,505.0	µg/mL	+/-	14.5643	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot MKBH9850V)			+/-	133.3106	µg/mL	Unstressed
	Purity 99%				+/-	133.4576	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,553.8	µg/mL	+/-	363.6739	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot SHBF2852V)			+/-	3,328.9705	µg/mL	Unstressed
	Purity 99%				+/-	3,332.6417	µg/mL	Stressed
17	Methyl-tert-butyl ether (MTBE)		2,504.6	µg/mL	+/-	14.5621	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBF1193V)			+/-	133.2906	µg/mL	Unstressed
	Purity 99%				+/-	133.4376	µg/mL	Stressed
18	Bromochloromethane		2,505.1	µg/mL	+/-	14.5650	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00004559)			+/-	133.3172	µg/mL	Unstressed
	Purity 99%				+/-	133.4642	µg/mL	Stressed
19	Tetrahydrofuran		5,000.7	µg/mL	+/-	29.0746	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBF2660V)			+/-	266.1270	µg/mL	Unstressed
	Purity 97%				+/-	266.4204	µg/mL	Stressed
20	1,1,1-trichloroethane		2,508.1	µg/mL	+/-	14.5825	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot B14Z1114)			+/-	133.4769	µg/mL	Unstressed
	Purity 99%				+/-	133.6241	µg/mL	Stressed
21	Cyclohexane		2,504.0	µg/mL	+/-	14.5585	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot SHBD7873V)			+/-	133.2574	µg/mL	Unstressed
	Purity 99%				+/-	133.4043	µg/mL	Stressed
22	1,1-Dichloropropene		2,502.4	µg/mL	+/-	14.5493	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot PR09161302)			+/-	133.1738	µg/mL	Unstressed
	Purity 98%				+/-	133.3207	µg/mL	Stressed
23	carbon tetrachloride		2,505.3	µg/mL	+/-	14.5657	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBC1410V)			+/-	133.3239	µg/mL	Unstressed
	Purity 99%				+/-	133.4709	µg/mL	Stressed

24	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 99%	(Lot SHBF2321V)	2,501.4	µg/mL	+/- 14.5432 +/- 133.1177 +/- 133.2645	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane **CAS #** 107-06-2 **Purity** 99%	(Lot SHBC6595V)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot SHBD4617V)	2,509.1	µg/mL	+/- 14.5883 +/- 133.5301 +/- 133.6774	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene **CAS #** 79-01-6 **Purity** 99%	(Lot SHBF0943V)	2,504.8	µg/mL	+/- 14.5628 +/- 133.2973 +/- 133.4443	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane **CAS #** 108-87-2 **Purity** 99%	(Lot 50996APV)	2,502.5	µg/mL	+/- 14.5498 +/- 133.1775 +/- 133.3244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane **CAS #** 78-87-5 **Purity** 99%	(Lot 01113D0V)	2,502.4	µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	bromodichloromethane **CAS #** 75-27-4 **Purity** 98%	(Lot MKBL1617V)	2,507.9	µg/mL	+/- 14.5814 +/- 133.4672 +/- 133.6144	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBF2002V)	50,001.4	µg/mL	+/- 290.6971 +/- 2,660.9612 +/- 2,663.8957	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3 **Purity** 99%	(Lot 10169264)	2,508.1	µg/mL	+/- 14.5825 +/- 133.4769 +/- 133.6241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5 **Purity** 99%	(Lot 20936)	2,507.0	µg/mL	+/- 14.5759 +/- 133.4170 +/- 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot SHBF2730V)	2,502.4	µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2 **Purity** 99%	(Lot 69796APV)	2,500.9	µg/mL	+/- 14.5403 +/- 133.0911 +/- 133.2378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6 **Purity** 99%	(Lot C363110)	2,502.1	µg/mL	+/- 14.5476 +/- 133.1576 +/- 133.3044	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5 **Purity** 99%	(Lot FGB01)	2,507.5	µg/mL	+/- 14.5788 +/- 133.4436 +/- 133.5908	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9 **Purity** 99%	(Lot BCBG2162V)	2,505.3	µg/mL	+/- 14.5657 +/- 133.3239 +/- 133.4709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,506.5	µg/mL	+/- 14.5730 +/- 133.3904 +/- 133.5375	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane		2,503.2	µg/mL	+/-	14.5536	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKBP0459V)			+/-	133.2129	µg/mL	Unstressed
	Purity 98%				+/-	133.3598	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,504.3	µg/mL	+/-	14.5599	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBH3877V)			+/-	133.2707	µg/mL	Unstressed
	Purity 99%				+/-	133.4176	µg/mL	Stressed
42	Chlorobenzene		2,510.8	µg/mL	+/-	14.5977	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBD3200V)			+/-	133.6166	µg/mL	Unstressed
	Purity 99%				+/-	133.7639	µg/mL	Stressed
43	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
44	Ethylbenzene		2,509.6	µg/mL	+/-	14.5912	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBC9001V)			+/-	133.5567	µg/mL	Unstressed
	Purity 99%				+/-	133.7040	µg/mL	Stressed
45	m-Xylene		1,252.6	µg/mL	+/-	7.2829	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBF1720V)			+/-	66.6619	µg/mL	Unstressed
	Purity 99%				+/-	66.7355	µg/mL	Stressed
46	o-Xylene		2,503.7	µg/mL	+/-	14.5565	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBC8668V)			+/-	133.2390	µg/mL	Unstressed
	Purity 98%				+/-	133.3859	µg/mL	Stressed
47	p-Xylene		1,253.3	µg/mL	+/-	7.2865	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBF3427V)			+/-	66.6952	µg/mL	Unstressed
	Purity 99%				+/-	66.7688	µg/mL	Stressed
48	Styrene		2,503.5	µg/mL	+/-	14.5556	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot 10182421)			+/-	133.2307	µg/mL	Unstressed
	Purity 99%				+/-	133.3777	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10169400)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
50	bromoform		2,507.8	µg/mL	+/-	14.5803	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBC3410V)			+/-	133.4569	µg/mL	Unstressed
	Purity 99%				+/-	133.6041	µg/mL	Stressed
51	1,1,1,2-Tetrachloroethane		2,510.3	µg/mL	+/-	14.5948	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	133.5900	µg/mL	Unstressed
	Purity 99%				+/-	133.7373	µg/mL	Stressed
52	chloroform		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBB7498V)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot 1428739V)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,499.5	µg/mL	+/-	14.5322	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot MKBP5371V)			+/-	133.0168	µg/mL	Unstressed
	Purity 96%				+/-	133.1635	µg/mL	Stressed
55	n-Propylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBQ8049V)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed

56	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot MKBD4032V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene **CAS #** 95-63-6 **Purity** 98%	(Lot MKBJ1732V)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8 **Purity** 99%	(Lot MKBH8892V)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4 **Purity** 99%	(Lot MKBB7205V)	2,506.4	µg/mL	+/- 14.5723 +/- 133.3837 +/- 133.5308	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6 **Purity** 99%	(Lot S52237V)	2,500.1	µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBJ3305V)	2,503.1	µg/mL	+/- 14.5534 +/- 133.2108 +/- 133.3577	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8 **Purity** 99%	(Lot MKBK3151V)	2,504.0	µg/mL	+/- 14.5585 +/- 133.2574 +/- 133.4043	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) **CAS #** 99-87-6 **Purity** 99%	(Lot MKBK4439V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,506.1	µg/mL	+/- 14.5708 +/- 133.3704 +/- 133.5175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,507.0	µg/mL	+/- 14.5759 +/- 133.4170 +/- 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8 **Purity** 99%	(Lot 09418JJV)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,505.9	µg/mL	+/- 14.5694 +/- 133.3571 +/- 133.5042	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot 26896BM)	2,501.5	µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot K22W009)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,503.4 µg/mL	+/-	14.5548	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	133.2241	µg/mL	Unstressed
	Purity 99%			+/-	133.3710	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)

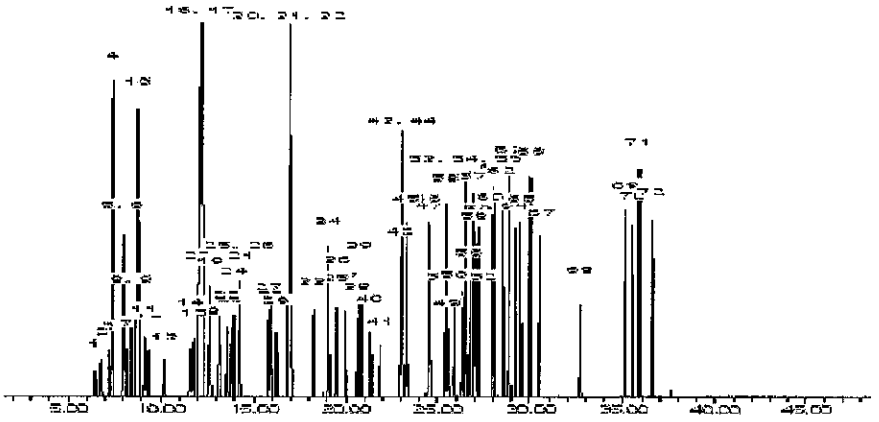
Carrier Gas:
helium-constant pressure 30 psi

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



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 - Mix Technician

Date Mixed: 07-Jan-2015 **Balance:** 1125113331

Tyler Brown - QA Analyst

Date Passed: 14-Jan-2015

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

Reagent

VOA8260MEGA1_00030

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
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www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569720 **Lot No.:** A0108166

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : January 31, 2017 **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 (Lot SHBF3466V) **Purity** 99%	2,521.3 µg/mL	+/- 14.6588 µg/mL +/- 134.1754 µg/mL +/- 134.3233 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00001135) **Purity** 99%	2,522.5 µg/mL	+/- 14.6660 µg/mL +/- 134.2419 µg/mL +/- 134.3899 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethane **CAS #** 75-34-3 (Lot Q179-33) **Purity** 98%	2,499.5 µg/mL	+/- 14.5323 µg/mL +/- 133.0173 µg/mL +/- 133.1640 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot SHBC6893V) **Purity** 99%	25,002.4 µg/mL	+/- 145.3584 µg/mL +/- 1,330.5704 µg/mL +/- 1,332.0378 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot SHBC7288V) **Purity** 99%	2,510.0 µg/mL	+/- 14.5934 µg/mL +/- 133.5767 µg/mL +/- 133.7240 µg/mL	Gravimetric Unstressed Stressed
6	Methyl acetate **CAS #** 79-20-9 (Lot SHBD7134V) **Purity** 98%	12,505.4 µg/mL	+/- 72.7037 µg/mL +/- 665.5101 µg/mL +/- 666.2440 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot MKBG5777V) **Purity** 99%	2,500.0 µg/mL	+/- 19.2743 µg/mL +/- 133.6453 µg/mL +/- 133.7914 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,511.3	µg/mL	+/-	14.6006	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBD4974V)			+/-	133.6432	µg/mL	Unstressed
	Purity 99%				+/-	133.7906	µg/mL	Stressed
9	Carbon disulfide		2,511.7	µg/mL	+/-	14.6035	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot C30Y997)			+/-	133.6693	µg/mL	Unstressed
	Purity 98%				+/-	133.8167	µg/mL	Stressed
10	Acrylonitrile		25,017.1	µg/mL	+/-	145.4441	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot 10172706)			+/-	1,331.3554	µg/mL	Unstressed
	Purity 99%				+/-	1,332.8236	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,503.9	µg/mL	+/-	14.5577	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKBG8424V)			+/-	133.2507	µg/mL	Unstressed
	Purity 99%				+/-	133.3977	µg/mL	Stressed
12	n-Hexane (C6)		2,511.9	µg/mL	+/-	14.6043	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBF0293V)			+/-	133.6764	µg/mL	Unstressed
	Purity 99%				+/-	133.8239	µg/mL	Stressed
13	1,1-dichloroethene		2,521.3	µg/mL	+/-	14.6588	µg/mL	Gravimetric
	CAS # 75-35-4	(Lot SHBD6170V)			+/-	134.1754	µg/mL	Unstressed
	Purity 99%				+/-	134.3233	µg/mL	Stressed
14	2,2-Dichloropropane		2,500.0	µg/mL	+/-	14.5351	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot BCBH9246V)			+/-	133.0434	µg/mL	Unstressed
	Purity 98%				+/-	133.1901	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,505.0	µg/mL	+/-	14.5643	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot MKBH9850V)			+/-	133.3106	µg/mL	Unstressed
	Purity 99%				+/-	133.4576	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,553.8	µg/mL	+/-	363.6739	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot SHBF2852V)			+/-	3,328.9705	µg/mL	Unstressed
	Purity 99%				+/-	3,332.6417	µg/mL	Stressed
17	Methyl-tert-butyl ether (MTBE)		2,504.6	µg/mL	+/-	14.5621	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBF1193V)			+/-	133.2906	µg/mL	Unstressed
	Purity 99%				+/-	133.4376	µg/mL	Stressed
18	Bromochloromethane		2,505.1	µg/mL	+/-	14.5650	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00004559)			+/-	133.3172	µg/mL	Unstressed
	Purity 99%				+/-	133.4642	µg/mL	Stressed
19	Tetrahydrofuran		5,000.7	µg/mL	+/-	29.0746	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBF2660V)			+/-	266.1270	µg/mL	Unstressed
	Purity 97%				+/-	266.4204	µg/mL	Stressed
20	1,1,1-trichloroethane		2,508.1	µg/mL	+/-	14.5825	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot B14Z1114)			+/-	133.4769	µg/mL	Unstressed
	Purity 99%				+/-	133.6241	µg/mL	Stressed
21	Cyclohexane		2,504.0	µg/mL	+/-	14.5585	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot SHBD7873V)			+/-	133.2574	µg/mL	Unstressed
	Purity 99%				+/-	133.4043	µg/mL	Stressed
22	1,1-Dichloropropene		2,502.4	µg/mL	+/-	14.5493	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot PR09161302)			+/-	133.1738	µg/mL	Unstressed
	Purity 98%				+/-	133.3207	µg/mL	Stressed
23	carbon tetrachloride		2,505.3	µg/mL	+/-	14.5657	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBC1410V)			+/-	133.3239	µg/mL	Unstressed
	Purity 99%				+/-	133.4709	µg/mL	Stressed

24	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 99%	(Lot SHBF2321V)	2,501.4	µg/mL	+/- 14.5432 +/- 133.1177 +/- 133.2645	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane **CAS #** 107-06-2 **Purity** 99%	(Lot SHBC6595V)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot SHBD4617V)	2,509.1	µg/mL	+/- 14.5883 +/- 133.5301 +/- 133.6774	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene **CAS #** 79-01-6 **Purity** 99%	(Lot SHBF0943V)	2,504.8	µg/mL	+/- 14.5628 +/- 133.2973 +/- 133.4443	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane **CAS #** 108-87-2 **Purity** 99%	(Lot 50996APV)	2,502.5	µg/mL	+/- 14.5498 +/- 133.1775 +/- 133.3244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane **CAS #** 78-87-5 **Purity** 99%	(Lot 01113D0V)	2,502.4	µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	bromodichloromethane **CAS #** 75-27-4 **Purity** 98%	(Lot MKBL1617V)	2,507.9	µg/mL	+/- 14.5814 +/- 133.4672 +/- 133.6144	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBF2002V)	50,001.4	µg/mL	+/- 290.6971 +/- 2,660.9612 +/- 2,663.8957	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3 **Purity** 99%	(Lot 10169264)	2,508.1	µg/mL	+/- 14.5825 +/- 133.4769 +/- 133.6241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5 **Purity** 99%	(Lot 20936)	2,507.0	µg/mL	+/- 14.5759 +/- 133.4170 +/- 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot SHBF2730V)	2,502.4	µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2 **Purity** 99%	(Lot 69796APV)	2,500.9	µg/mL	+/- 14.5403 +/- 133.0911 +/- 133.2378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6 **Purity** 99%	(Lot C363110)	2,502.1	µg/mL	+/- 14.5476 +/- 133.1576 +/- 133.3044	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5 **Purity** 99%	(Lot FGB01)	2,507.5	µg/mL	+/- 14.5788 +/- 133.4436 +/- 133.5908	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9 **Purity** 99%	(Lot BCBG2162V)	2,505.3	µg/mL	+/- 14.5657 +/- 133.3239 +/- 133.4709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,506.5	µg/mL	+/- 14.5730 +/- 133.3904 +/- 133.5375	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane		2,503.2	µg/mL	+/-	14.5536	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKBP0459V)			+/-	133.2129	µg/mL	Unstressed
	Purity 98%				+/-	133.3598	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,504.3	µg/mL	+/-	14.5599	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBH3877V)			+/-	133.2707	µg/mL	Unstressed
	Purity 99%				+/-	133.4176	µg/mL	Stressed
42	Chlorobenzene		2,510.8	µg/mL	+/-	14.5977	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBD3200V)			+/-	133.6166	µg/mL	Unstressed
	Purity 99%				+/-	133.7639	µg/mL	Stressed
43	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
44	Ethylbenzene		2,509.6	µg/mL	+/-	14.5912	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBC9001V)			+/-	133.5567	µg/mL	Unstressed
	Purity 99%				+/-	133.7040	µg/mL	Stressed
45	m-Xylene		1,252.6	µg/mL	+/-	7.2829	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBF1720V)			+/-	66.6619	µg/mL	Unstressed
	Purity 99%				+/-	66.7355	µg/mL	Stressed
46	o-Xylene		2,503.7	µg/mL	+/-	14.5565	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBC8668V)			+/-	133.2390	µg/mL	Unstressed
	Purity 98%				+/-	133.3859	µg/mL	Stressed
47	p-Xylene		1,253.3	µg/mL	+/-	7.2865	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBF3427V)			+/-	66.6952	µg/mL	Unstressed
	Purity 99%				+/-	66.7688	µg/mL	Stressed
48	Styrene		2,503.5	µg/mL	+/-	14.5556	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot 10182421)			+/-	133.2307	µg/mL	Unstressed
	Purity 99%				+/-	133.3777	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10169400)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
50	bromoform		2,507.8	µg/mL	+/-	14.5803	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBC3410V)			+/-	133.4569	µg/mL	Unstressed
	Purity 99%				+/-	133.6041	µg/mL	Stressed
51	1,1,1,2-Tetrachloroethane		2,510.3	µg/mL	+/-	14.5948	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	133.5900	µg/mL	Unstressed
	Purity 99%				+/-	133.7373	µg/mL	Stressed
52	chloroform		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBB7498V)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot 1428739V)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,499.5	µg/mL	+/-	14.5322	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot MKBP5371V)			+/-	133.0168	µg/mL	Unstressed
	Purity 96%				+/-	133.1635	µg/mL	Stressed
55	n-Propylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBQ8049V)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed

56	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot MKBD4032V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene **CAS #** 95-63-6 **Purity** 98%	(Lot MKBJ1732V)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8 **Purity** 99%	(Lot MKBH8892V)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4 **Purity** 99%	(Lot MKBB7205V)	2,506.4	µg/mL	+/- 14.5723 +/- 133.3837 +/- 133.5308	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6 **Purity** 99%	(Lot S52237V)	2,500.1	µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBJ3305V)	2,503.1	µg/mL	+/- 14.5534 +/- 133.2108 +/- 133.3577	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8 **Purity** 99%	(Lot MKBK3151V)	2,504.0	µg/mL	+/- 14.5585 +/- 133.2574 +/- 133.4043	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) **CAS #** 99-87-6 **Purity** 99%	(Lot MKBK4439V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,506.1	µg/mL	+/- 14.5708 +/- 133.3704 +/- 133.5175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,507.0	µg/mL	+/- 14.5759 +/- 133.4170 +/- 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8 **Purity** 99%	(Lot 09418JJV)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,505.9	µg/mL	+/- 14.5694 +/- 133.3571 +/- 133.5042	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot 26896BM)	2,501.5	µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot K22W009)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,503.4 µg/mL	+/-	14.5548	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	133.2241	µg/mL	Unstressed
	Purity 99%			+/-	133.3710	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)

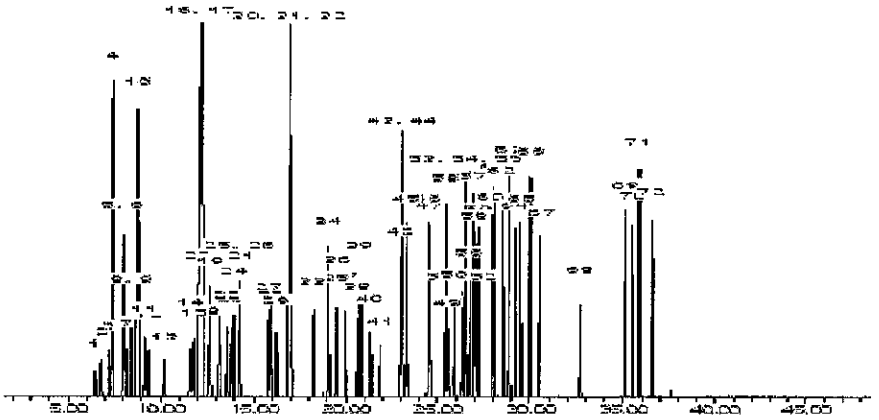
Carrier Gas:
helium-constant pressure 30 psi

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



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 - Mix Technician

Date Mixed: 07-Jan-2015 **Balance:** 1125113331

Tyler Brown - QA Analyst

Date Passed: 14-Jan-2015

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

Reagent

VOA8260MEGA2_00032

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110 Benner Circle
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569720.sec **Lot No.:** A0108163

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : January 31, 2017 **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 (Lot F23X068) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL +/- 133.1044 µg/mL +/- 133.2511 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL +/- 133.1044 µg/mL +/- 133.2511 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 903000) **Purity** 99%	2,502.8 µg/mL	+/- 14.5512 µg/mL +/- 133.1908 µg/mL +/- 133.3377 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot XYXDO) **Purity** 98%	25,000.5 µg/mL	+/- 145.3477 µg/mL +/- 1,330.4725 µg/mL +/- 1,331.9397 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot A13Y016) **Purity** 97%	2,500.5 µg/mL	+/- 14.5383 µg/mL +/- 133.0732 µg/mL +/- 133.2199 µg/mL	Gravimetric Unstressed Stressed
6	Methyl acetate **CAS #** 79-20-9.SEC (Lot YDGVD) **Purity** 99%	12,500.6 µg/mL	+/- 72.6759 µg/mL +/- 665.2553 µg/mL +/- 665.9889 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot 5MNOA-DQ) **Purity** 99%	2,501.3 µg/mL	+/- 14.5425 µg/mL +/- 133.1110 µg/mL +/- 133.2578 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 75-09-2.SEC	(Lot FGM02)			+/-	133.1177	µg/mL	Unstressed
	Purity 99%				+/-	133.2645	µg/mL	Stressed
9	Carbon disulfide		2,501.2	µg/mL	+/-	14.5422	µg/mL	Gravimetric
	CAS # 75-15-0.SEC	(Lot MKBL1376V)			+/-	133.1086	µg/mL	Unstressed
	Purity 98%				+/-	133.2554	µg/mL	Stressed
10	Acrylonitrile		25,002.1	µg/mL	+/-	145.3569	µg/mL	Gravimetric
	CAS # 107-13-1.SEC	(Lot CCFKL)			+/-	1,330.5571	µg/mL	Unstressed
	Purity 99%				+/-	1,332.0244	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 156-59-2.SEC	(Lot HGC01-BLKT)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed
12	n-Hexane (C6)		2,500.1	µg/mL	+/-	14.5358	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot K24W001)			+/-	133.0499	µg/mL	Unstressed
	Purity 98%				+/-	133.1967	µg/mL	Stressed
13	1,1-Dichloroethane		2,503.0	µg/mL	+/-	14.5527	µg/mL	Gravimetric
	CAS # 75-34-3.SEC	(Lot 2663100)			+/-	133.2041	µg/mL	Unstressed
	Purity 99%				+/-	133.3510	µg/mL	Stressed
14	2,2-Dichloropropane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 594-20-7.SEC	(Lot GI01)			+/-	133.0844	µg/mL	Unstressed
	Purity 99%				+/-	133.2312	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 156-60-5.SEC	(Lot TS5UB)			+/-	133.0538	µg/mL	Unstressed
	Purity 97%				+/-	133.2005	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,501.3	µg/mL	+/-	363.3687	µg/mL	Gravimetric
	CAS # 78-83-1.SEC	(Lot PH2XK)			+/-	3,326.1766	µg/mL	Unstressed
	Purity 99%				+/-	3,329.8447	µg/mL	Stressed
17	Methyl-tert-butyl ether (MTBE)		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC	(Lot ZAQTA-MS)			+/-	133.0711	µg/mL	Unstressed
	Purity 99%				+/-	133.2178	µg/mL	Stressed
18	Bromochloromethane		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 345600)			+/-	133.0777	µg/mL	Unstressed
	Purity 99%				+/-	133.2245	µg/mL	Stressed
19	Tetrahydrofuran		5,002.3	µg/mL	+/-	29.0835	µg/mL	Gravimetric
	CAS # 109-99-9.SEC	(Lot XWFLA)			+/-	266.2087	µg/mL	Unstressed
	Purity 99%				+/-	266.5023	µg/mL	Stressed
20	1,1,1-Trichloroethane		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 71-55-6.SEC	(Lot 1103200)			+/-	133.1443	µg/mL	Unstressed
	Purity 99%				+/-	133.2911	µg/mL	Stressed
21	Cyclohexane		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	133.1243	µg/mL	Unstressed
	Purity 99%				+/-	133.2711	µg/mL	Stressed
22	1,1-Dichloropropene		2,501.1	µg/mL	+/-	14.5419	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 2028500)			+/-	133.1054	µg/mL	Unstressed
	Purity 97%				+/-	133.2522	µg/mL	Stressed
23	Carbon tetrachloride		2,501.9	µg/mL	+/-	14.5465	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	133.1477	µg/mL	Unstressed
	Purity 98%				+/-	133.2946	µg/mL	Stressed

24	n-Heptane (C7)		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 142-82-5.SEC	(Lot OGM01)			+/-	133.0644	µg/mL	Unstressed
	Purity 99%				+/-	133.2112	µg/mL	Stressed
25	1,2-Dichloroethane		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 107-06-2.SEC	(Lot FO6PK)			+/-	133.1443	µg/mL	Unstressed
	Purity 99%				+/-	133.2911	µg/mL	Stressed
26	Benzene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 71-43-2.SEC	(Lot B28Y008)			+/-	133.0911	µg/mL	Unstressed
	Purity 99%				+/-	133.2378	µg/mL	Stressed
27	Trichloroethene		2,500.6	µg/mL	+/-	14.5387	µg/mL	Gravimetric
	CAS # 79-01-6.SEC	(Lot H04X050)			+/-	133.0760	µg/mL	Unstressed
	Purity 98%				+/-	133.2228	µg/mL	Stressed
28	Methylcyclohexane		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 108-87-2.SEC	(Lot 24MSD-CD)			+/-	133.0711	µg/mL	Unstressed
	Purity 99%				+/-	133.2178	µg/mL	Stressed
29	1,2-Dichloropropane		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 78-87-5.SEC	(Lot OGG01)			+/-	133.0445	µg/mL	Unstressed
	Purity 99%				+/-	133.1912	µg/mL	Stressed
30	Bromodichloromethane		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 10171168)			+/-	133.1243	µg/mL	Unstressed
	Purity 99%				+/-	133.2711	µg/mL	Stressed
31	1,4-Dioxane		50,000.8	µg/mL	+/-	290.6935	µg/mL	Gravimetric
	CAS # 123-91-1.SEC	(Lot CHA4A)			+/-	2,660.9280	µg/mL	Unstressed
	Purity 99%				+/-	2,663.8624	µg/mL	Stressed
32	Dibromomethane		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 74-95-3.SEC	(Lot FGI01-OICH)			+/-	133.0777	µg/mL	Unstressed
	Purity 99%				+/-	133.2245	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 10061-01-5.SEC	(Lot 7ZLXJ-TJ)			+/-	133.0977	µg/mL	Unstressed
	Purity 99%				+/-	133.2445	µg/mL	Stressed
34	Toluene		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 108-88-3.SEC	(Lot YND2B-BD)			+/-	133.0511	µg/mL	Unstressed
	Purity 99%				+/-	133.1979	µg/mL	Stressed
35	Ethyl methacrylate		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 97-63-2.SEC	(Lot MLWYK-LS)			+/-	133.0844	µg/mL	Unstressed
	Purity 99%				+/-	133.2312	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,501.6	µg/mL	+/-	14.5444	µg/mL	Gravimetric
	CAS # 10061-02-6.SEC	(Lot 2ECIC-NM)			+/-	133.1282	µg/mL	Unstressed
	Purity 98%				+/-	133.2750	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 79-00-5.SEC	(Lot 732700)			+/-	133.0977	µg/mL	Unstressed
	Purity 99%				+/-	133.2445	µg/mL	Stressed
38	1,3-Dichloropropane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 142-28-9.SEC	(Lot AGN01-EFPC)			+/-	133.0844	µg/mL	Unstressed
	Purity 99%				+/-	133.2312	µg/mL	Stressed
39	Tetrachloroethene		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 127-18-4.SEC	(Lot F09W014)			+/-	133.0445	µg/mL	Unstressed
	Purity 99%				+/-	133.1912	µg/mL	Stressed

40	Dibromochloromethane		2,501.8	µg/mL	+/-	14.5454	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot I13W021)			+/-	133.1377	µg/mL	Unstressed
	Purity 97%				+/-	133.2845	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,502.1	µg/mL	+/-	14.5472	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 1368400)			+/-	133.1542	µg/mL	Unstressed
	Purity 98%				+/-	133.3011	µg/mL	Stressed
42	Chlorobenzene		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	133.1310	µg/mL	Unstressed
	Purity 99%				+/-	133.2778	µg/mL	Stressed
43	1,1,1,2-Tetrachloroethane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01-QSHR)			+/-	133.0844	µg/mL	Unstressed
	Purity 99%				+/-	133.2312	µg/mL	Stressed
44	Ethylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE-GR)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed
45	m-Xylene		1,250.4	µg/mL	+/-	7.2698	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	66.5422	µg/mL	Unstressed
	Purity 99%				+/-	66.6156	µg/mL	Stressed
46	o-Xylene		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01-KTPK)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
47	p-Xylene		1,251.6	µg/mL	+/-	7.2771	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/-	66.6087	µg/mL	Unstressed
	Purity 99%				+/-	66.6822	µg/mL	Stressed
48	Styrene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot OFIOL-IA)			+/-	133.0911	µg/mL	Unstressed
	Purity 99%				+/-	133.2378	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot 2PHXG-IH)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
50	Bromoform		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 1039300)			+/-	133.1243	µg/mL	Unstressed
	Purity 99%				+/-	133.2711	µg/mL	Stressed
51	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
52	Chloroform		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	133.1310	µg/mL	Unstressed
	Purity 99%				+/-	133.2778	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,501.9	µg/mL	+/-	14.5465	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot OGI01)			+/-	133.1477	µg/mL	Unstressed
	Purity 98%				+/-	133.2946	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,502.7	µg/mL	+/-	14.5510	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-2)			+/-	133.1893	µg/mL	Unstressed
	Purity 97%				+/-	133.3362	µg/mL	Stressed
55	n-Propylbenzene		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC-IT)			+/-	133.0445	µg/mL	Unstressed
	Purity 99%				+/-	133.1912	µg/mL	Stressed

56	Bromobenzene **CAS #** 108-86-1.SEC **Purity** 99%	(Lot 2FUHG-EM)	2,501.6 µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene **CAS #** 95-63-6.SEC **Purity** 99%	(Lot SC7LO-QA)	2,502.4 µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8.SEC **Purity** 99%	(Lot SW8QG-AO)	2,500.5 µg/mL	+/- 14.5381 +/- 133.0711 +/- 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4.SEC **Purity** 99%	(Lot P4XHJ-AO)	2,500.3 µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6.SEC **Purity** 99%	(Lot OGN01)	2,501.6 µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene **CAS #** 108-67-8.SEC **Purity** 99%	(Lot FGH02-CMLN)	2,500.3 µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8.SEC **Purity** 99%	(Lot OGN01)	2,500.1 µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	4-Isopropyltoluene (p-cymene) **CAS #** 99-87-6.SEC **Purity** 99%	(Lot 1721700)	2,501.6 µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1.SEC **Purity** 99%	(Lot FMDFD-KA)	2,501.5 µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7.SEC **Purity** 99%	(Lot YWKDC-MK)	2,500.3 µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8.SEC **Purity** 99%	(Lot OGN01)	2,500.6 µg/mL	+/- 14.5388 +/- 133.0777 +/- 133.2245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1.SEC **Purity** 99%	(Lot 4NRGF-OT)	2,500.0 µg/mL	+/- 14.5352 +/- 133.0445 +/- 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8.SEC **Purity** 97%	(Lot LC00408V)	2,500.5 µg/mL	+/- 14.5383 +/- 133.0732 +/- 133.2199	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1.SEC **Purity** 99%	(Lot OGO01)	2,501.0 µg/mL	+/- 14.5410 +/- 133.0977 +/- 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3.SEC **Purity** 97%	(Lot 2009400)	2,501.0 µg/mL	+/- 14.5412 +/- 133.0990 +/- 133.2458	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3.SEC **Purity** 99%	(Lot 4KW3H-OO)	2,500.5 µg/mL	+/- 14.5381 +/- 133.0711 +/- 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,502.4	µg/mL	+/-	14.5490	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)			+/-	133.1709	µg/mL	Unstressed
	Purity 99%				+/-	133.3177	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)

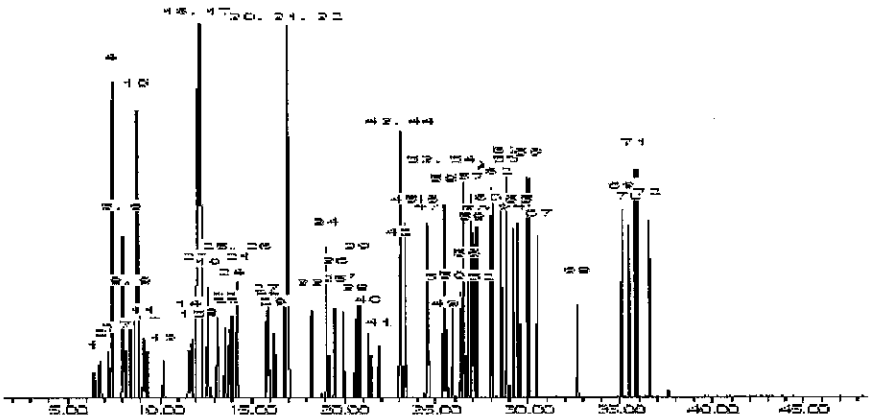
Carrier Gas:
helium-constant pressure 30 psi

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



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.

Michael J Maye

Tyler Brown - QA Analyst

Date Mixed: 07-Jan-2015 **Balance:** 1127510105

Date Passed: 14-Jan-2015

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

Reagent

VOA8260SURRES_00066

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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 **CAS #** 1868-53-7 (Lot 022012) **Purity** 99%	2,502.2 µg/mL	+/- 14.5480 µg/mL +/- 28.2159 µg/mL +/- 32.4683 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 12K-027) **Purity** 99%	2,501.2 µg/mL	+/- 14.5422 µg/mL +/- 28.2046 µg/mL +/- 32.4554 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot 13I-050) **Purity** 99%	2,500.8 µg/mL	+/- 14.5399 µg/mL +/- 28.2001 µg/mL +/- 32.4502 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 01127COV) **Purity** 99%	2,501.4 µg/mL	+/- 14.5434 µg/mL +/- 28.2069 µg/mL +/- 32.4580 µg/mL	Gravimetric Unstressed Stressed

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

Reagent

VOA8260SURRES_00085

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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Catalog No. : 567650 **Lot No.:** A0102817

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 : April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 022012) **Purity** 99%	2,503.8 µg/mL	+/- 14.5573 +/- 28.2339 +/- 32.4891	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 13I-483) **Purity** 99%	2,502.4 µg/mL	+/- 14.5492 +/- 28.2182 +/- 32.4709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot 13I-050) **Purity** 99%	2,500.0 µg/mL	+/- 14.5352 +/- 28.1911 +/- 32.4398	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 01127COV) **Purity** 99%	2,503.6 µg/mL	+/- 14.5561 +/- 28.2317 +/- 32.4865	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

Reagent

VOA8260SURRES_00091

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 567650 **Lot No.:** A0102817

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 : April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 022012) **Purity** 99%	2,503.8 µg/mL	+/- 14.5573 +/- 28.2339 +/- 32.4891	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 13I-483) **Purity** 99%	2,502.4 µg/mL	+/- 14.5492 +/- 28.2182 +/- 32.4709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot 13I-050) **Purity** 99%	2,500.0 µg/mL	+/- 14.5352 +/- 28.1911 +/- 32.4398	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 01127COV) **Purity** 99%	2,503.6 µg/mL	+/- 14.5561 +/- 28.2317 +/- 32.4865	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

Reagent

VOA8260VARES_00051

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569724 **Lot No.:** A0108225

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5000 ug/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : July 31, 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	5,000.0 µg/mL	+/- 29.3428	µg/mL	Gravimetric
	CAS # 108-05-4 (Lot STBC8935V)		+/- 266.1189	µg/mL	Unstressed
	Purity 99%		+/- 266.4123	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

VOA8260VARES2_00051

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569724.sec **Lot No.:** A0108224

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5000 ug/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : July 31, 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	5,003.0 µg/mL	+/- 29.3604	µg/mL	Gravimetric
	CAS # 108-05-4.SEC (Lot F3Z5C)		+/- 266.2785	µg/mL	Unstressed
	Purity 99%		+/- 266.5721	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_00071

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

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Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 568720 **Lot No.:** A0109948

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 : July 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	19,756.0 µg/mL	+/- 115.6757	µg/mL	Gravimetric
	CAS # 107-02-8 (Lot 150115JLM)		+/- 633.4395	µg/mL	Unstressed
	Purity 99%		+/- 736.3041	µg/mL	Stressed

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

Reagent

VOARESEE1ST_00022

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

www.restek.com

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Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 568363-FL **Lot No.:** A0109701

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 : 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	3-Chlorobenzotrifluoride **CAS #** 98-15-7 **Purity** 99%	(Lot 21324DO)	5,000.0 µg/mL	+/- 29.3428 +/- 56.5231 +/- 65.0021	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	4-Chlorobenzotrifluoride **CAS #** 98-56-6 **Purity** 99%	(Lot 08507BO)	5,003.0 µg/mL	+/- 29.3604 +/- 56.5570 +/- 65.0411	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorobenzotrifluoride **CAS #** 88-16-4 **Purity** 99%	(Lot I0316DQ)	5,009.0 µg/mL	+/- 29.3956 +/- 56.6248 +/- 65.1191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	3-Chlorotoluene **CAS #** 108-41-8 **Purity** 99%	(Lot 13528LX)	5,012.0 µg/mL	+/- 29.4132 +/- 56.6587 +/- 65.1581	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2,4-Dichlorobenzotrifluoride **CAS #** 320-60-5 **Purity** 99%	(Lot MKBL3552V)	5,013.0 µg/mL	+/- 29.4191 +/- 56.6701 +/- 65.1711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	3,4-Dichlorobenzotrifluoride **CAS #** 328-84-7 **Purity** 99%	(Lot 11105EJV)	5,018.0 µg/mL	+/- 29.4484 +/- 56.7266 +/- 65.2361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	2,5-Dichlorobenzotrifluoride **CAS #** 320-50-3 **Purity** 99%	(Lot 04415DSV)	5,015.0 µg/mL	+/- 29.4308 +/- 56.6927 +/- 65.1971	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2,4-Dichlorotoluene		5,021.0	µg/mL	+/-	29.4660	µg/mL	Gravimetric
	CAS # 95-73-8	(Lot 07715JS)			+/-	56.7605	µg/mL	Unstressed
	Purity 99%				+/-	65.2751	µg/mL	Stressed
9	2,5-Dichlorotoluene		5,005.0	µg/mL	+/-	29.3721	µg/mL	Gravimetric
	CAS # 19398-61-9	(Lot 1381346V)			+/-	56.5796	µg/mL	Unstressed
	Purity 99%				+/-	65.0671	µg/mL	Stressed
10	2,6-Dichlorotoluene		5,014.0	µg/mL	+/-	29.4250	µg/mL	Gravimetric
	CAS # 118-69-4	(Lot 16921JS)			+/-	56.6814	µg/mL	Unstressed
	Purity 99%				+/-	65.1841	µg/mL	Stressed
11	3,4-Dichlorotoluene		5,011.0	µg/mL	+/-	29.4074	µg/mL	Gravimetric
	CAS # 95-75-0	(Lot 09419AS)			+/-	56.6474	µg/mL	Unstressed
	Purity 99%				+/-	65.1451	µg/mL	Stressed
12	2,3-Dichlorotoluene		5,016.0	µg/mL	+/-	29.4367	µg/mL	Gravimetric
	CAS # 32768-54-0	(Lot 00317)			+/-	56.7040	µg/mL	Unstressed
	Purity 99%				+/-	65.2101	µg/mL	Stressed
13	2,4,5-Trichlorotoluene		5,000.0	µg/mL	+/-	29.3428	µg/mL	Gravimetric
	CAS # 6639-30-1	(Lot 2490300)			+/-	56.5231	µg/mL	Unstressed
	Purity 99%				+/-	65.0021	µg/mL	Stressed
14	2,3,6-Trichlorotoluene		5,005.0	µg/mL	+/-	29.3721	µg/mL	Gravimetric
	CAS # 2077-46-5	(Lot NT050444)			+/-	56.5796	µg/mL	Unstressed
	Purity 99%				+/-	65.0671	µg/mL	Stressed

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

Reagent

VOARESEE1ST_00024

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

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Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 568363-FL **Lot No.:** A0109701

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 : 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	3-Chlorobenzotrifluoride **CAS #** 98-15-7 **Purity** 99%	(Lot 21324DO)	5,000.0 µg/mL	+/- 29.3428 +/- 56.5231 +/- 65.0021	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	4-Chlorobenzotrifluoride **CAS #** 98-56-6 **Purity** 99%	(Lot 08507BO)	5,003.0 µg/mL	+/- 29.3604 +/- 56.5570 +/- 65.0411	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorobenzotrifluoride **CAS #** 88-16-4 **Purity** 99%	(Lot I0316DQ)	5,009.0 µg/mL	+/- 29.3956 +/- 56.6248 +/- 65.1191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
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	CAS # 95-73-8	(Lot 07715JS)			+/-	56.7605	µg/mL	Unstressed
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9	2,5-Dichlorotoluene		5,005.0	µg/mL	+/-	29.3721	µg/mL	Gravimetric
	CAS # 19398-61-9	(Lot 1381346V)			+/-	56.5796	µg/mL	Unstressed
	Purity 99%				+/-	65.0671	µg/mL	Stressed
10	2,6-Dichlorotoluene		5,014.0	µg/mL	+/-	29.4250	µg/mL	Gravimetric
	CAS # 118-69-4	(Lot 16921JS)			+/-	56.6814	µg/mL	Unstressed
	Purity 99%				+/-	65.1841	µg/mL	Stressed
11	3,4-Dichlorotoluene		5,011.0	µg/mL	+/-	29.4074	µg/mL	Gravimetric
	CAS # 95-75-0	(Lot 09419AS)			+/-	56.6474	µg/mL	Unstressed
	Purity 99%				+/-	65.1451	µg/mL	Stressed
12	2,3-Dichlorotoluene		5,016.0	µg/mL	+/-	29.4367	µg/mL	Gravimetric
	CAS # 32768-54-0	(Lot 00317)			+/-	56.7040	µg/mL	Unstressed
	Purity 99%				+/-	65.2101	µg/mL	Stressed
13	2,4,5-Trichlorotoluene		5,000.0	µg/mL	+/-	29.3428	µg/mL	Gravimetric
	CAS # 6639-30-1	(Lot 2490300)			+/-	56.5231	µg/mL	Unstressed
	Purity 99%				+/-	65.0021	µg/mL	Stressed
14	2,3,6-Trichlorotoluene		5,005.0	µg/mL	+/-	29.3721	µg/mL	Gravimetric
	CAS # 2077-46-5	(Lot NT050444)			+/-	56.5796	µg/mL	Unstressed
	Purity 99%				+/-	65.0671	µg/mL	Stressed

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

Reagent

WNa2CO3P_00007

Fisher Scientific

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

Lab Manager Fair Lawn

1243950
ID: WNa2CO3P_00007
Exp:07/09/18 Prpd:HRA Opn:07/09/14
Sodium Carbonate

1243948
ID: WNa2CO3P_00007
Exp:07/09/18 Prpd:HRA Opn:07/09/14
Sodium Carbonate

1243949
ID: WNa2CO3P_00007
Exp:07/09/18 Prpd:HRA Opn:07/09/14
Sodium Carbonate

1243947
ID: WNa2CO3P_00007
Exp:07/09/18 Prpd:HRA Opn:07/09/14
Sodium Carbonate

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a 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.: 180-45946-1

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-COD-SW-6-0/1-0	180-45946-1	115	120	97	93
HD-COD-SW-7-0/1-0	180-45946-2	117	119	96	87
HD-COD-SW-8-0/1-0	180-45946-3	117	121	97	95
HD-COD-SW-9-0/1-0	180-45946-4	119	122	99	94
HD-COD-SW-10-0/1-0	180-45946-5	120	122	102	100
HD-COD-SW-11-0/1-0	180-45946-6	116	122	97	91
HD-COD-SW-12-0/1-0	180-45946-7	95	92	110	101
HD-COD-SW-13-0/1-0	180-45946-8	95	94	111	101
HD-COD-SW-15-0/1-0	180-45946-9	93	92	111	101
HD-QC1-0/1-2	180-45946-10	96	95	113	104
HD-COD-SW-16-0/1-0	180-45946-11	99	97	112	104
HD-COD-SW-17-0/1-0	180-45946-12	96	90	111	103
HD-COD-SW-20-0/1-0	180-45946-13	96	95	112	104
HD-COD-SW-26-0/1-0	180-45946-14	100	98	109	101
HD-COD-SW-27-0/1-0	180-45946-15	98	94	109	100
HD-COD-SW-28-0/1-0	180-45946-16	100	97	107	97
HD-COD-SW-29-0/1-0	180-45946-17	100	97	111	101
HD-QC1-0/1-1	180-45946-18	98	95	111	102
HD-QC2-0/1-2	180-45946-19	94	94	110	103
	MB 180-148055/6	109	115	100	92
	MB 180-148334/5	93	90	111	104
	LCS 180-148055/7	89	91	97	93
	LCS 180-148334/6	98	91	112	106
	LCSD 180-148055/8	96	100	98	98
HD-COD-SW-17-0/1-0 MS	180-45946-12 MS	94	89	110	106
HD-COD-SW-17-0/1-0 MSD	180-45946-12 MSD	94	92	105	101

	QC LIMITS
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 II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50717007.D

Lab ID: LCS 180-148055/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	10.7	107	50-139	
Vinyl chloride	10.0	10.4	104	53-138	
Bromomethane	10.0	10.4	104	33-150	
Chloroethane	10.0	10.5	105	36-142	
1,1-Dichloroethene	10.0	8.92	89	65-136	
Acetone	20.0	23.4	117	22-150	
Carbon disulfide	10.0	8.40	84	54-132	
Methylene Chloride	10.0	7.98	80	63-129	
trans-1,2-Dichloroethene	10.0	9.20	92	73-126	
Methyl tert-butyl ether	10.0	8.69	87	64-123	
1,1-Dichloroethane	10.0	9.20	92	73-126	
cis-1,2-Dichloroethene	10.0	9.17	92	70-120	
Bromochloromethane	10.0	9.28	93	70-127	
2-Butanone (MEK)	20.0	20.7	103	39-138	
Chloroform	10.0	9.73	97	72-127	
1,1,1-Trichloroethane	10.0	9.25	93	63-133	
Carbon tetrachloride	10.0	9.27	93	55-150	
Benzene	10.0	9.62	96	80-120	
1,2-Dichloroethane	10.0	9.77	98	68-132	
Trichloroethene	10.0	9.45	94	73-120	
1,2-Dichloropropane	10.0	10.0	100	76-124	
Bromodichloromethane	10.0	9.59	96	66-130	
cis-1,3-Dichloropropene	10.0	9.74	97	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	17.6	88	45-145	
Toluene	10.0	10.7	107	80-123	
trans-1,3-Dichloropropene	10.0	9.66	97	65-125	
1,1,2-Trichloroethane	10.0	10.6	106	77-127	
Tetrachloroethene	10.0	10.2	102	70-135	
2-Hexanone	20.0	23.2	116	25-132	
Dibromochloromethane	10.0	10.2	102	60-140	
1,2-Dibromoethane (EDB)	10.0	10.7	107	74-123	
Chlorobenzene	10.0	10.5	105	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.3	103	63-140	
Ethylbenzene	10.0	10.5	105	72-126	
Xylenes, Total	20.0	21.1	106	76-128	
Styrene	10.0	11.0	110	71-127	
Bromoform	10.0	10.5	105	46-150	
1,1,2,2-Tetrachloroethane	10.0	11.7	117	62-125	
Acrylonitrile	100	104	104	30-140	
1,4-Dioxane	200	240	120	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 60721006.D

Lab ID: LCS 180-148334/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	7.01	70	50-139	
Vinyl chloride	10.0	7.52	75	53-138	
Bromomethane	10.0	8.72	87	33-150	
Chloroethane	10.0	7.38	74	36-142	
1,1-Dichloroethene	10.0	10.7	107	65-136	
Acetone	20.0	16.9	85	22-150	
Carbon disulfide	10.0	9.99	100	54-132	
Methylene Chloride	10.0	10.1	101	63-129	
trans-1,2-Dichloroethene	10.0	11.0	110	73-126	
Methyl tert-butyl ether	10.0	9.69	97	64-123	
1,1-Dichloroethane	10.0	9.89	99	73-126	
cis-1,2-Dichloroethene	10.0	10.3	103	70-120	
Bromochloromethane	10.0	9.79	98	70-127	
2-Butanone (MEK)	20.0	15.7	78	39-138	
Chloroform	10.0	10.5	105	72-127	
1,1,1-Trichloroethane	10.0	9.99	100	63-133	
Carbon tetrachloride	10.0	9.39	94	55-150	
Benzene	10.0	10.6	106	80-120	
1,2-Dichloroethane	10.0	9.47	95	68-132	
Trichloroethene	10.0	10.2	102	73-120	
1,2-Dichloropropane	10.0	9.96	100	76-124	
Bromodichloromethane	10.0	10.0	100	66-130	
cis-1,3-Dichloropropene	10.0	9.31	93	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	17.9	90	45-145	
Toluene	10.0	11.1	111	80-123	
trans-1,3-Dichloropropene	10.0	9.57	96	65-125	
1,1,2-Trichloroethane	10.0	10.5	105	77-127	
Tetrachloroethene	10.0	10.1	101	70-135	
2-Hexanone	20.0	13.6	68	25-132	
Dibromochloromethane	10.0	9.65	97	60-140	
1,2-Dibromoethane (EDB)	10.0	10.5	105	74-123	
Chlorobenzene	10.0	10.4	104	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.3	103	63-140	
Ethylbenzene	10.0	10.6	106	72-126	
Xylenes, Total	20.0	21.1	106	76-128	
Styrene	10.0	10.8	108	71-127	
Bromoform	10.0	9.08	91	46-150	
1,1,2,2-Tetrachloroethane	10.0	10.6	106	62-125	
Acrylonitrile	100	95.6	96	30-140	
1,4-Dioxane	200	172 J	86	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50717008.D

Lab ID: LCSD 180-148055/8 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chloromethane	10.0	10.5	105	2	35	50-139	
Vinyl chloride	10.0	9.57	96	9	35	53-138	
Bromomethane	10.0	10.9	109	5	35	33-150	
Chloroethane	10.0	10.6	106	0	35	36-142	
1,1-Dichloroethene	10.0	8.38	84	6	35	65-136	
Acetone	20.0	22.0	110	6	35	22-150	
Carbon disulfide	10.0	8.02	80	5	35	54-132	
Methylene Chloride	10.0	8.20	82	3	35	63-129	
trans-1,2-Dichloroethene	10.0	8.87	89	4	35	73-126	
Methyl tert-butyl ether	10.0	9.07	91	4	35	64-123	
1,1-Dichloroethane	10.0	9.16	92	0	35	73-126	
cis-1,2-Dichloroethene	10.0	9.31	93	1	35	70-120	
Bromochloromethane	10.0	9.59	96	3	35	70-127	
2-Butanone (MEK)	20.0	20.6	103	0	35	39-138	
Chloroform	10.0	9.73	97	0	35	72-127	
1,1,1-Trichloroethane	10.0	8.84	88	5	35	63-133	
Carbon tetrachloride	10.0	8.78	88	5	35	55-150	
Benzene	10.0	9.49	95	1	32	80-120	
1,2-Dichloroethane	10.0	9.96	100	2	32	68-132	
Trichloroethene	10.0	8.99	90	5	35	73-120	
1,2-Dichloropropane	10.0	9.87	99	2	34	76-124	
Bromodichloromethane	10.0	9.72	97	1	35	66-130	
cis-1,3-Dichloropropene	10.0	10.0	100	3	35	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	17.6	88	0	35	45-145	
Toluene	10.0	10.5	105	2	35	80-123	
trans-1,3-Dichloropropene	10.0	9.83	98	2	35	65-125	
1,1,2-Trichloroethane	10.0	10.4	104	2	35	77-127	
Tetrachloroethene	10.0	9.80	98	4	35	70-135	
2-Hexanone	20.0	23.8	119	3	35	25-132	
Dibromochloromethane	10.0	9.97	100	3	35	60-140	
1,2-Dibromoethane (EDB)	10.0	11.0	110	3	35	74-123	
Chlorobenzene	10.0	10.6	106	1	29	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.3	103	0	34	63-140	
Ethylbenzene	10.0	10.4	104	2	33	72-126	
Xylenes, Total	20.0	20.9	105	1	32	76-128	
Styrene	10.0	11.0	110	0	34	71-127	
Bromoform	10.0	10.6	106	1	35	46-150	
1,1,2,2-Tetrachloroethane	10.0	11.5	115	2	35	62-125	
Acrylonitrile	100	105	105	0	35	30-140	
1,4-Dioxane	200	257	129	7	35	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 60721009.D

Lab ID: 180-45946-12 MS Client ID: HD-COD-SW-17-0/1-0 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chloromethane	10.0	ND	6.85	68	50-139	
Vinyl chloride	10.0	ND	7.50	75	53-138	
Bromomethane	10.0	ND	9.04	90	33-150	
Chloroethane	10.0	ND	7.34	73	36-142	
1,1-Dichloroethene	10.0	0.74 J	11.0	103	65-136	
Acetone	20.0	ND	23.5	117	22-150	
Carbon disulfide	10.0	ND	10.1	101	54-132	
Methylene Chloride	10.0	ND	10.5	105	63-129	
trans-1,2-Dichloroethene	10.0	ND	10.8	108	73-126	
Methyl tert-butyl ether	10.0	ND	10.1	101	64-123	
1,1-Dichloroethane	10.0	0.36 J	10.7	103	73-126	
cis-1,2-Dichloroethene	10.0	13	26.3	128	70-120	F1
Bromochloromethane	10.0	ND	10.2	102	70-127	
2-Butanone (MEK)	20.0	ND	19.8	99	39-138	
Chloroform	10.0	ND	10.5	105	72-127	
1,1,1-Trichloroethane	10.0	1.8	11.6	98	63-133	
Carbon tetrachloride	10.0	ND	9.15	91	55-150	
Benzene	10.0	ND	10.5	105	80-120	
1,2-Dichloroethane	10.0	ND	9.77	98	68-132	
Trichloroethene	10.0	15	25.8	109	73-120	
1,2-Dichloropropane	10.0	ND	9.60	96	76-124	
Bromodichloromethane	10.0	ND	9.76	98	66-130	
cis-1,3-Dichloropropene	10.0	ND	9.03	90	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	ND	18.5	93	45-145	
Toluene	10.0	ND	11.0	110	80-123	
trans-1,3-Dichloropropene	10.0	ND	9.69	97	65-125	
1,1,2-Trichloroethane	10.0	ND	11.0	110	77-127	
Tetrachloroethene	10.0	28	39.5	111	70-135	
2-Hexanone	20.0	ND	16.2	81	25-132	
Dibromochloromethane	10.0	ND	9.87	99	60-140	
1,2-Dibromoethane (EDB)	10.0	ND	10.9	109	74-123	
Chlorobenzene	10.0	ND	10.9	109	80-120	
1,1,1,2-Tetrachloroethane	10.0	ND	10.5	105	63-140	
Ethylbenzene	10.0	ND	10.8	108	72-126	
Xylenes, Total	20.0	ND	21.5	108	76-128	
Styrene	10.0	ND	10.9	109	71-127	
Bromoform	10.0	ND	9.71	97	46-150	
1,1,2,2-Tetrachloroethane	10.0	ND	11.7	117	62-125	
Acrylonitrile	100	ND	98.5	99	30-140	
1,4-Dioxane	200	ND	133 J	67	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 60721010.D

Lab ID: 180-45946-12 MSD Client ID: HD-COD-SW-17-0/1-0 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chloromethane	10.0	6.67	67	3	35	50-139	
Vinyl chloride	10.0	7.44	74	1	35	53-138	
Bromomethane	10.0	8.50	85	6	35	33-150	
Chloroethane	10.0	7.04	70	4	35	36-142	
1,1-Dichloroethene	10.0	11.1	103	1	35	65-136	
Acetone	20.0	22.0	110	7	35	22-150	
Carbon disulfide	10.0	9.57	96	5	35	54-132	
Methylene Chloride	10.0	10.5	105	0	35	63-129	
trans-1,2-Dichloroethene	10.0	10.6	106	1	35	73-126	
Methyl tert-butyl ether	10.0	10.2	102	1	35	64-123	
1,1-Dichloroethane	10.0	10.4	100	3	35	73-126	
cis-1,2-Dichloroethene	10.0	25.4	119	3	35	70-120	
Bromochloromethane	10.0	10.0	100	2	35	70-127	
2-Butanone (MEK)	20.0	21.2	106	7	35	39-138	
Chloroform	10.0	10.5	105	1	35	72-127	
1,1,1-Trichloroethane	10.0	11.6	98	0	35	63-133	
Carbon tetrachloride	10.0	9.13	91	0	35	55-150	
Benzene	10.0	10.4	104	1	32	80-120	
1,2-Dichloroethane	10.0	9.47	95	3	32	68-132	
Trichloroethene	10.0	25.2	103	2	35	73-120	
1,2-Dichloropropane	10.0	9.47	95	1	34	76-124	
Bromodichloromethane	10.0	9.65	96	1	35	66-130	
cis-1,3-Dichloropropene	10.0	9.03	90	0	35	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	19.6	98	5	35	45-145	
Toluene	10.0	10.7	107	3	35	80-123	
trans-1,3-Dichloropropene	10.0	9.59	96	1	35	65-125	
1,1,2-Trichloroethane	10.0	10.3	103	7	35	77-127	
Tetrachloroethene	10.0	37.4	90	5	35	70-135	
2-Hexanone	20.0	16.3	82	1	35	25-132	
Dibromochloromethane	10.0	9.85	98	0	35	60-140	
1,2-Dibromoethane (EDB)	10.0	10.3	103	5	35	74-123	
Chlorobenzene	10.0	10.4	104	5	29	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.3	103	2	34	63-140	
Ethylbenzene	10.0	10.3	103	5	33	72-126	
Xylenes, Total	20.0	20.4	102	5	32	76-128	
Styrene	10.0	10.3	103	5	34	71-127	
Bromoform	10.0	9.70	97	0	35	46-150	
1,1,2,2-Tetrachloroethane	10.0	11.5	115	2	35	62-125	
Acrylonitrile	100	102	102	3	35	30-140	
1,4-Dioxane	200	120 J	60	10	35	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab File ID: 50717006.D Lab Sample ID: MB 180-148055/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: CHHP5 Date Analyzed: 07/17/2015 13:13

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 180-148055/7	50717007.D	07/17/2015 13:48
	LCSD 180-148055/8	50717008.D	07/17/2015 14:12
HD-COD-SW-6-0/1-0	180-45946-1	50717025.D	07/17/2015 21:06
HD-COD-SW-7-0/1-0	180-45946-2	50717026.D	07/17/2015 21:29
HD-COD-SW-8-0/1-0	180-45946-3	50717027.D	07/17/2015 21:53
HD-COD-SW-9-0/1-0	180-45946-4	50717028.D	07/17/2015 22:17
HD-COD-SW-10-0/1-0	180-45946-5	50717029.D	07/17/2015 22:40
HD-COD-SW-11-0/1-0	180-45946-6	50717030.D	07/17/2015 23:04

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab File ID: 60721005.D Lab Sample ID: MB 180-148334/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: CHHP6 Date Analyzed: 07/21/2015 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 180-148334/6	60721006.D	07/21/2015 13:31
HD-COD-SW-17-0/1-0	180-45946-12	60721007.D	07/21/2015 14:41
HD-QC2-0/1-2	180-45946-19	60721008.D	07/21/2015 15:05
HD-COD-SW-17-0/1-0 MS	180-45946-12 MS	60721009.D	07/21/2015 15:36
HD-COD-SW-17-0/1-0 MSD	180-45946-12 MSD	60721010.D	07/21/2015 16:00
HD-COD-SW-12-0/1-0	180-45946-7	60721011.D	07/21/2015 16:32
HD-COD-SW-13-0/1-0	180-45946-8	60721012.D	07/21/2015 16:56
HD-COD-SW-15-0/1-0	180-45946-9	60721013.D	07/21/2015 17:20
HD-QC1-0/1-2	180-45946-10	60721014.D	07/21/2015 17:43
HD-COD-SW-16-0/1-0	180-45946-11	60721015.D	07/21/2015 18:07
HD-COD-SW-20-0/1-0	180-45946-13	60721016.D	07/21/2015 18:31
HD-COD-SW-26-0/1-0	180-45946-14	60721017.D	07/21/2015 18:55
HD-COD-SW-27-0/1-0	180-45946-15	60721018.D	07/21/2015 19:19
HD-COD-SW-28-0/1-0	180-45946-16	60721019.D	07/21/2015 19:43
HD-COD-SW-29-0/1-0	180-45946-17	60721020.D	07/21/2015 20:07
HD-QC1-0/1-1	180-45946-18	60721021.D	07/21/2015 20:31

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab File ID: 50617016.D BFB Injection Date: 06/17/2015

Instrument ID: CHHP5 BFB Injection Time: 11:58

Analysis Batch No.: 145277

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.8	
75	30.0 - 60.0 % of mass 95	54.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.5	
173	Less than 2.0 % of mass 174	0.6	(0.8)1
174	50.0 - 120.00 % of mass 95	72.3	
175	5.0 - 9.0 % of mass 174	5.6	(7.7)1
176	95.0 - 101.0 % of mass 174	72.9	(100.7)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 180-145277/6	50617006.D	06/17/2015	14:07
	ICIS 180-145277/7	50617007.D	06/17/2015	14:30
	IC 180-145277/8	50617008.D	06/17/2015	14:54
	IC 180-145277/9	50617009.D	06/17/2015	15:18
	IC 180-145277/10	50617010.D	06/17/2015	15:42
	IC 180-145277/11	50617011.D	06/17/2015	16:06
	IC 180-145277/12	50617012.D	06/17/2015	16:29
	IC 180-145277/17	50617017.D	06/17/2015	18:04

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab File ID: 50717004.D BFB Injection Date: 07/17/2015

Instrument ID: CHHP5 BFB Injection Time: 11:22

Analysis Batch No.: 148055

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.8	
75	30.0 - 60.0 % of mass 95	49.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	75.1	
175	5.0 - 9.0 % of mass 174	6.1	(8.1)1
176	95.0 - 101.0 % of mass 174	73.1	(97.3)1
177	5.0 - 9.0 % of mass 176	4.6	(6.4)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 180-148055/2	50717002.D	07/17/2015	12:02
	CCV 180-148055/3	50717003.D	07/17/2015	12:25
	MB 180-148055/6	50717006.D	07/17/2015	13:13
	LCS 180-148055/7	50717007.D	07/17/2015	13:48
	LCSD 180-148055/8	50717008.D	07/17/2015	14:12
HD-COD-SW-6-0/1-0	180-45946-1	50717025.D	07/17/2015	21:06
HD-COD-SW-7-0/1-0	180-45946-2	50717026.D	07/17/2015	21:29
HD-COD-SW-8-0/1-0	180-45946-3	50717027.D	07/17/2015	21:53
HD-COD-SW-9-0/1-0	180-45946-4	50717028.D	07/17/2015	22:17
HD-COD-SW-10-0/1-0	180-45946-5	50717029.D	07/17/2015	22:40
HD-COD-SW-11-0/1-0	180-45946-6	50717030.D	07/17/2015	23:04

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab File ID: 60602004.D BFB Injection Date: 06/02/2015

Instrument ID: CHHP6 BFB Injection Time: 14:36

Analysis Batch No.: 143599

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.0	
75	30.0 - 60.0 % of mass 95	54.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.4	(0.6)1
174	50.0 - 120.00 % of mass 95	73.7	
175	5.0 - 9.0 % of mass 174	5.9	(7.9)1
176	95.0 - 101.0 % of mass 174	74.4	(100.9)1
177	5.0 - 9.0 % of mass 176	4.7	(6.4)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 180-143599/7	60602007.D	06/02/2015	16:07
	ICIS 180-143599/8	60602008.D	06/02/2015	16:31
	IC 180-143599/9	60602009.D	06/02/2015	16:55
	IC 180-143599/10	60602010.D	06/02/2015	17:19
	IC 180-143599/11	60602011.D	06/02/2015	17:43
	IC 180-143599/12	60602012.D	06/02/2015	18:07
	IC 180-143599/13	60602013.D	06/02/2015	18:31
	IC 180-143599/17	60602017.D	06/02/2015	20:05

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab File ID: 60721001.D BFB Injection Date: 07/21/2015

Instrument ID: CHHP6 BFB Injection Time: 10:05

Analysis Batch No.: 148334

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.5	
75	30.0 - 60.0 % of mass 95	54.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.1	
173	Less than 2.0 % of mass 174	0.5	(0.7)1
174	50.0 - 120.00 % of mass 95	65.6	
175	5.0 - 9.0 % of mass 174	5.0	(7.6)1
176	95.0 - 101.0 % of mass 174	65.1	(99.3)1
177	5.0 - 9.0 % of mass 176	4.4	(6.7)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 180-148334/3	60721003.D	07/21/2015	11:45
	MB 180-148334/5	60721005.D	07/21/2015	12:44
	LCS 180-148334/6	60721006.D	07/21/2015	13:31
HD-COD-SW-17-0/1-0	180-45946-12	60721007.D	07/21/2015	14:41
HD-QC2-0/1-2	180-45946-19	60721008.D	07/21/2015	15:05
HD-COD-SW-17-0/1-0 MS	180-45946-12 MS	60721009.D	07/21/2015	15:36
HD-COD-SW-17-0/1-0 MSD	180-45946-12 MSD	60721010.D	07/21/2015	16:00
HD-COD-SW-12-0/1-0	180-45946-7	60721011.D	07/21/2015	16:32
HD-COD-SW-13-0/1-0	180-45946-8	60721012.D	07/21/2015	16:56
HD-COD-SW-15-0/1-0	180-45946-9	60721013.D	07/21/2015	17:20
HD-QC1-0/1-2	180-45946-10	60721014.D	07/21/2015	17:43
HD-COD-SW-16-0/1-0	180-45946-11	60721015.D	07/21/2015	18:07
HD-COD-SW-20-0/1-0	180-45946-13	60721016.D	07/21/2015	18:31
HD-COD-SW-26-0/1-0	180-45946-14	60721017.D	07/21/2015	18:55
HD-COD-SW-27-0/1-0	180-45946-15	60721018.D	07/21/2015	19:19
HD-COD-SW-28-0/1-0	180-45946-16	60721019.D	07/21/2015	19:43
HD-COD-SW-29-0/1-0	180-45946-17	60721020.D	07/21/2015	20:07
HD-QC1-0/1-1	180-45946-18	60721021.D	07/21/2015	20:31

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Sample No.: CCVIS 180-148055/2 Date Analyzed: 07/17/2015 12:02

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50717002.D Heated Purge: (Y/N) N

Calibration ID: 24418

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		125664	4.27	408475	7.29	90179	10.39
UPPER LIMIT		251328	4.77	816950	7.79	180358	10.89
LOWER LIMIT		62832	3.77	204238	6.79	45090	9.89
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 180-148055/3		136491	4.26	411273	7.29	86864	10.39
MB 180-148055/6		160153	4.27	394283	7.29	93318	10.39
LCS 180-148055/7		123890	4.27	426705	7.29	95105	10.39
LCSD 180-148055/8		141833	4.28	417448	7.29	94086	10.39
180-45946-1	HD-COD-SW-6-0/1-0	117986	4.27	352525	7.29	84809	10.39
180-45946-2	HD-COD-SW-7-0/1-0	106224	4.27	346700	7.29	84349	10.39
180-45946-3	HD-COD-SW-8-0/1-0	118322	4.27	347769	7.29	84871	10.38
180-45946-4	HD-COD-SW-9-0/1-0	116005	4.27	345171	7.29	82812	10.39
180-45946-5	HD-COD-SW-10-0/1-0	117527	4.27	348199	7.29	79635	10.38
180-45946-6	HD-COD-SW-11-0/1-0	113093	4.26	344729	7.29	83010	10.39

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

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Sample No.: CCVIS 180-148055/2 Date Analyzed: 07/17/2015 12:02

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50717002.D Heated Purge: (Y/N) N

Calibration ID: 24418

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		120723	12.73				
UPPER LIMIT		241446	13.23				
LOWER LIMIT		60362	12.23				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 180-148055/3		91480	12.73				
MB 180-148055/6		119566	12.73				
LCS 180-148055/7		123303	12.73				
LCSD 180-148055/8		127605	12.72				
180-45946-1	HD-COD-SW-6-0/1-0	103932	12.73				
180-45946-2	HD-COD-SW-7-0/1-0	99672	12.73				
180-45946-3	HD-COD-SW-8-0/1-0	109683	12.73				
180-45946-4	HD-COD-SW-9-0/1-0	103388	12.73				
180-45946-5	HD-COD-SW-10-0/1-0	106472	12.73				
180-45946-6	HD-COD-SW-11-0/1-0	106534	12.73				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Sample No.: CCVIS 180-148334/3 Date Analyzed: 07/21/2015 11:45

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 60721003.D Heated Purge: (Y/N) N

Calibration ID: 24020

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		137060	4.24	428579	7.29	91576	10.40
UPPER LIMIT		274120	4.74	857158	7.79	183152	10.90
LOWER LIMIT		68530	3.74	214290	6.79	45788	9.90
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-148334/5		121643	4.22	499627	7.29	105145	10.40
LCS 180-148334/6		142329	4.23	411802	7.29	90836	10.40
180-45946-12	HD-COD-SW-17-0/1-0	134515	4.22	510322	7.29	105814	10.40
180-45946-19	HD-QC2-0/1-2	141242	4.23	500537	7.29	102792	10.40
180-45946-12 MS	HD-COD-SW-17-0/1-0 MS	132962	4.23	396577	7.29	82563	10.40
180-45946-12 MSD	HD-COD-SW-17-0/1-0 MSD	127234	4.24	403129	7.29	87753	10.40
180-45946-7	HD-COD-SW-12-0/1-0	129421	4.23	491264	7.29	101571	10.40
180-45946-8	HD-COD-SW-13-0/1-0	159317	4.22	487288	7.29	101907	10.40
180-45946-9	HD-COD-SW-15-0/1-0	144992	4.22	488403	7.29	101394	10.40
180-45946-10	HD-QC1-0/1-2	135124	4.23	471463	7.29	96055	10.40
180-45946-11	HD-COD-SW-16-0/1-0	126759	4.23	461812	7.29	96255	10.39
180-45946-13	HD-COD-SW-20-0/1-0	118448	4.23	460734	7.29	94956	10.40
180-45946-14	HD-COD-SW-26-0/1-0	108353	4.22	449433	7.29	93755	10.40
180-45946-15	HD-COD-SW-27-0/1-0	104116	4.24	445689	7.29	95564	10.40
180-45946-16	HD-COD-SW-28-0/1-0	119364	4.23	441094	7.29	94696	10.40
180-45946-17	HD-COD-SW-29-0/1-0	105038	4.22	440586	7.29	91226	10.40
180-45946-18	HD-QC1-0/1-1	113656	4.22	447620	7.29	92277	10.40

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

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Sample No.: CCVIS 180-148334/3 Date Analyzed: 07/21/2015 11:45

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 60721003.D Heated Purge: (Y/N) N

Calibration ID: 24020

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		149007	12.75				
UPPER LIMIT		298014	13.25				
LOWER LIMIT		74504	12.25				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-148334/5		162409	12.75				
LCS 180-148334/6		143836	12.75				
180-45946-12	HD-COD-SW-17-0/1-0	159370	12.75				
180-45946-19	HD-QC2-0/1-2	154154	12.75				
180-45946-12 MS	HD-COD-SW-17-0/1-0 MS	136916	12.75				
180-45946-12 MSD	HD-COD-SW-17-0/1-0 MSD	140751	12.75				
180-45946-7	HD-COD-SW-12-0/1-0	163659	12.75				
180-45946-8	HD-COD-SW-13-0/1-0	158274	12.75				
180-45946-9	HD-COD-SW-15-0/1-0	151994	12.75				
180-45946-10	HD-QC1-0/1-2	148782	12.75				
180-45946-11	HD-COD-SW-16-0/1-0	149451	12.75				
180-45946-13	HD-COD-SW-20-0/1-0	145681	12.75				
180-45946-14	HD-COD-SW-26-0/1-0	144735	12.75				
180-45946-15	HD-COD-SW-27-0/1-0	142767	12.75				
180-45946-16	HD-COD-SW-28-0/1-0	143899	12.75				
180-45946-17	HD-COD-SW-29-0/1-0	140761	12.75				
180-45946-18	HD-QC1-0/1-1	145029	12.75				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 | Lab Sample ID: 180-45946-1

Matrix: Water | Lab File ID: 50717025.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 21:06

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.: 148055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	ND		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	4.3	J	5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND		5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	ND		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND		5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 | Lab Sample ID: 180-45946-1

Matrix: Water | Lab File ID: 50717025.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 21:06

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.: 148055 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	120		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	93		70-118
1868-53-7	Dibromofluoromethane (Surr)	115		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717025.D
Lims ID: 180-45946-C-1 Lab Sample ID: 180-45946-1
Client ID: HD-COD-SW-6-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 21:06:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-C-1
Misc. Info.: 180-0007815-025
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Jul-2015 08:05:56 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 20-Jul-2015 08:05:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.272	4.263	0.009	0	117986	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.292	-0.002	98	352525	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.389	-0.003	89	84809	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.725	0.003	98	103932	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.566	6.559	0.007	92	94562	57.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.937	6.930	0.007	0	142556	60.1	
$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	94	340751	48.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.566	11.572	-0.006	84	119828	46.3	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.264				ND	
16 Chloroethane	64		2.410				ND	
22 1,1-Dichloroethene	96		3.341				ND	
24 Acetone	43	3.433	3.450	-0.017	96	12567	21.5	
26 Carbon disulfide	76		3.627				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.521				ND	
34 trans-1,2-Dichloroethene	96		4.564				ND	
35 Methyl tert-butyl ether	73		4.582				ND	
37 1,1-Dichloroethane	63		5.202				ND	
46 2-Butanone (MEK)	43		5.957				ND	
45 cis-1,2-Dichloroethene	96		5.957				ND	
49 Chlorobromomethane	128		6.237				ND	
52 Chloroform	83		6.376				ND	
53 1,1,1-Trichloroethane	97		6.541				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.942				ND	
59 1,2-Dichloroethane	62		7.015				ND	
64 Trichloroethene	130		7.678				ND	
67 1,2-Dichloropropane	63		7.946				ND	
70 1,4-Dioxane	88		8.037				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.232				ND	
74 cis-1,3-Dichloropropene	75		8.670				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91	8.999	9.005	-0.005	81	4056	0.4450	
77 trans-1,3-Dichloropropene	75		9.248				ND	
79 1,1,2-Trichloroethane	97		9.443				ND	
80 Tetrachloroethene	164		9.516				ND	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.814				ND	
85 Ethylene Dibromide	107		9.923				ND	
87 Chlorobenzene	112		10.416				ND	
89 1,1,1,2-Tetrachloroethane	131		10.507				ND	
90 Ethylbenzene	106		10.513				ND	
91 m-Xylene & p-Xylene	106		10.647				ND	
92 o-Xylene	106		11.030				ND	
93 Styrene	104		11.049				ND	
94 Bromoform	173		11.231				ND	
99 1,1,2,2-Tetrachloroethane	83		11.706				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

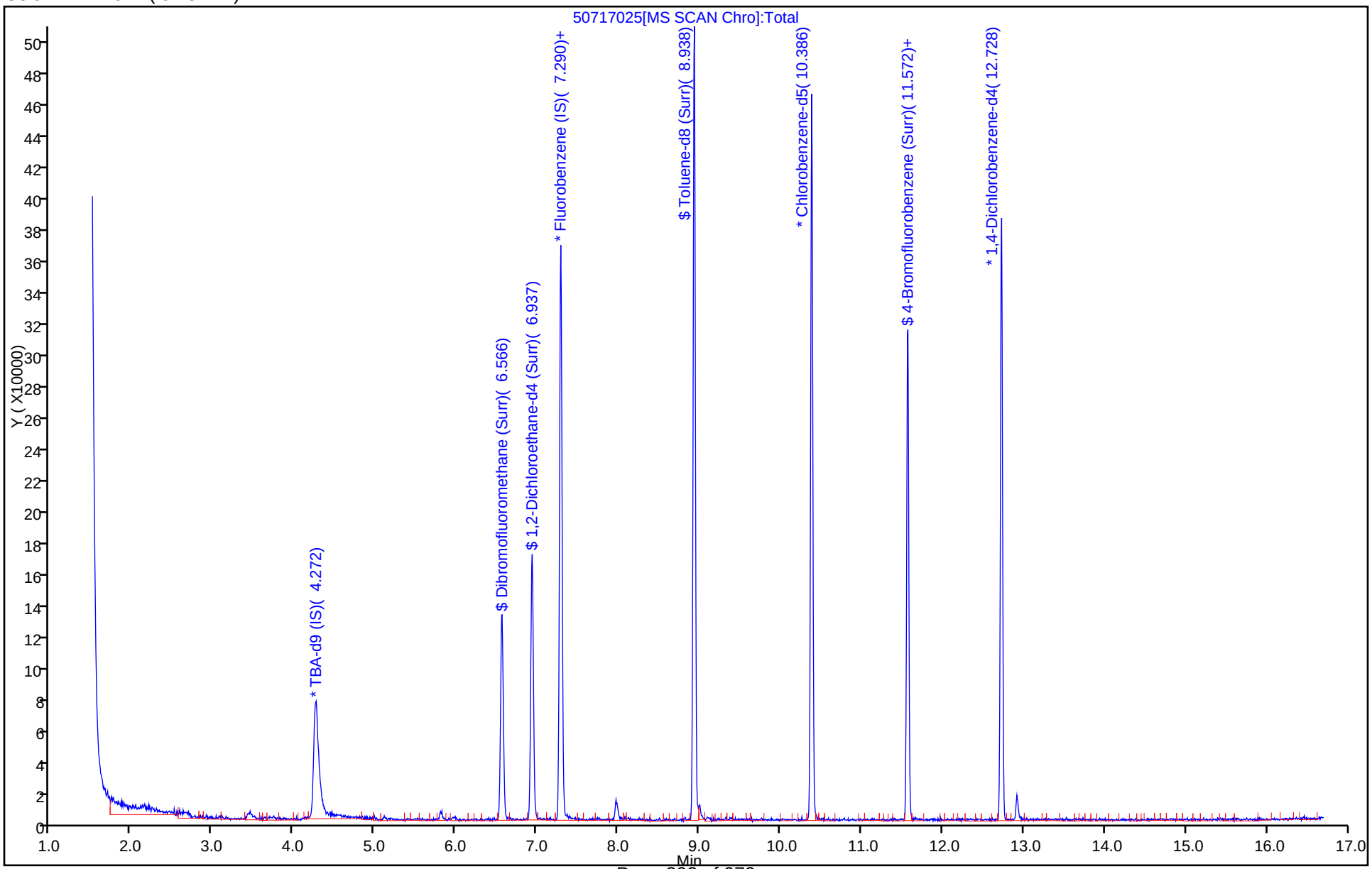
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 20-Jul-2015 08:05:57 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717025.D				
Injection Date:	17-Jul-2015 21:06:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-45946-C-1	Lab Sample ID:	180-45946-1	Worklist Smp#:	25
Client ID:	HD-COD-SW-6-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



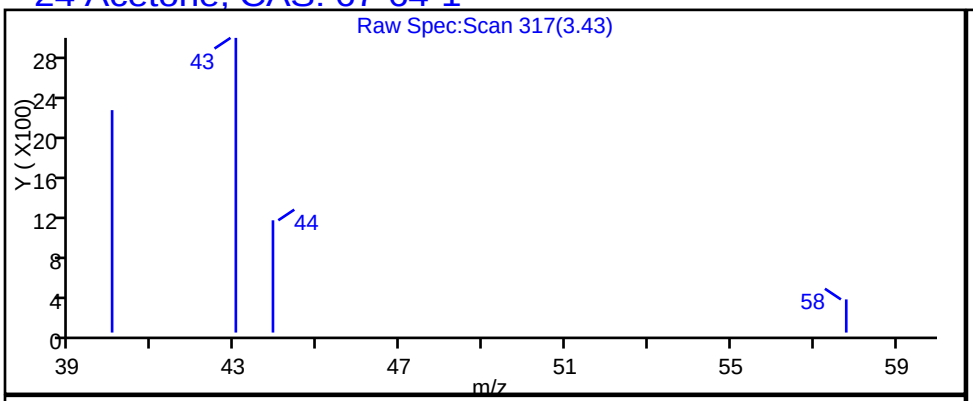
Report Date: 20-Jul-2015 08:05:57 Chrom Revision: 2.2 23-Jun-2015 15:30:48

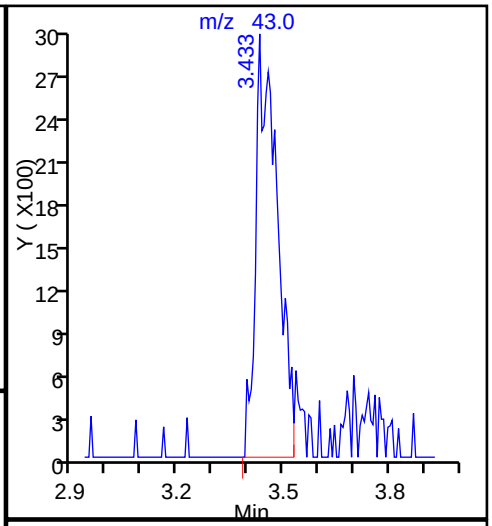
TestAmerica Pittsburgh

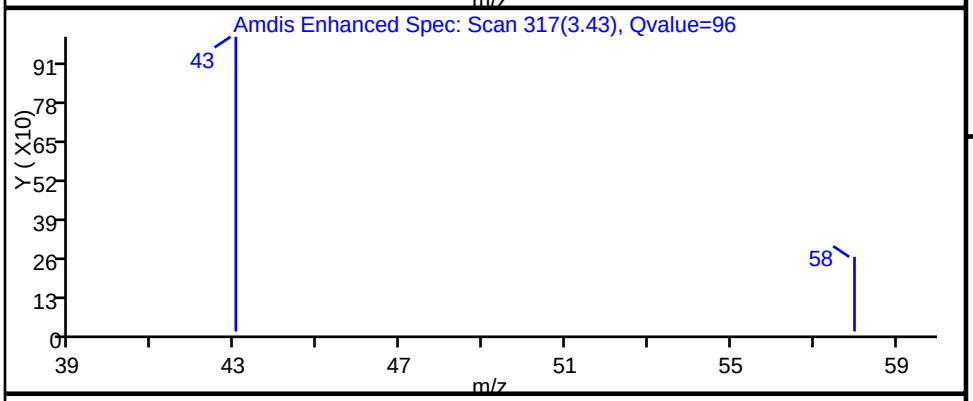
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717025.D

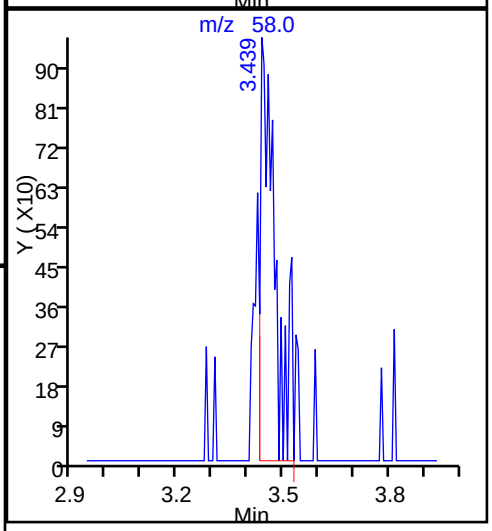
Injection Date:	17-Jul-2015 21:06:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-C-1	Lab Sample ID:	180-45946-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

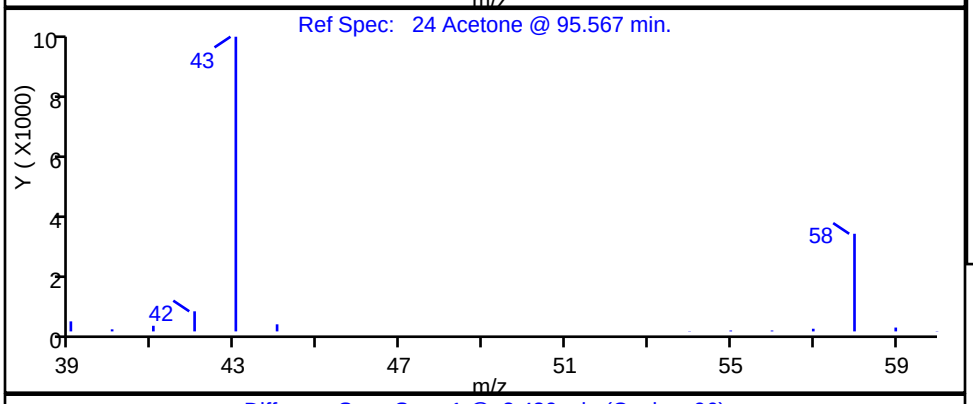
24 Acetone, CAS: 67-64-1

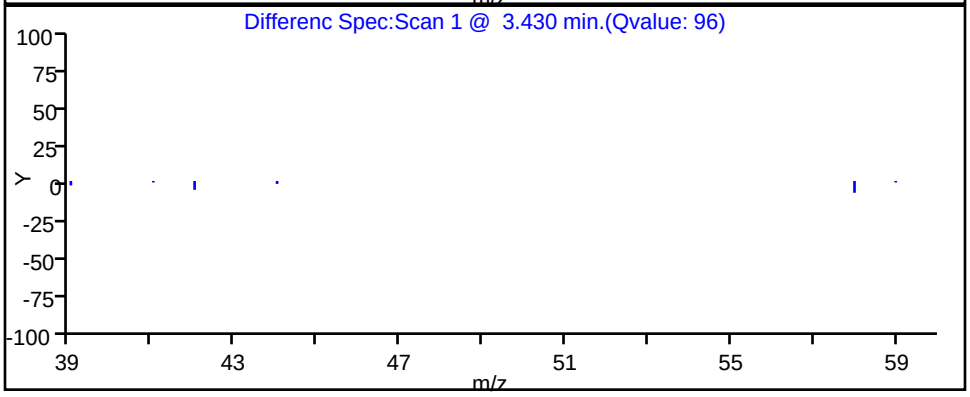












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 | Lab Sample ID: 180-45946-2

Matrix: Water | Lab File ID: 50717026.D

Analysis Method: 8260C | Date Collected: 07/15/2015 11:35

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 21:29

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.: 148055 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 | Lab Sample ID: 180-45946-2

Matrix: Water | Lab File ID: 50717026.D

Analysis Method: 8260C | Date Collected: 07/15/2015 11:35

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 21:29

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.: 148055 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	119		64-135
2037-26-5	Toluene-d8 (Surr)	96		71-118
460-00-4	4-Bromofluorobenzene (Surr)	87		70-118
1868-53-7	Dibromofluoromethane (Surr)	117		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717026.D
Lims ID: 180-45946-C-2 Lab Sample ID: 180-45946-2
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 21:29:30 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-C-2
Misc. Info.: 180-0007815-026
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Jul-2015 08:07:13 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 20-Jul-2015 08:07:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.268	4.263	0.005	0	106224	1000.0	
* 2 Fluorobenzene (IS)	96	7.292	7.292	0.000	98	346700	50.0	
* 3 Chlorobenzene-d5	119	10.388	10.389	-0.001	90	84349	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.725	0.005	98	99672	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.562	6.559	0.003	92	94588	58.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.939	6.930	0.009	0	138531	59.4	
$ 7 Toluene-d8 (Surr)	98	8.934	8.938	-0.004	94	335480	47.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.568	11.572	-0.004	85	112075	43.5	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.264				ND	
16 Chloroethane	64		2.410				ND	
22 1,1-Dichloroethene	96		3.341				ND	
24 Acetone	43	3.453	3.450	0.003	76	6848	11.9	
26 Carbon disulfide	76		3.627				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.521				ND	
34 trans-1,2-Dichloroethene	96		4.564				ND	
35 Methyl tert-butyl ether	73		4.582				ND	
37 1,1-Dichloroethane	63		5.202				ND	
45 cis-1,2-Dichloroethene	96	5.959	5.957	0.002	1	910	0.4115	
46 2-Butanone (MEK)	43		5.957				ND	
49 Chlorobromomethane	128		6.237				ND	
52 Chloroform	83	6.373	6.376	-0.003	1	1359	0.3703	M
53 1,1,1-Trichloroethane	97		6.541				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.942				ND	
59 1,2-Dichloroethane	62		7.015				ND	
64 Trichloroethene	130	7.675	7.678	-0.003	86	1104	0.5351	
67 1,2-Dichloropropane	63		7.946				ND	
70 1,4-Dioxane	88		8.037				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.232				ND	
74 cis-1,3-Dichloropropene	75		8.670				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91	9.001	9.005	-0.003	90	3889	0.4290	
77 trans-1,3-Dichloropropene	75		9.248				ND	
79 1,1,2-Trichloroethane	97		9.443				ND	
80 Tetrachloroethene	164	9.512	9.516	-0.004	17	274	0.1589	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.814				ND	
85 Ethylene Dibromide	107		9.923				ND	
87 Chlorobenzene	112		10.416				ND	
89 1,1,1,2-Tetrachloroethane	131		10.507				ND	
90 Ethylbenzene	106		10.513				ND	
91 m-Xylene & p-Xylene	106		10.647				ND	
92 o-Xylene	106		11.030				ND	
93 Styrene	104		11.049				ND	
94 Bromoform	173		11.231				ND	
99 1,1,2,2-Tetrachloroethane	83		11.706				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

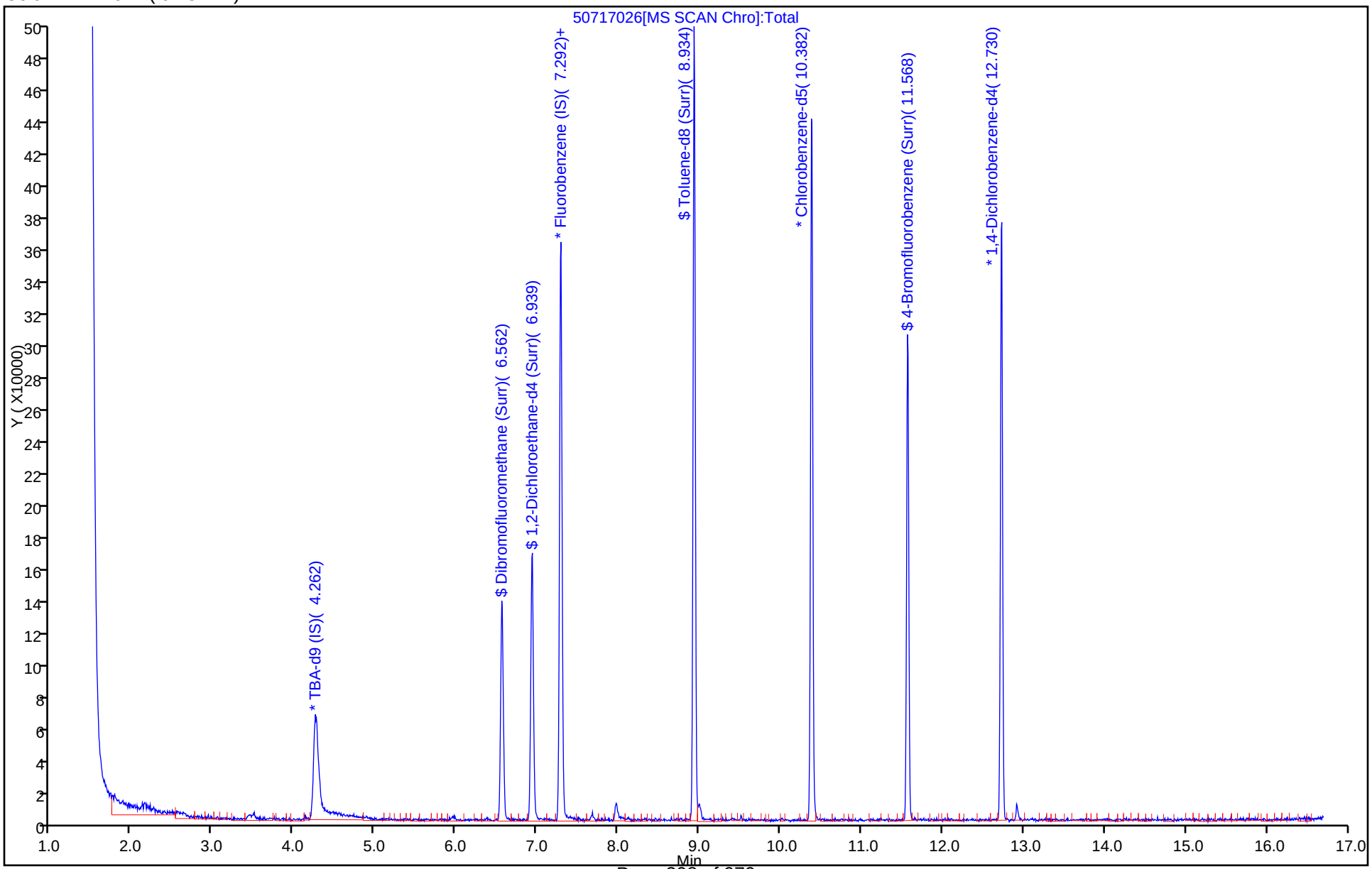
Report Date: 20-Jul-2015 08:07:14 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717026.D

Injection Date:	17-Jul-2015 21:29:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-45946-C-2	Lab Sample ID:	180-45946-2	Worklist Smp#:	26
Client ID:	HD-COD-SW-7-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

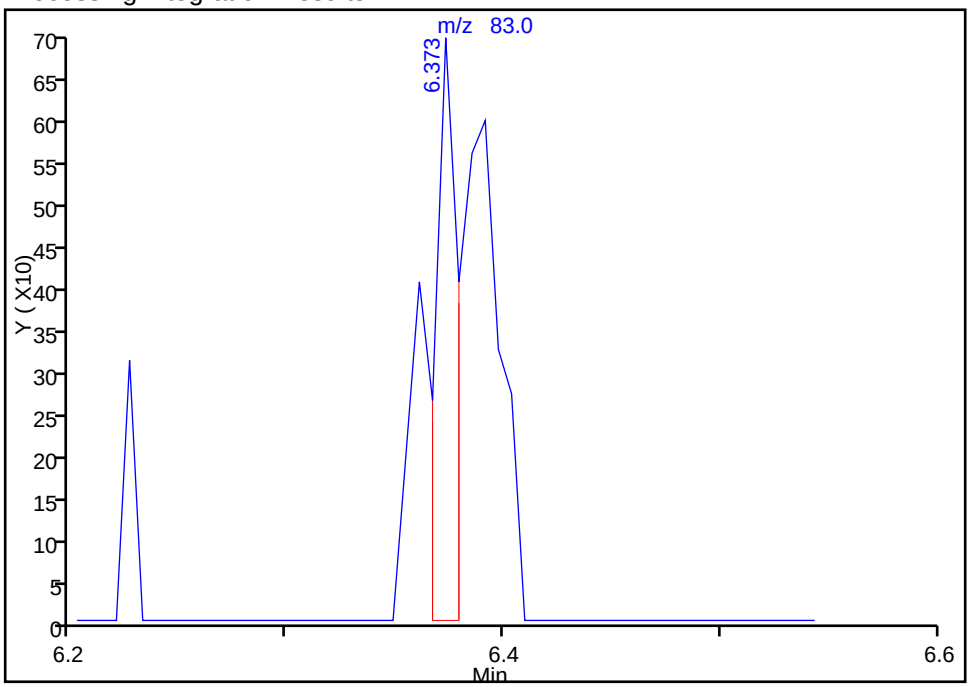
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717026.D				
Injection Date:	17-Jul-2015 21:29:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-C-2	Lab Sample ID:	180-45946-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	001562	ALS Bottle#:	25	Worklist Smp#:	26
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		

52 Chloroform, CAS: 67-66-3

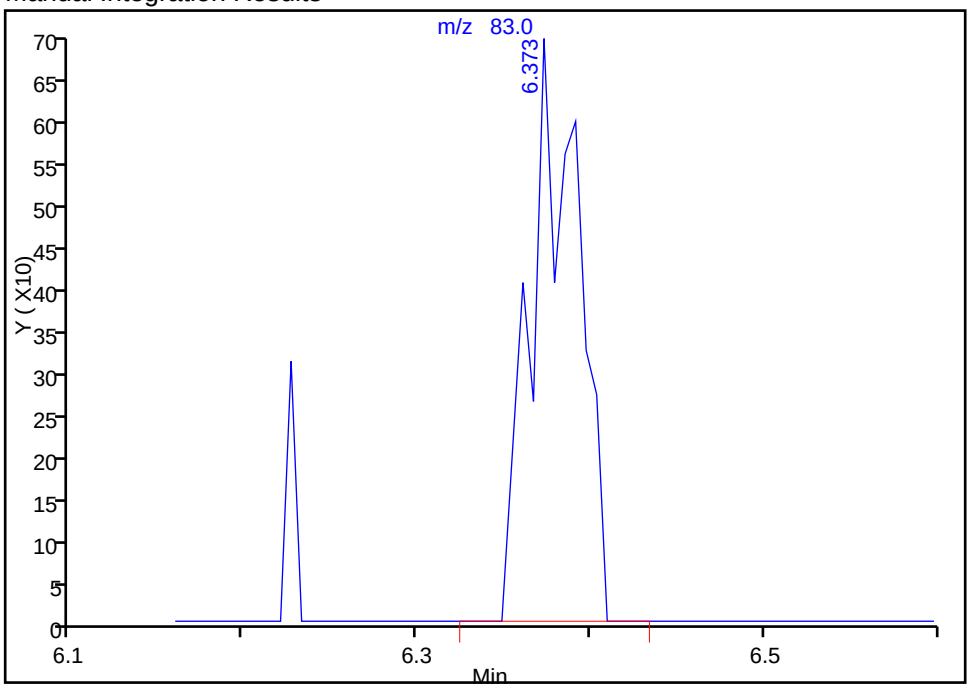
Processing Integration Results

RT: 6.37
Area: 498
Amount: 0.135703
Amount Units: ng



Manual Integration Results

RT: 6.37
Area: 1359
Amount: 0.370323
Amount Units: ng



Reviewer: fergusond, 20-Jul-2015 08:07:13
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 | Lab Sample ID: 180-45946-3

Matrix: Water | Lab File ID: 50717027.D

Analysis Method: 8260C | Date Collected: 07/15/2015 08:55

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 21:53

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.: 148055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	ND		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	3.7	J	5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND		5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	0.15	J	1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	0.16	J	1.0	0.15
591-78-6	2-Hexanone	ND		5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 | Lab Sample ID: 180-45946-3

Matrix: Water | Lab File ID: 50717027.D

Analysis Method: 8260C | Date Collected: 07/15/2015 08:55

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 21:53

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.: 148055 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	121		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	95		70-118
1868-53-7	Dibromofluoromethane (Surr)	117		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717027.D
Lims ID: 180-45946-C-3 Lab Sample ID: 180-45946-3
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 21:53:30 ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-C-3
Misc. Info.: 180-0007815-027
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Jul-2015 08:08:44 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 20-Jul-2015 08:08:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.272	4.263	0.009	0	118322	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.292	-0.003	98	347769	50.0	
* 3 Chlorobenzene-d5	119	10.380	10.389	-0.009	89	84871	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.725	0.003	98	109683	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.559	6.559	0.000	93	95254	58.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.930	0.006	0	142117	60.7	
$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	95	342651	48.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.566	11.572	-0.006	83	123555	47.7	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.264				ND	
16 Chloroethane	64		2.410				ND	
22 1,1-Dichloroethene	96		3.341				ND	
24 Acetone	43	3.463	3.450	0.013	77	10683	18.5	
26 Carbon disulfide	76		3.627				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.521				ND	
34 trans-1,2-Dichloroethene	96		4.564				ND	
35 Methyl tert-butyl ether	73		4.582				ND	
37 1,1-Dichloroethane	63		5.202				ND	
46 2-Butanone (MEK)	43		5.957				ND	
45 cis-1,2-Dichloroethene	96	5.951	5.957	-0.006	78	1661	0.7487	
49 Chlorobromomethane	128		6.237				ND	
52 Chloroform	83	6.383	6.376	0.007	13	853	0.2317	
53 1,1,1-Trichloroethane	97		6.541				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.942				ND	
59 1,2-Dichloroethane	62		7.015				ND	
64 Trichloroethene	130	7.673	7.678	-0.005	86	1580	0.7634	
67 1,2-Dichloropropane	63		7.946				ND	
70 1,4-Dioxane	88		8.037				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.232				ND	
74 cis-1,3-Dichloropropene	75		8.670				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91	9.005	9.005	0.001	86	4816	0.5280	
77 trans-1,3-Dichloropropene	75		9.248				ND	
79 1,1,2-Trichloroethane	97		9.443				ND	
80 Tetrachloroethene	164	9.522	9.516	0.006	90	1392	0.8022	M
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.814				ND	
85 Ethylene Dibromide	107		9.923				ND	
87 Chlorobenzene	112		10.416				ND	
89 1,1,1,2-Tetrachloroethane	131		10.507				ND	
90 Ethylbenzene	106		10.513				ND	
91 m-Xylene & p-Xylene	106		10.647				ND	
92 o-Xylene	106		11.030				ND	
93 Styrene	104		11.049				ND	
94 Bromoform	173		11.231				ND	
99 1,1,2,2-Tetrachloroethane	83		11.706				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

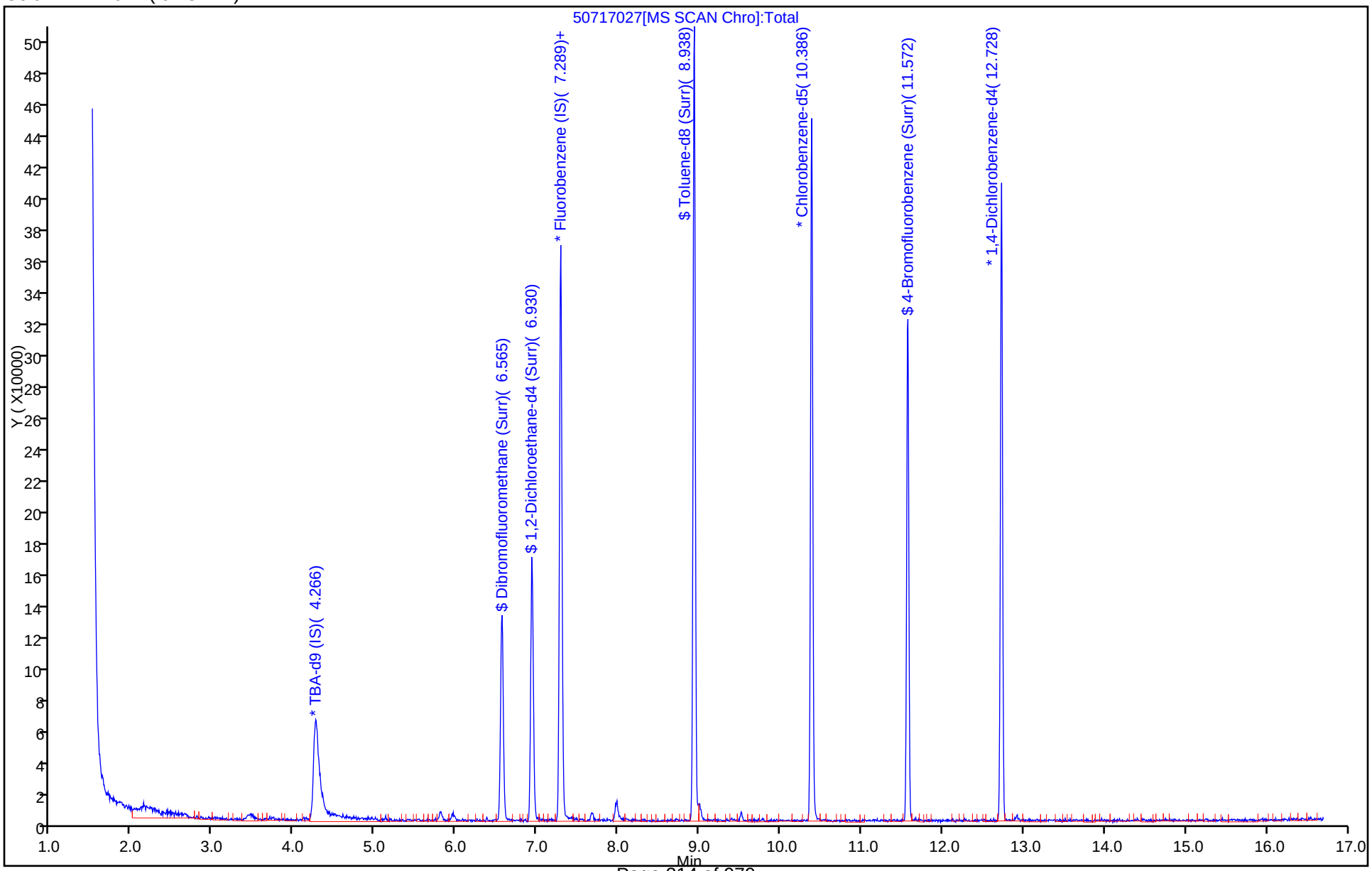
Report Date: 20-Jul-2015 08:08:45 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717027.D

Injection Date:	17-Jul-2015 21:53:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-45946-C-3	Lab Sample ID:	180-45946-3	Worklist Smp#:	27
Client ID:	HD-COD-SW-8-0/1-0				
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)



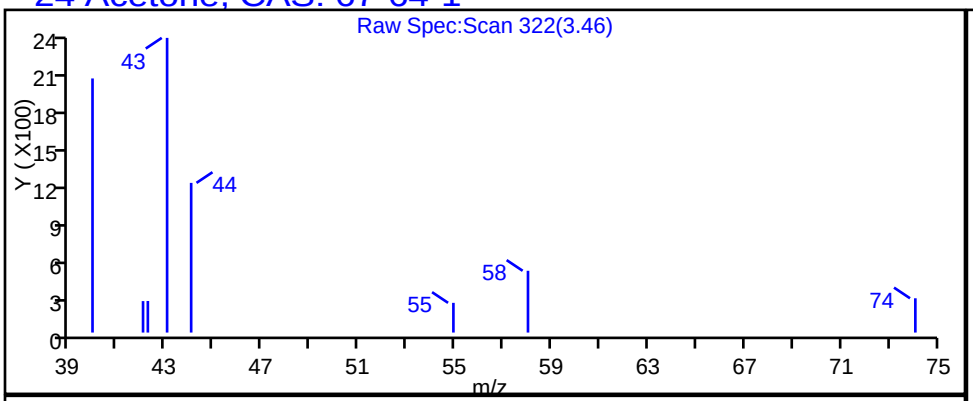
Report Date: 20-Jul-2015 08:08:45 Chrom Revision: 2.2 23-Jun-2015 15:30:48

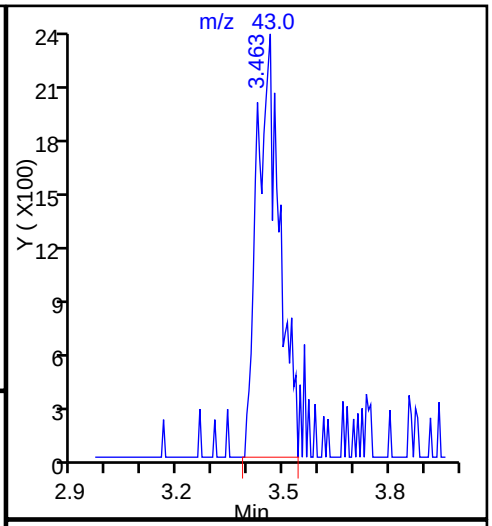
TestAmerica Pittsburgh

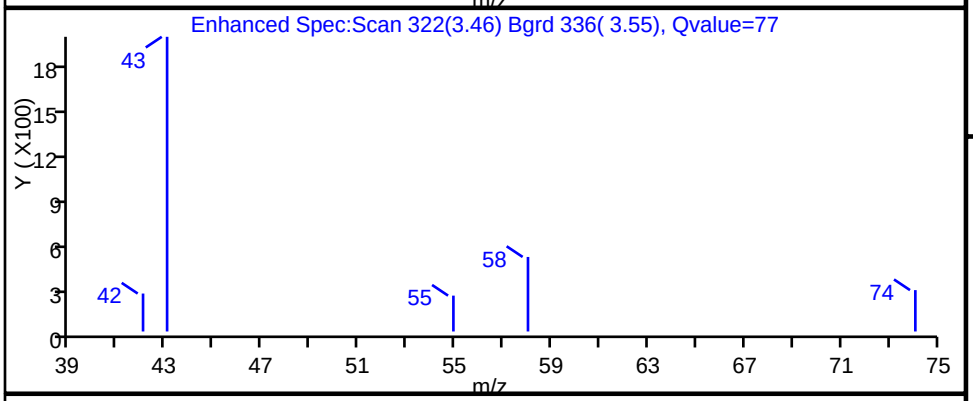
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717027.D

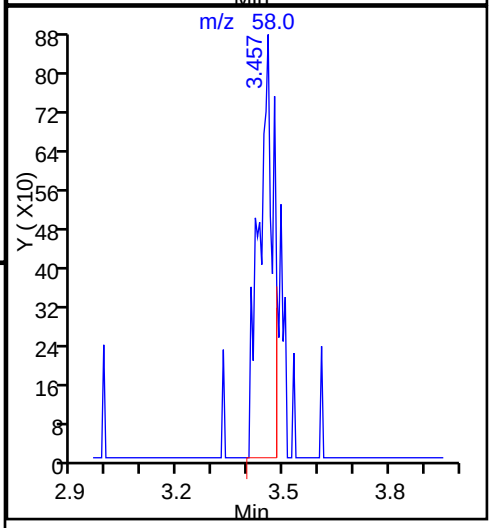
Injection Date:	17-Jul-2015 21:53:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-C-3	Lab Sample ID:	180-45946-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	001562	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

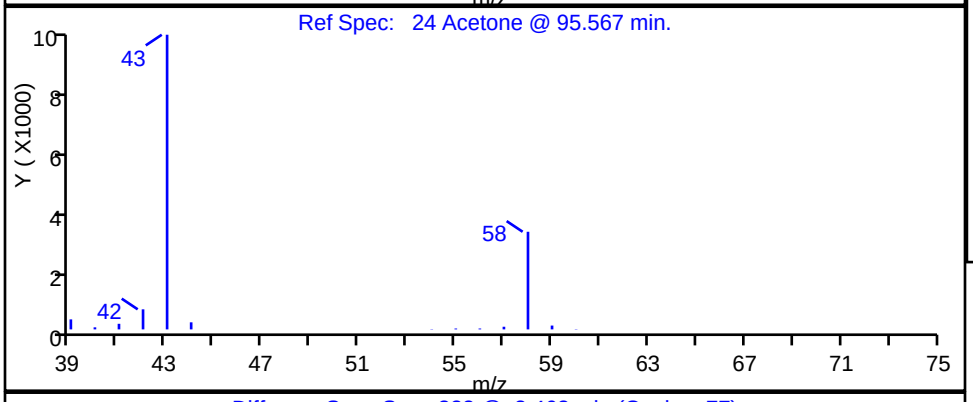
24 Acetone, CAS: 67-64-1

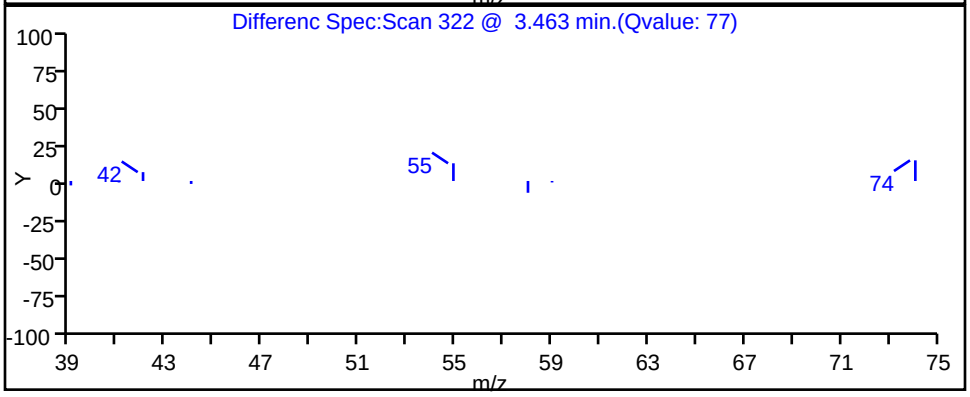












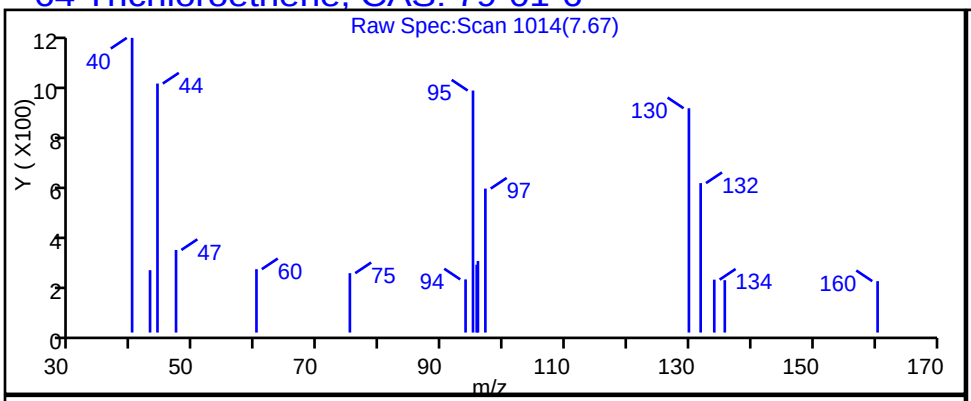
Report Date: 20-Jul-2015 08:08:45 Chrom Revision: 2.2 23-Jun-2015 15:30:48

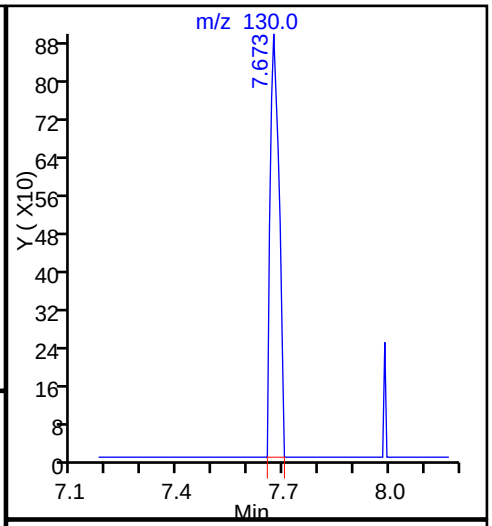
TestAmerica Pittsburgh

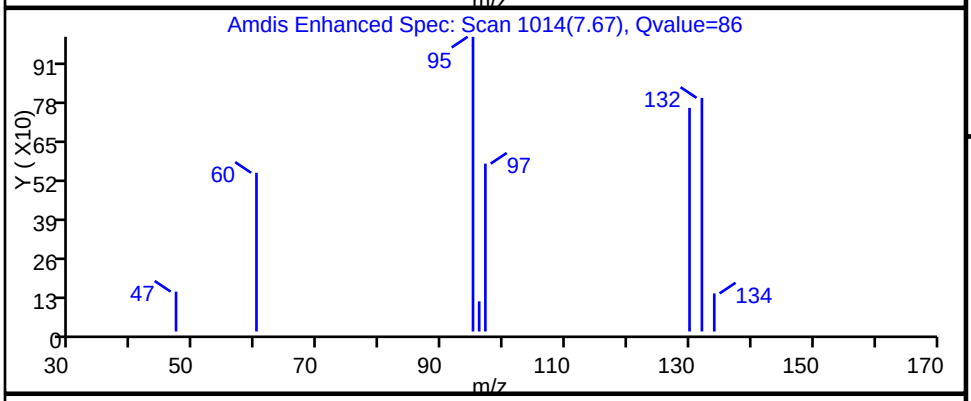
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717027.D

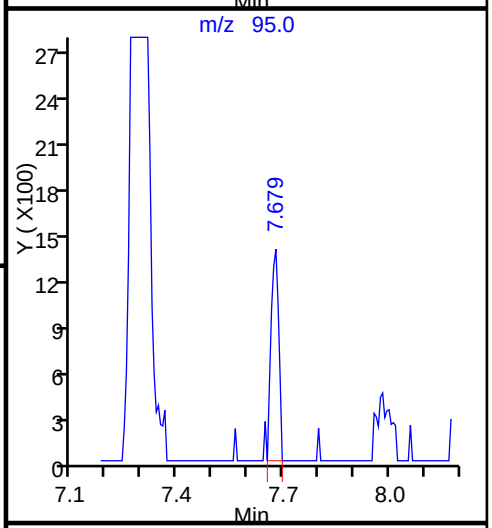
Injection Date:	17-Jul-2015 21:53:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-C-3	Lab Sample ID:	180-45946-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	001562	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

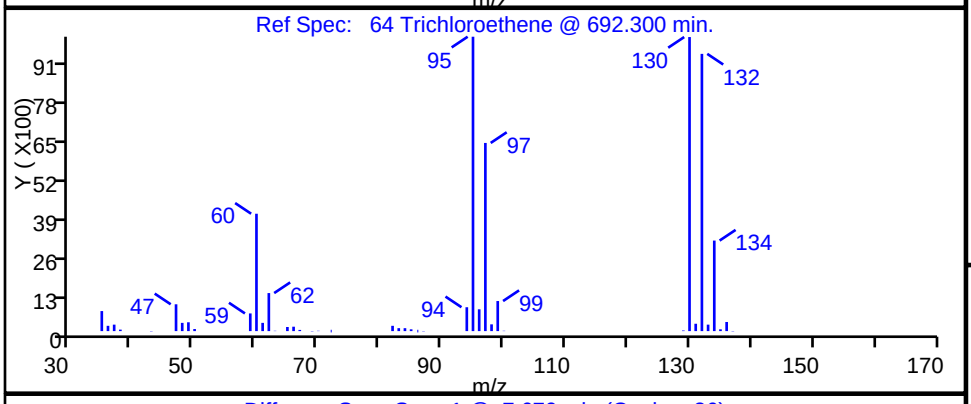
64 Trichloroethene, CAS: 79-01-6

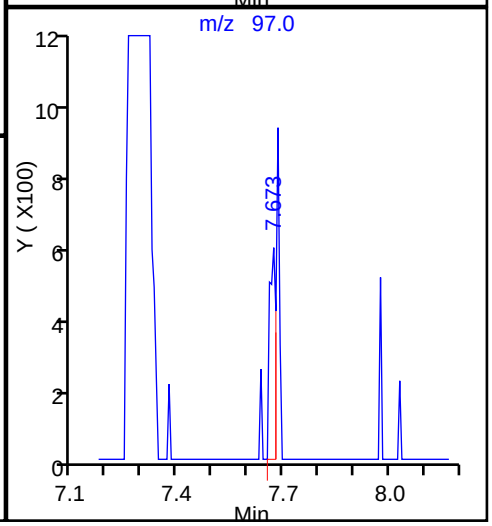


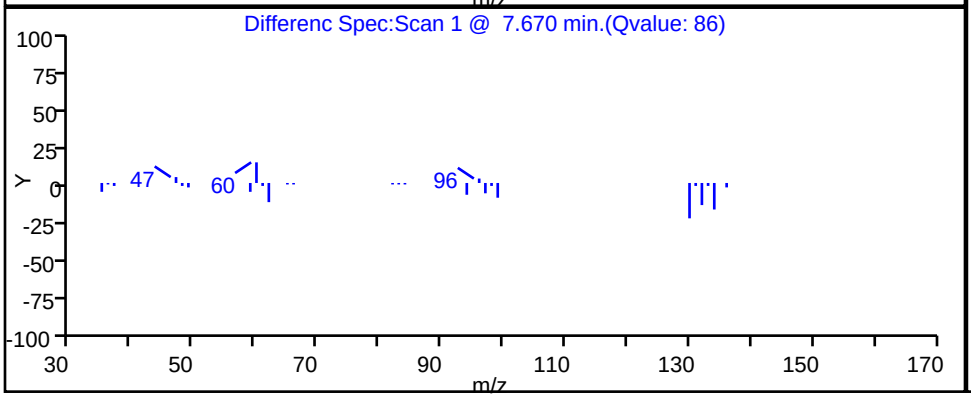












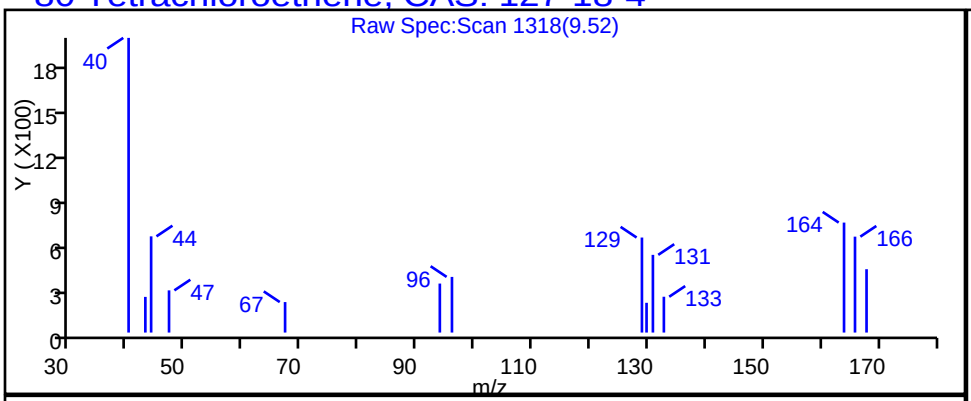
Report Date: 20-Jul-2015 08:08:45 Chrom Revision: 2.2 23-Jun-2015 15:30:48

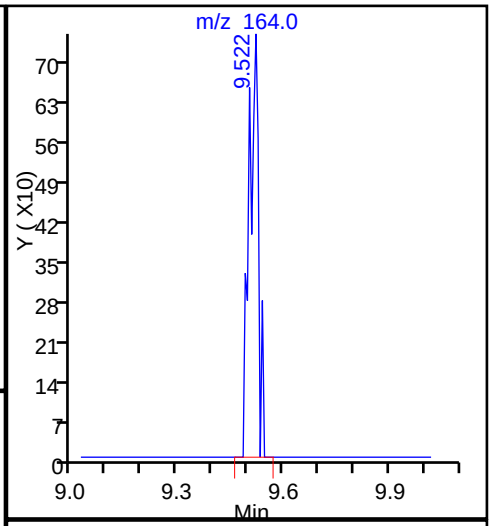
TestAmerica Pittsburgh

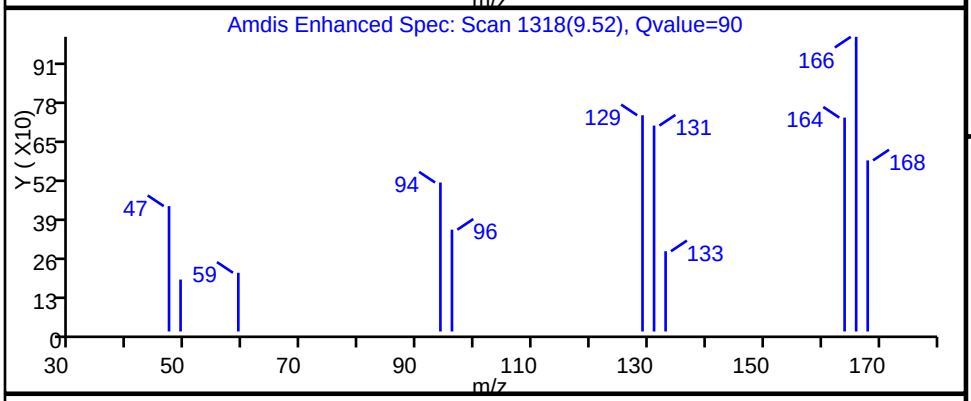
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717027.D

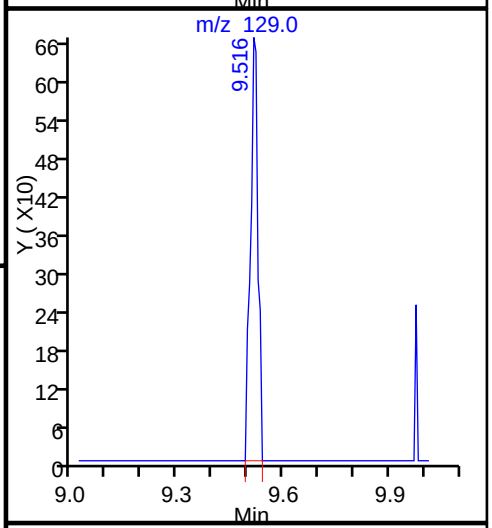
Injection Date:	17-Jul-2015 21:53:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-C-3	Lab Sample ID:	180-45946-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	001562	ALS Bottle#:	26	Worklist Smp#:	27
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

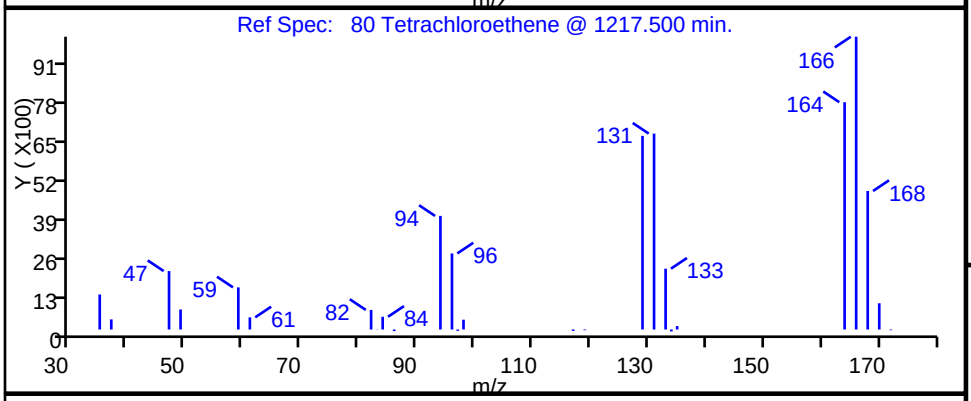
80 Tetrachloroethene, CAS: 127-18-4

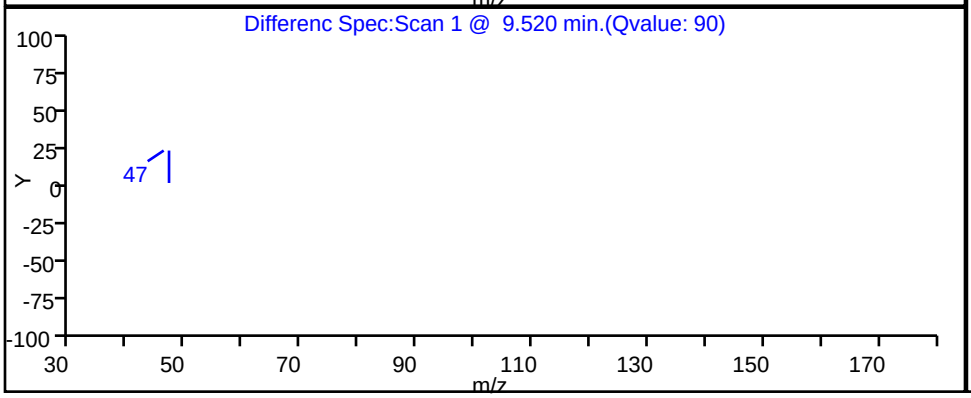


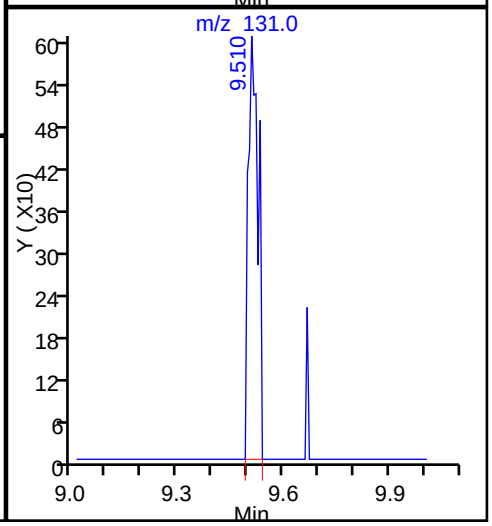












Manual Integration/User Assign Peak Report

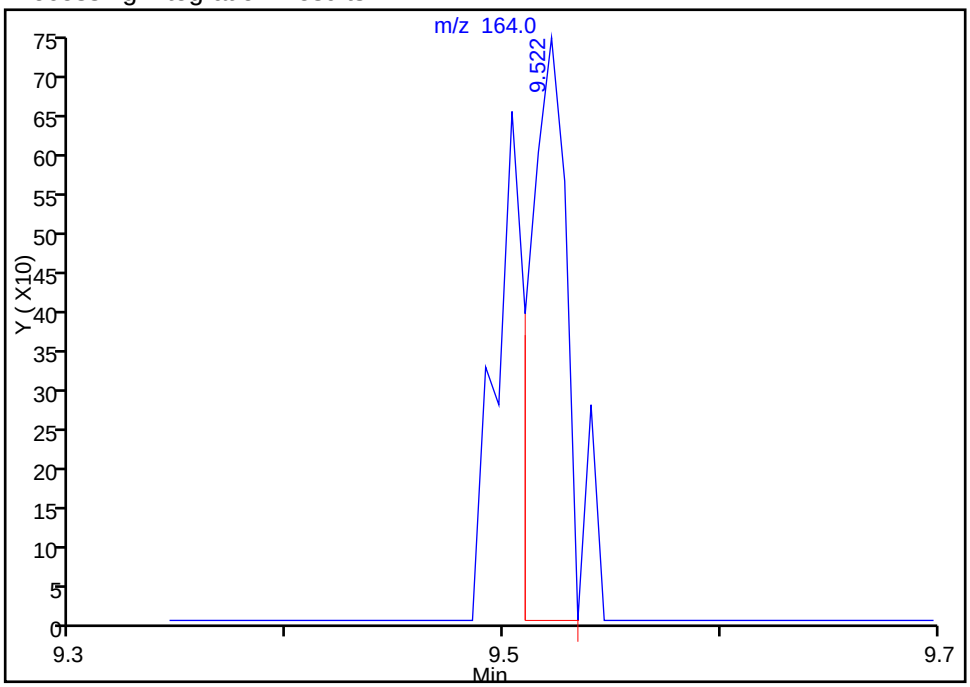
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717027.D				
Injection Date:	17-Jul-2015 21:53:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-C-3	Lab Sample ID:	180-45946-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	001562	ALS Bottle#:	26	Worklist Smp#:	27
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

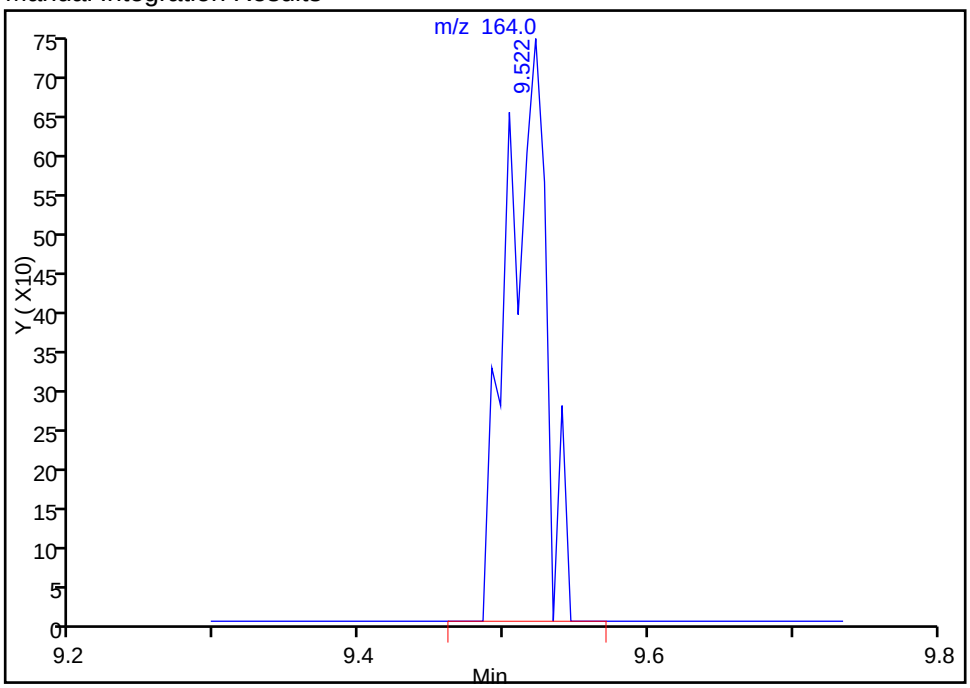
Processing Integration Results

RT: 9.52
Area: 836
Amount: 0.481801
Amount Units: ng



Manual Integration Results

RT: 9.52
Area: 1392
Amount: 0.802233
Amount Units: ng



Reviewer: fergusond, 20-Jul-2015 08:08:44
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 | Lab Sample ID: 180-45946-4

Matrix: Water | Lab File ID: 50717028.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:20

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 22:17

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.: 148055 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 | Lab Sample ID: 180-45946-4

Matrix: Water | Lab File ID: 50717028.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:20

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 22:17

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.: 148055 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	122		64-135
2037-26-5	Toluene-d8 (Surr)	99		71-118
460-00-4	4-Bromofluorobenzene (Surr)	94		70-118
1868-53-7	Dibromofluoromethane (Surr)	119		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717028.D
Lims ID: 180-45946-D-4 Lab Sample ID: 180-45946-4
Client ID: HD-COD-SW-9-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 22:17:30 ALS Bottle#: 27 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-D-4
Misc. Info.: 180-0007815-028
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Jul-2015 08:10:13 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 20-Jul-2015 08:10:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.265	4.263	0.002	0	116005	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.292	-0.003	97	345171	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.389	-0.004	90	82812	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.727	12.725	0.002	98	103388	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.565	6.559	0.006	93	96132	59.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.930	0.006	0	141895	61.1	
$ 7 Toluene-d8 (Surr)	98	8.937	8.938	-0.001	95	339116	49.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.571	11.572	-0.001	85	118524	46.9	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.264				ND	
16 Chloroethane	64		2.410				ND	
22 1,1-Dichloroethene	96		3.341				ND	
24 Acetone	43	3.444	3.450	-0.006	83	6911	12.1	
26 Carbon disulfide	76		3.627				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.521				ND	
34 trans-1,2-Dichloroethene	96		4.564				ND	
35 Methyl tert-butyl ether	73		4.582				ND	
37 1,1-Dichloroethane	63		5.202				ND	
46 2-Butanone (MEK)	43		5.957				ND	
45 cis-1,2-Dichloroethene	96	5.950	5.957	-0.007	79	3094	1.41	
49 Chlorobromomethane	128		6.237				ND	
52 Chloroform	83	6.388	6.376	0.012	0	1889	0.5170	M
53 1,1,1-Trichloroethane	97		6.541				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.942				ND	
59 1,2-Dichloroethane	62		7.015				ND	
64 Trichloroethene	130	7.678	7.678	0.000	88	2894	1.41	M
67 1,2-Dichloropropane	63		7.946				ND	
70 1,4-Dioxane	88		8.037				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.232				ND	
74 cis-1,3-Dichloropropene	75		8.670				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91	9.004	9.005	0.000	98	7110	0.7988	
77 trans-1,3-Dichloropropene	75		9.248				ND	
79 1,1,2-Trichloroethane	97		9.443				ND	
80 Tetrachloroethene	164	9.515	9.516	-0.001	85	1288	0.7608	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.814				ND	
85 Ethylene Dibromide	107		9.923				ND	
87 Chlorobenzene	112		10.416				ND	
89 1,1,1,2-Tetrachloroethane	131		10.507				ND	
90 Ethylbenzene	106		10.513				ND	
91 m-Xylene & p-Xylene	106		10.647				ND	
92 o-Xylene	106		11.030				ND	
93 Styrene	104		11.049				ND	
94 Bromoform	173		11.231				ND	
99 1,1,2,2-Tetrachloroethane	83		11.706				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

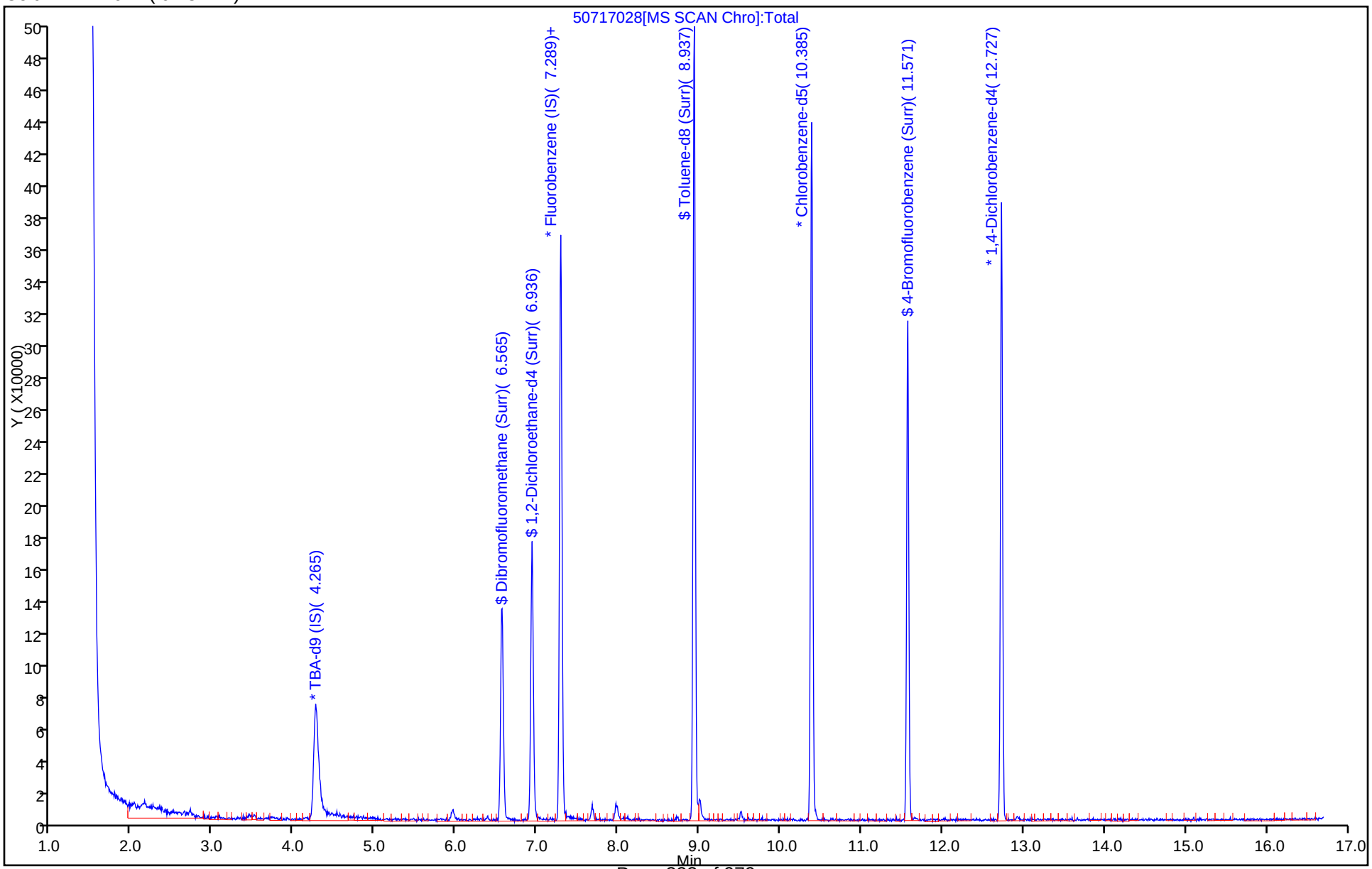
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 20-Jul-2015 08:10:14 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717028.D				
Injection Date:	17-Jul-2015 22:17:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-45946-D-4	Lab Sample ID:	180-45946-4	Worklist Smp#:	28
Client ID:	HD-COD-SW-9-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

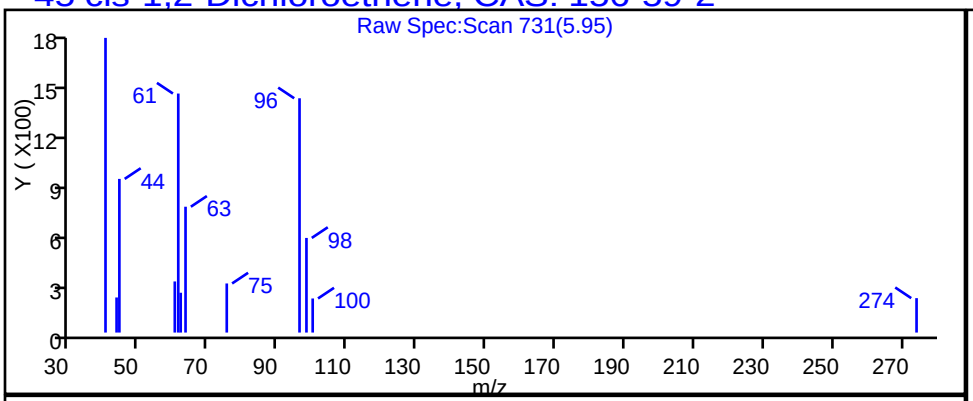


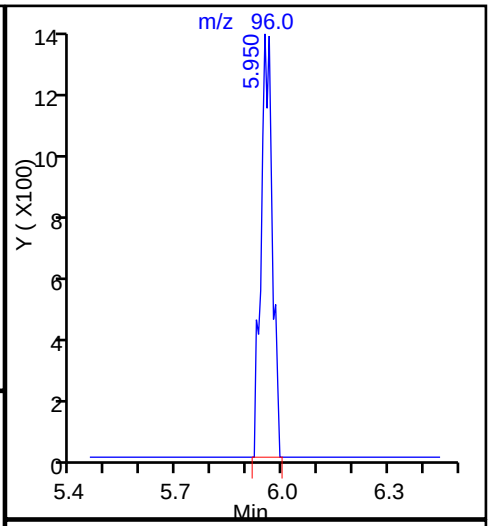
Report Date: 20-Jul-2015 08:10:14 Chrom Revision: 2.2 23-Jun-2015 15:30:48

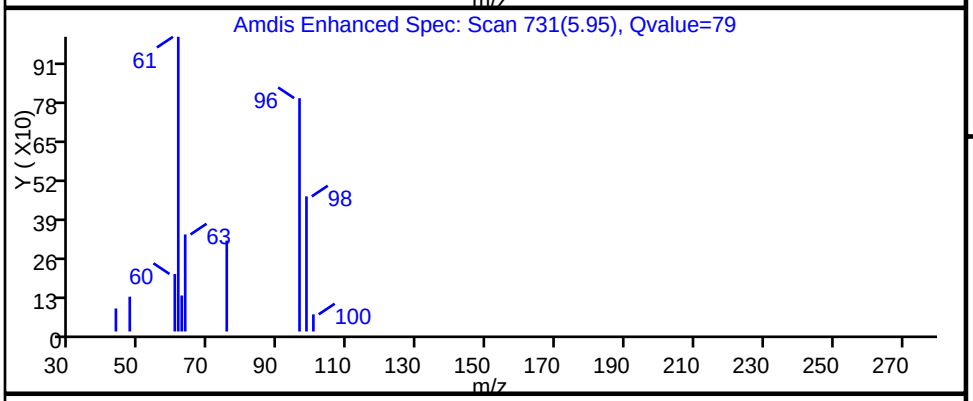
TestAmerica Pittsburgh

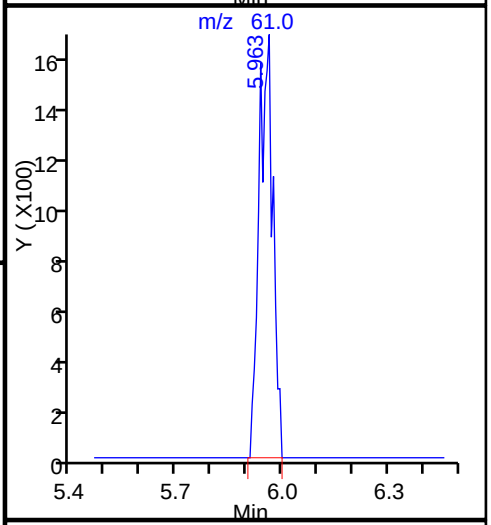
Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717028.D				
Injection Date:	17-Jul-2015 22:17:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-D-4	Lab Sample ID:	180-45946-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	001562	ALS Bottle#:	27	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

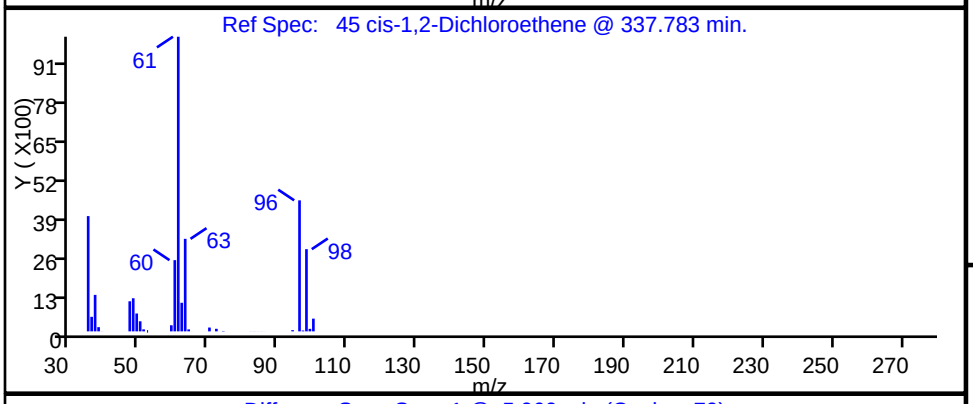
45 cis-1,2-Dichloroethene, CAS: 156-59-2

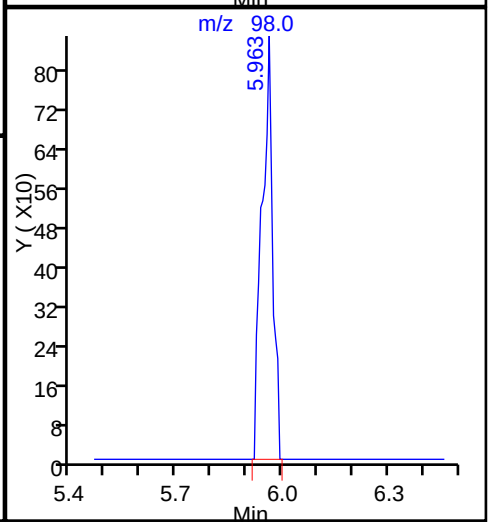


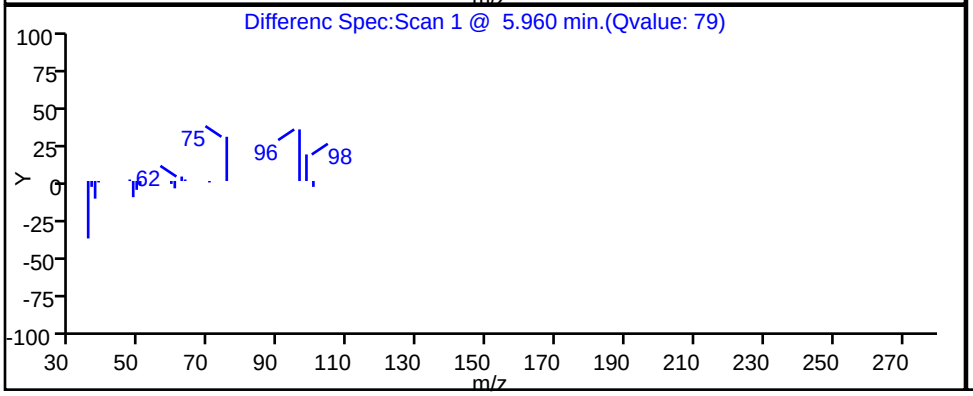












Report Date: 20-Jul-2015 08:10:14 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717028.D

Injection Date: 17-Jul-2015 22:17:30 Instrument ID: CHHP5

Lims ID: 180-45946-D-4 Lab Sample ID: 180-45946-4

Client ID: HD-COD-SW-9-0/1-0

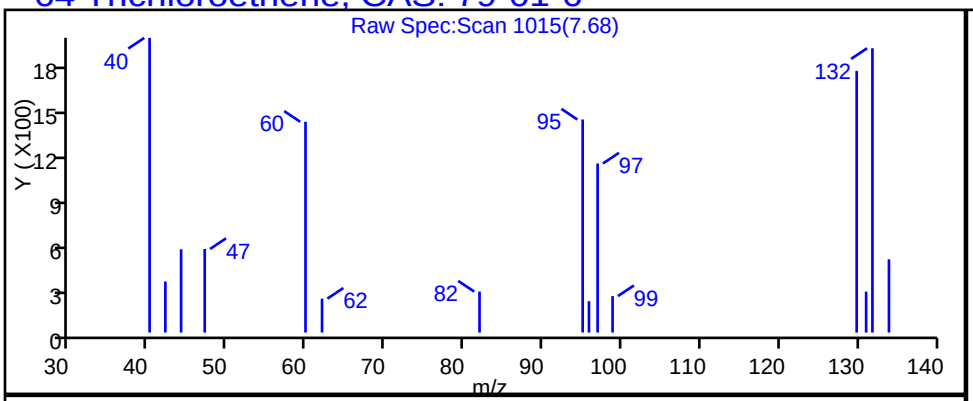
Operator ID: 001562 ALS Bottle#: 27 Worklist Smp#: 28

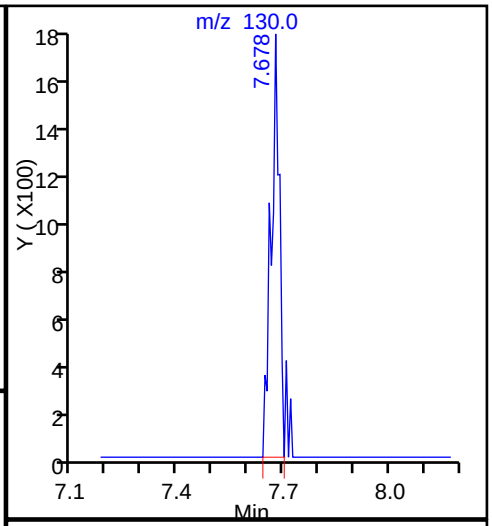
Purge Vol: 5.000 mL Dil. Factor: 1.0000

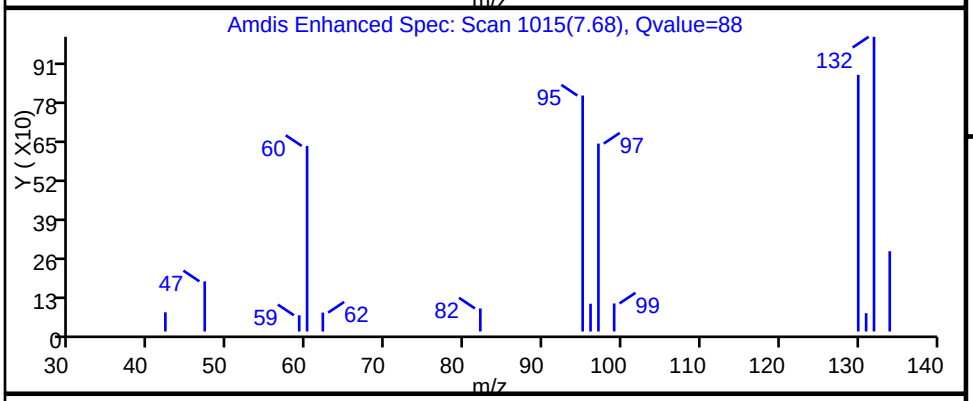
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

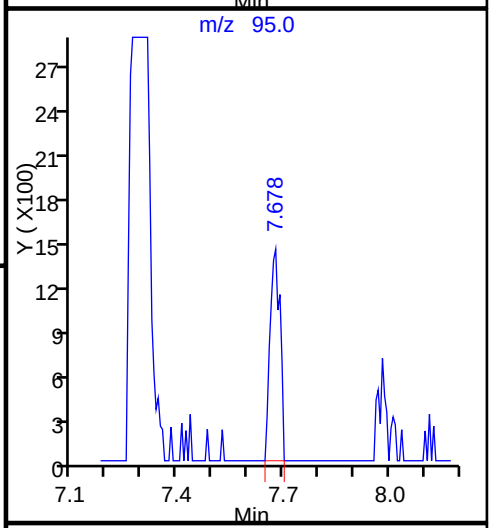
Column: DB-624 (0.18 mm) Detector MS SCAN

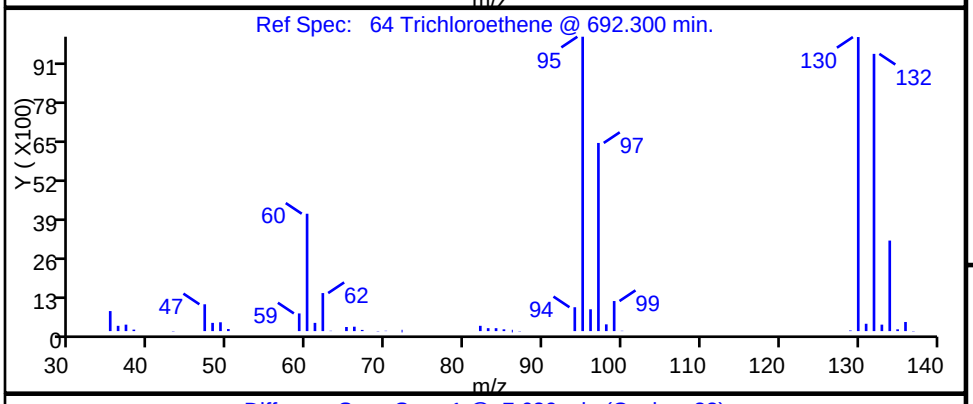
64 Trichloroethene, CAS: 79-01-6

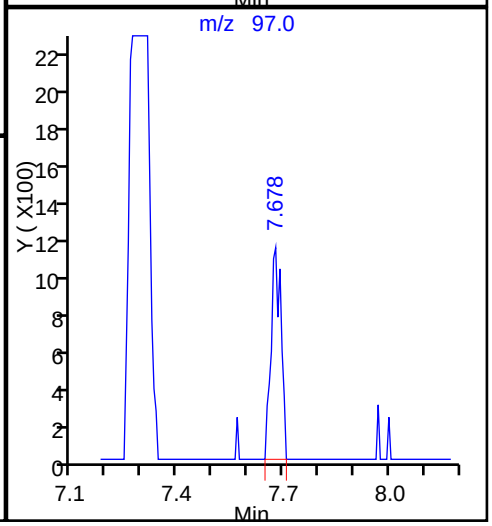


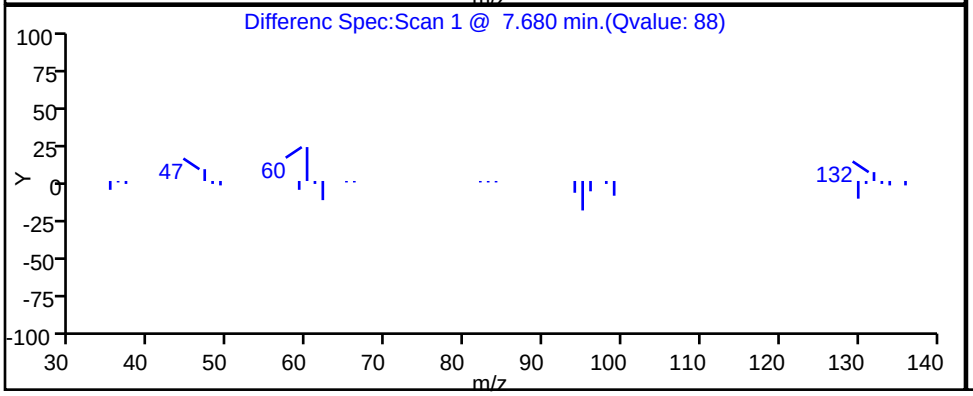












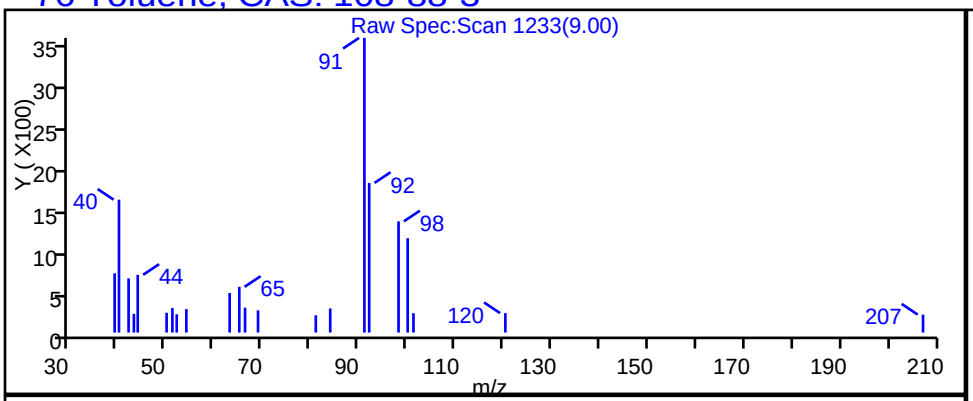
Report Date: 20-Jul-2015 08:10:14 Chrom Revision: 2.2 23-Jun-2015 15:30:48

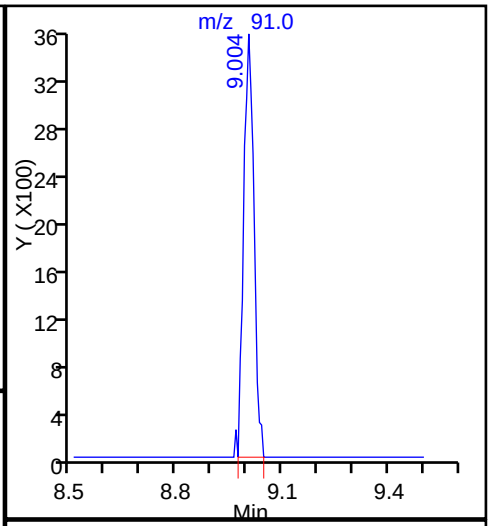
TestAmerica Pittsburgh

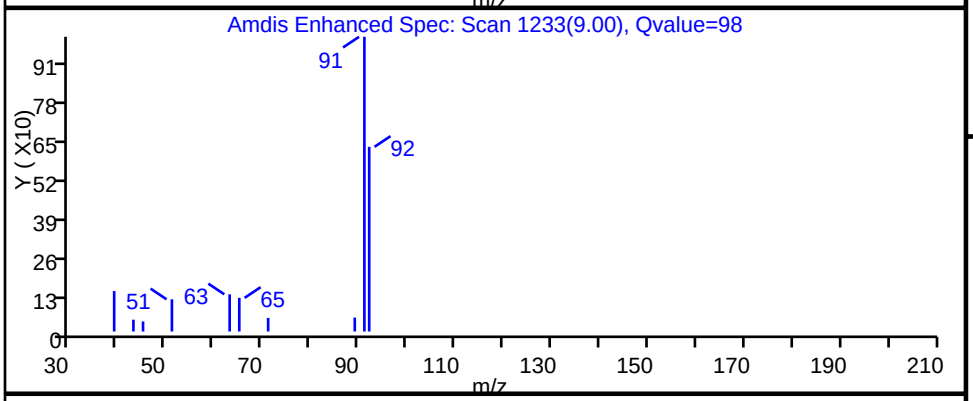
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717028.D

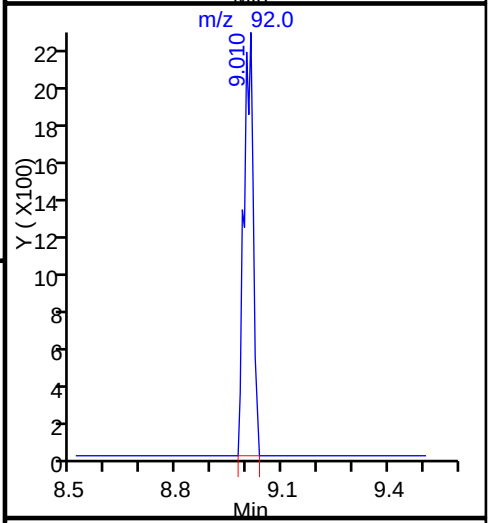
Injection Date:	17-Jul-2015 22:17:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-D-4	Lab Sample ID:	180-45946-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	001562	ALS Bottle#:	27	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

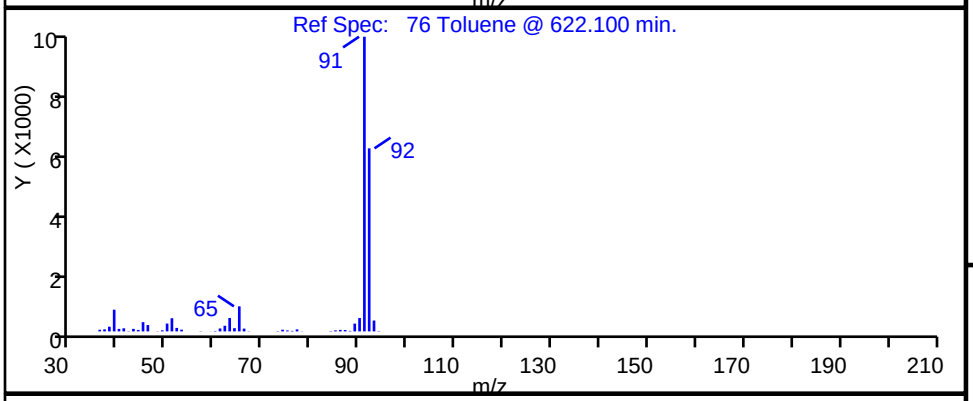
76 Toluene, CAS: 108-88-3

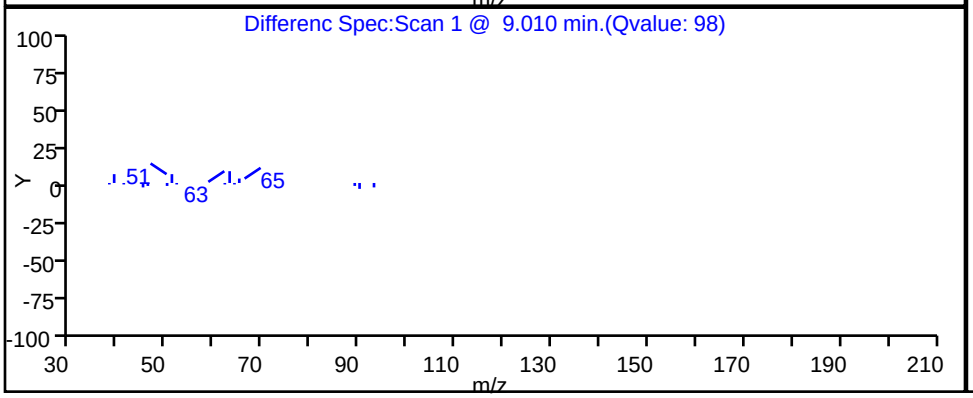


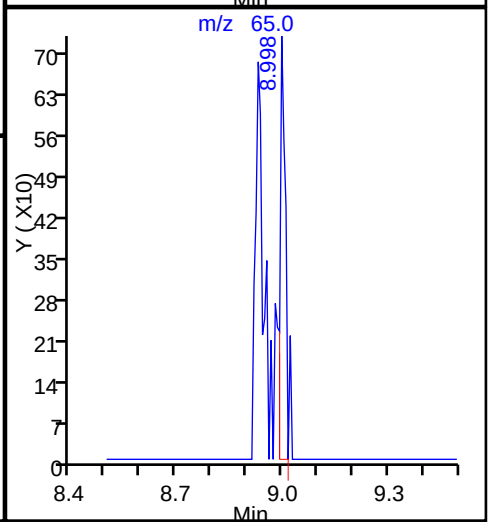












Report Date: 20-Jul-2015 08:10:14 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717028.D

Injection Date: 17-Jul-2015 22:17:30 Instrument ID: CHHP5

Lims ID: 180-45946-D-4 Lab Sample ID: 180-45946-4

Client ID: HD-COD-SW-9-0/1-0

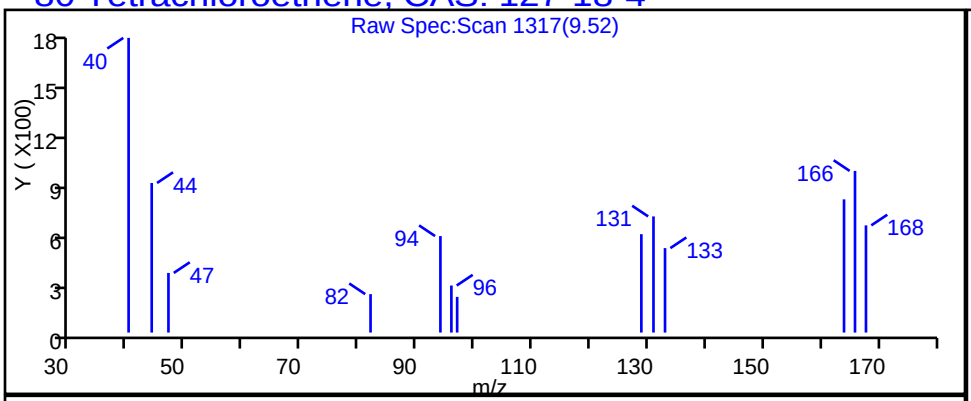
Operator ID: 001562 ALS Bottle#: 27 Worklist Smp#: 28

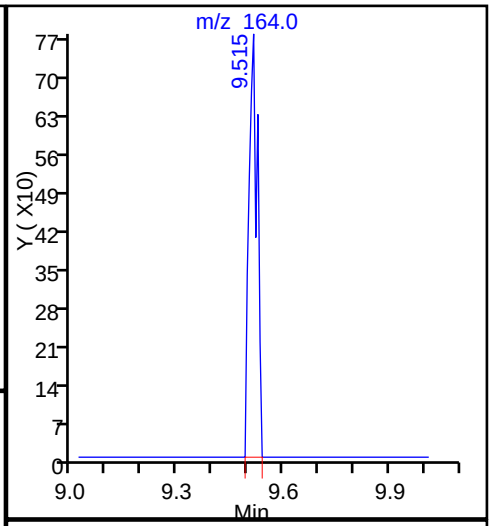
Purge Vol: 5.000 mL Dil. Factor: 1.0000

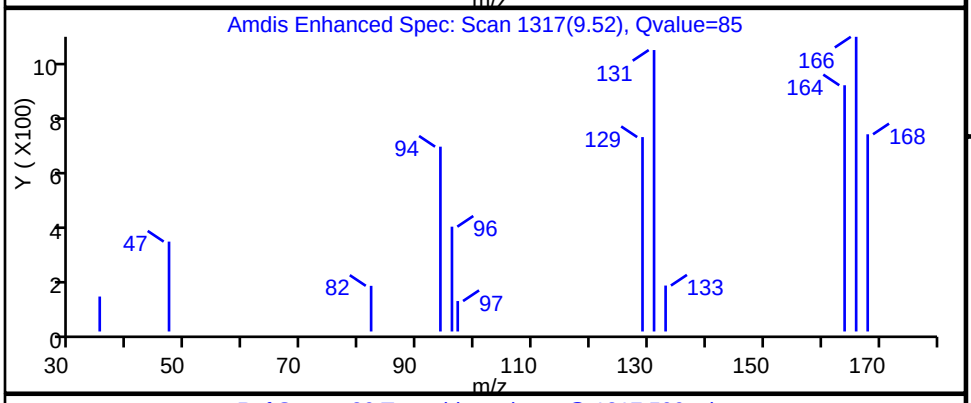
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

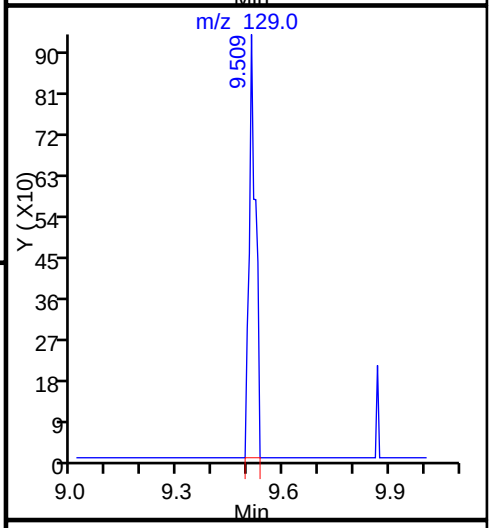
Column: DB-624 (0.18 mm) Detector MS SCAN

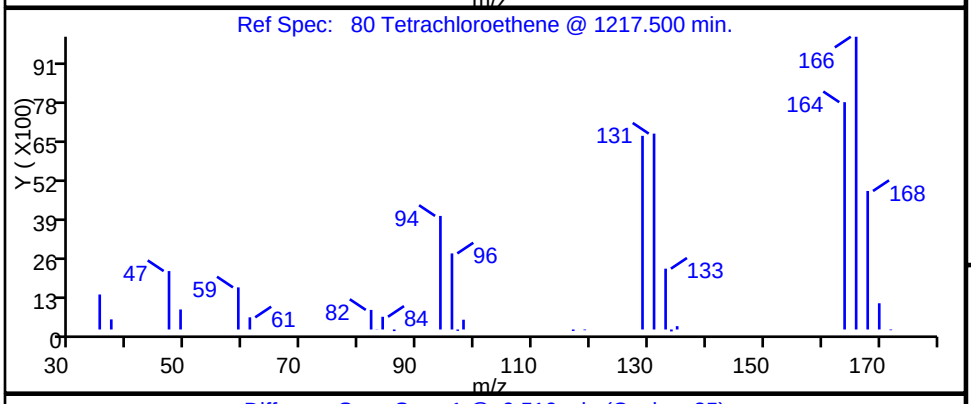
80 Tetrachloroethene, CAS: 127-18-4

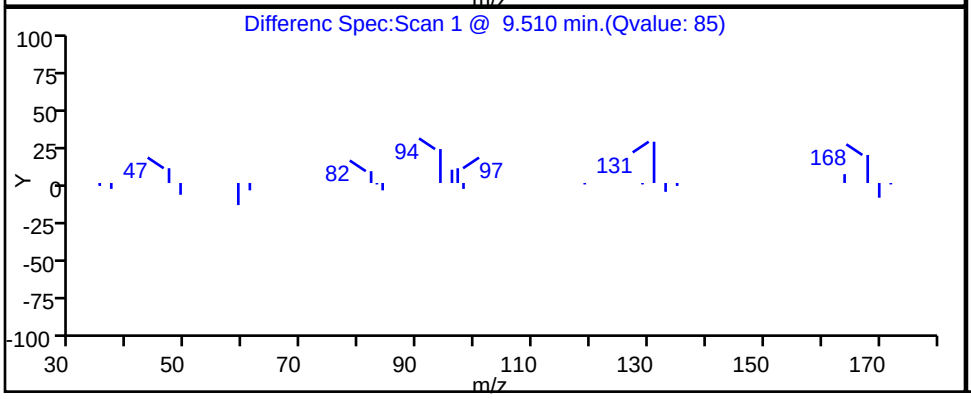


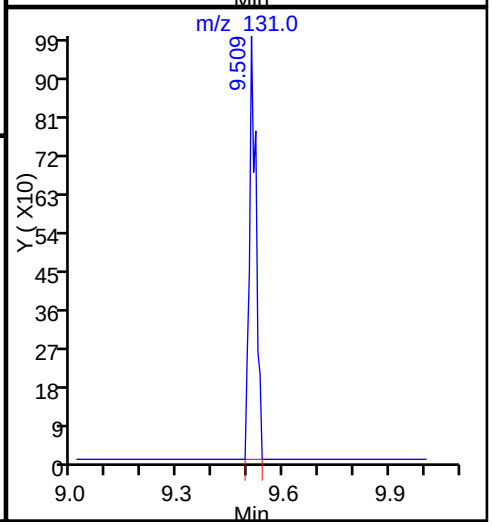












Manual Integration/User Assign Peak Report

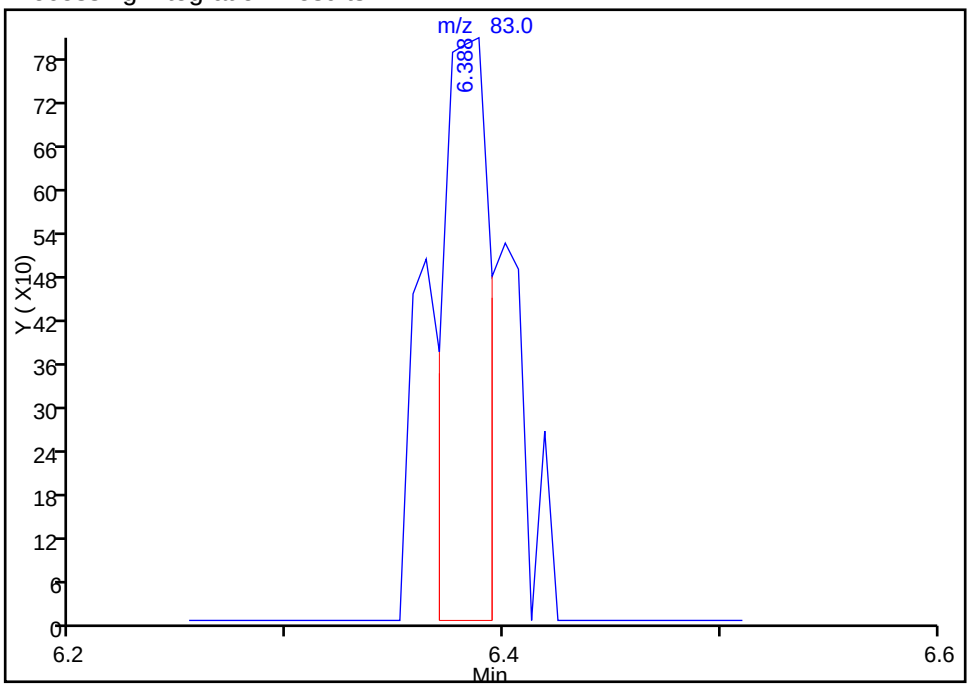
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717028.D				
Injection Date:	17-Jul-2015 22:17:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-D-4	Lab Sample ID:	180-45946-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	001562	ALS Bottle#:	27	Worklist Smp#:	28
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		

52 Chloroform, CAS: 67-66-3

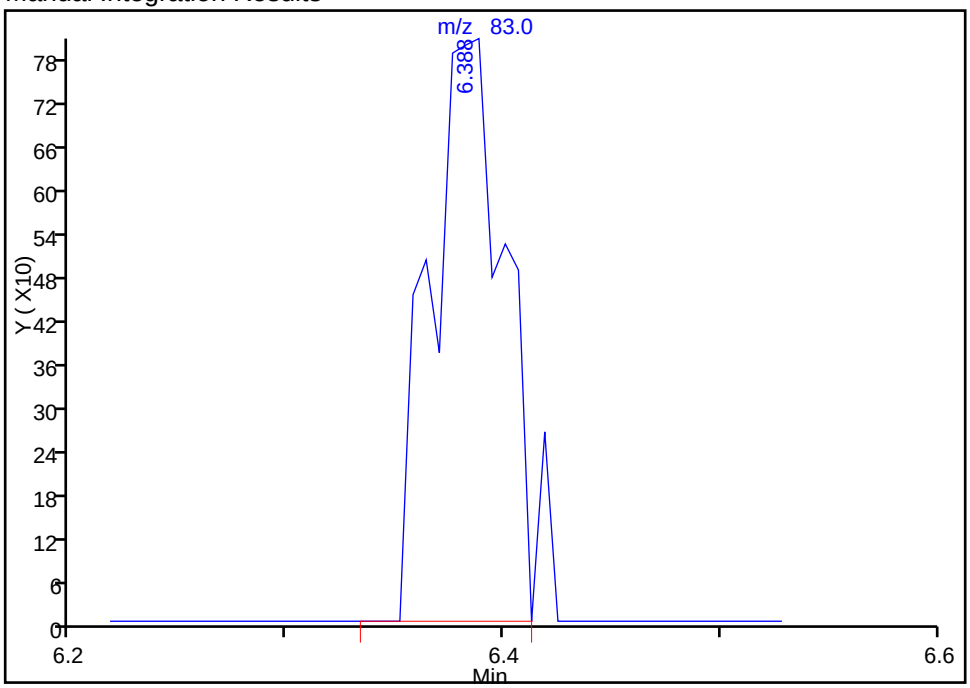
Processing Integration Results

RT: 6.39
Area: 1178
Amount: 0.322423
Amount Units: ng



Manual Integration Results

RT: 6.39
Area: 1889
Amount: 0.517026
Amount Units: ng



Reviewer: fergusond, 20-Jul-2015 08:10:13
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

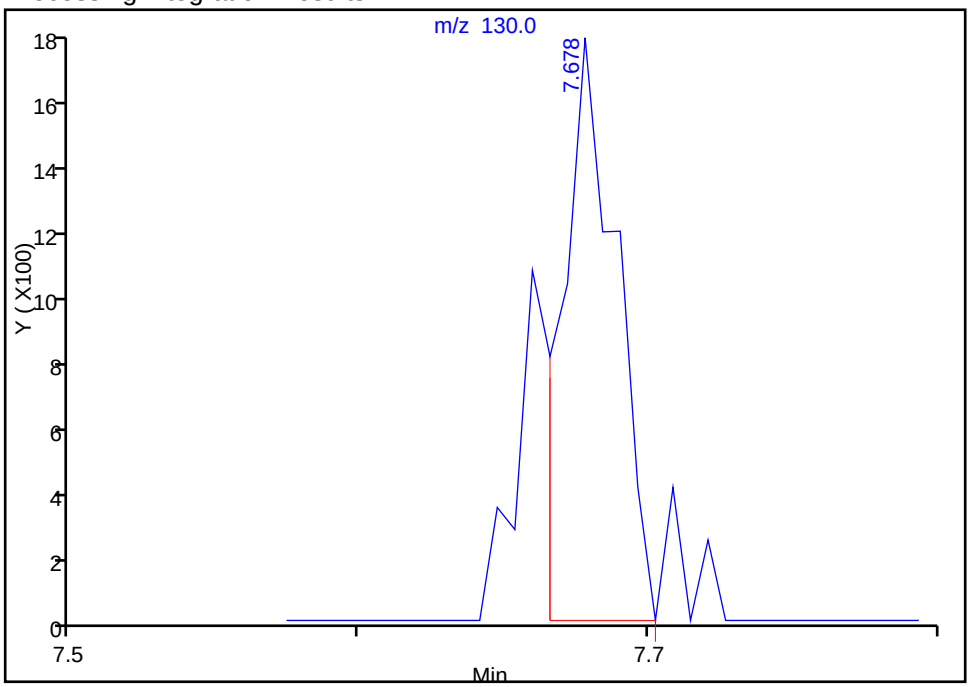
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717028.D				
Injection Date:	17-Jul-2015 22:17:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-D-4	Lab Sample ID:	180-45946-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	001562	ALS Bottle#:	27	Worklist Smp#:	28
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

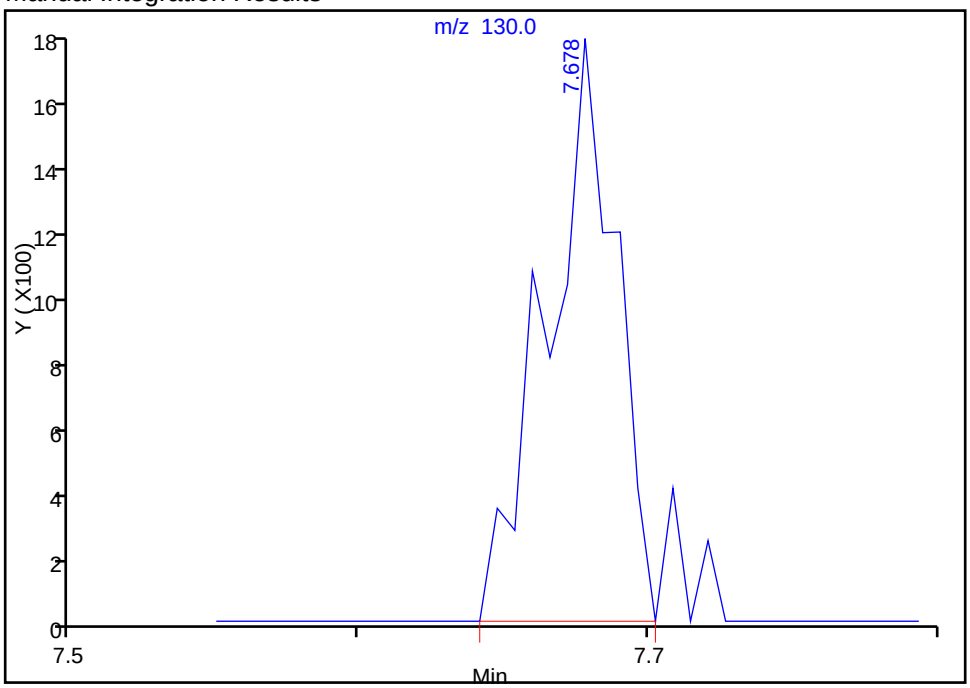
Processing Integration Results

RT: 7.68
Area: 2289
Amount: 1.114357
Amount Units: ng



Manual Integration Results

RT: 7.68
Area: 2894
Amount: 1.408890
Amount Units: ng



Reviewer: fergusond, 20-Jul-2015 08:10:13
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-10-0/1-0 | Lab Sample ID: 180-45946-5

Matrix: Water | Lab File ID: 50717029.D

Analysis Method: 8260C | Date Collected: 07/15/2015 09:35

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 22:40

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.: 148055 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-10-0/1-0 | Lab Sample ID: 180-45946-5

Matrix: Water | Lab File ID: 50717029.D

Analysis Method: 8260C | Date Collected: 07/15/2015 09:35

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 22:40

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.: 148055 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	122		64-135
2037-26-5	Toluene-d8 (Surr)	102		71-118
460-00-4	4-Bromofluorobenzene (Surr)	100		70-118
1868-53-7	Dibromofluoromethane (Surr)	120		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717029.D
Lims ID: 180-45946-D-5 Lab Sample ID: 180-45946-5
Client ID: HD-COD-SW-10-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 22:40:30 ALS Bottle#: 28 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-D-5
Misc. Info.: 180-0007815-029
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Jul-2015 08:11:55 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 20-Jul-2015 08:11:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.273	4.263	0.010	0	117527	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.292	-0.002	97	348199	50.0	
* 3 Chlorobenzene-d5	119	10.380	10.389	-0.009	90	79635	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.729	12.725	0.004	98	106472	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.566	6.559	0.007	93	97255	59.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.931	6.930	0.001	0	142923	61.0	
$ 7 Toluene-d8 (Surr)	98	8.939	8.938	0.001	95	335903	50.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.567	11.572	-0.005	87	121322	49.9	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.264				ND	
16 Chloroethane	64		2.410				ND	
22 1,1-Dichloroethene	96		3.341				ND	
24 Acetone	43	3.451	3.450	0.001	81	4827	8.37	M
26 Carbon disulfide	76		3.627				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.521				ND	
34 trans-1,2-Dichloroethene	96		4.564				ND	
35 Methyl tert-butyl ether	73		4.582				ND	
37 1,1-Dichloroethane	63		5.202				ND	
45 cis-1,2-Dichloroethene	96	5.952	5.957	-0.005	1	985	0.4435	
46 2-Butanone (MEK)	43		5.957				ND	
49 Chlorobromomethane	128		6.237				ND	
52 Chloroform	83		6.376				ND	
53 1,1,1-Trichloroethane	97		6.541				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.942				ND	
59 1,2-Dichloroethane	62		7.015				ND	
64 Trichloroethene	130		7.678				ND	
67 1,2-Dichloropropane	63		7.946				ND	
70 1,4-Dioxane	88	8.020	8.037	-0.017	15	630	42.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.232				ND	
74 cis-1,3-Dichloropropene	75		8.670				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91	9.006	9.005	0.002	96	3612	0.4220	
77 trans-1,3-Dichloropropene	75		9.248				ND	
79 1,1,2-Trichloroethane	97		9.443				ND	
80 Tetrachloroethene	164		9.516				ND	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.814				ND	
85 Ethylene Dibromide	107		9.923				ND	
87 Chlorobenzene	112		10.416				ND	
89 1,1,1,2-Tetrachloroethane	131		10.507				ND	
90 Ethylbenzene	106		10.513				ND	
91 m-Xylene & p-Xylene	106		10.647				ND	
92 o-Xylene	106		11.030				ND	
93 Styrene	104		11.049				ND	
94 Bromoform	173		11.231				ND	
99 1,1,2,2-Tetrachloroethane	83		11.706				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

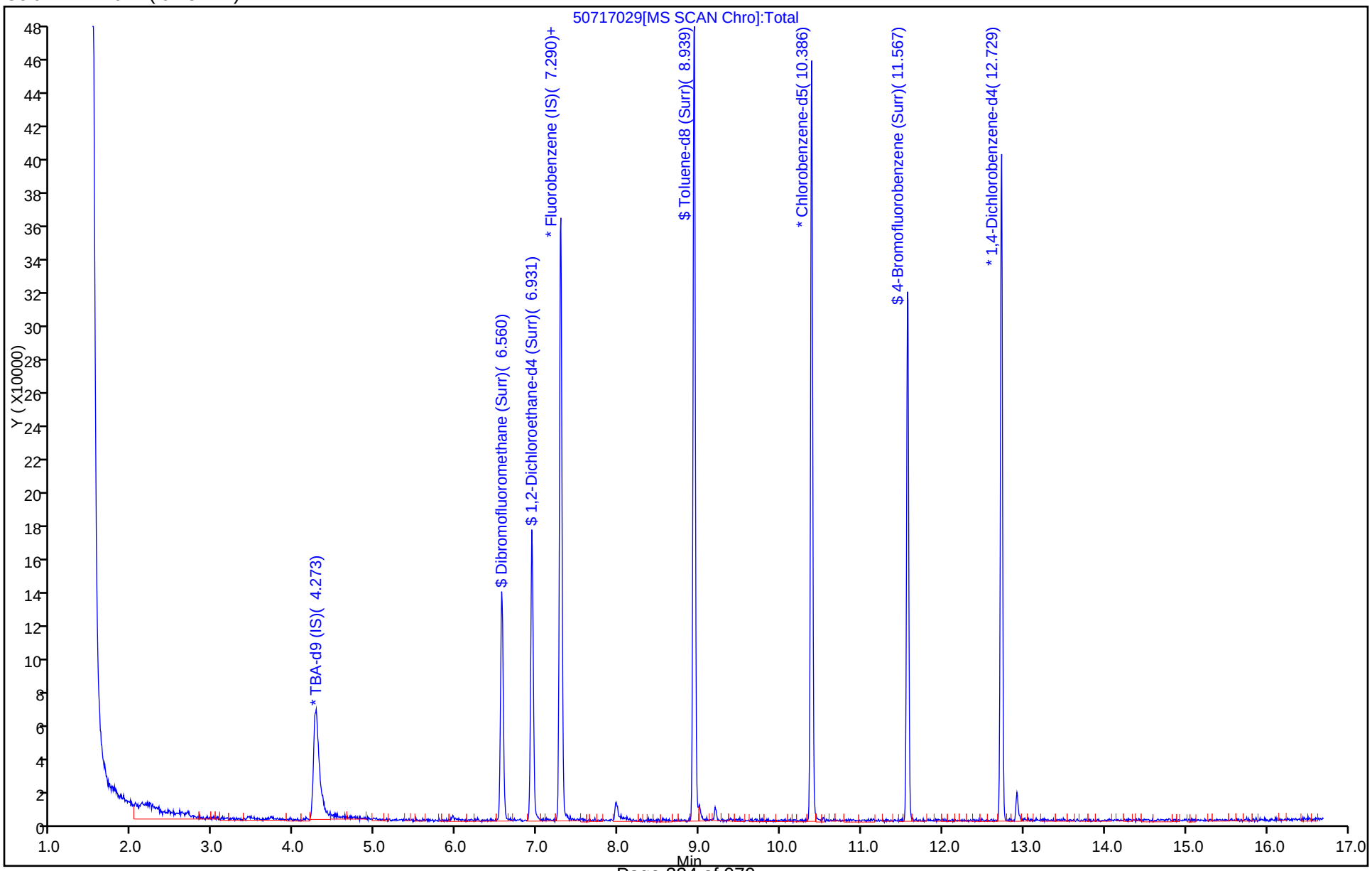
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 20-Jul-2015 08:11:56 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717029.D				
Injection Date:	17-Jul-2015 22:40:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-45946-D-5	Lab Sample ID:	180-45946-5	Worklist Smp#:	29
Client ID:	HD-COD-SW-10-0/1-0				
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)



Manual Integration/User Assign Peak Report

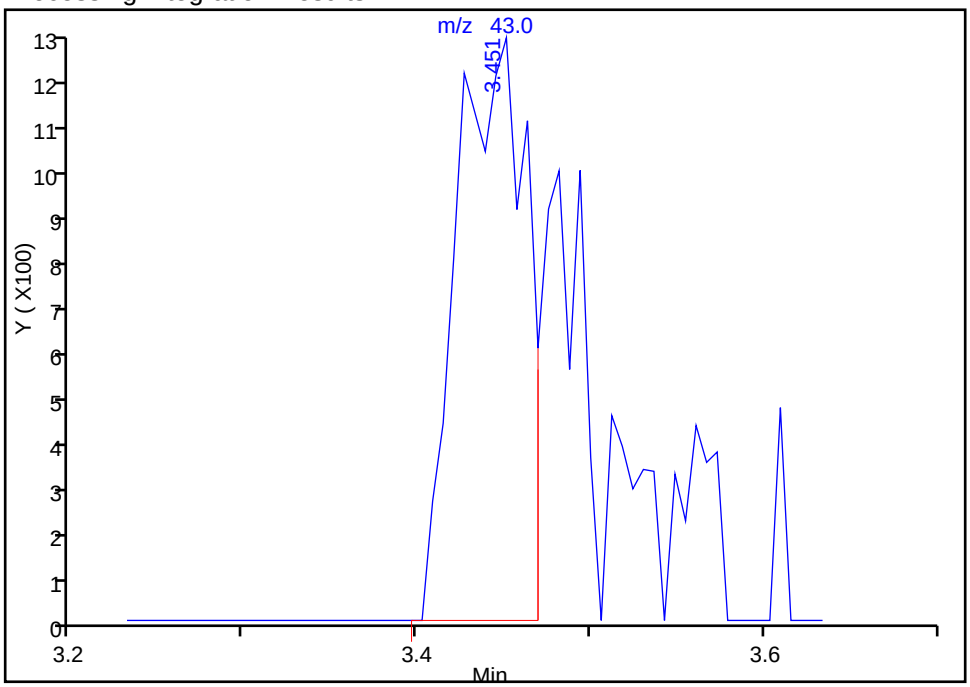
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717029.D				
Injection Date:	17-Jul-2015 22:40:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-D-5	Lab Sample ID:	180-45946-5		
Client ID:	HD-COD-SW-10-0/1-0				
Operator ID:	001562	ALS Bottle#:	28	Worklist Smp#:	29
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

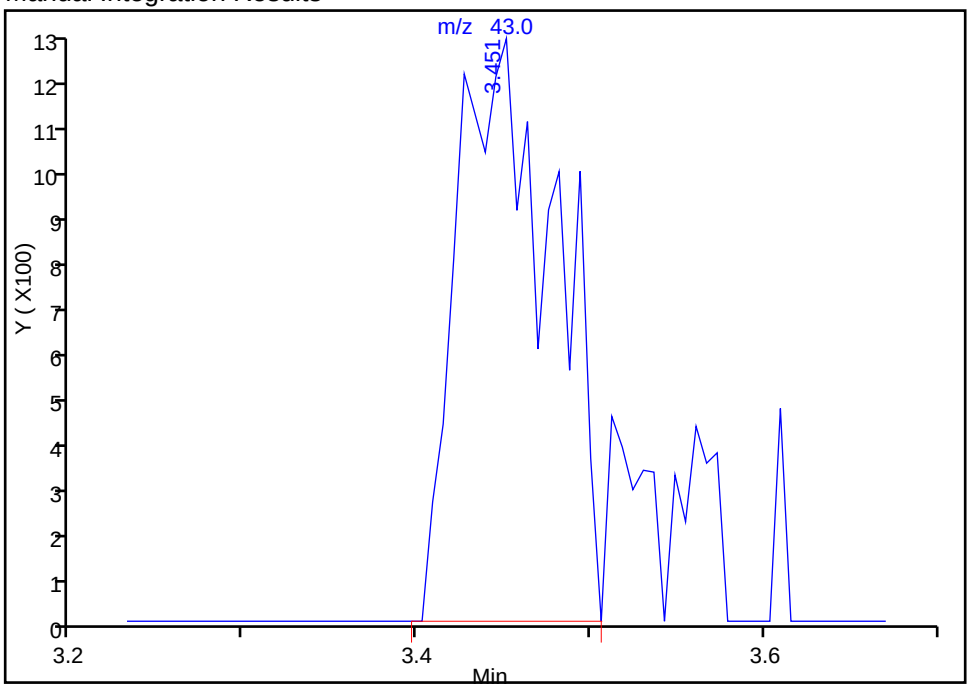
Processing Integration Results

RT: 3.45
Area: 3492
Amount: 6.053386
Amount Units: ng



Manual Integration Results

RT: 3.45
Area: 4827
Amount: 8.367610
Amount Units: ng



Reviewer: fergusond, 20-Jul-2015 08:11:55
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-11-0/1-0 | Lab Sample ID: 180-45946-6

Matrix: Water | Lab File ID: 50717030.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 23:04

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.: 148055 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-11-0/1-0 | Lab Sample ID: 180-45946-6

Matrix: Water | Lab File ID: 50717030.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 23:04

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.: 148055 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	122		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	91		70-118
1868-53-7	Dibromofluoromethane (Surr)	116		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717030.D
Lims ID: 180-45946-D-6 Lab Sample ID: 180-45946-6
Client ID: HD-COD-SW-11-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 23:04:30 ALS Bottle#: 29 Worklist Smp#: 30
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-D-6
Misc. Info.: 180-0007815-030
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Jul-2015 08:12:56 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 20-Jul-2015 08:12:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.256	4.263	-0.007	0	113093	1000.0	
* 2 Fluorobenzene (IS)	96	7.292	7.292	0.000	98	344729	50.0	
* 3 Chlorobenzene-d5	119	10.388	10.389	-0.001	89	83010	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.725	0.005	98	106534	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.562	6.559	0.003	92	93444	58.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.930	0.003	0	141242	60.9	
$ 7 Toluene-d8 (Surr)	98	8.934	8.938	-0.004	95	335409	48.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.569	11.572	-0.003	84	115881	45.7	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.264				ND	
16 Chloroethane	64		2.410				ND	
22 1,1-Dichloroethene	96		3.341				ND	
24 Acetone	43	3.465	3.450	0.015	31	2638	4.62	
26 Carbon disulfide	76		3.627				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.521				ND	
34 trans-1,2-Dichloroethene	96		4.564				ND	
35 Methyl tert-butyl ether	73		4.582				ND	
37 1,1-Dichloroethane	63		5.202				ND	
45 cis-1,2-Dichloroethene	96		5.957				ND	
46 2-Butanone (MEK)	43		5.957				ND	
49 Chlorobromomethane	128		6.237				ND	
52 Chloroform	83	6.385	6.376	0.009	93	5048	1.38	
53 1,1,1-Trichloroethane	97		6.541				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.942				ND	
59 1,2-Dichloroethane	62		7.015				ND	
64 Trichloroethene	130		7.678				ND	
67 1,2-Dichloropropane	63		7.946				ND	
70 1,4-Dioxane	88		8.037				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.232				ND	
74 cis-1,3-Dichloropropene	75		8.670				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91	9.001	9.005	-0.003	96	3194	0.3580	
77 trans-1,3-Dichloropropene	75		9.248				ND	
79 1,1,2-Trichloroethane	97		9.443				ND	
80 Tetrachloroethene	164		9.516				ND	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.814				ND	
85 Ethylene Dibromide	107		9.923				ND	
87 Chlorobenzene	112		10.416				ND	
89 1,1,1,2-Tetrachloroethane	131		10.507				ND	
90 Ethylbenzene	106		10.513				ND	
91 m-Xylene & p-Xylene	106		10.647				ND	
92 o-Xylene	106		11.030				ND	
93 Styrene	104		11.049				ND	
94 Bromoform	173		11.231				ND	
99 1,1,2,2-Tetrachloroethane	83		11.706				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

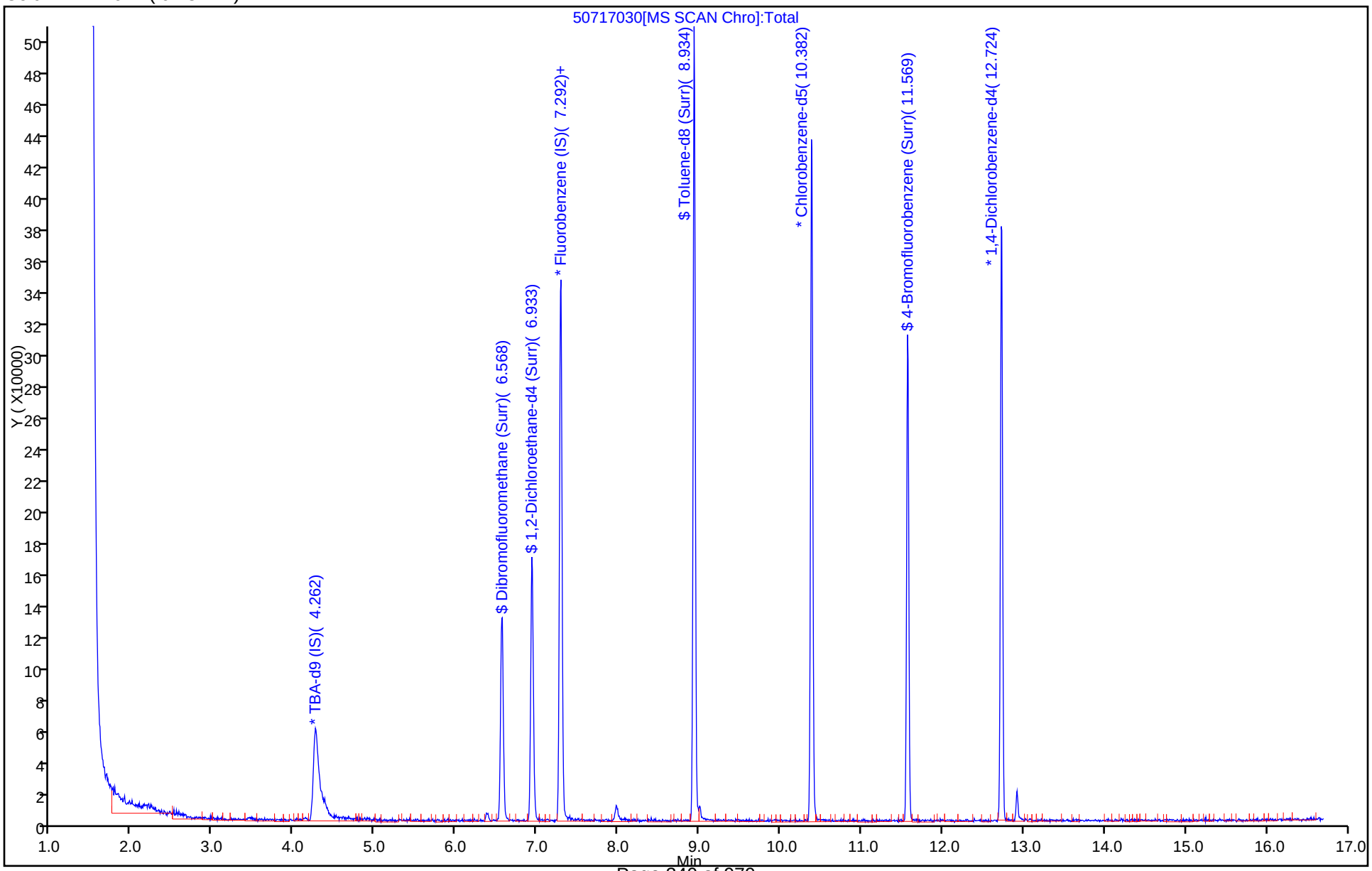
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 20-Jul-2015 08:12:56 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717030.D				
Injection Date:	17-Jul-2015 23:04:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-45946-D-6	Lab Sample ID:	180-45946-6	Worklist Smp#:	30
Client ID:	HD-COD-SW-11-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



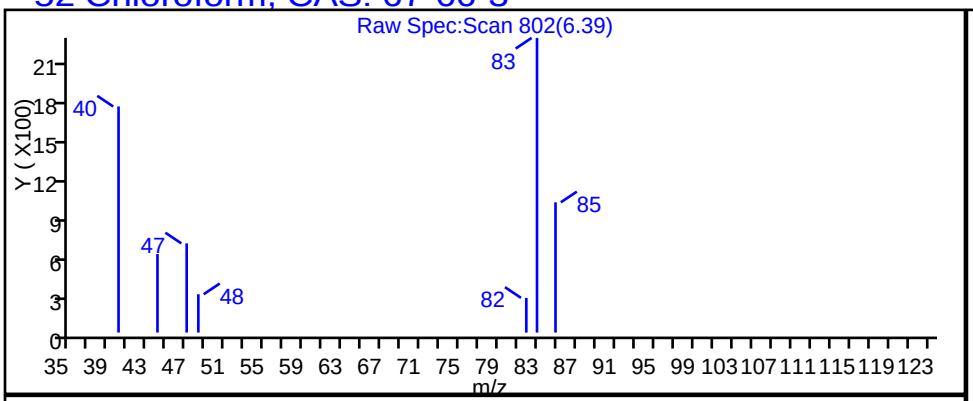
Report Date: 20-Jul-2015 08:12:56 Chrom Revision: 2.2 23-Jun-2015 15:30:48

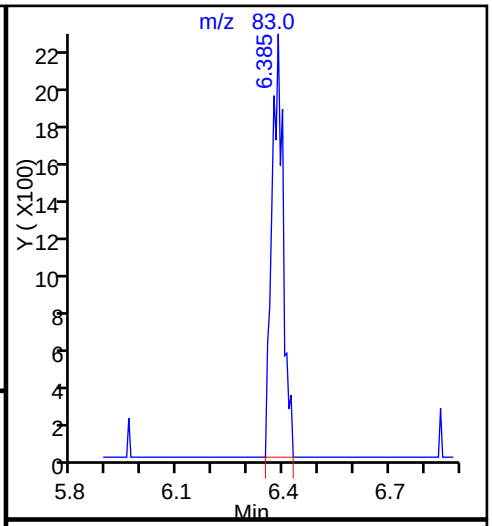
TestAmerica Pittsburgh

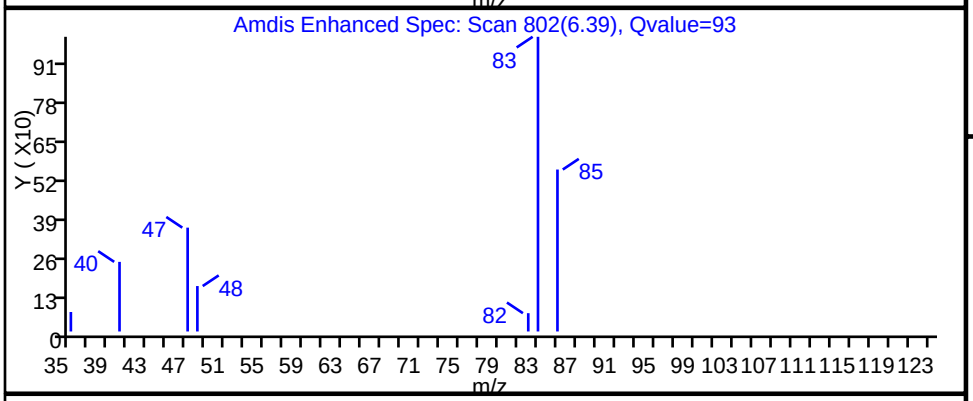
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717030.D

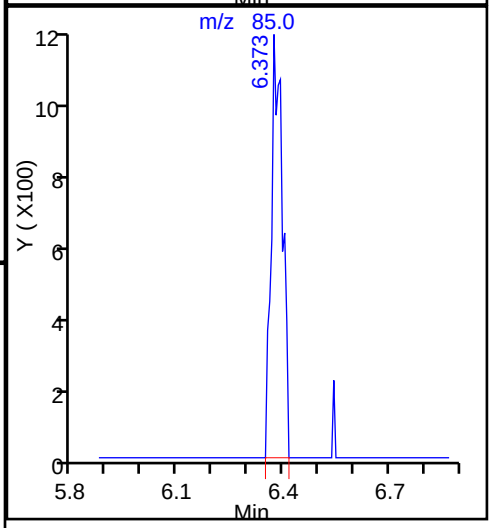
Injection Date:	17-Jul-2015 23:04:30	Instrument ID:	CHHP5		
Lims ID:	180-45946-D-6	Lab Sample ID:	180-45946-6		
Client ID:	HD-COD-SW-11-0/1-0				
Operator ID:	001562	ALS Bottle#:	29	Worklist Smp#:	30
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

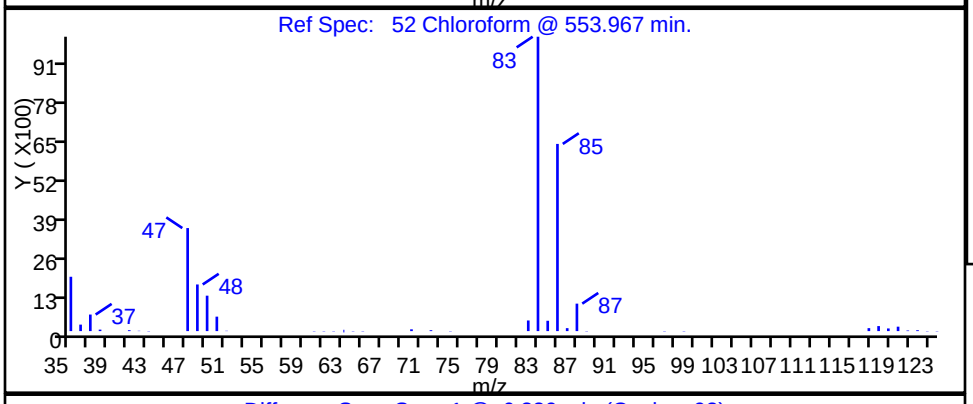
52 Chloroform, CAS: 67-66-3

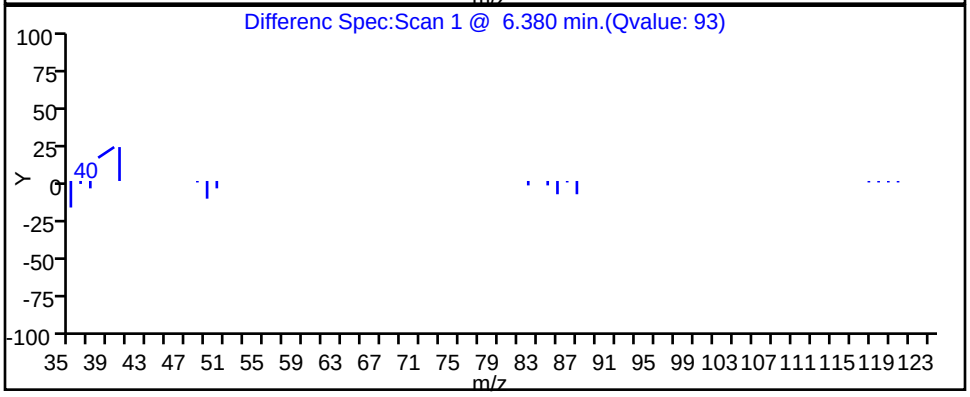












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-12-0/1-0 | Lab Sample ID: 180-45946-7

Matrix: Water | Lab File ID: 60721011.D

Analysis Method: 8260C | Date Collected: 07/15/2015 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 16:32

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	^c	1.0	0.28
75-01-4	Vinyl chloride	ND	^c	1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND	^c	1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	ND		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	0.26	J	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-12-0/1-0 | Lab Sample ID: 180-45946-7

Matrix: Water | Lab File ID: 60721011.D

Analysis Method: 8260C | Date Collected: 07/15/2015 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 16:32

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		64-135
2037-26-5	Toluene-d8 (Surr)	110		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	95		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721011.D
Lims ID: 180-45946-E-7 Lab Sample ID: 180-45946-7
Client ID: HD-COD-SW-12-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 16:32:30 ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-E-7
Misc. Info.: 180-0007861-011
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:27:43 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:27:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.226	4.243	-0.017	91	129421	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.285	0.001	98	491264	50.0	
* 3 Chlorobenzene-d5	119	10.395	10.399	-0.004	89	101571	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.749	12.747	0.002	97	163659	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.550	6.548	0.002	91	111999	47.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.932	0.001	70	169424	46.1	
$ 7 Toluene-d8 (Surr)	98	8.941	8.939	0.002	94	439976	55.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.587	11.586	0.001	82	168269	50.5	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43	3.429	3.428	0.001	1	5755	7.71	M
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96		5.940				ND	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83	6.379	6.372	0.007	45	2512	0.4788	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130		7.674				ND	
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.014	9.012	0.002	98	13456	1.28	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164		9.529				ND	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

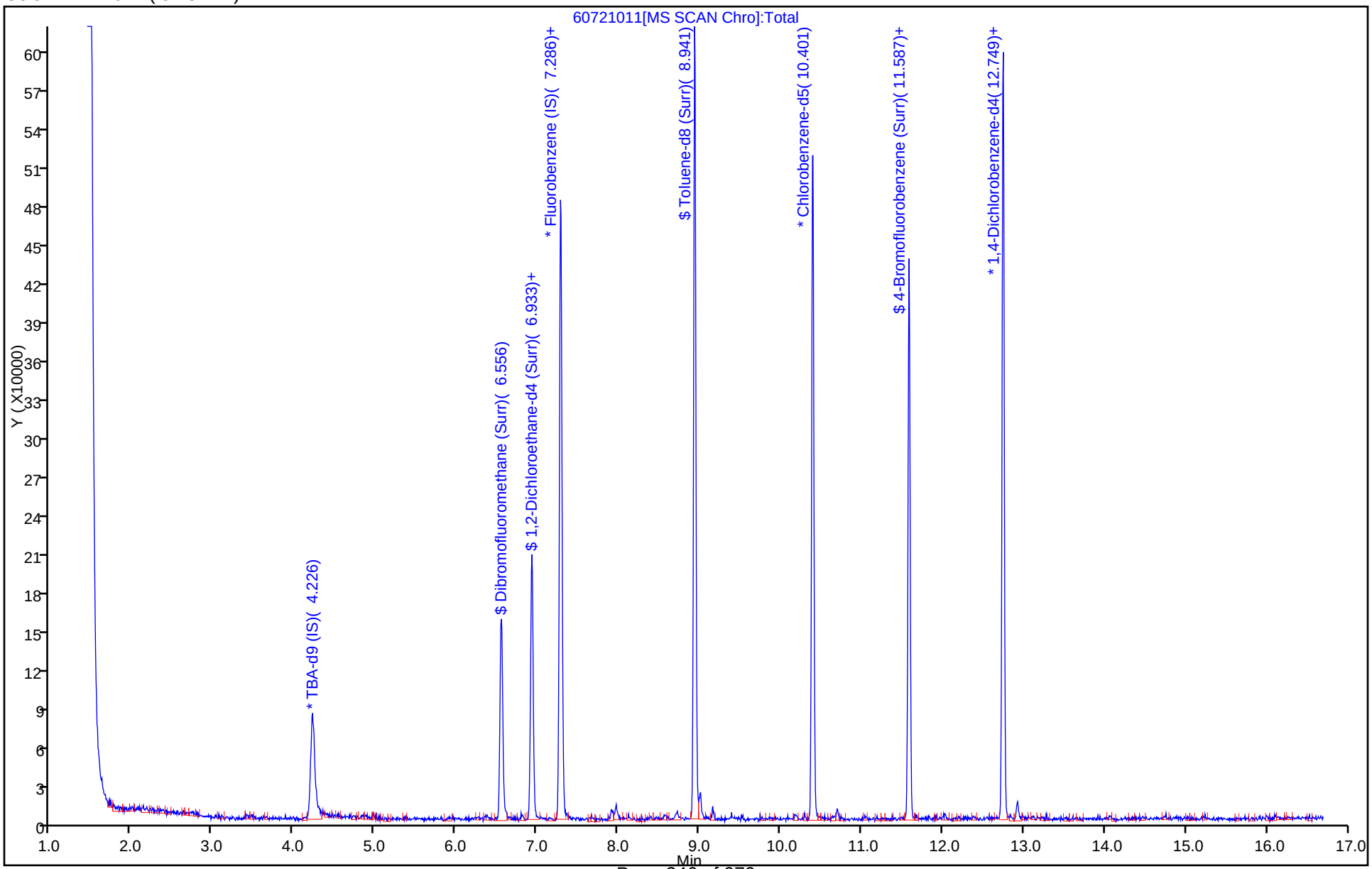
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 22-Jul-2015 08:27:43 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721011.D				
Injection Date:	21-Jul-2015 16:32:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-E-7	Lab Sample ID:	180-45946-7	Worklist Smp#:	11
Client ID:	HD-COD-SW-12-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



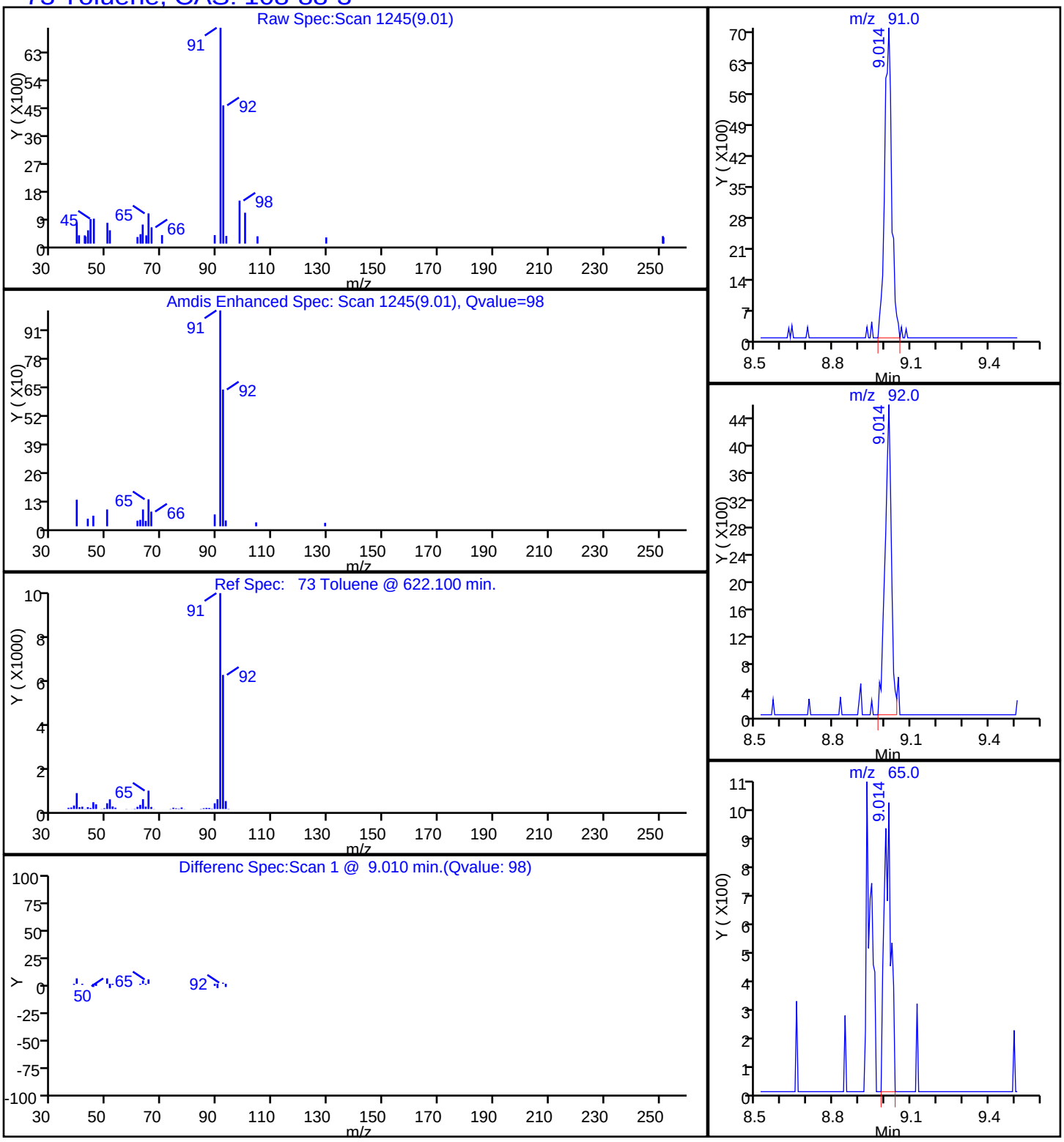
Report Date: 22-Jul-2015 08:27:44 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721011.D

Injection Date:	21-Jul-2015 16:32:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-7	Lab Sample ID:	180-45946-7		
Client ID:	HD-COD-SW-12-0/1-0				
Operator ID:	001562	ALS Bottle#:	11	Worklist Smp#:	11
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

73 Toluene, CAS: 108-88-3



Manual Integration/User Assign Peak Report

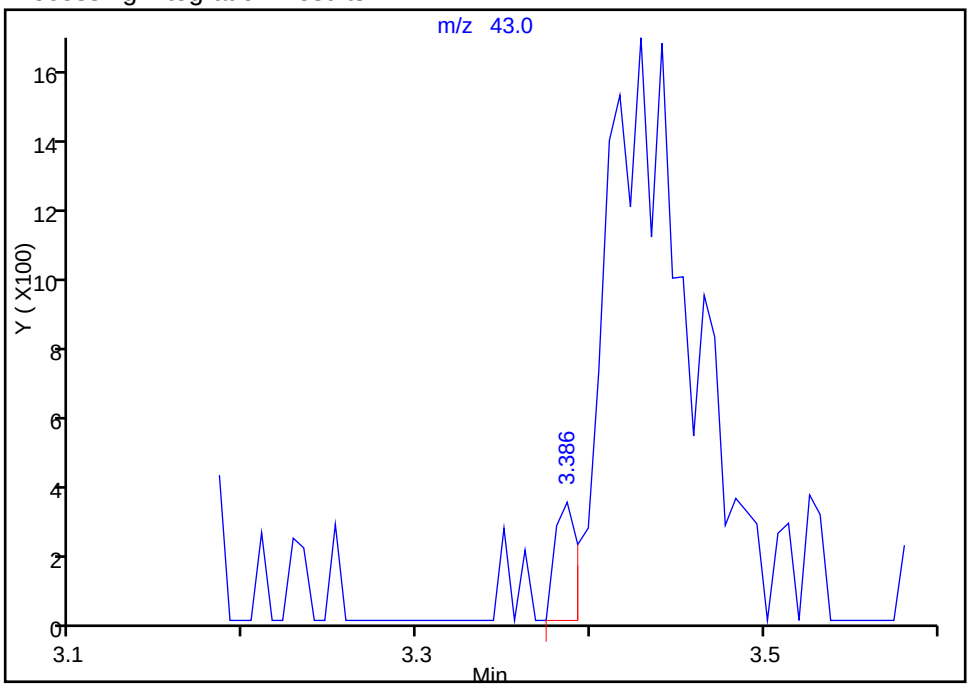
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721011.D				
Injection Date:	21-Jul-2015 16:32:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-7	Lab Sample ID:	180-45946-7		
Client ID:	HD-COD-SW-12-0/1-0				
Operator ID:	001562	ALS Bottle#:	11	Worklist Smp#:	11
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

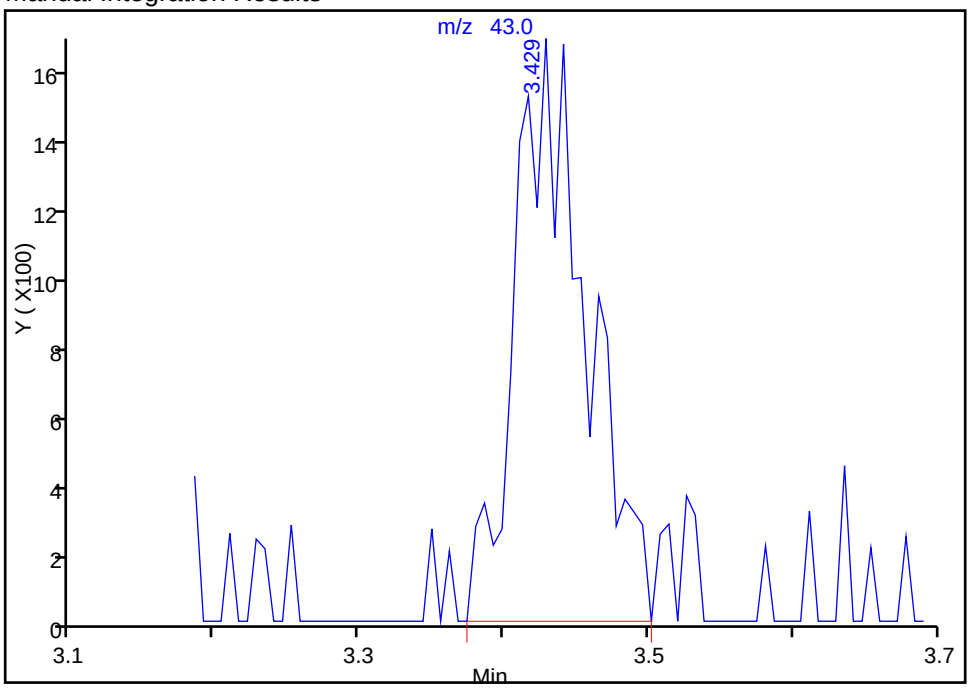
Processing Integration Results

RT: 3.39
Area: 303
Amount: 0.406181
Amount Units: ng



Manual Integration Results

RT: 3.43
Area: 5755
Amount: 7.714752
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:27:43
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 | Lab Sample ID: 180-45946-8

Matrix: Water | Lab File ID: 60721012.D

Analysis Method: 8260C | Date Collected: 07/15/2015 09:20

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 16:56

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	^c	1.0	0.28
75-01-4	Vinyl chloride	ND	^c	1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND	^c	1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	2.8	J	5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	0.19	J	1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	0.20	J	1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 | Lab Sample ID: 180-45946-8

Matrix: Water | Lab File ID: 60721012.D

Analysis Method: 8260C | Date Collected: 07/15/2015 09:20

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 16:56

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		64-135
2037-26-5	Toluene-d8 (Surr)	111		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	95		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721012.D
Lims ID: 180-45946-C-8 Lab Sample ID: 180-45946-8
Client ID: HD-COD-SW-13-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 16:56:30 ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-C-8
Misc. Info.: 180-0007861-012
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:29:16 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:29:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.224	4.243	-0.019	91	159317	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.285	0.005	98	487288	50.0	
* 3 Chlorobenzene-d5	119	10.399	10.399	0.000	89	101907	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.747	12.747	0.000	97	158274	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.554	6.548	0.006	93	110885	47.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.931	6.932	-0.001	70	170892	46.9	
$ 7 Toluene-d8 (Surr)	98	8.945	8.939	0.006	94	445646	55.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.585	11.586	-0.001	82	168023	50.3	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43	3.433	3.428	0.005	66	10368	14.0	
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96	5.933	5.940	-0.007	18	2693	0.8589	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83		6.372				ND	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130	7.679	7.674	0.005	83	2655	0.9320	M
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.012	9.012	0.000	93	6407	0.6059	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164	9.523	9.529	-0.006	86	1992	1.00	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

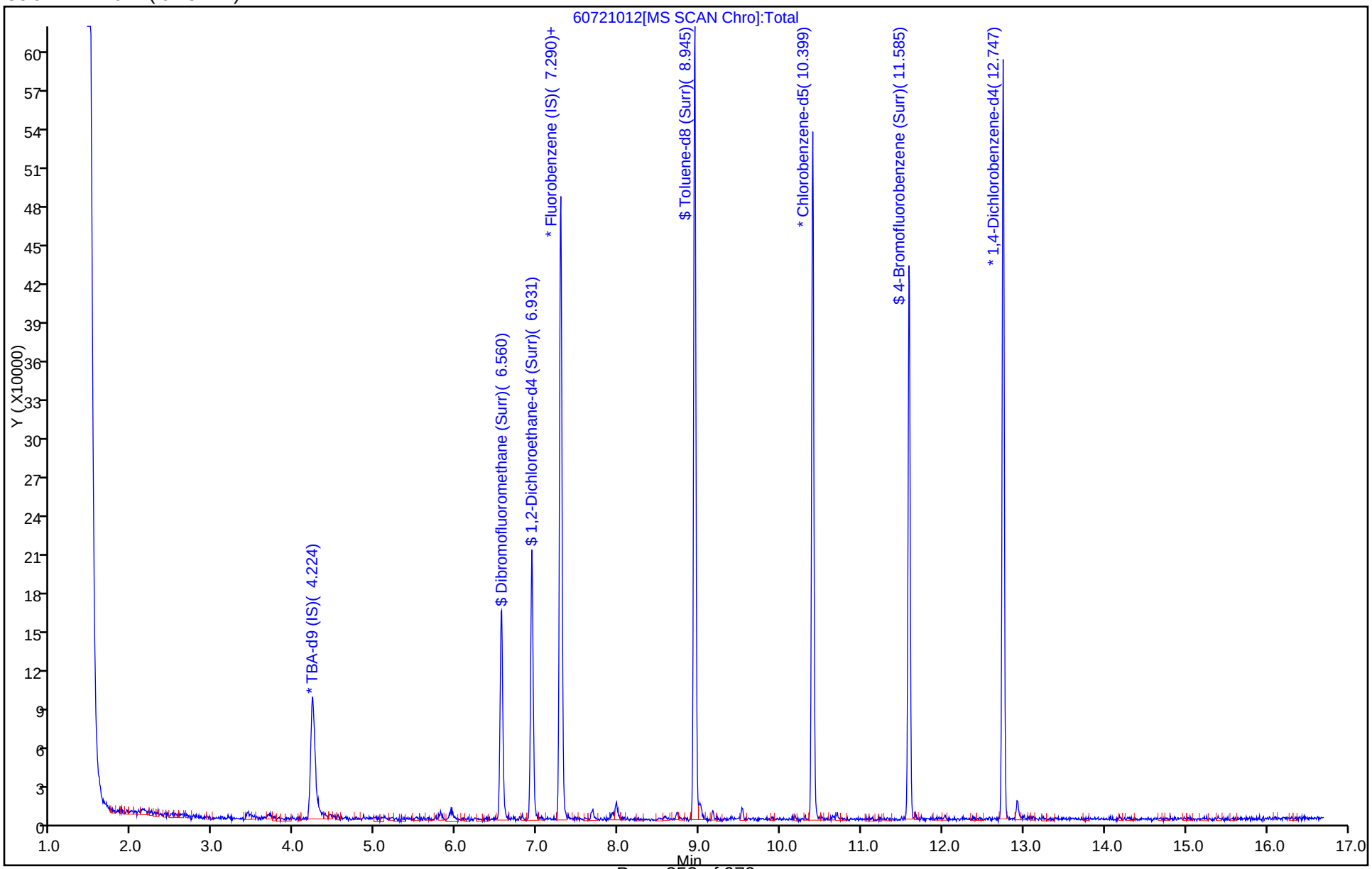
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 22-Jul-2015 08:29:16 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721012.D				
Injection Date:	21-Jul-2015 16:56:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-C-8	Lab Sample ID:	180-45946-8	Worklist Smp#:	12
Client ID:	HD-COD-SW-13-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

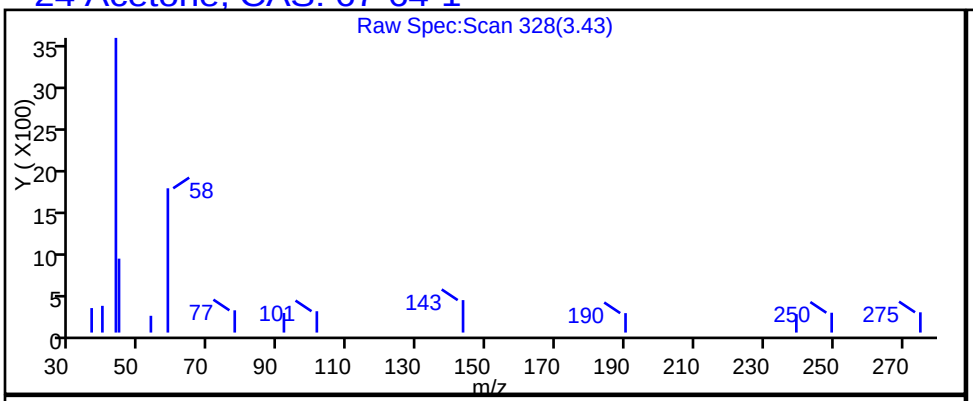


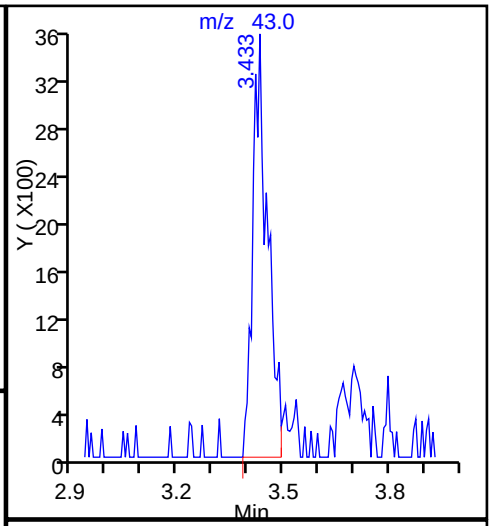
Report Date: 22-Jul-2015 08:29:16 Chrom Revision: 2.2 09-Jul-2015 10:16:20

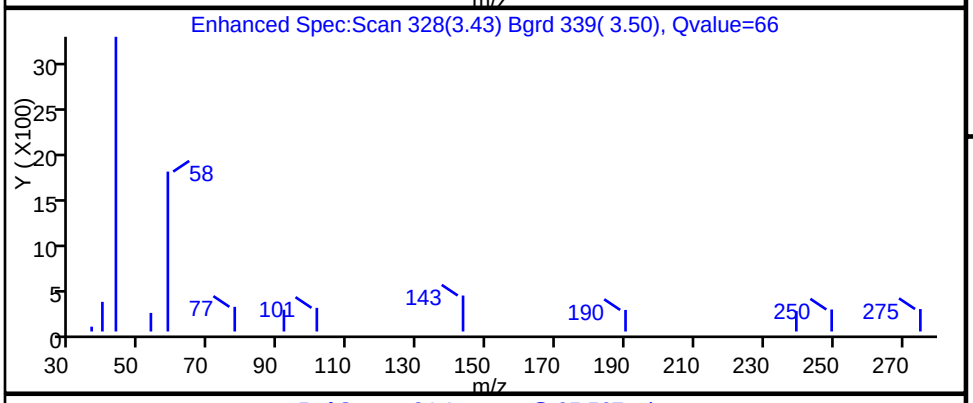
TestAmerica Pittsburgh

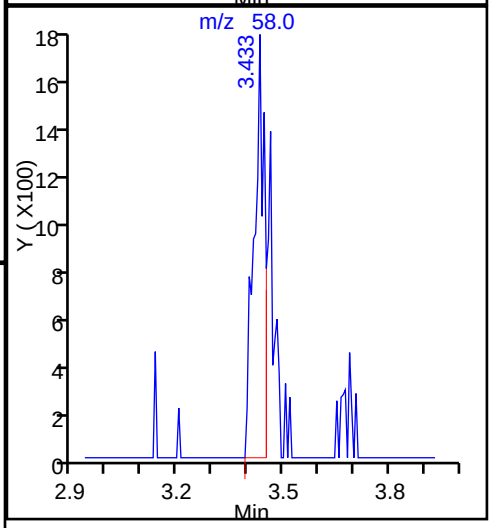
Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721012.D				
Injection Date:	21-Jul-2015 16:56:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-C-8	Lab Sample ID:	180-45946-8		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

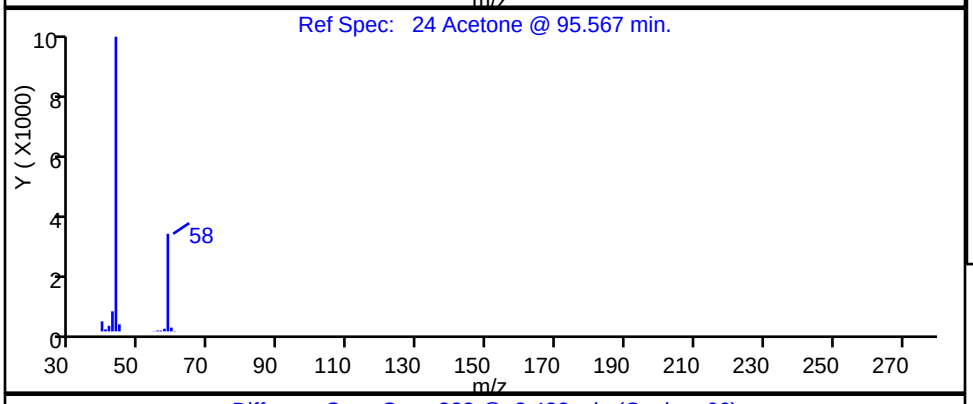
24 Acetone, CAS: 67-64-1

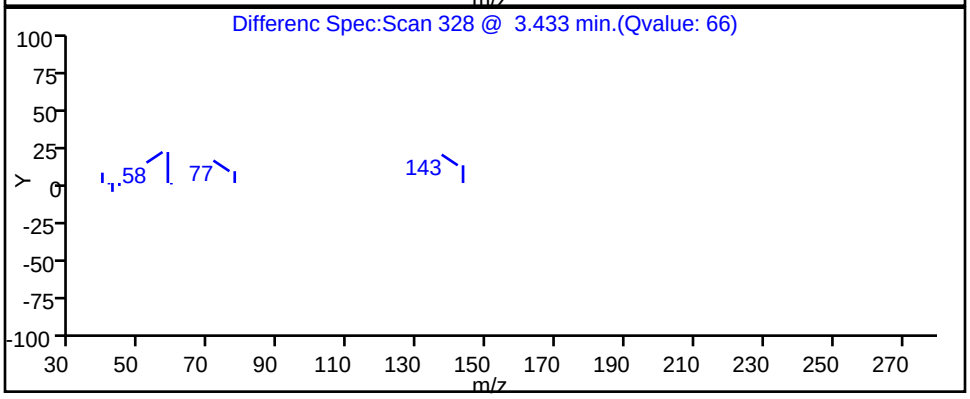












Report Date: 22-Jul-2015 08:29:16 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721012.D

Injection Date: 21-Jul-2015 16:56:30 Instrument ID: CHHP6

Lims ID: 180-45946-C-8 Lab Sample ID: 180-45946-8

Client ID: HD-COD-SW-13-0/1-0

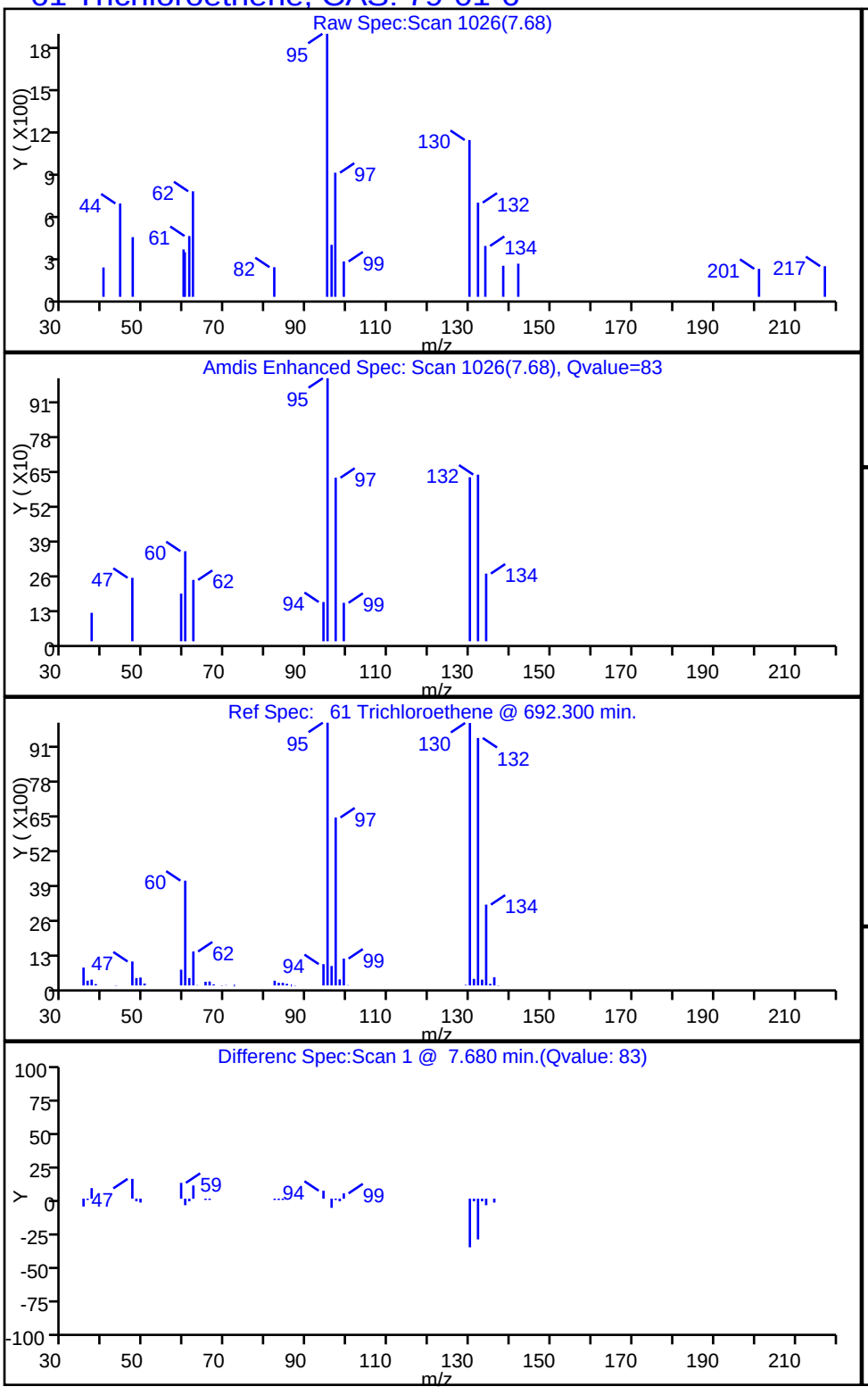
Operator ID: 001562 ALS Bottle#: 12 Worklist Smp#: 12

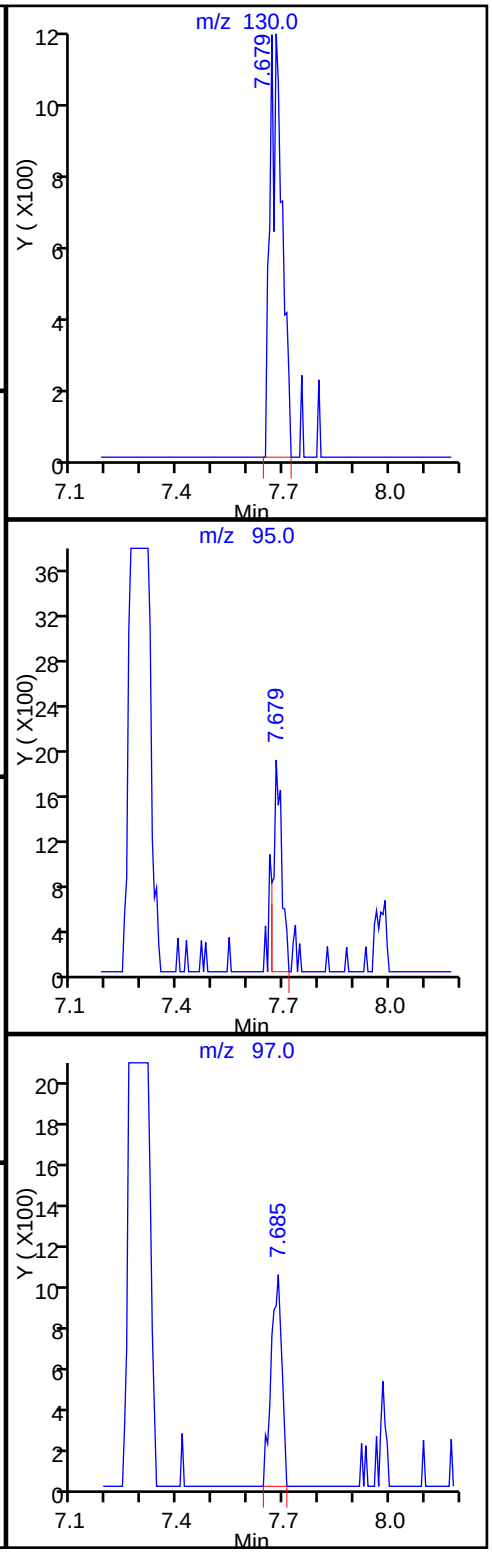
Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

61 Trichloroethene, CAS: 79-01-6





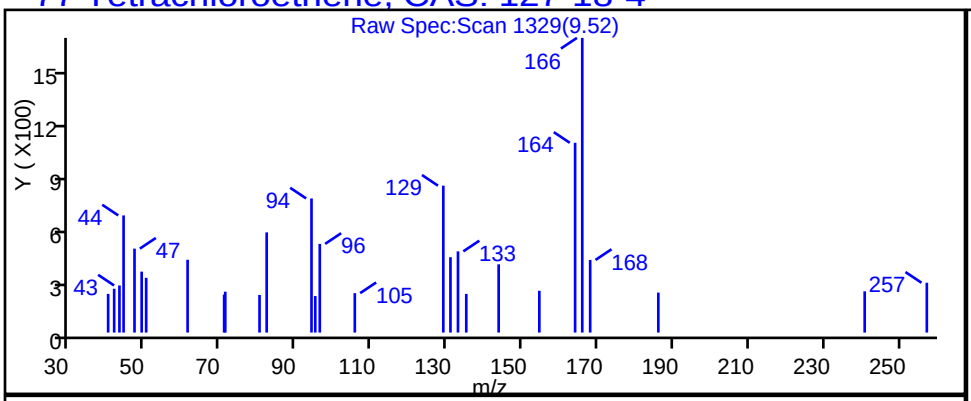
Report Date: 22-Jul-2015 08:29:16 Chrom Revision: 2.2 09-Jul-2015 10:16:20

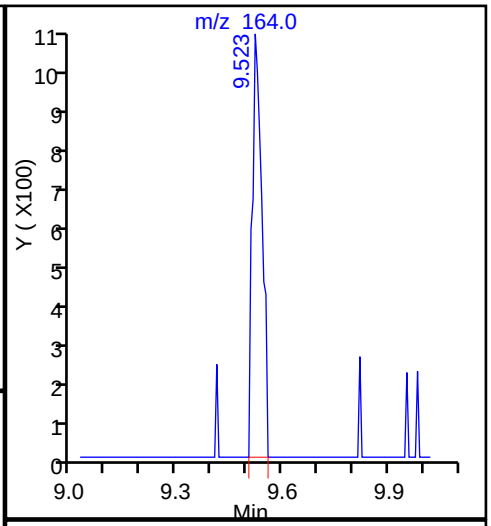
TestAmerica Pittsburgh

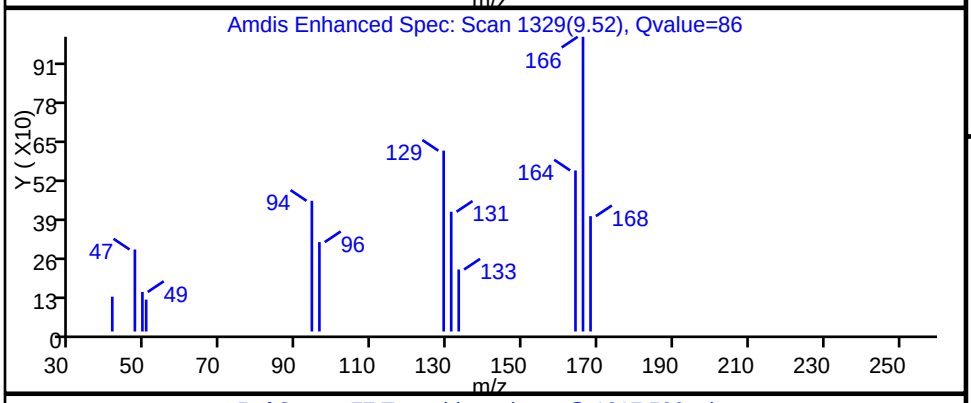
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721012.D

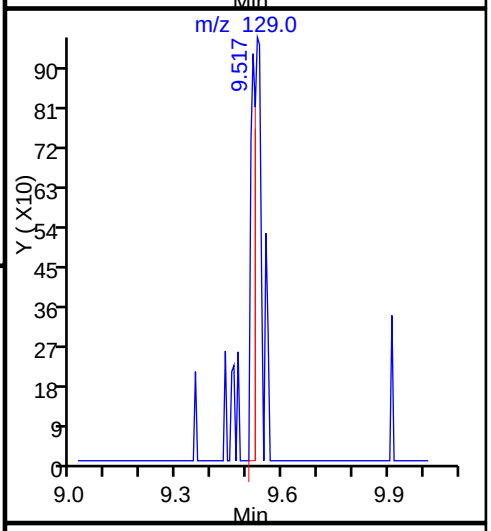
Injection Date:	21-Jul-2015 16:56:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-C-8	Lab Sample ID:	180-45946-8		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

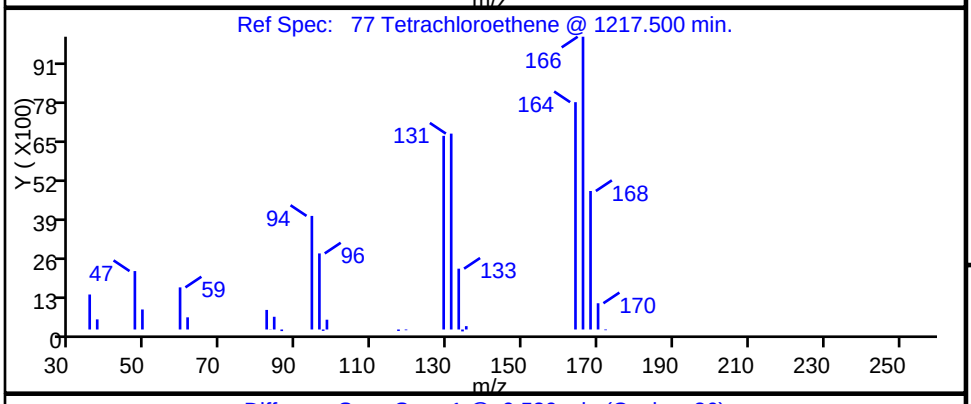
77 Tetrachloroethene, CAS: 127-18-4

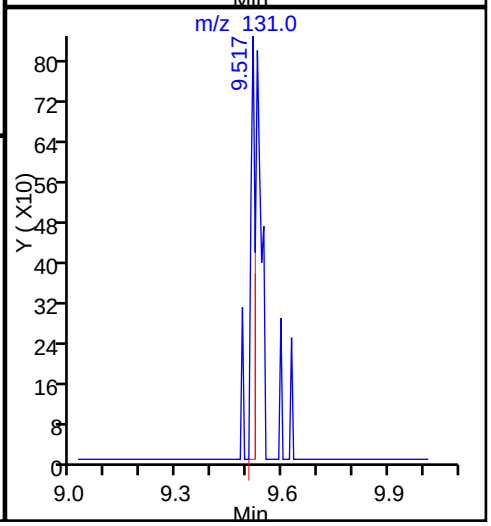


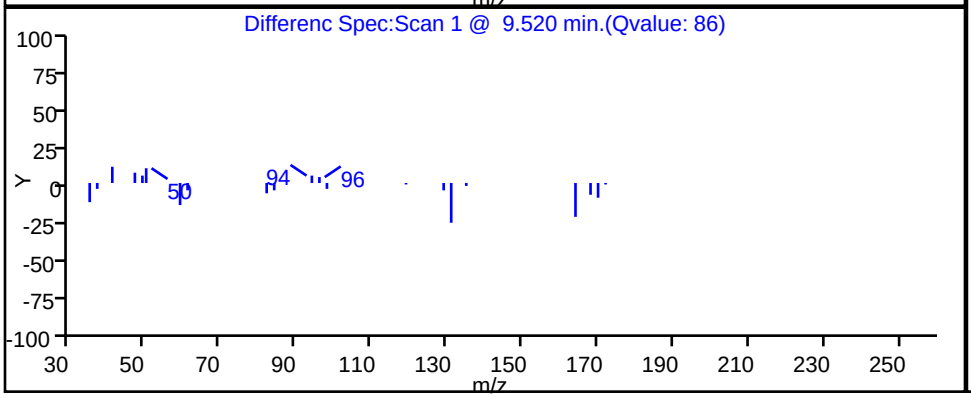












Manual Integration/User Assign Peak Report

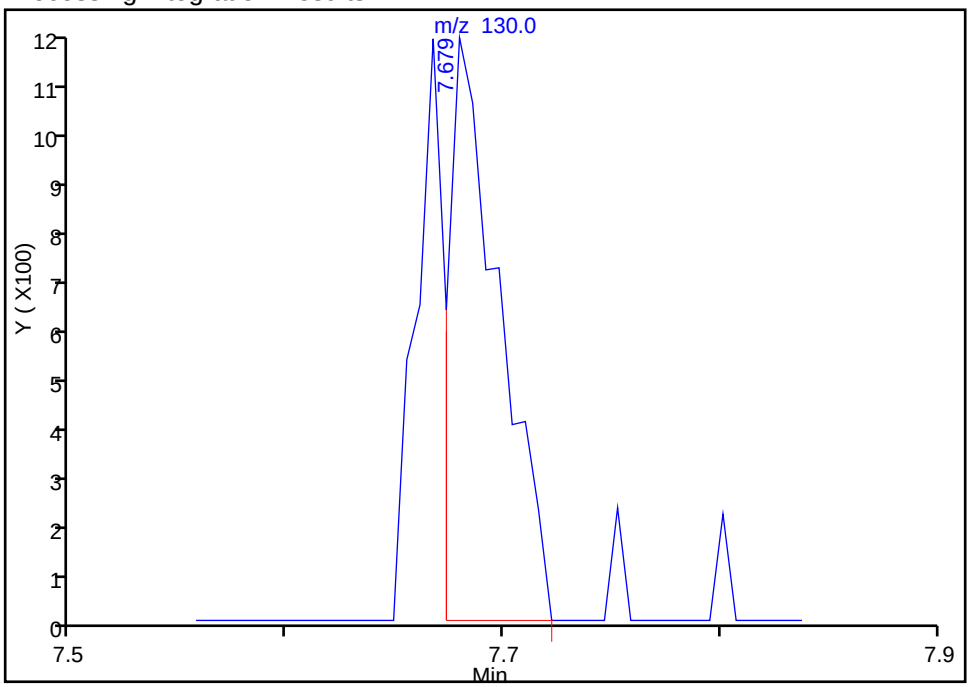
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721012.D				
Injection Date:	21-Jul-2015 16:56:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-C-8	Lab Sample ID:	180-45946-8		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

61 Trichloroethene, CAS: 79-01-6

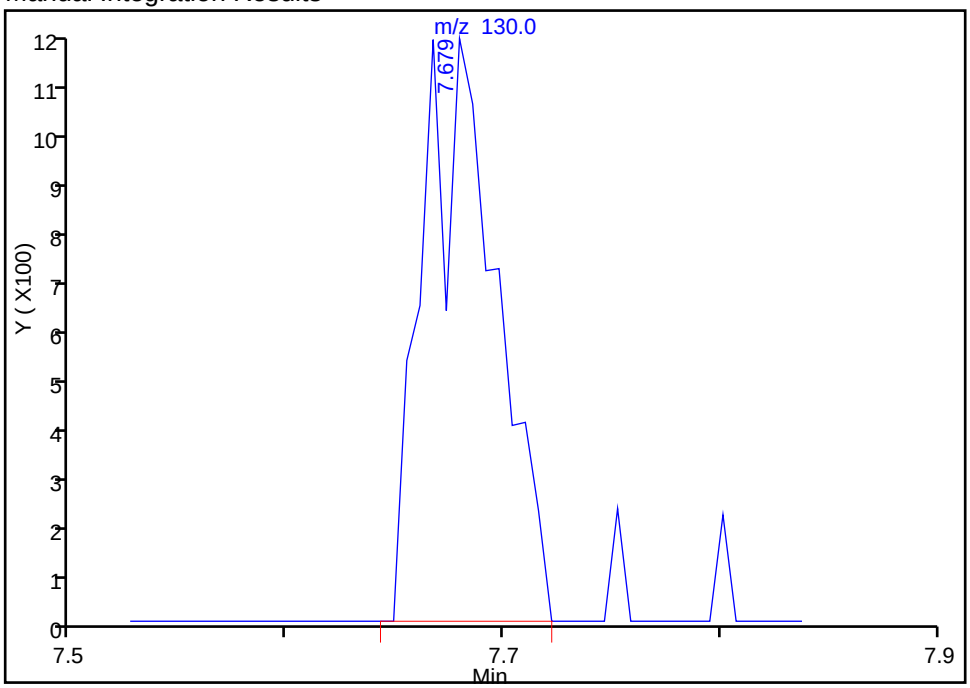
Processing Integration Results

RT: 7.68
Area: 1841
Amount: 0.646272
Amount Units: ng



Manual Integration Results

RT: 7.68
Area: 2655
Amount: 0.932022
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:29:16
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 | Lab Sample ID: 180-45946-9

Matrix: Water | Lab File ID: 60721013.D

Analysis Method: 8260C | Date Collected: 07/15/2015 13:20

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 17:20

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	^c	1.0	0.28
75-01-4	Vinyl chloride	ND	^c	1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND	^c	1.0	0.21
75-35-4	1,1-Dichloroethene	0.48	J	1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.6		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	0.36	J	1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	8.4		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	5.4		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 | Lab Sample ID: 180-45946-9

Matrix: Water | Lab File ID: 60721013.D

Analysis Method: 8260C | Date Collected: 07/15/2015 13:20

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 17:20

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		64-135
2037-26-5	Toluene-d8 (Surr)	111		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	93		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721013.D
Lims ID: 180-45946-D-9 Lab Sample ID: 180-45946-9
Client ID: HD-COD-SW-15-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 17:20:30 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-D-9
Misc. Info.: 180-0007861-013
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:30:28 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:30:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.223	4.243	-0.020	91	144992	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.285	0.004	98	488403	50.0	
* 3 Chlorobenzene-d5	119	10.398	10.399	-0.001	90	101394	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.752	12.747	0.005	98	151994	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.559	6.548	0.011	93	108270	46.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.932	-0.002	70	168731	46.2	
$ 7 Toluene-d8 (Surr)	98	8.944	8.939	0.005	94	441896	55.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.584	11.586	-0.002	82	168194	50.6	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96	3.353	3.336	0.017	96	5896	2.39	
24 Acetone	43	3.438	3.428	0.010	84	4060	5.47	
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96	5.951	5.940	0.011	82	150275	47.8	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83	6.383	6.372	0.011	41	3849	0.7380	
51 1,1,1-Trichloroethane	97	6.541	6.542	-0.001	95	6887	1.78	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130	7.678	7.674	0.004	96	120178	42.1	
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.011	9.012	-0.001	63	4661	0.4430	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164	9.528	9.529	-0.001	94	52996	26.8	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

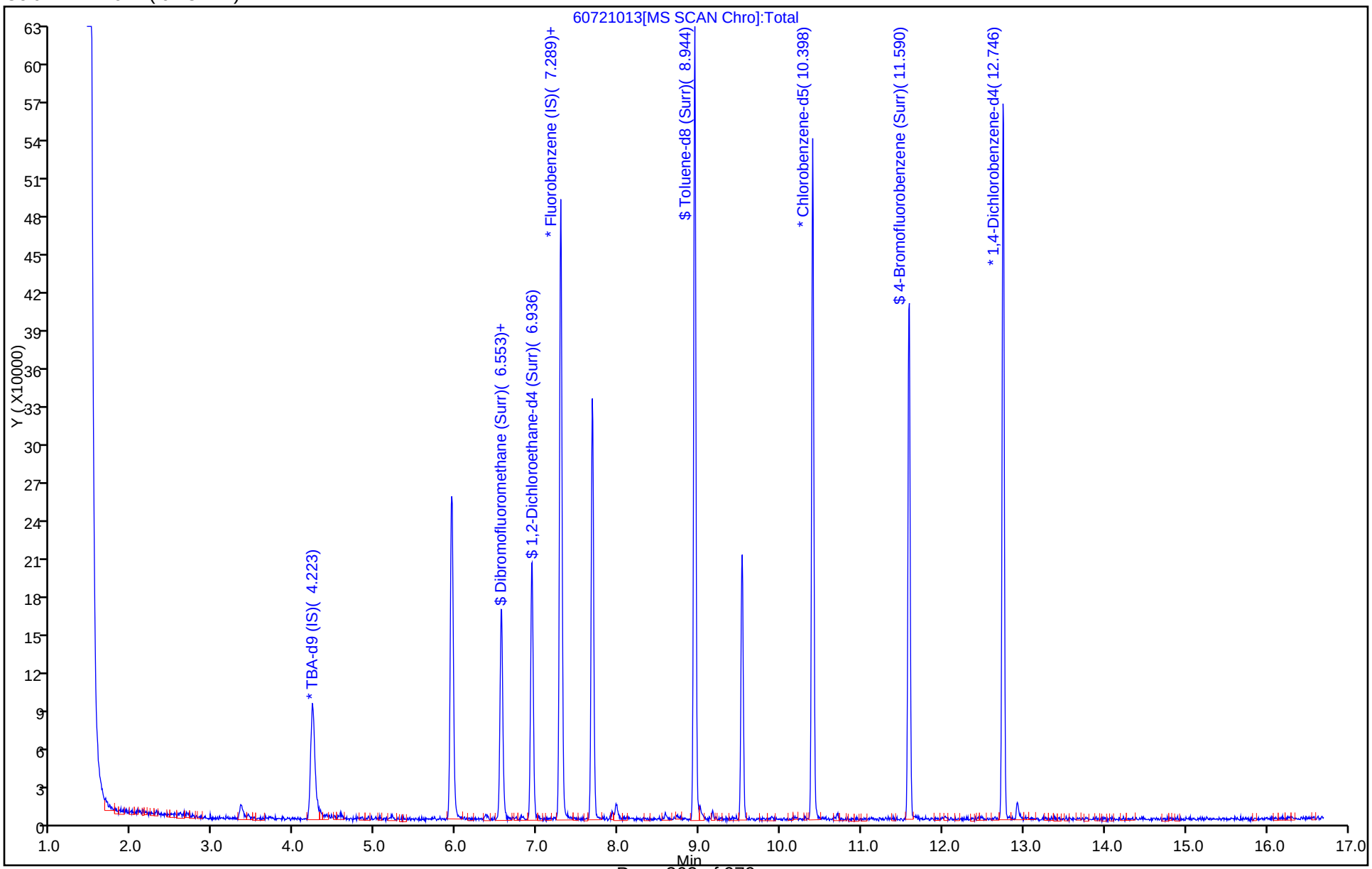
Report Date: 22-Jul-2015 08:30:28 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721013.D

Injection Date:	21-Jul-2015 17:20:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-D-9	Lab Sample ID:	180-45946-9	Worklist Smp#:	13
Client ID:	HD-COD-SW-15-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



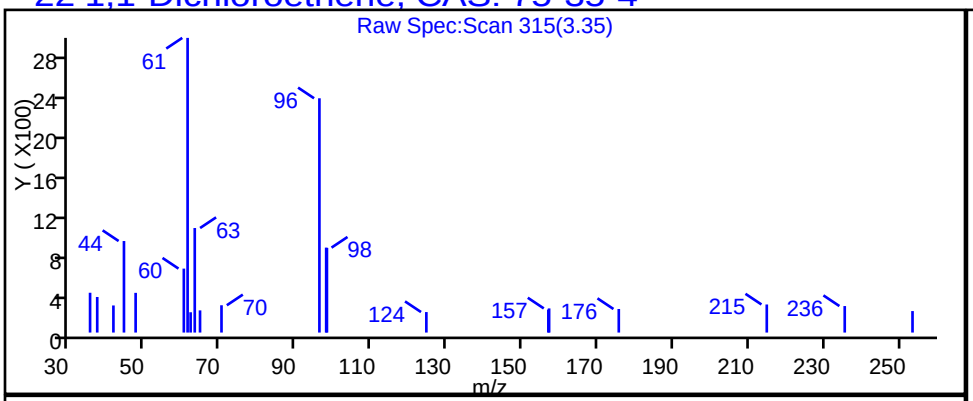
Report Date: 22-Jul-2015 08:30:28 Chrom Revision: 2.2 09-Jul-2015 10:16:20

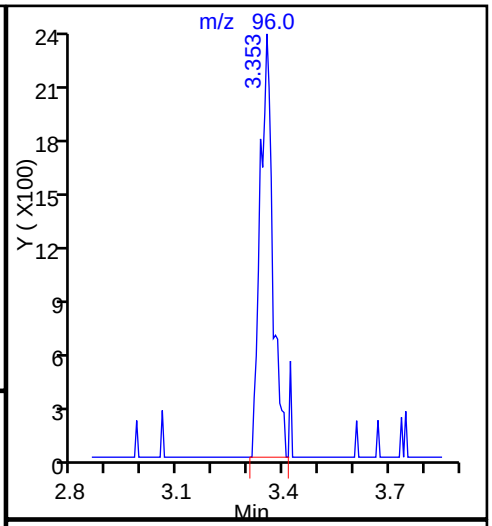
TestAmerica Pittsburgh

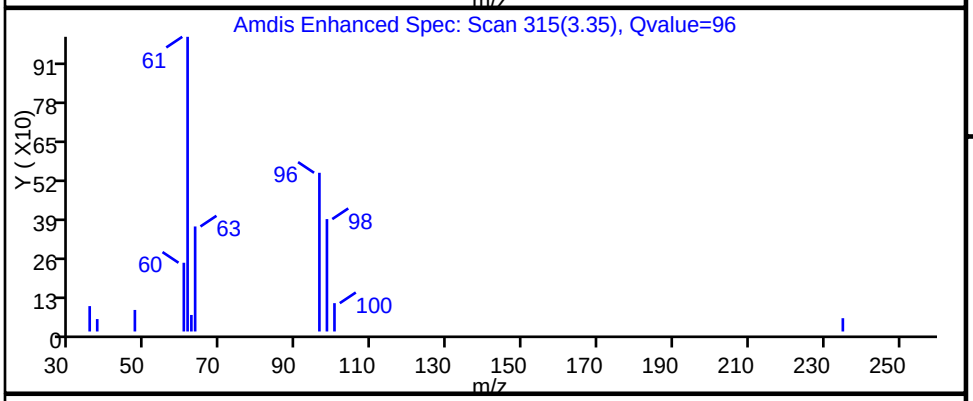
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721013.D

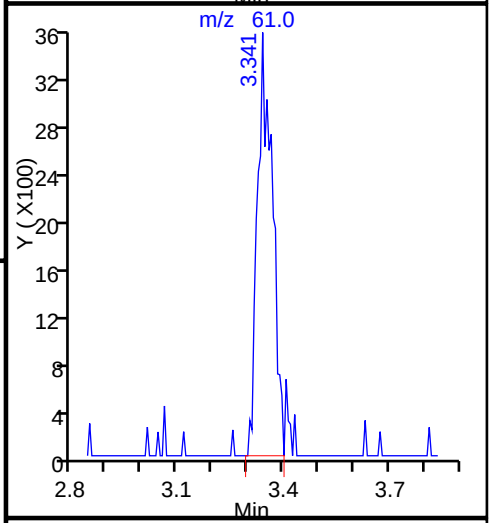
Injection Date:	21-Jul-2015 17:20:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-9	Lab Sample ID:	180-45946-9		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

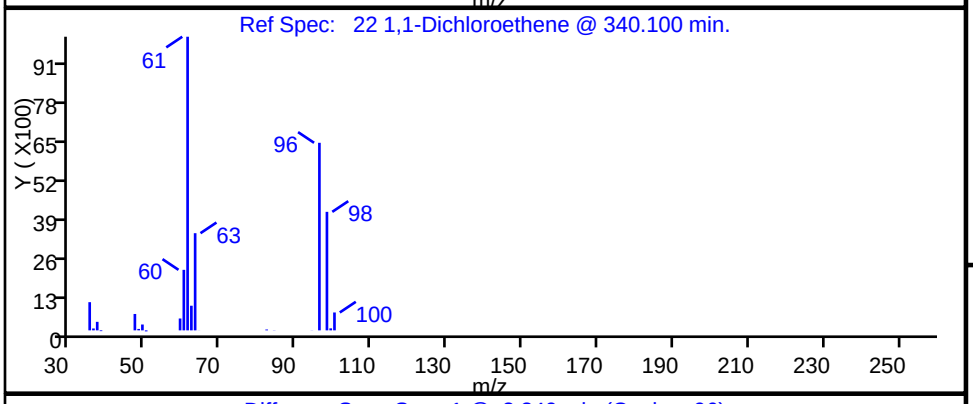
22 1,1-Dichloroethene, CAS: 75-35-4

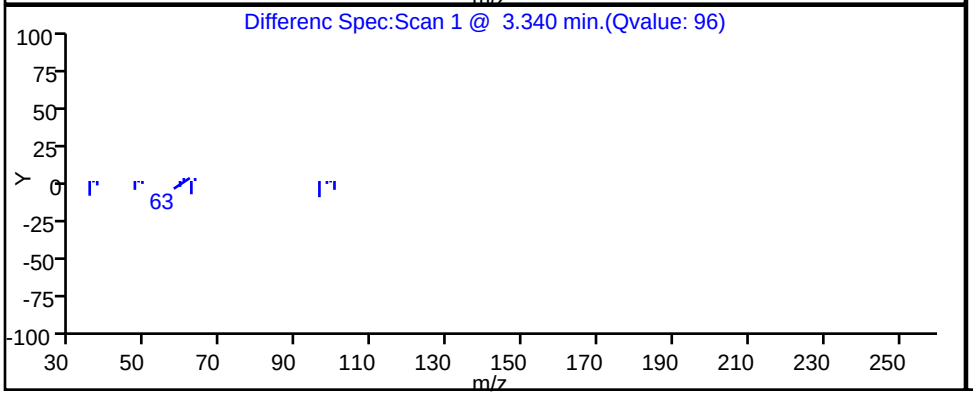


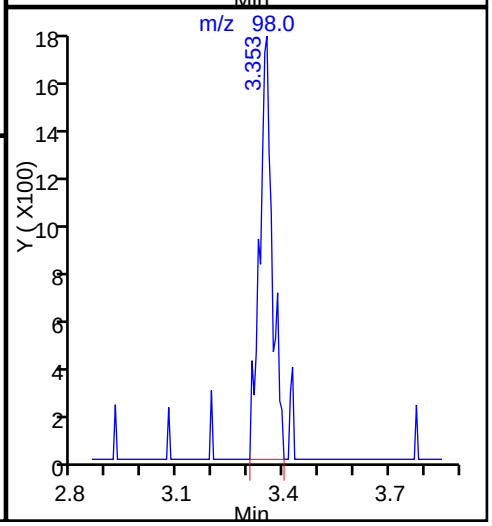












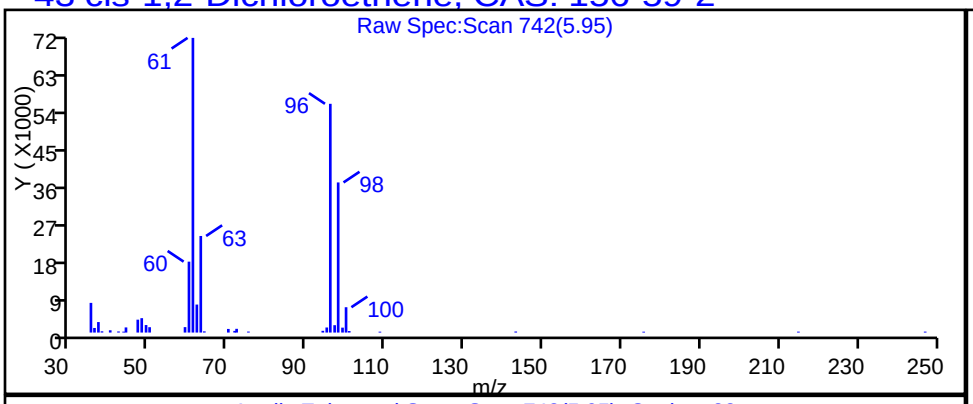
Report Date: 22-Jul-2015 08:30:28 Chrom Revision: 2.2 09-Jul-2015 10:16:20

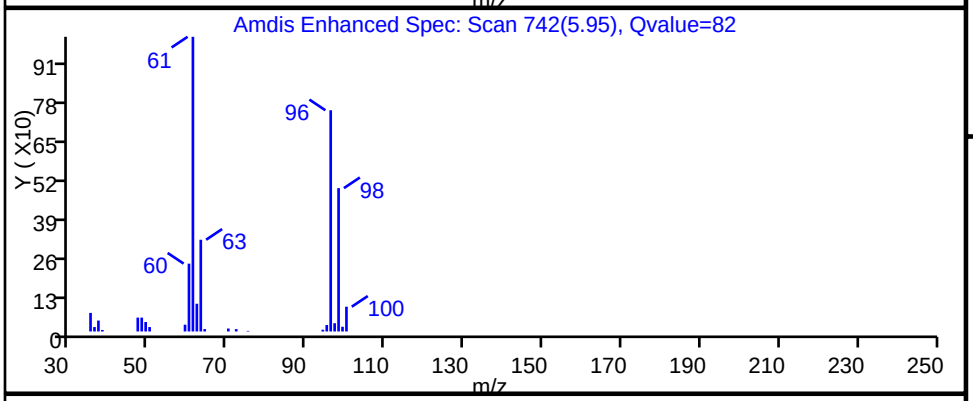
TestAmerica Pittsburgh

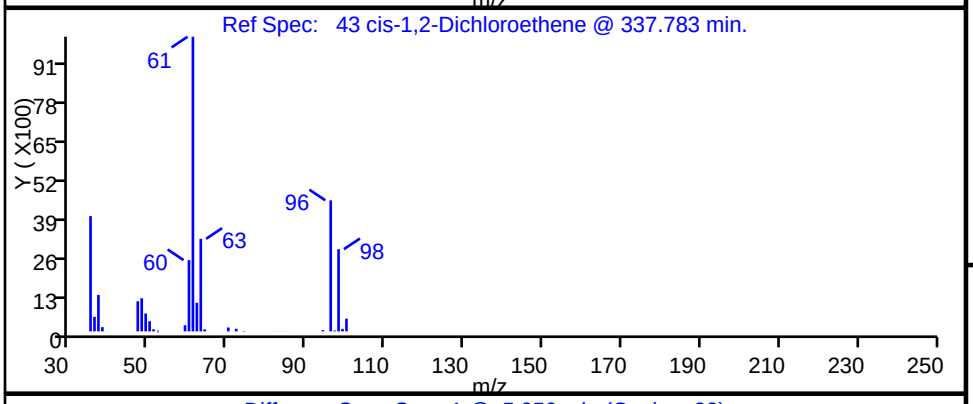
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721013.D

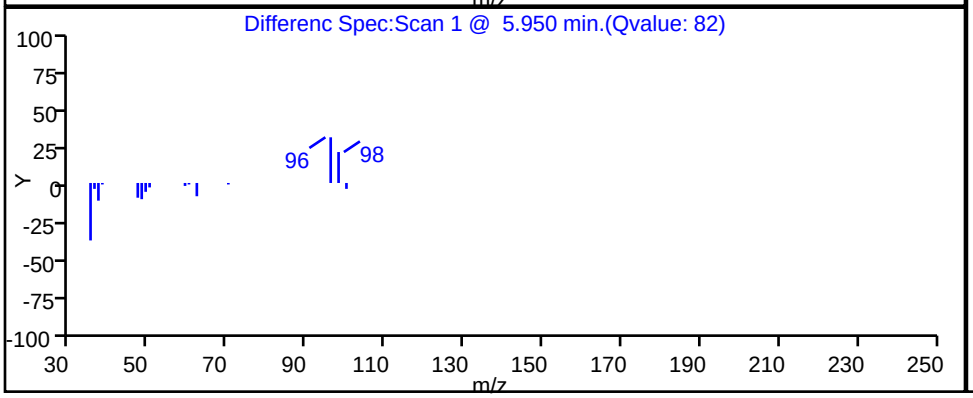
Injection Date:	21-Jul-2015 17:20:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-9	Lab Sample ID:	180-45946-9		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

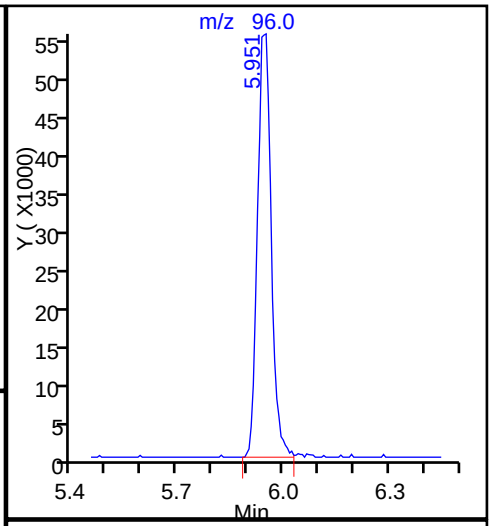
43 cis-1,2-Dichloroethene, CAS: 156-59-2

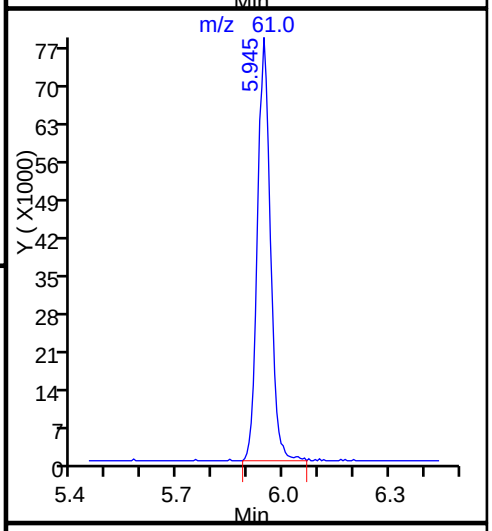


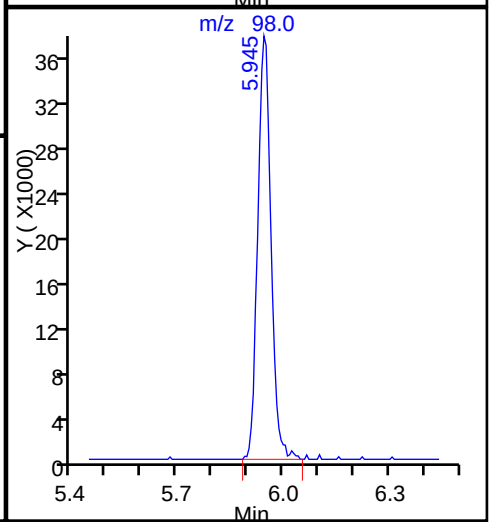












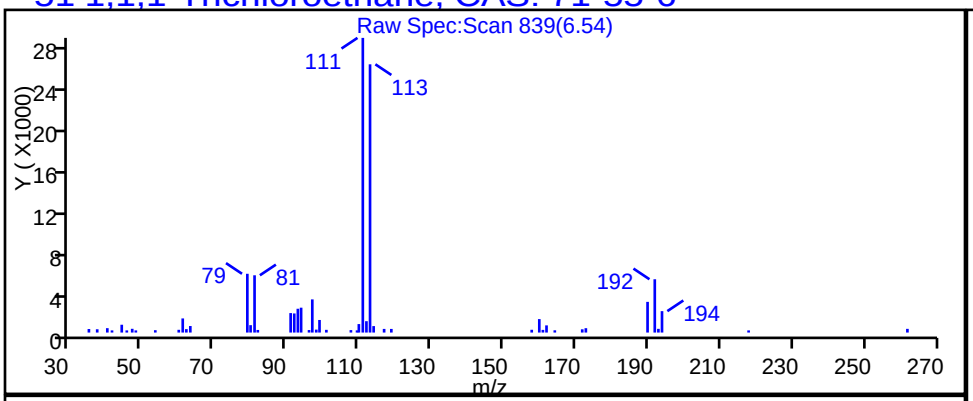
Report Date: 22-Jul-2015 08:30:28 Chrom Revision: 2.2 09-Jul-2015 10:16:20

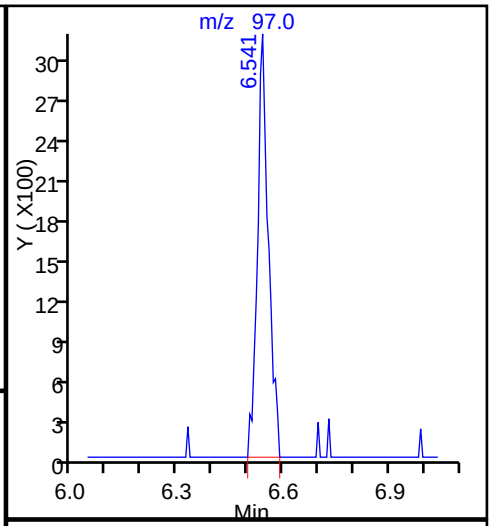
TestAmerica Pittsburgh

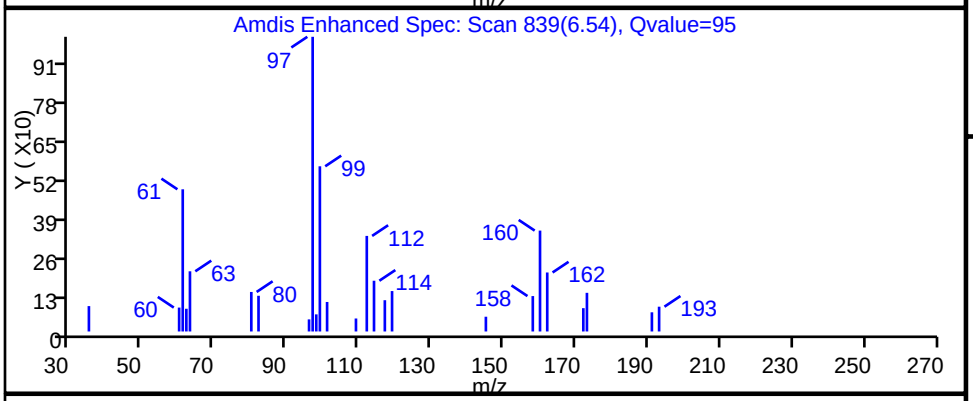
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721013.D

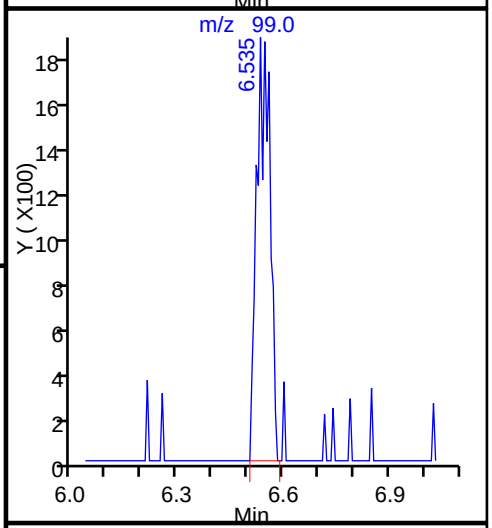
Injection Date:	21-Jul-2015 17:20:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-9	Lab Sample ID:	180-45946-9		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

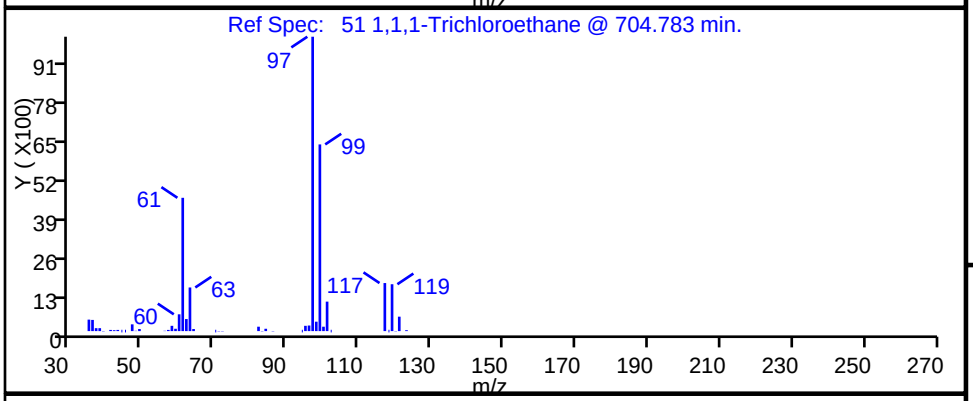
51 1,1,1-Trichloroethane, CAS: 71-55-6

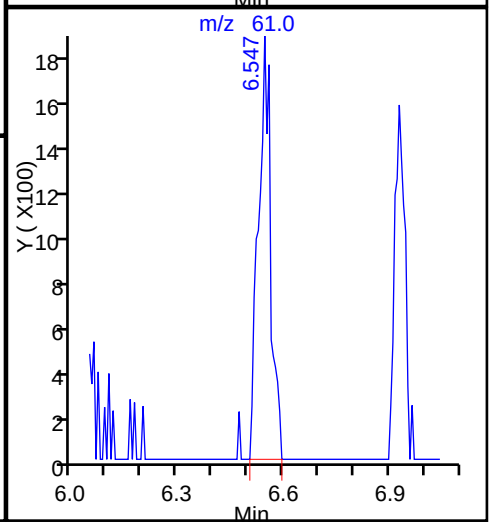


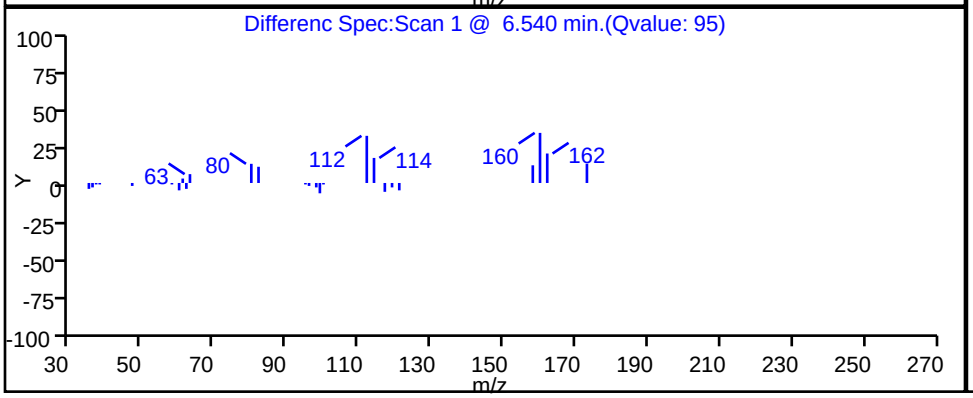












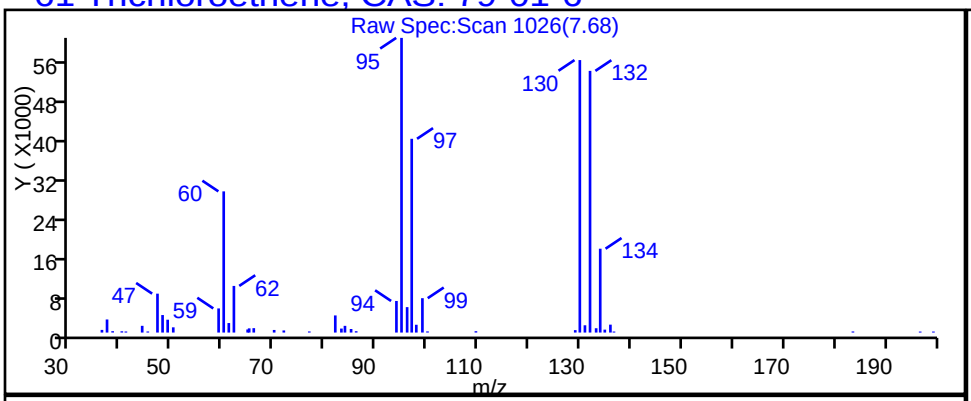
Report Date: 22-Jul-2015 08:30:28 Chrom Revision: 2.2 09-Jul-2015 10:16:20

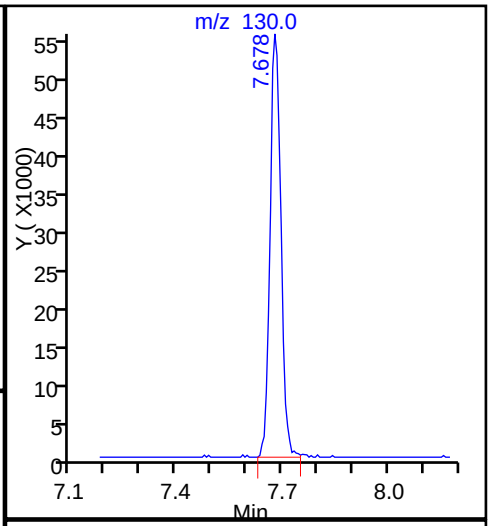
TestAmerica Pittsburgh

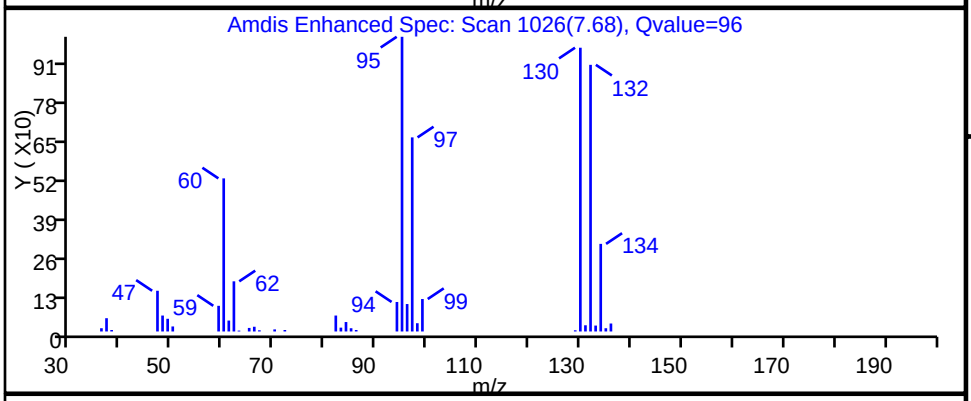
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721013.D

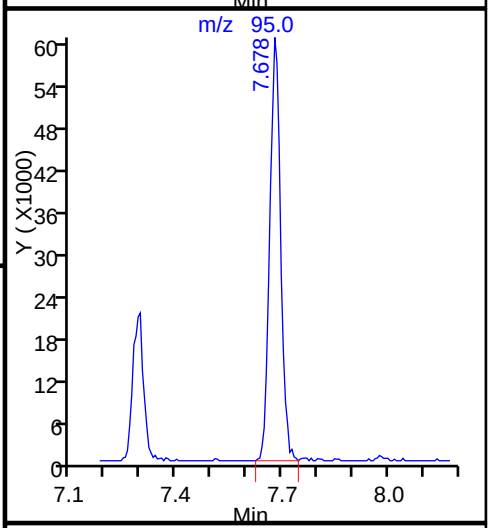
Injection Date:	21-Jul-2015 17:20:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-9	Lab Sample ID:	180-45946-9		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

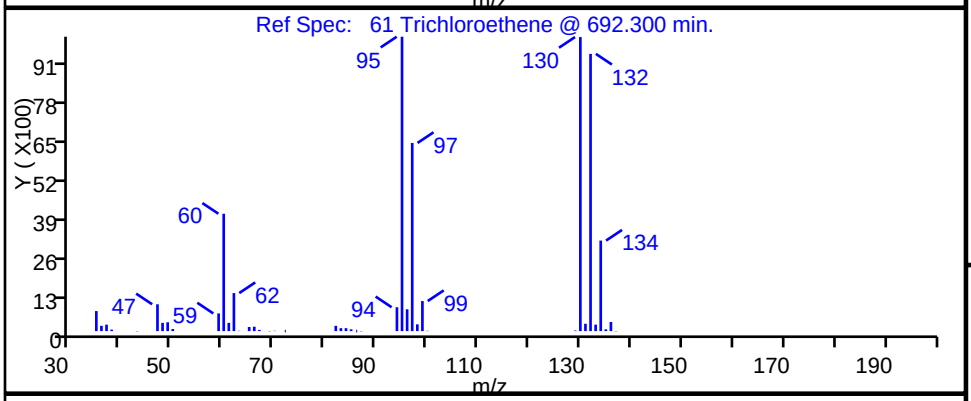
61 Trichloroethene, CAS: 79-01-6

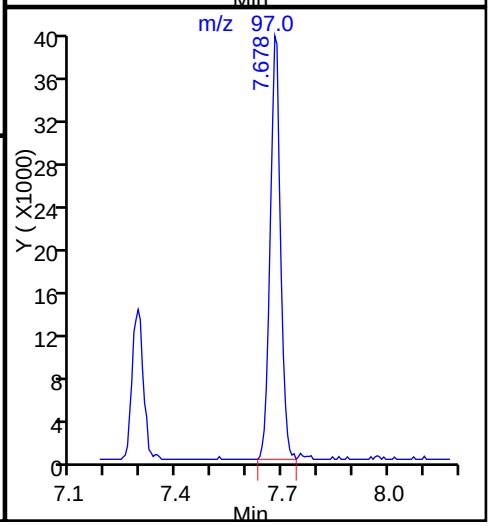


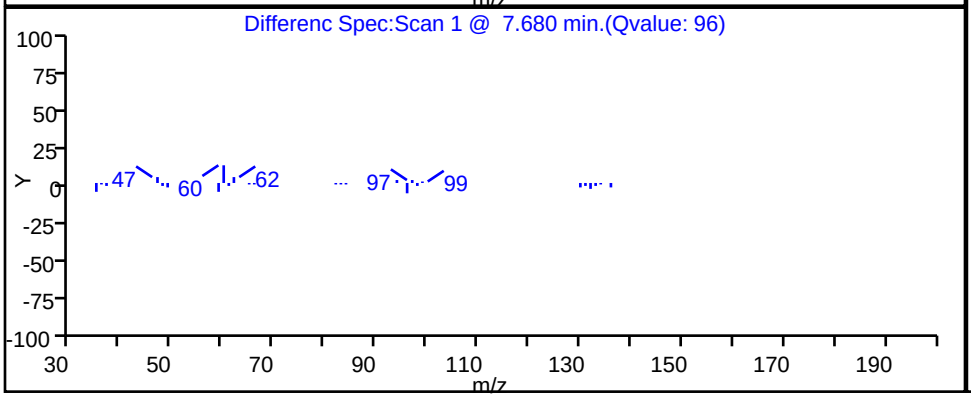












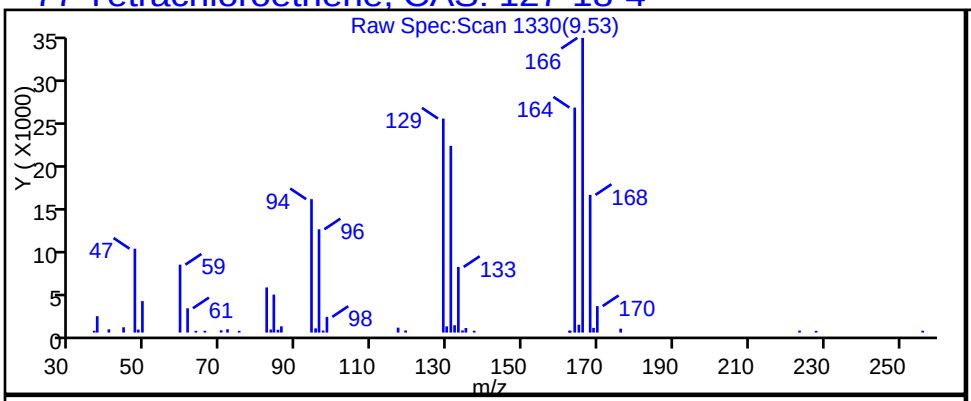
Report Date: 22-Jul-2015 08:30:28 Chrom Revision: 2.2 09-Jul-2015 10:16:20

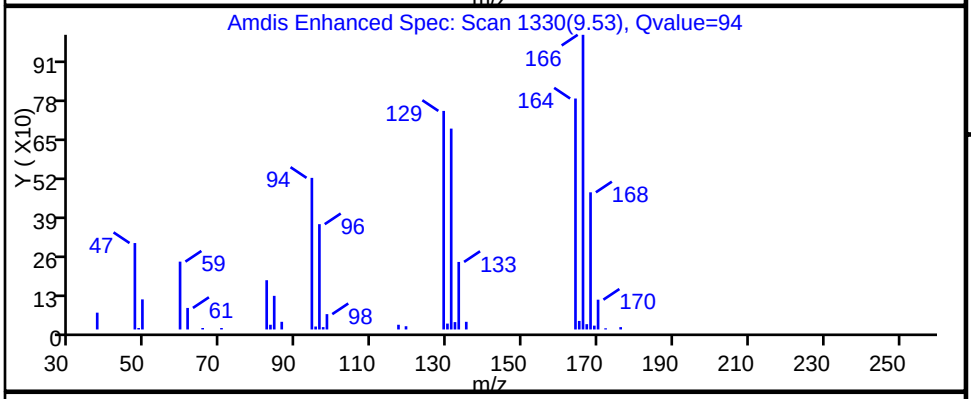
TestAmerica Pittsburgh

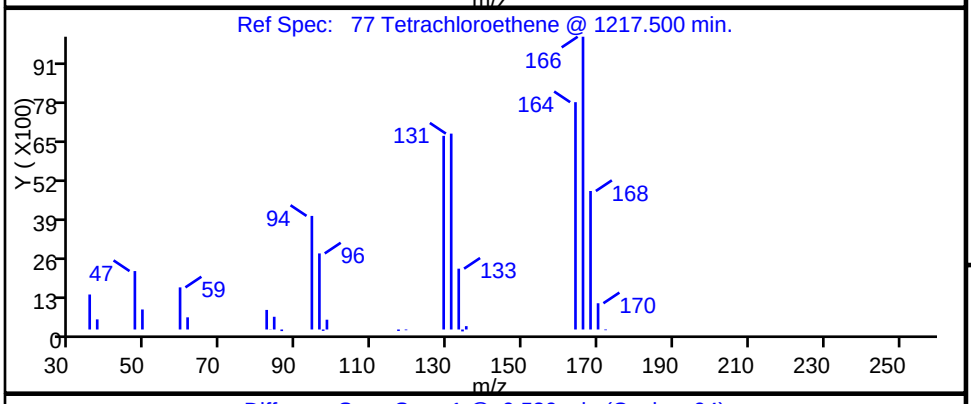
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721013.D

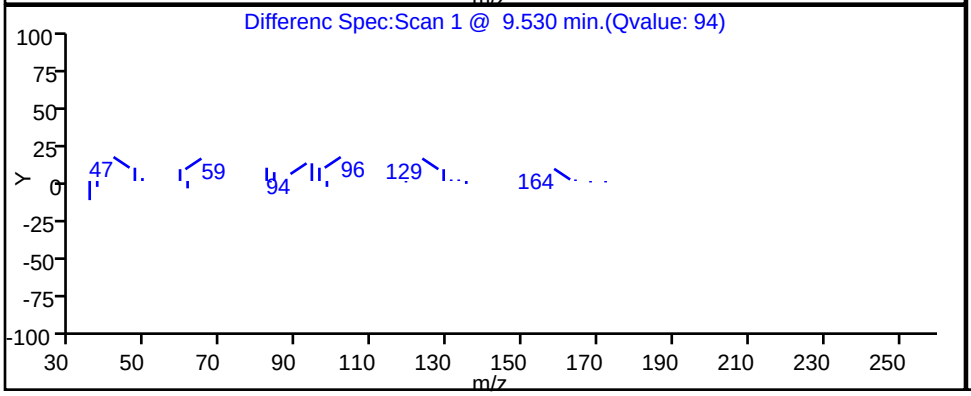
Injection Date:	21-Jul-2015 17:20:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-9	Lab Sample ID:	180-45946-9		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

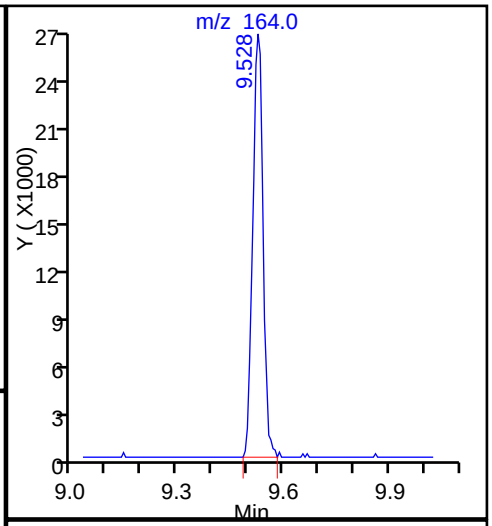
77 Tetrachloroethene, CAS: 127-18-4

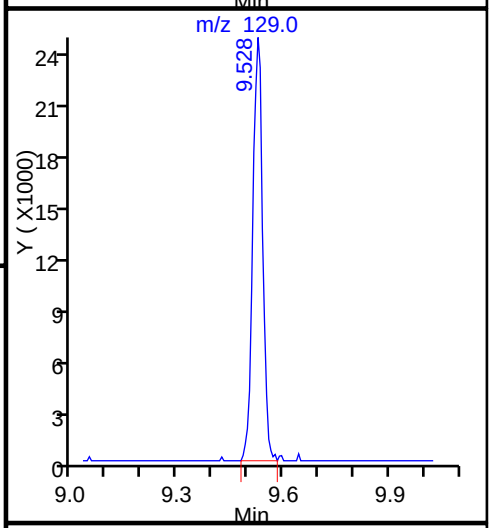


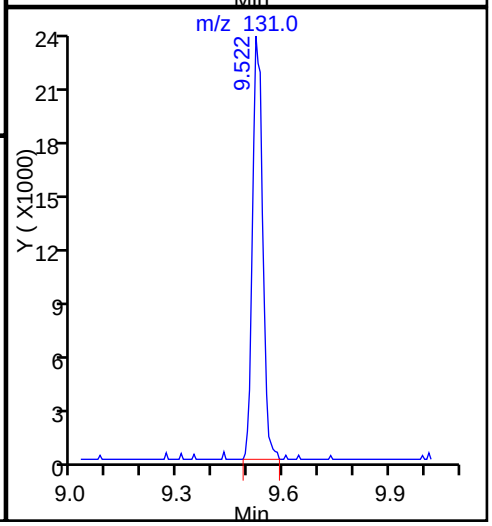












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 | Lab Sample ID: 180-45946-10

Matrix: Water | Lab File ID: 60721014.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 17:43

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.: 148334 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 | Lab Sample ID: 180-45946-10

Matrix: Water | Lab File ID: 60721014.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 17:43

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		64-135
2037-26-5	Toluene-d8 (Surr)	113		71-118
460-00-4	4-Bromofluorobenzene (Surr)	104		70-118
1868-53-7	Dibromofluoromethane (Surr)	96		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721014.D
Lims ID: 180-45946-A-10 Lab Sample ID: 180-45946-10
Client ID: HD-QC1-0/1-2
Sample Type: Client
Inject. Date: 21-Jul-2015 17:43:30 ALS Bottle#: 14 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-A-10
Misc. Info.: 180-0007861-014
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:31:25 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:31:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.232	4.243	-0.011	91	135124	1000.0	
* 2 Fluorobenzene (IS)	96	7.292	7.285	0.007	98	471463	50.0	
* 3 Chlorobenzene-d5	119	10.400	10.399	0.001	89	96055	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.748	12.747	0.001	98	148782	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.555	6.548	0.007	91	108878	48.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.932	0.001	71	167680	47.5	
$ 7 Toluene-d8 (Surr)	98	8.946	8.939	0.007	93	424997	56.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.587	11.586	0.000	81	163723	52.0	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43		3.428				ND	
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96		5.940				ND	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83		6.372				ND	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130		7.674				ND	
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.013	9.012	0.001	94	5240	0.5257	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164		9.529				ND	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

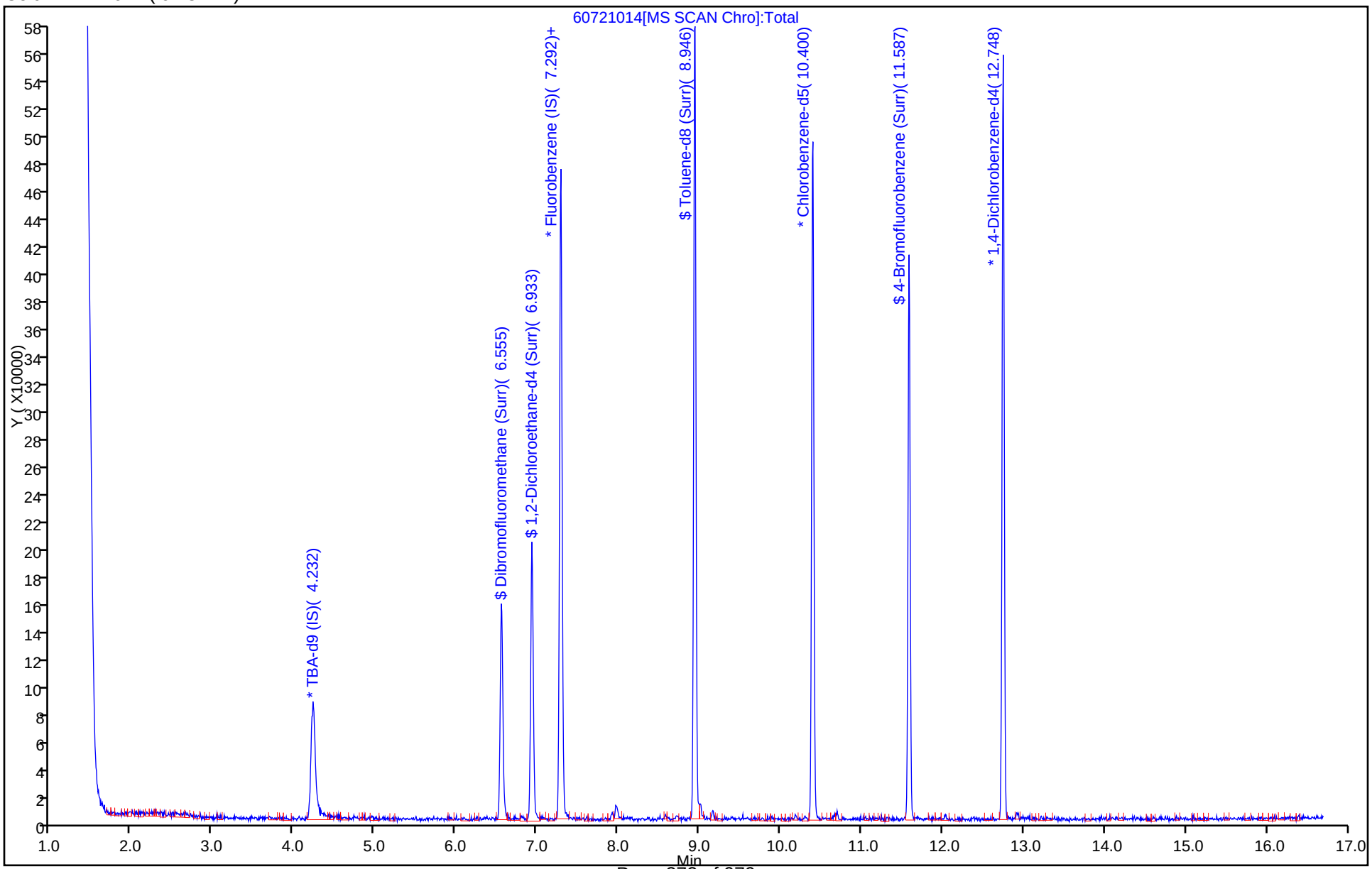
Report Date: 22-Jul-2015 08:31:26 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721014.D

Injection Date:	21-Jul-2015 17:43:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-A-10	Lab Sample ID:	180-45946-10	Worklist Smp#:	14
Client ID:	HD-QC1-0/1-2				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MSVOA_LL_CHHP6	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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 | Lab Sample ID: 180-45946-11

Matrix: Water | Lab File ID: 60721015.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:25

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 18:07

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	^c	1.0	0.28
75-01-4	Vinyl chloride	ND	^c	1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND	^c	1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	0.18	J	1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	0.22	J	1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 | Lab Sample ID: 180-45946-11

Matrix: Water | Lab File ID: 60721015.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:25

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 18:07

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	112		71-118
460-00-4	4-Bromofluorobenzene (Surr)	104		70-118
1868-53-7	Dibromofluoromethane (Surr)	99		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721015.D
Lims ID: 180-45946-E-11 Lab Sample ID: 180-45946-11
Client ID: HD-COD-SW-16-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 18:07:30 ALS Bottle#: 15 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-E-11
Misc. Info.: 180-0007861-015
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:33:34 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:33:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.226	4.243	-0.017	89	126759	1000.0	
* 2 Fluorobenzene (IS)	96	7.292	7.285	0.007	98	461812	50.0	
* 3 Chlorobenzene-d5	119	10.394	10.399	-0.005	90	96255	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.748	12.747	0.001	98	149451	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.562	6.548	0.014	92	109761	49.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.932	0.001	70	166836	48.3	
$ 7 Toluene-d8 (Surr)	98	8.940	8.939	0.001	94	424060	56.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.587	11.586	0.001	81	163779	51.9	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43	3.429	3.428	0.001	89	6589	9.40	
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96	5.941	5.940	0.001	8	2348	0.7902	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83		6.372				ND	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130	7.681	7.674	0.007	90	2455	0.9094	
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.007	9.012	-0.005	92	6230	0.6238	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164	9.524	9.529	-0.005	91	2021	1.08	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

Reagents:

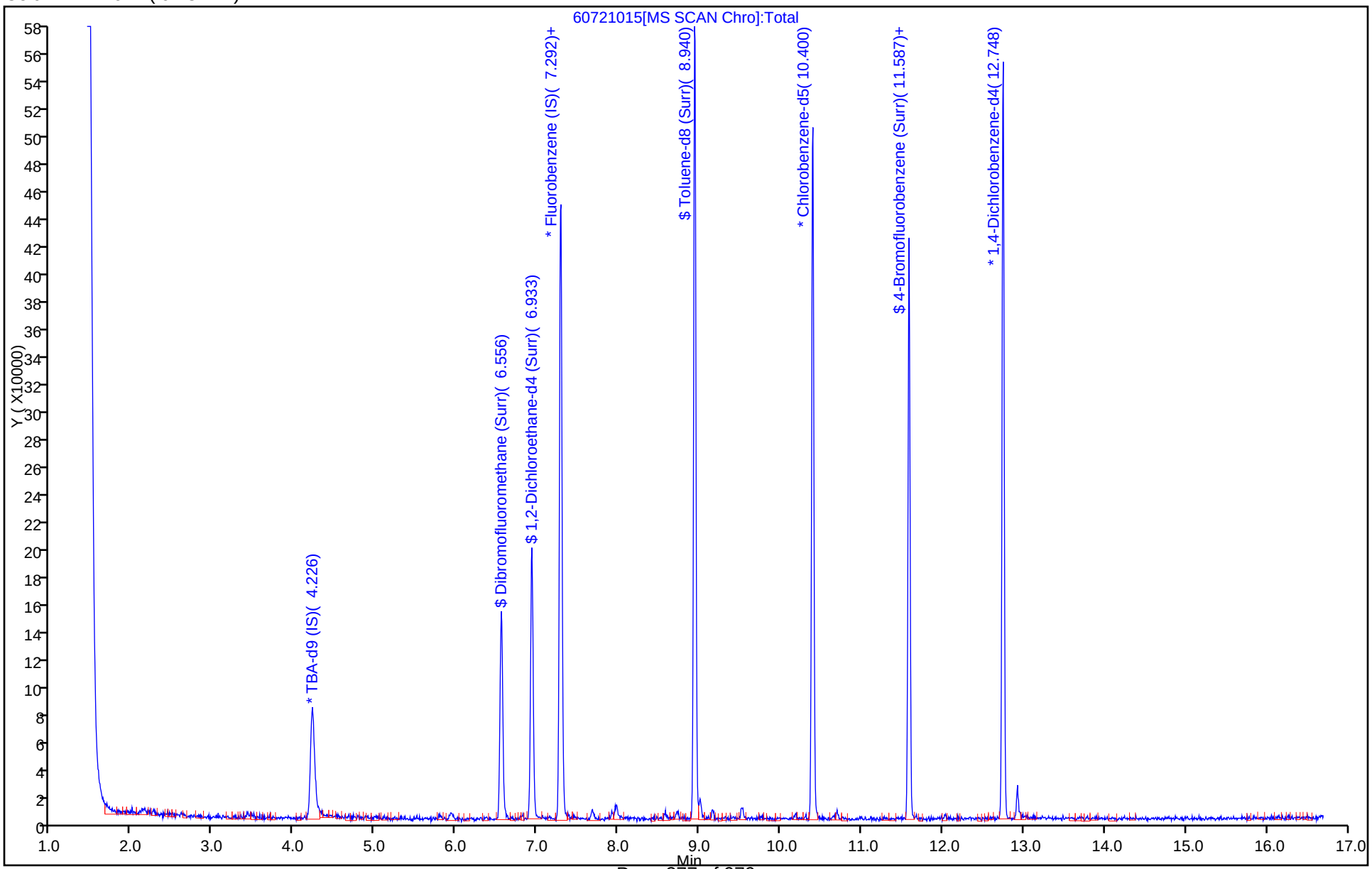
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 22-Jul-2015 08:33:35 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721015.D				
Injection Date:	21-Jul-2015 18:07:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-E-11	Lab Sample ID:	180-45946-11	Worklist Smp#:	15
Client ID:	HD-COD-SW-16-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



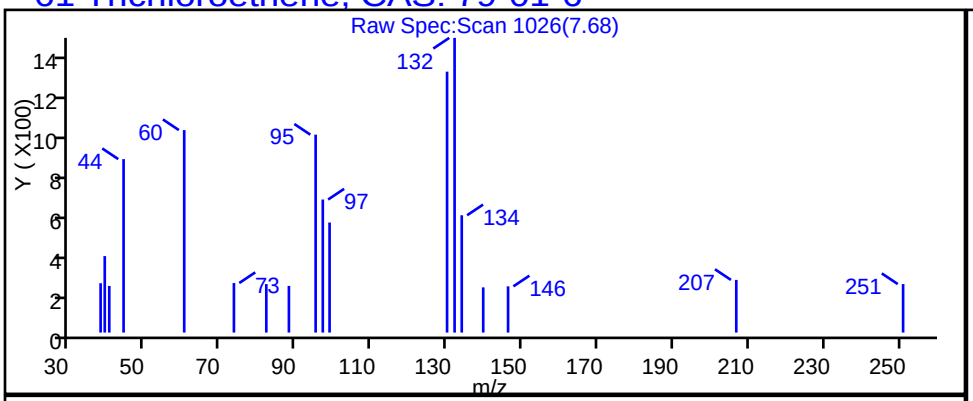
Report Date: 22-Jul-2015 08:33:35 Chrom Revision: 2.2 09-Jul-2015 10:16:20

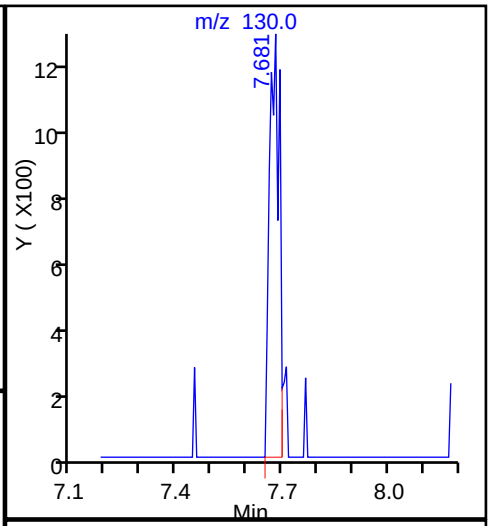
TestAmerica Pittsburgh

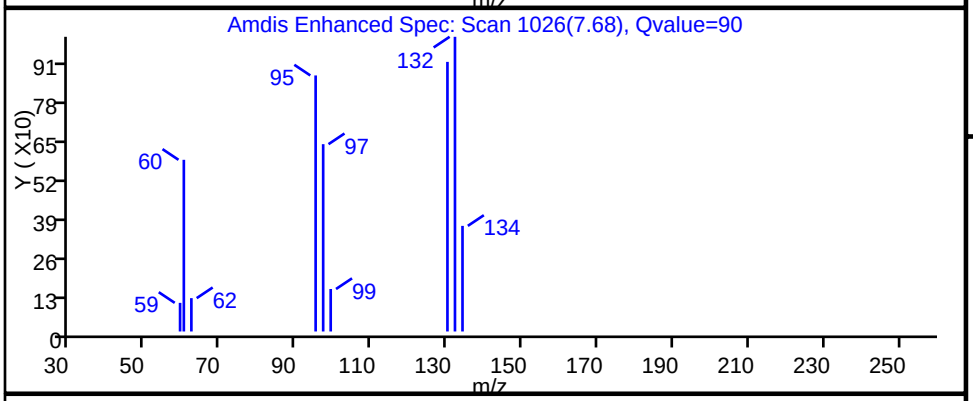
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721015.D

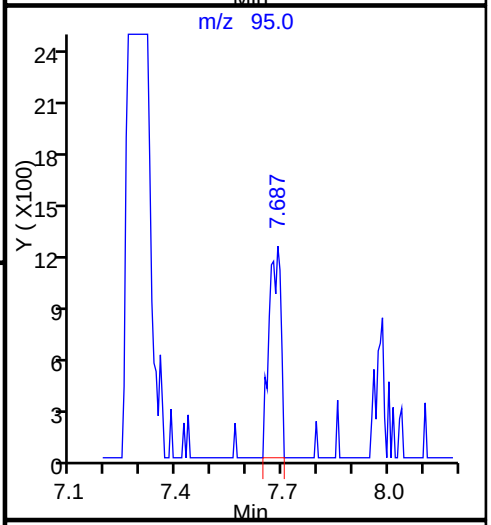
Injection Date:	21-Jul-2015 18:07:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-11	Lab Sample ID:	180-45946-11		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	001562	ALS Bottle#:	15	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

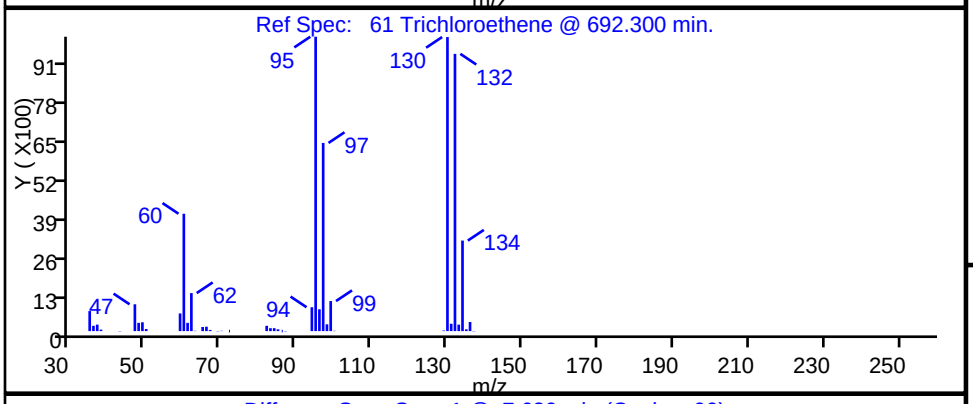
61 Trichloroethene, CAS: 79-01-6

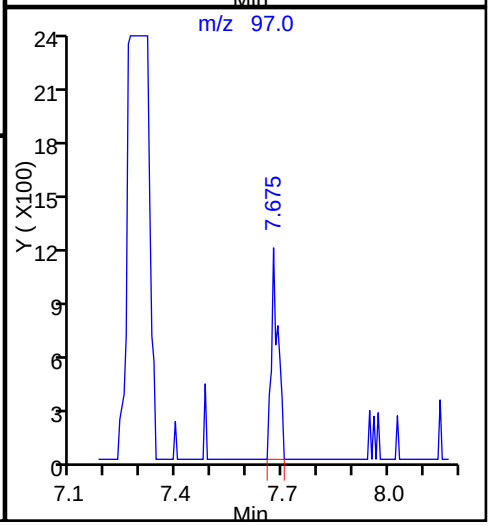


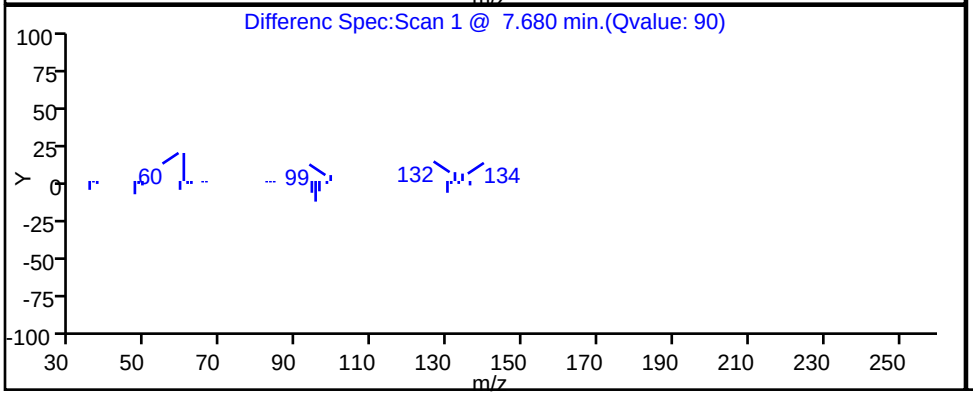












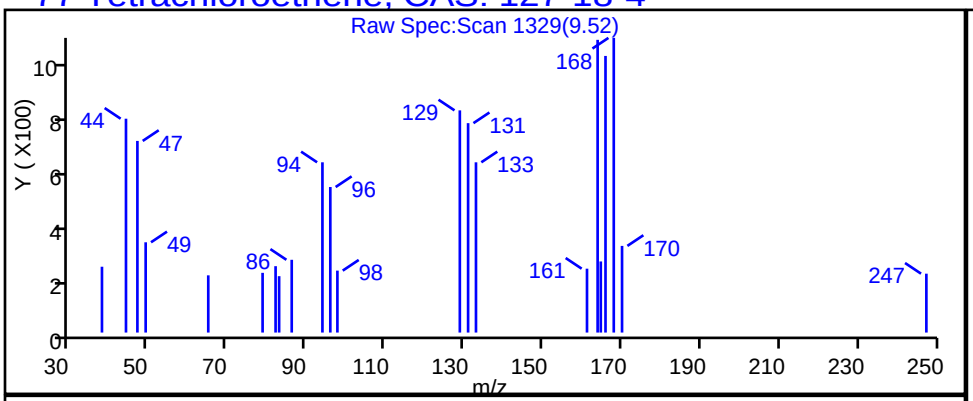
Report Date: 22-Jul-2015 08:33:35 Chrom Revision: 2.2 09-Jul-2015 10:16:20

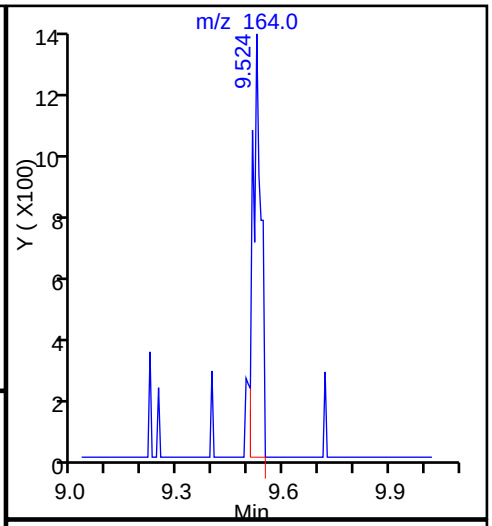
TestAmerica Pittsburgh

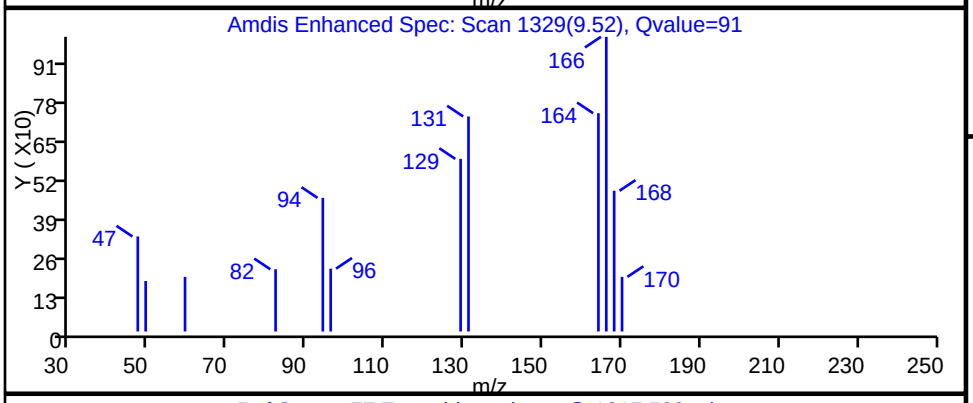
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721015.D

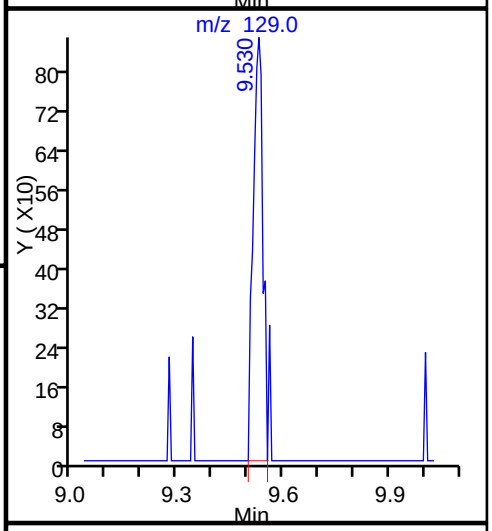
Injection Date:	21-Jul-2015 18:07:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-11	Lab Sample ID:	180-45946-11		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	001562	ALS Bottle#:	15	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

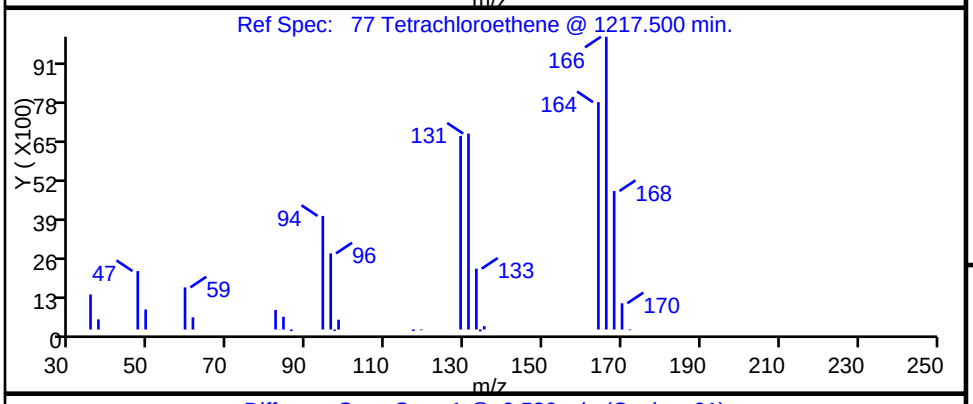
77 Tetrachloroethene, CAS: 127-18-4

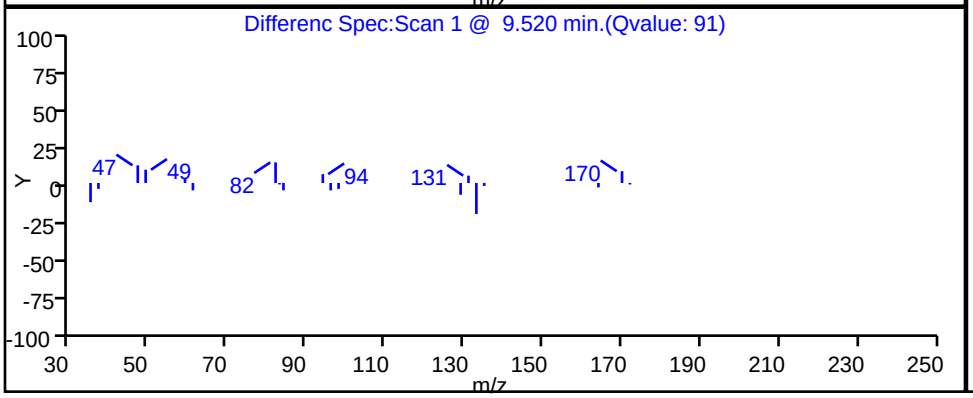


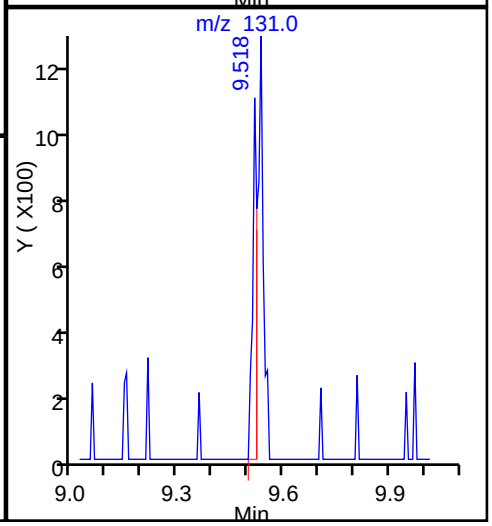












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 | Lab Sample ID: 180-45946-12

Matrix: Water | Lab File ID: 60721007.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 14:41

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	^c	1.0	0.28
75-01-4	Vinyl chloride	ND	^c	1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND	^c	1.0	0.21
75-35-4	1,1-Dichloroethene	0.74	J	1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	0.36	J	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	13	F1	1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.8		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	15		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	28		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 | Lab Sample ID: 180-45946-12

Matrix: Water | Lab File ID: 60721007.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 14:41

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		64-135
2037-26-5	Toluene-d8 (Surr)	111		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: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D
Lims ID: 180-45946-D-12 Lab Sample ID: 180-45946-12
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 14:41:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-C-12
Misc. Info.: 180-0007861-007
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 21-Jul-2015 15:39:42 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: fergusond Date: 21-Jul-2015 15:39:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.224	4.243	-0.019	91	134515	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.285	0.005	98	510322	50.0	
* 3 Chlorobenzene-d5	119	10.399	10.399	0.000	89	105814	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.747	12.747	0.000	98	159370	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.554	6.548	0.006	92	117795	48.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.931	6.932	-0.001	70	172191	45.1	
$ 7 Toluene-d8 (Surr)	98	8.945	8.939	0.006	94	462533	55.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.585	11.586	-0.001	81	178541	51.5	
11 Dichlorodifluoromethane	85		1.603				ND	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
14 Butadiene	39		1.931				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
17 Dichlorofluoromethane	67		2.649				ND	
18 Trichlorofluoromethane	101		2.679				ND	
19 Ethanol	45		2.922				ND	
20 Ethyl ether	59		3.044				ND	
21 Acrolein	56		3.221				ND	
22 1,1-Dichloroethene	96	3.348	3.336	0.012	96	9499	3.68	
23 1,1,2-Trichloro-1,2,2-trif	101		3.409				ND	
24 Acetone	43	3.439	3.428	0.011	71	5514	7.12	M
25 Iodomethane	142		3.531				ND	
26 Carbon disulfide	76		3.634				ND	
27 Isopropyl alcohol	45		3.676				ND	
28 Acetonitrile	40		3.834				ND	
29 3-Chloro-1-propene	76		3.908				ND	
30 Methyl acetate	43		3.926				ND	
31 Methylene Chloride	84		4.127				ND	
32 2-Methyl-2-propanol	59		4.364				ND	
33 Acrylonitrile	53		4.498				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96	4.565	4.565	0.000	17	1557	0.5120	
35 Methyl tert-butyl ether	73		4.571				ND	
36 Hexane	57		4.985				ND	
37 1,1-Dichloroethane	63	5.203	5.198	0.005	50	9966	1.81	M
38 Vinyl acetate	43		5.234				ND	
39 2-Chloro-1,3-butadiene	53		5.294				ND	
40 Isopropyl ether	45		5.294				ND	
41 Tert-butyl ethyl ether	59		5.769				ND	
42 2,2-Dichloropropane	77		5.934				ND	
43 cis-1,2-Dichloroethene	96	5.946	5.940	0.006	80	221472	67.5	
44 2-Butanone (MEK)	43		5.946				ND	
45 Propionitrile	54		6.012				ND	
46 Ethyl acetate	43		6.018				ND	
47 Methacrylonitrile	41		6.195				ND	
48 Chlorobromomethane	128		6.226				ND	
49 Tetrahydrofuran	42		6.244				ND	
50 Chloroform	83	6.377	6.372	0.005	81	4296	0.7883	
51 1,1,1-Trichloroethane	97	6.542	6.542	0.000	60	36059	8.93	
52 Cyclohexane	56		6.615				ND	
53 Carbon tetrachloride	117		6.713				ND	
54 1,1-Dichloropropene	75		6.725				ND	
55 Isobutyl alcohol	41		6.895				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
148 Isooctane	57		7.101				ND	
58 Tert-amyl methyl ether	73		7.120				ND	
59 n-Heptane	43	7.308	7.309	-0.001	73	3996	1.26	
60 n-Butanol	56		7.612				ND	
61 Trichloroethene	130	7.679	7.674	0.005	96	222729	74.7	
62 Ethyl acrylate	55		7.789				ND	
63 Methylcyclohexane	83	7.923	7.923	0.000	31	2529	0.5136	
64 1,2-Dichloropropane	63		7.948				ND	
66 Methyl methacrylate	69		8.032				ND	
65 1,4-Dioxane	88		8.033				ND	
67 Dibromomethane	93		8.039				ND	
68 Dichlorobromomethane	83		8.227				ND	
69 2-Nitropropane	41		8.440				ND	
70 2-Chloroethyl vinyl ether	63		8.527				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.012	9.012	0.000	54	5202	0.4738	M
74 trans-1,3-Dichloropropene	75		9.256				ND	
75 Ethyl methacrylate	69		9.310				ND	
76 1,1,2-Trichloroethane	97	9.450	9.444	0.006	1	788	0.3457	
77 Tetrachloroethene	164	9.529	9.529	0.000	93	293433	142.3	
78 1,3-Dichloropropane	76		9.608				ND	
79 2-Hexanone	43		9.657				ND	
80 n-Butyl acetate	43		9.784				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
83 3-Chlorobenzotrifluoride	180		10.393				ND	
84 Chlorobenzene	112		10.430				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
85 4-Chlorobenzotrifluoride	180		10.484				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
129 Cyclohexanol	57		11.289				ND	
92 2-Chlorobenzotrifluoride	180		11.306				ND	
93 Isopropylbenzene	105		11.409				ND	
94 Cyclohexanone	55		11.487				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
95 Bromobenzene	156		11.719				ND	
97 trans-1,4-Dichloro-2-buten	53		11.750				ND	
98 1,2,3-Trichloropropane	110		11.774				ND	
99 N-Propylbenzene	120		11.829				ND	
100 2-Chlorotoluene	126		11.914				ND	
101 3-Chlorotoluene	126		11.981				ND	
102 1,3,5-Trimethylbenzene	105		12.011				ND	
103 4-Chlorotoluene	126		12.036				ND	
104 tert-Butylbenzene	119		12.322				ND	
105 Pentachloroethane	167		12.351				ND	
106 1,2,4-Trimethylbenzene	105		12.382				ND	
107 1,2-dichloro-4-(trifluorom	214		12.419				ND	
108 sec-Butylbenzene	105		12.547				ND	
109 1,3-Dichlorobenzene	146		12.668				ND	
110 4-Isopropyltoluene	119		12.705				ND	
111 1,4-Dichlorobenzene	146		12.772				ND	
112 1,2,3-Trimethylbenzene	105		12.789				ND	
113 2,4-Dichloro-1-(triflourom	214		12.790				ND	
114 2,5-Dichlorobenzotrifluori	214		12.833				ND	
115 Benzyl chloride	91		12.881				ND	
116 n-Butylbenzene	91		13.112				ND	
117 1,2-Dichlorobenzene	146		13.125				ND	
118 1,2-Dibromo-3-Chloropropan	75		13.916				ND	
119 2,4- & 2,5- & 2,6- Dichlor	125		14.062				ND	
120 1,3,5-Trichlorobenzene	180		14.105				ND	
121 2,3- & 3,4- Dichlorotoluen	125		14.475				ND	
122 1,2,4-Trichlorobenzene	180		14.743				ND	
123 Hexachlorobutadiene	225		14.889				ND	
124 Naphthalene	128		15.011				ND	
125 1,2,3-Trichlorobenzene	180		15.230				ND	
126 2,4,5-Trichlorotoluene	159		16.008				ND	
127 2,3,6-Trichlorotoluene	159		16.112				ND	
128 2-Methylnaphthalene	142		16.147				ND	
150 Tert-butyl ethyl ether (TI	1		0.000				ND	
152 Formaldehyde TIC	1		0.000				ND	
151 Tert-amyl methyl ether (TI	1		0.000				ND	
143 2,5-Dichlorotoluene	1		0.000				ND	
149 Isopropyl ether TIC	1		0.000				ND	
144 2,4-Dichlorotoluene	1		0.000				ND	
147 2,6-Dichlorotoluene	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
146 3,4-Dichlorotoluene	1		0.000				ND	
153 1,2 Epoxybutane TIC	1		0.000				ND	
145 2,3-Dichlorotoluene	1		0.000				ND	
S 131 Xylenes, Total	106		1.000				ND	
S 130 1,2-Dichloroethene, Total	96				0		68.0	
S 132 1,3-Dichloropropene, Total	1		0.000				ND	
T 135 Mesityl oxide TIC	83		0.000				ND	
T 134 Methyl n-amyl ketone TIC	43		0.000				ND	
T 133 Tetrahydrofuran TIC	42		0.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

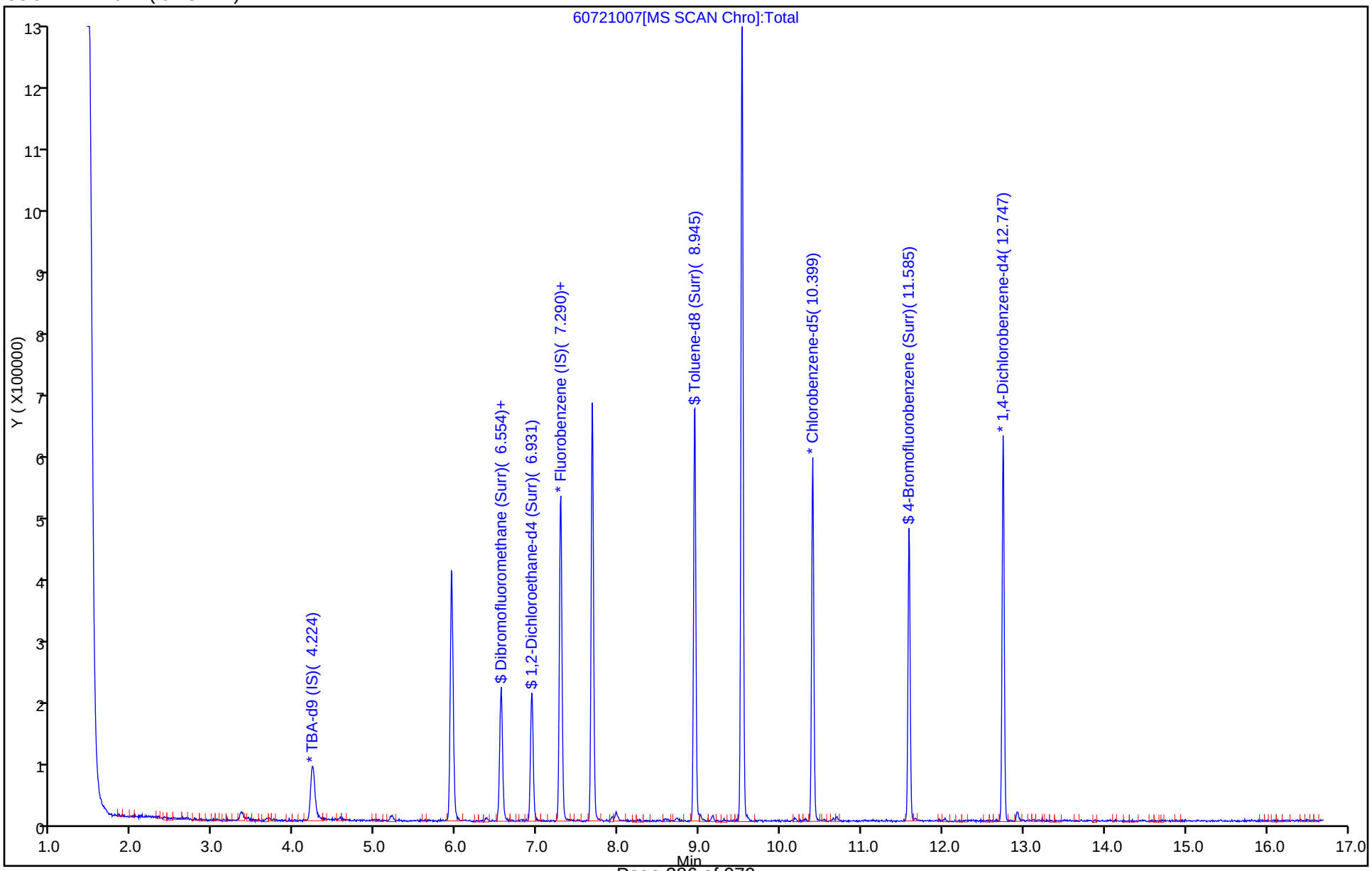
Report Date: 21-Jul-2015 15:39:43 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D

Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12	Worklist Smp#:	7
Client ID:	HD-COD-SW-17-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



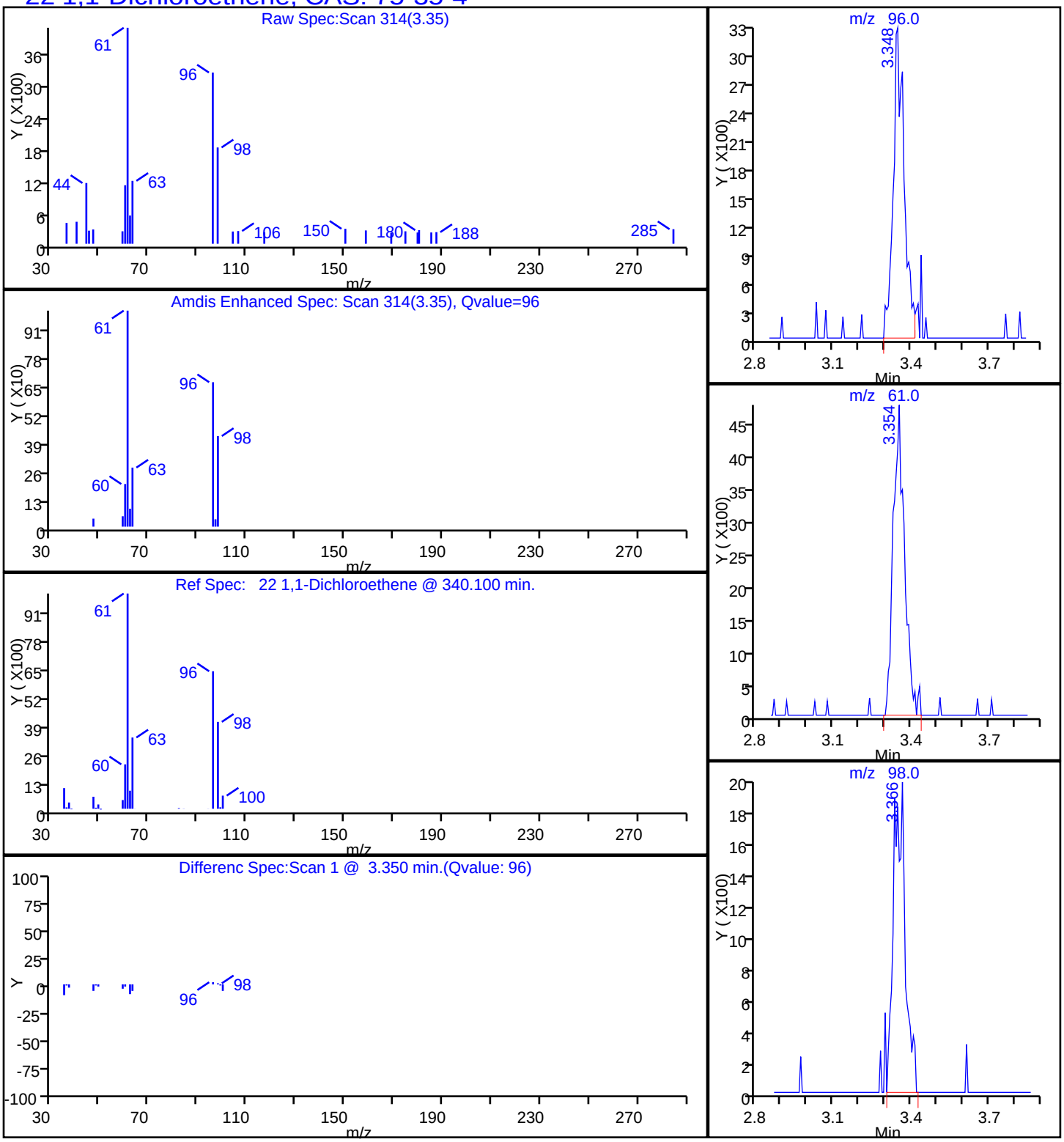
Report Date: 21-Jul-2015 15:39:43 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D

Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



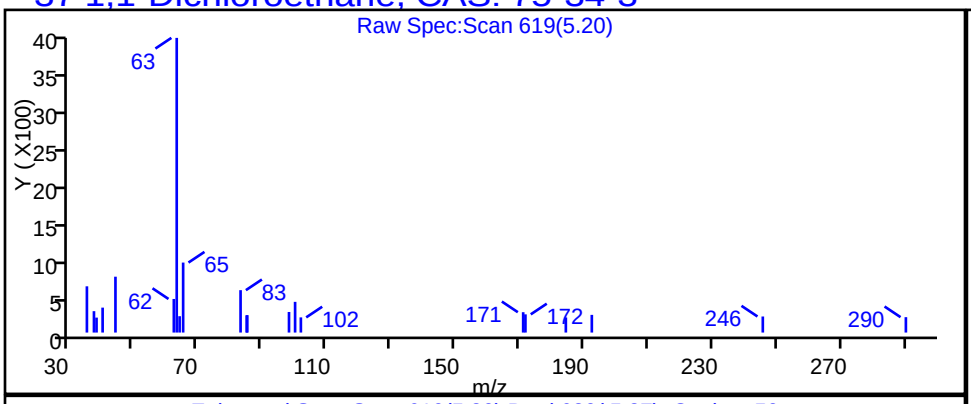
Report Date: 21-Jul-2015 15:39:43 Chrom Revision: 2.2 09-Jul-2015 10:16:20

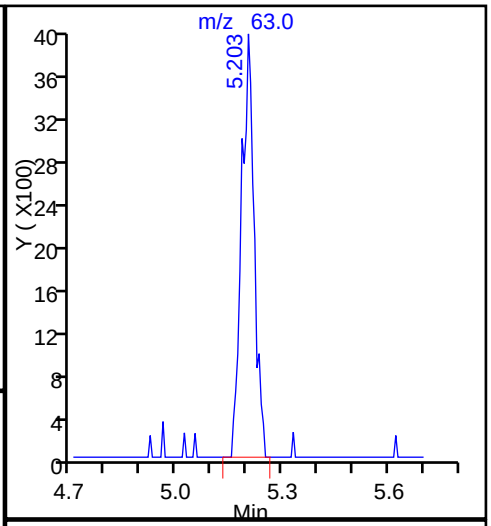
TestAmerica Pittsburgh

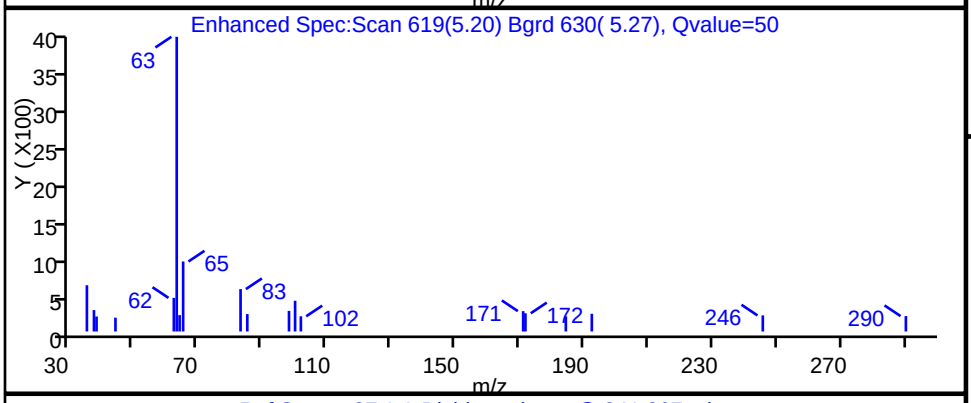
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D

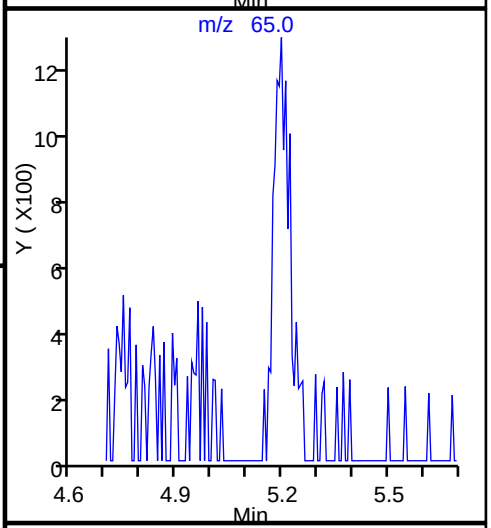
Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

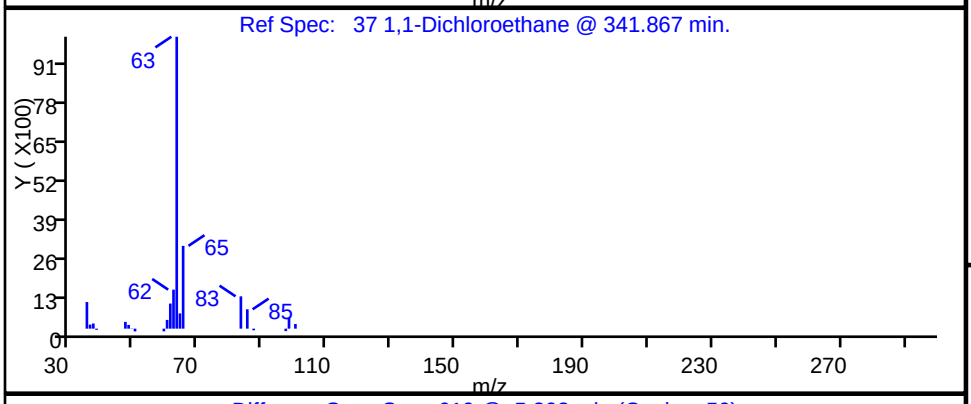
37 1,1-Dichloroethane, CAS: 75-34-3

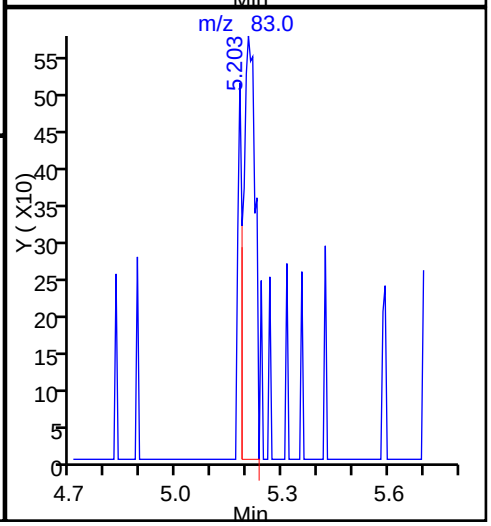


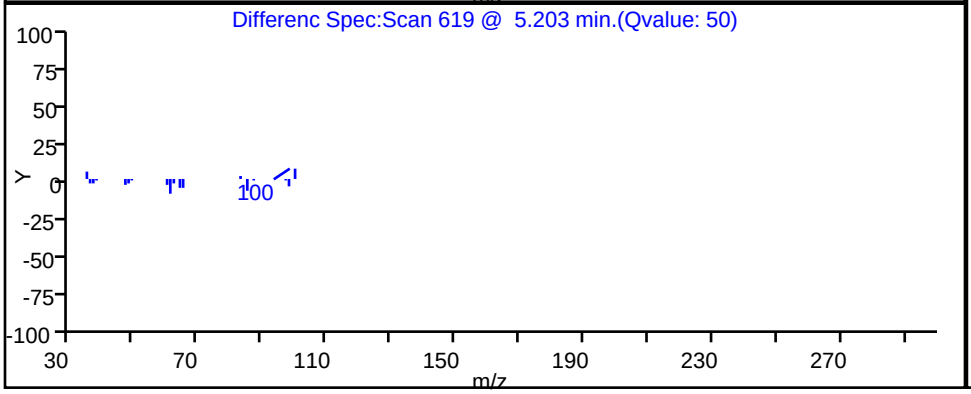












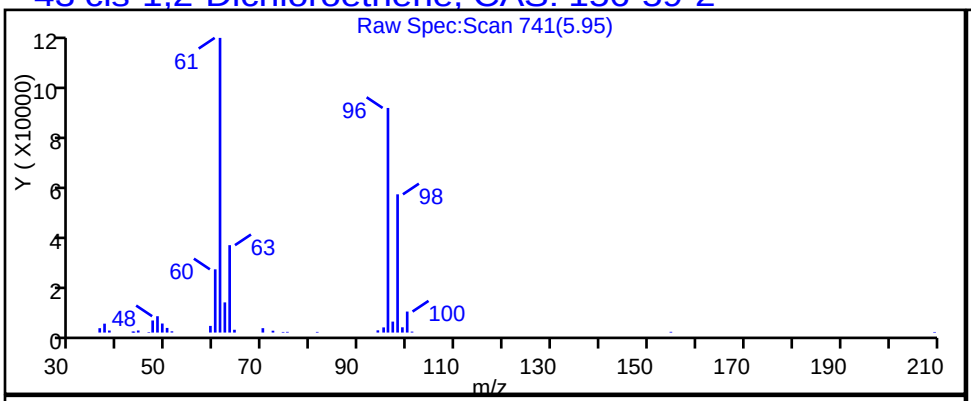
Report Date: 21-Jul-2015 15:39:43 Chrom Revision: 2.2 09-Jul-2015 10:16:20

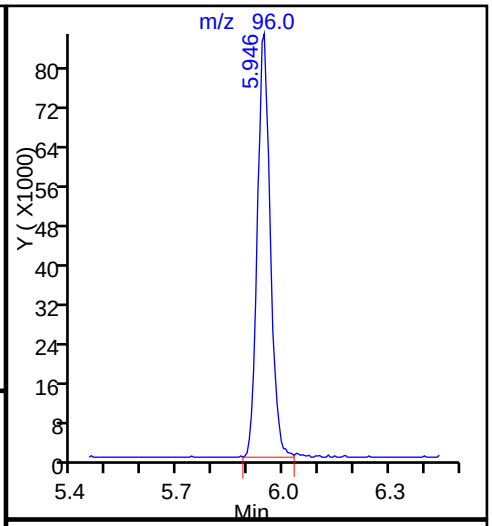
TestAmerica Pittsburgh

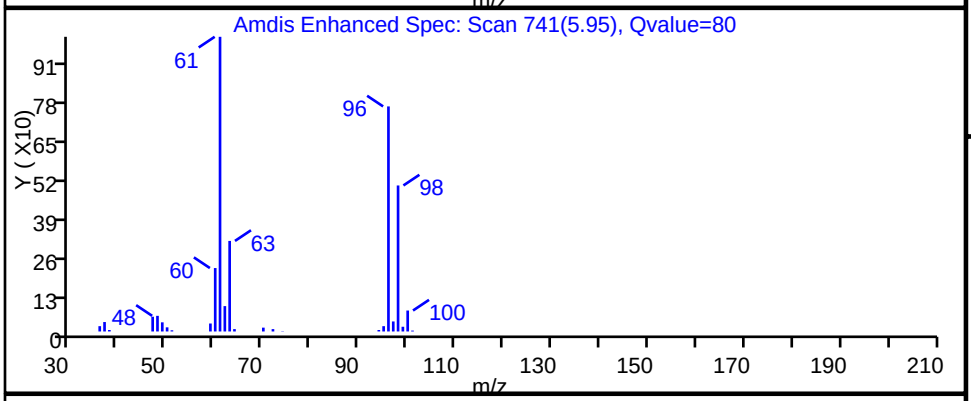
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D

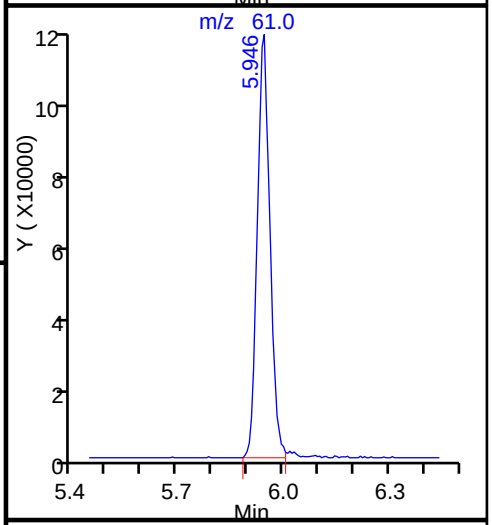
Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

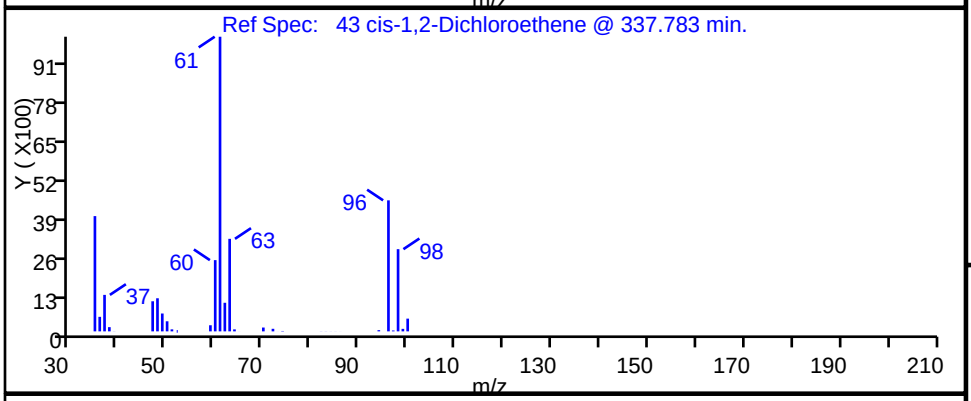
43 cis-1,2-Dichloroethene, CAS: 156-59-2

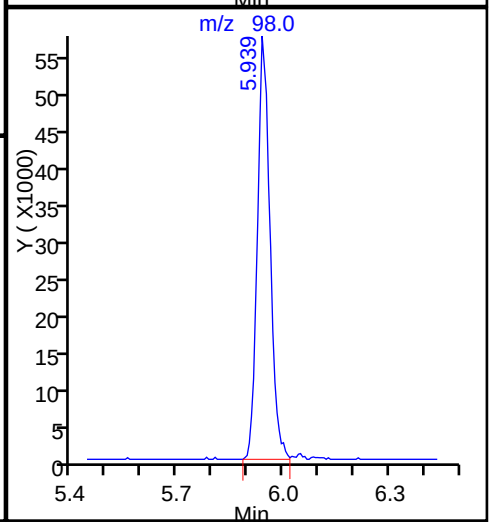


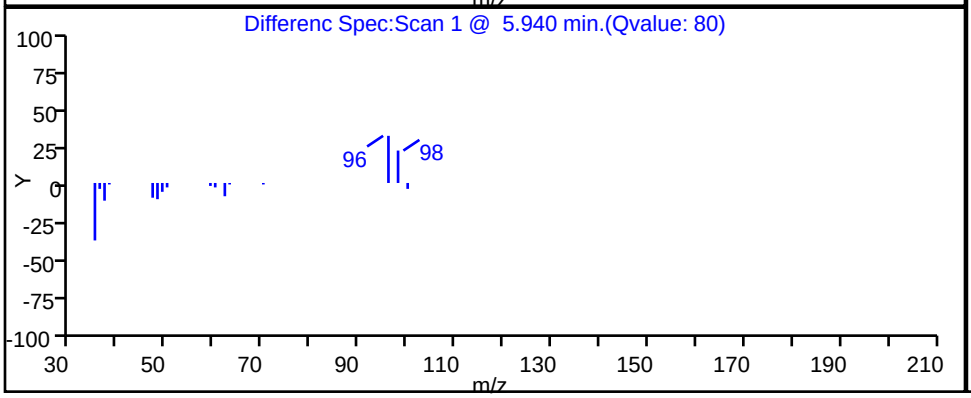












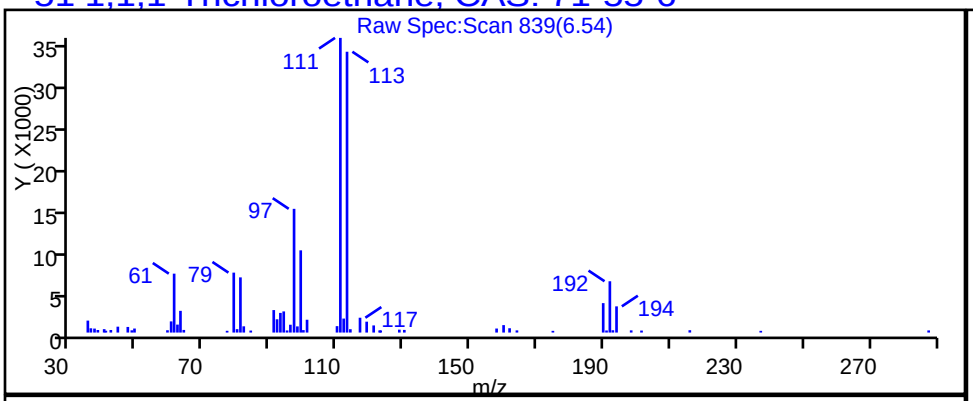
Report Date: 21-Jul-2015 15:39:43 Chrom Revision: 2.2 09-Jul-2015 10:16:20

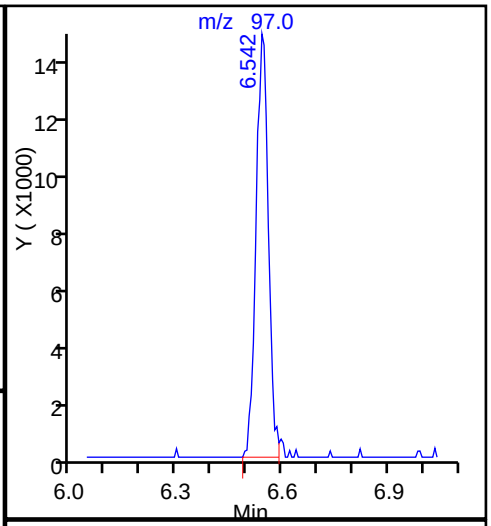
TestAmerica Pittsburgh

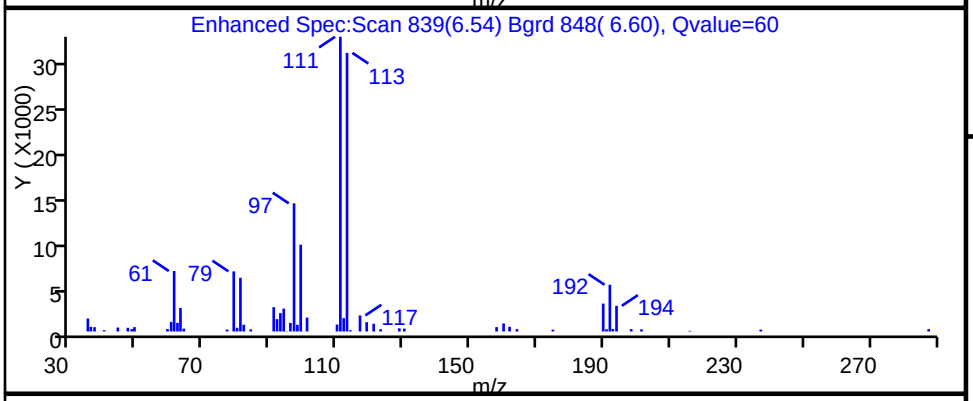
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D

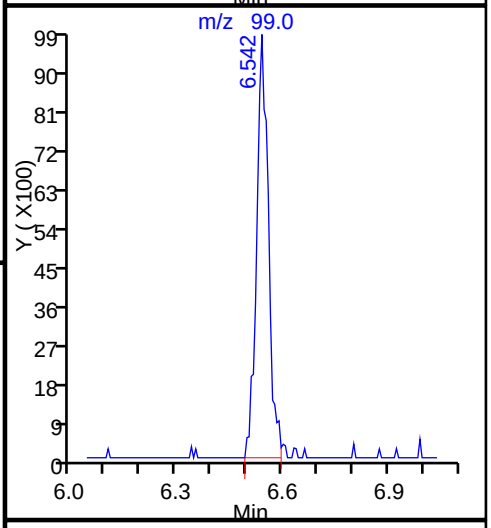
Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

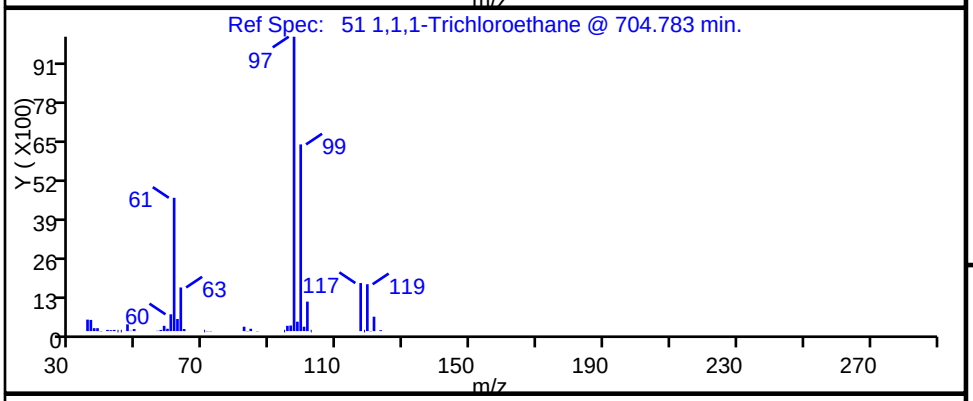
51 1,1,1-Trichloroethane, CAS: 71-55-6

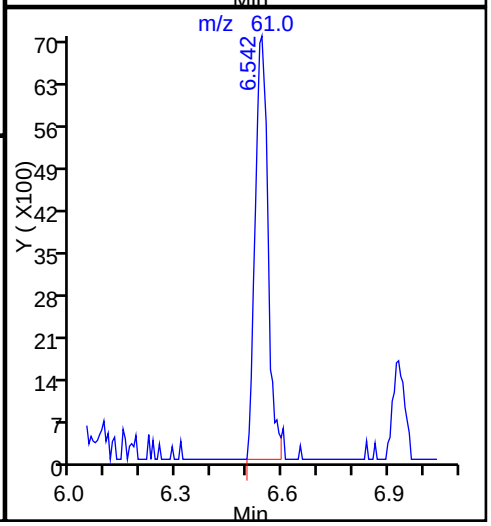


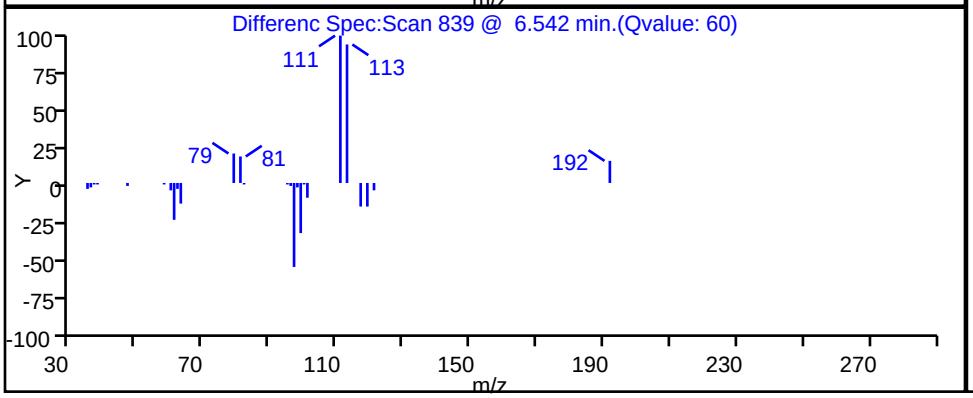












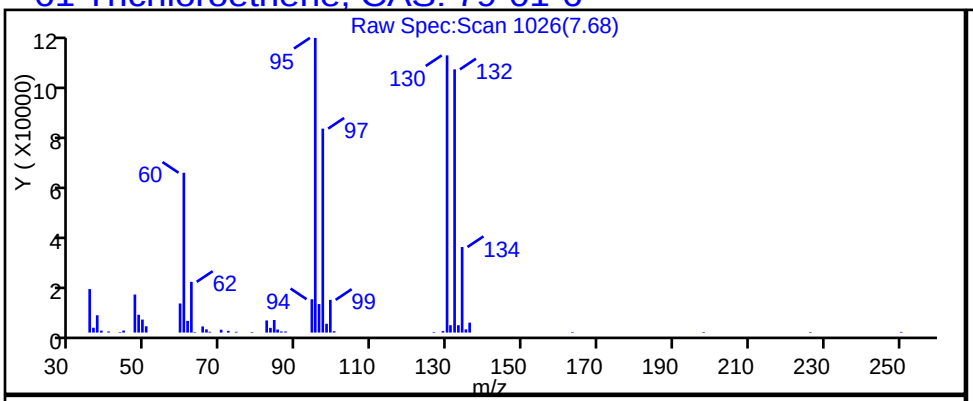
Report Date: 21-Jul-2015 15:39:43 Chrom Revision: 2.2 09-Jul-2015 10:16:20

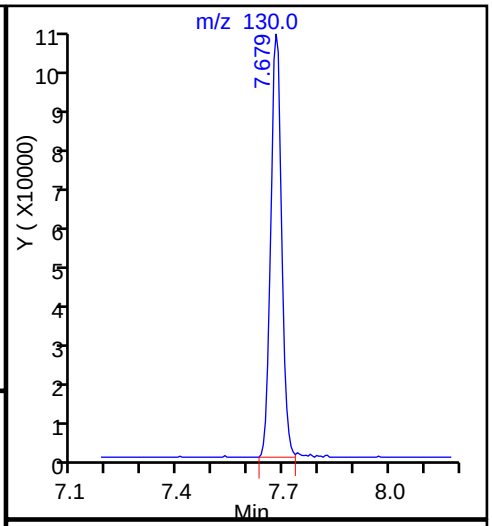
TestAmerica Pittsburgh

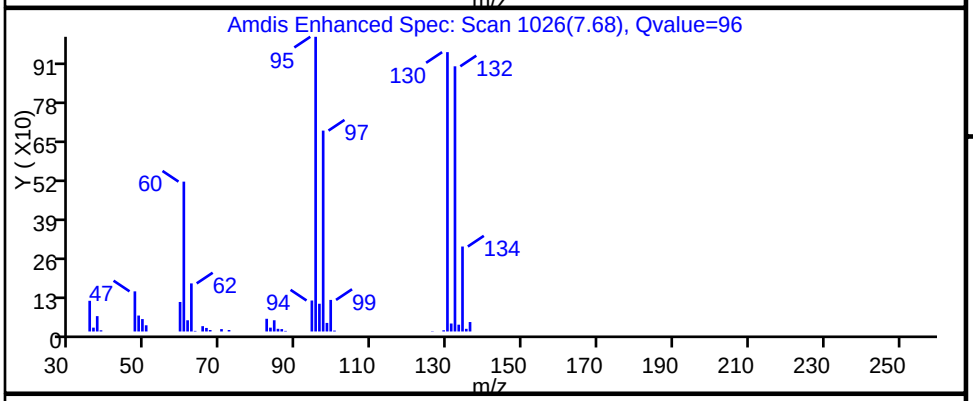
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D

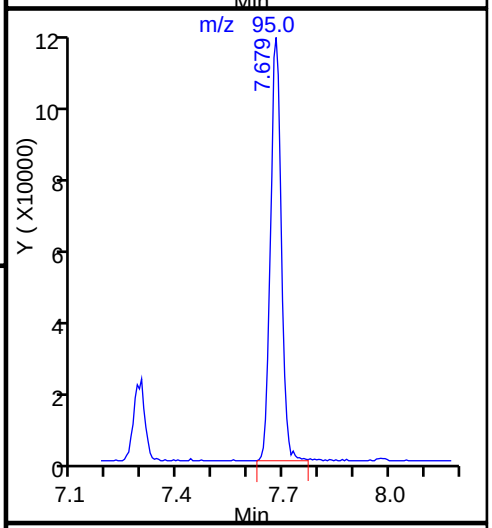
Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

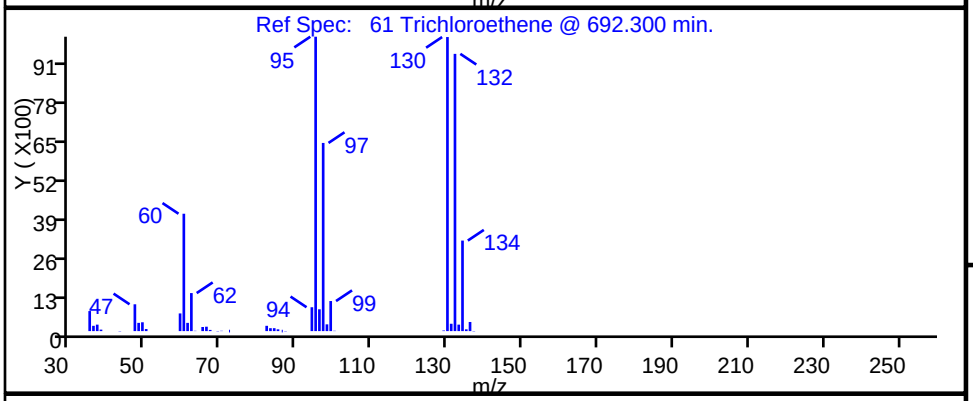
61 Trichloroethene, CAS: 79-01-6

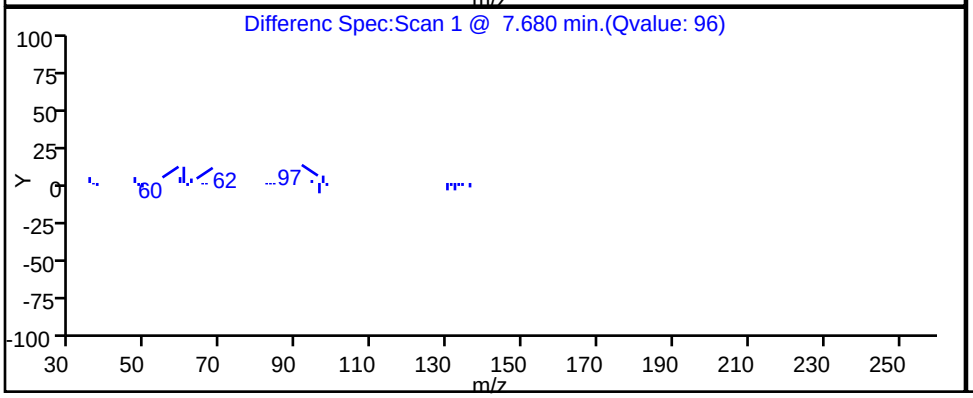


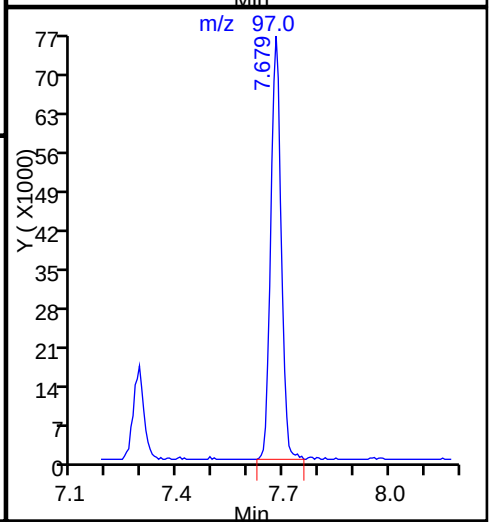












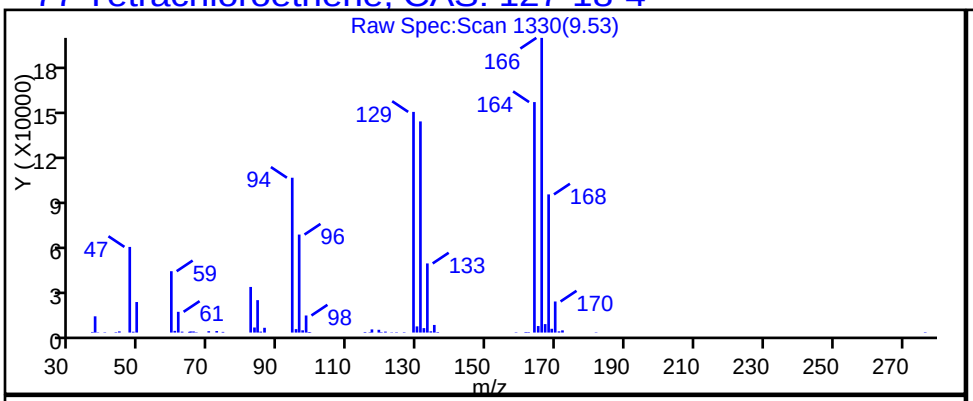
Report Date: 21-Jul-2015 15:39:44 Chrom Revision: 2.2 09-Jul-2015 10:16:20

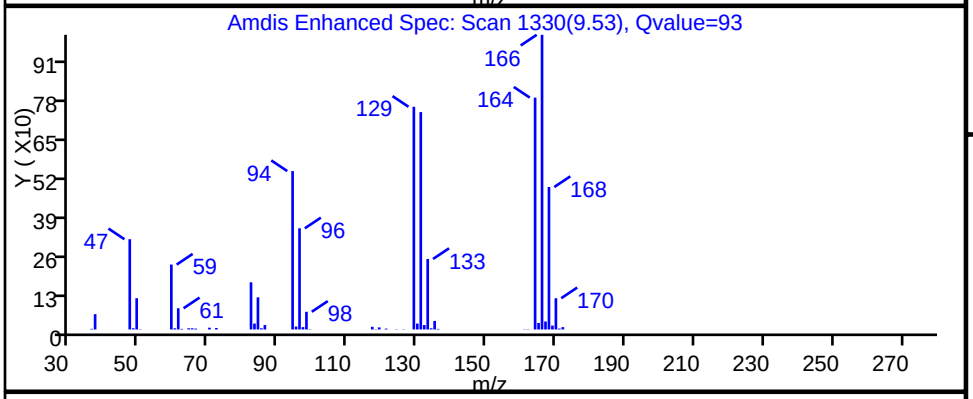
TestAmerica Pittsburgh

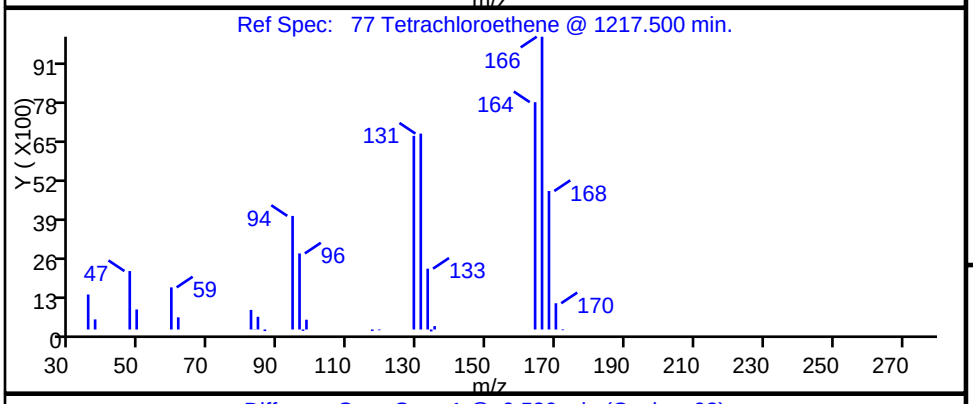
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D

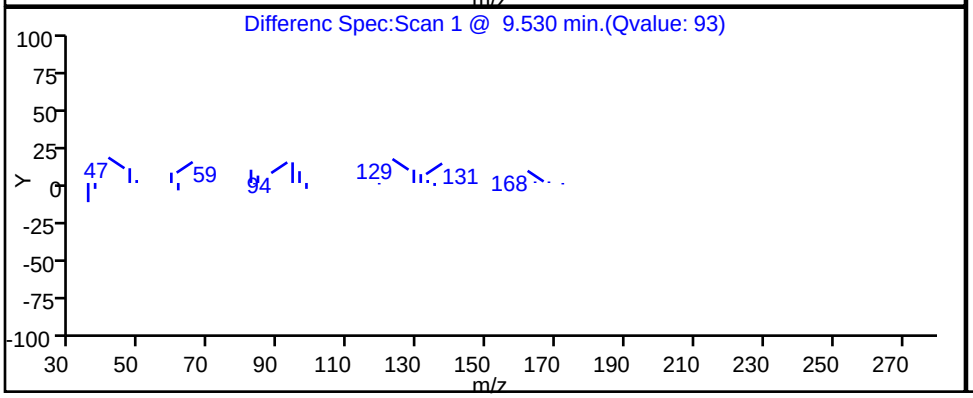
Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

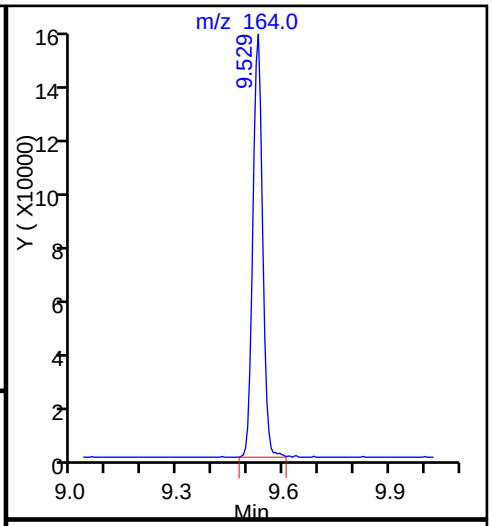
77 Tetrachloroethene, CAS: 127-18-4

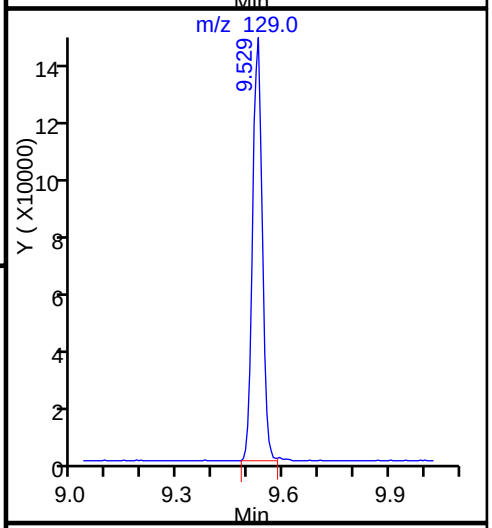


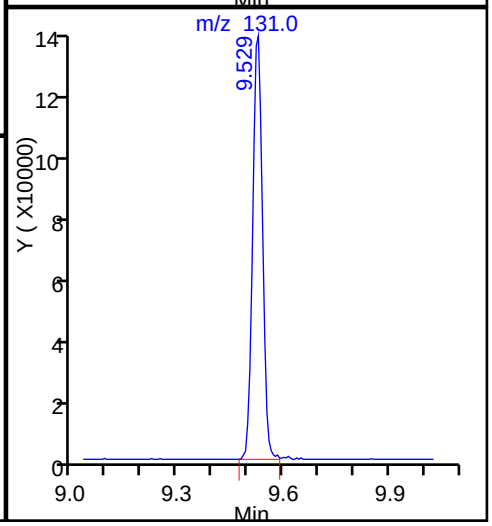












Manual Integration/User Assign Peak Report

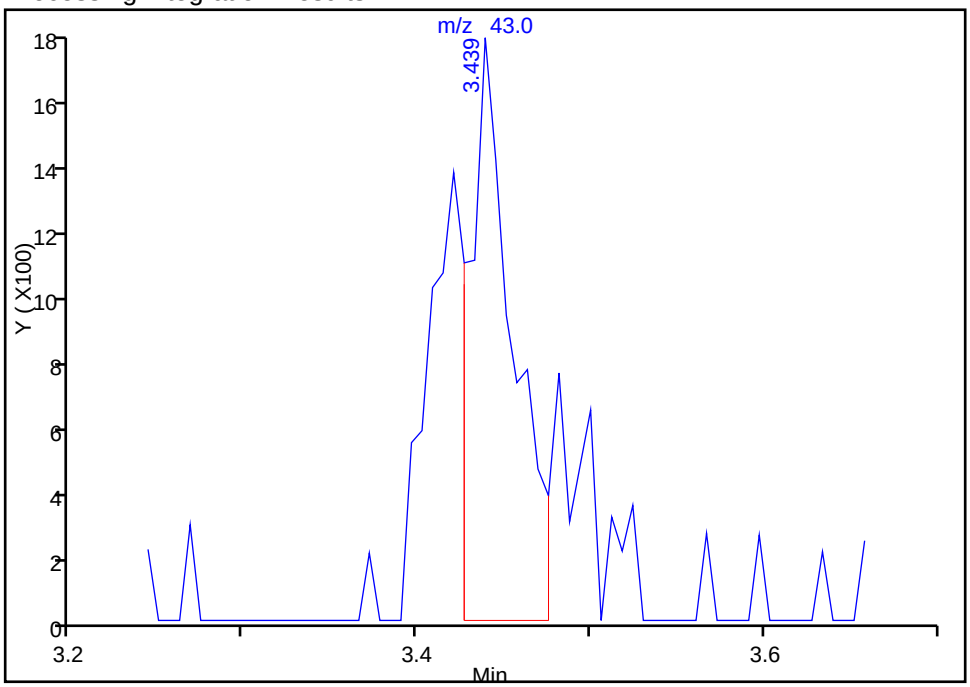
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D				
Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

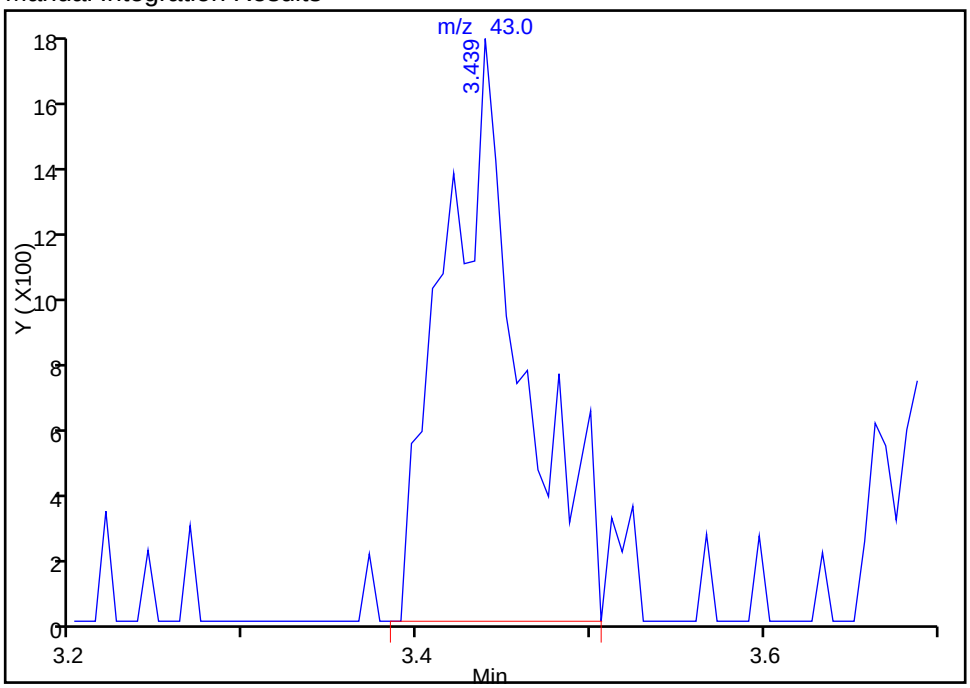
Processing Integration Results

RT: 3.44
Area: 3098
Amount: 3.997871
Amount Units: ng



Manual Integration Results

RT: 3.44
Area: 5514
Amount: 7.115642
Amount Units: ng



Reviewer: fergusond, 21-Jul-2015 15:39:42
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

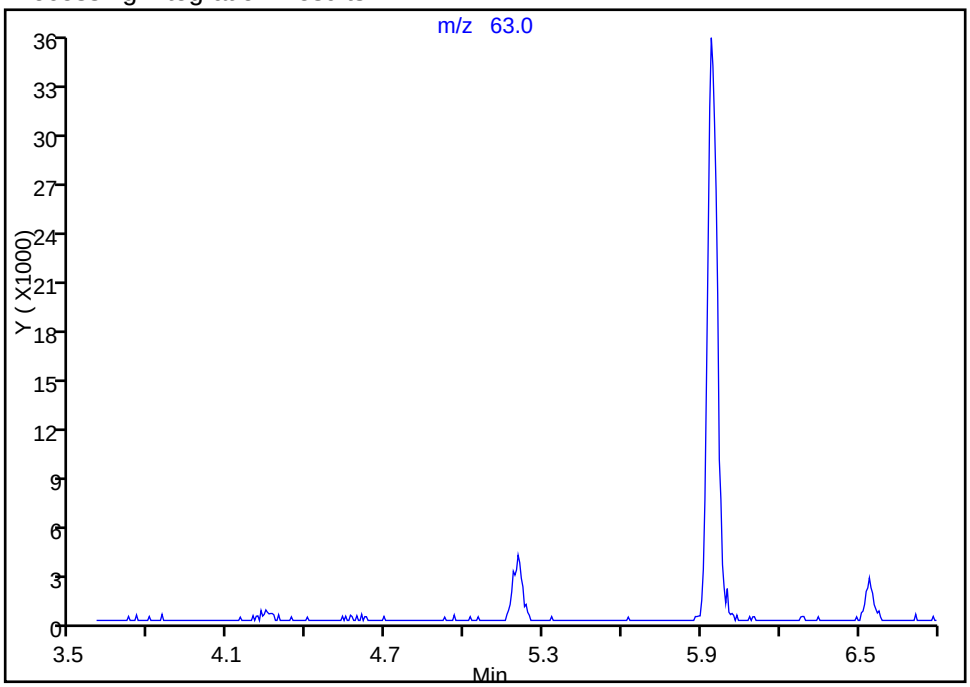
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D				
Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

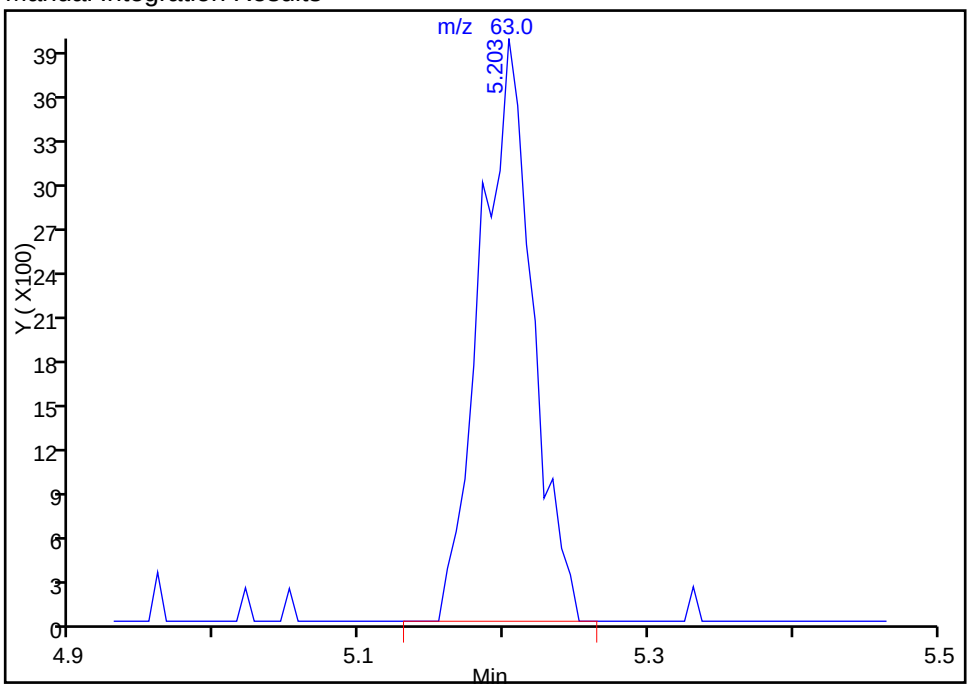
Processing Integration Results

Not Detected
Expected RT: 5.20



Manual Integration Results

RT: 5.20
Area: 9966
Amount: 1.811186
Amount Units: ng



Reviewer: fergusond, 21-Jul-2015 15:39:42
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

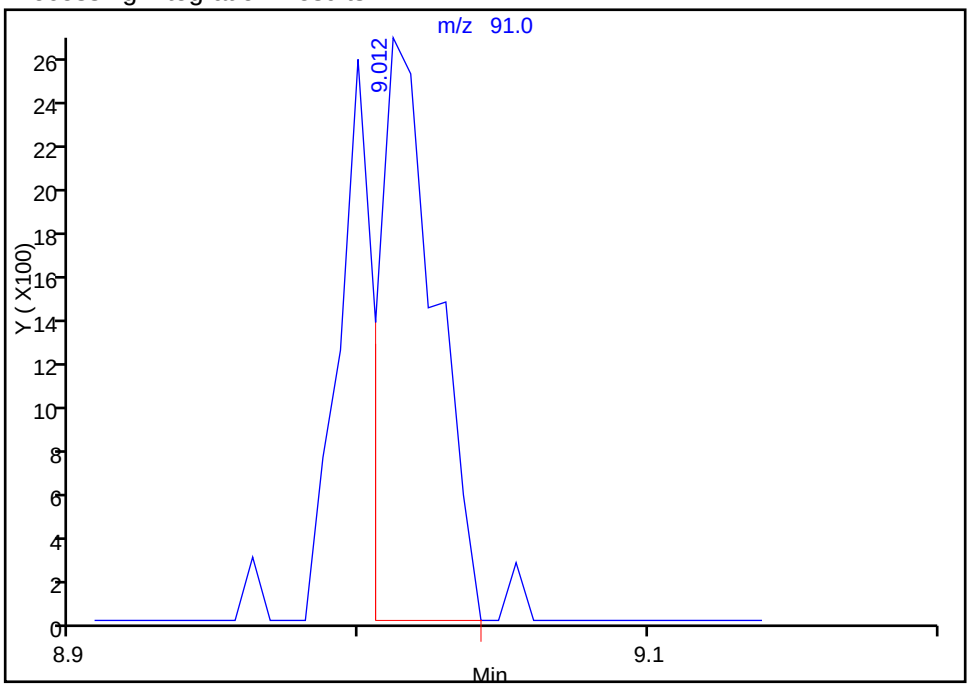
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721007.D				
Injection Date:	21-Jul-2015 14:41:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-12	Lab Sample ID:	180-45946-12		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

73 Toluene, CAS: 108-88-3

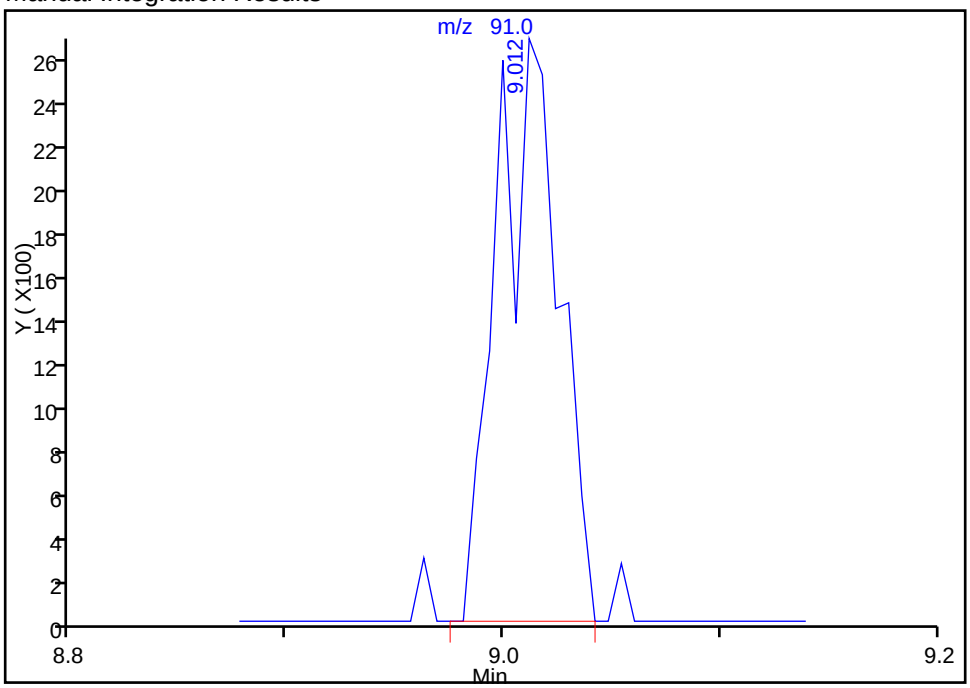
Processing Integration Results

RT: 9.01
Area: 3574
Amount: 0.325515
Amount Units: ng



Manual Integration Results

RT: 9.01
Area: 5202
Amount: 0.473791
Amount Units: ng



Reviewer: fergusond, 21-Jul-2015 15:39:42
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-20-0/1-0 | Lab Sample ID: 180-45946-13

Matrix: Water | Lab File ID: 60721016.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 18:31

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.: 148334 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-20-0/1-0 | Lab Sample ID: 180-45946-13

Matrix: Water | Lab File ID: 60721016.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 18:31

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		64-135
2037-26-5	Toluene-d8 (Surr)	112		71-118
460-00-4	4-Bromofluorobenzene (Surr)	104		70-118
1868-53-7	Dibromofluoromethane (Surr)	96		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721016.D
Lims ID: 180-45946-D-13 Lab Sample ID: 180-45946-13
Client ID: HD-COD-SW-20-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 18:31:30 ALS Bottle#: 16 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-D-13
Misc. Info.: 180-0007861-016
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:35:39 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:35:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.229	4.243	-0.014	90	118448	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.285	0.004	98	460734	50.0	
* 3 Chlorobenzene-d5	119	10.398	10.399	-0.001	89	94956	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.746	12.747	-0.001	98	145681	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.559	6.548	0.011	92	105819	47.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.932	-0.002	70	164374	47.7	
$ 7 Toluene-d8 (Surr)	98	8.944	8.939	0.005	94	416223	55.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.584	11.586	-0.002	82	161437	51.8	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43	3.438	3.428	0.010	76	8483	12.1	M
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96		5.940				ND	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83		6.372				ND	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130		7.674				ND	
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.017	9.012	0.005	96	4699	0.4769	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164		9.529				ND	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

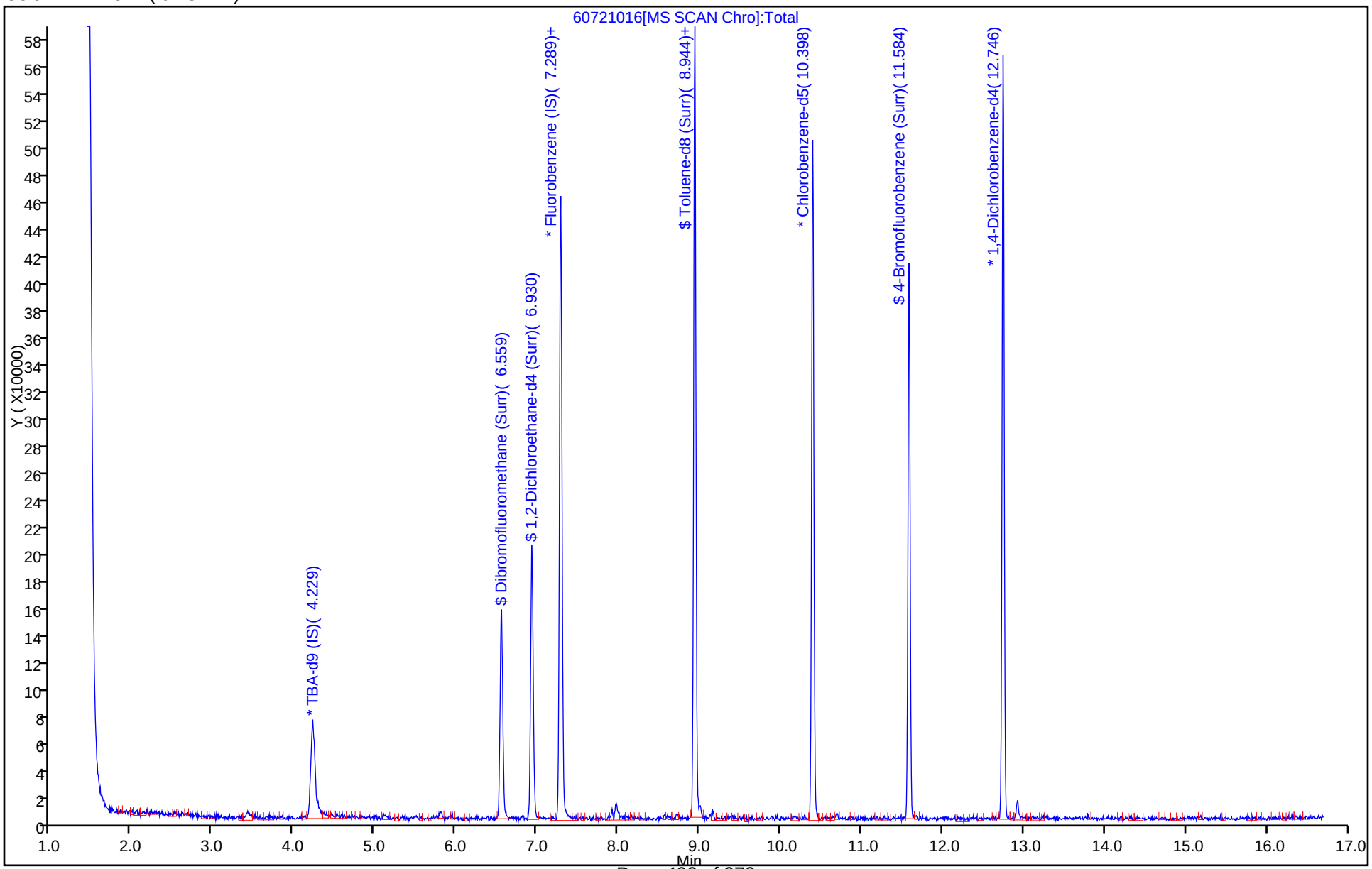
Report Date: 22-Jul-2015 08:35:39 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721016.D

Injection Date:	21-Jul-2015 18:31:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-D-13	Lab Sample ID:	180-45946-13	Worklist Smp#:	16
Client ID:	HD-COD-SW-20-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

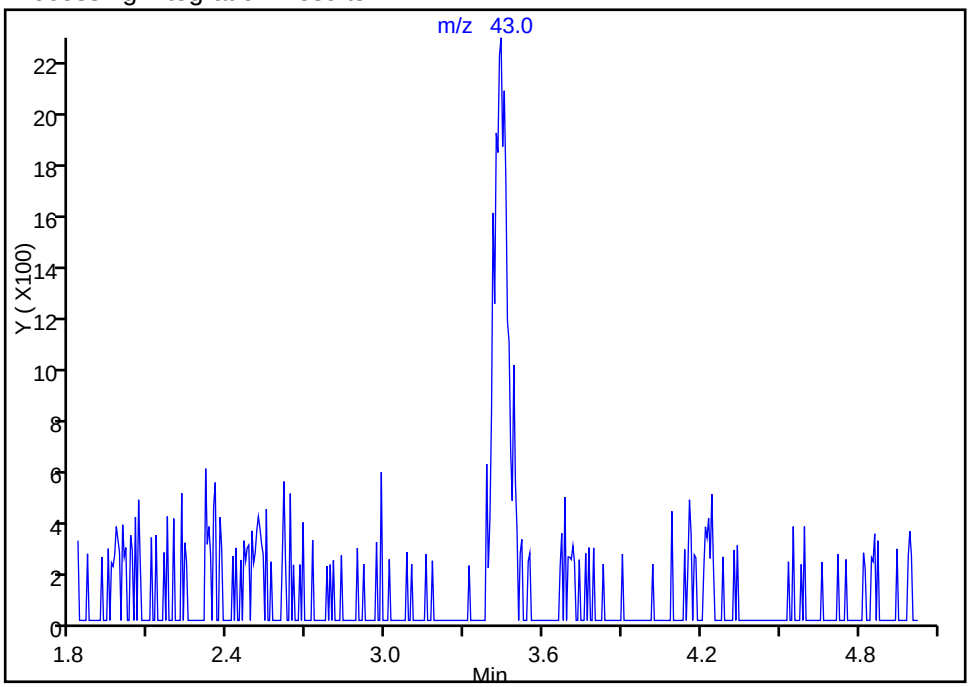
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721016.D				
Injection Date:	21-Jul-2015 18:31:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-13	Lab Sample ID:	180-45946-13		
Client ID:	HD-COD-SW-20-0/1-0				
Operator ID:	001562	ALS Bottle#:	16	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

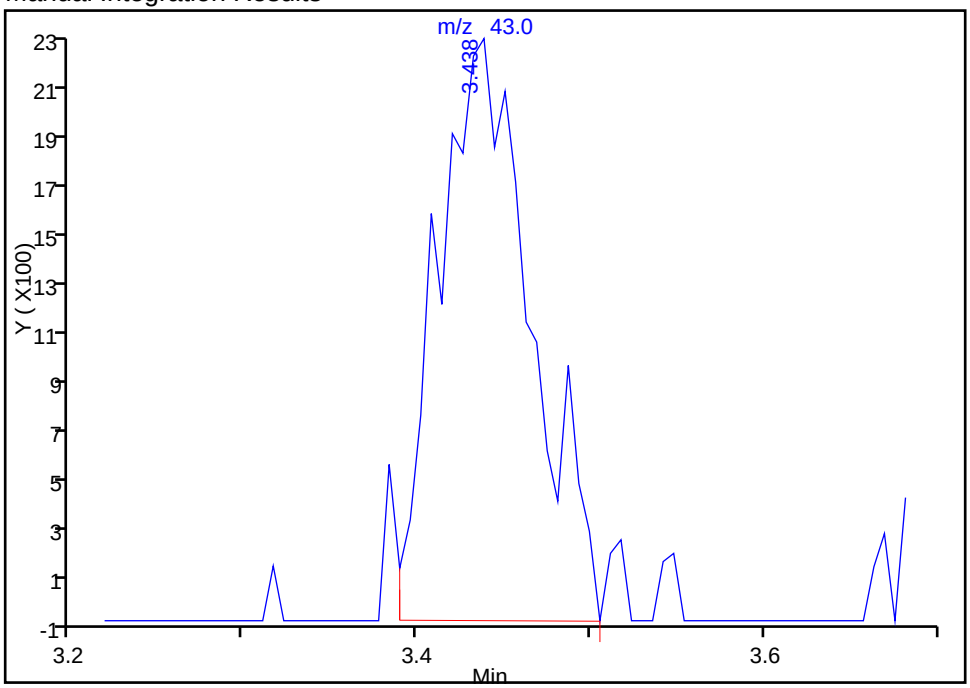
Processing Integration Results

Not Detected
Expected RT: 3.43



Manual Integration Results

RT: 3.44
Area: 8483
Amount: 12.125253
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:35:39
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 | Lab Sample ID: 180-45946-14

Matrix: Water | Lab File ID: 60721017.D

Analysis Method: 8260C | Date Collected: 07/15/2015 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 18:55

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.: 148334 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 | Lab Sample ID: 180-45946-14

Matrix: Water | Lab File ID: 60721017.D

Analysis Method: 8260C | Date Collected: 07/15/2015 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 18:55

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		64-135
2037-26-5	Toluene-d8 (Surr)	109		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	100		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721017.D
Lims ID: 180-45946-D-14 Lab Sample ID: 180-45946-14
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 18:55:30 ALS Bottle#: 17 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-D-14
Misc. Info.: 180-0007861-017
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:36:59 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:36:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.220	4.243	-0.023	90	108353	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.285	0.001	98	449433	50.0	
* 3 Chlorobenzene-d5	119	10.401	10.399	0.002	89	93755	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.749	12.747	0.002	98	144735	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.556	6.548	0.008	93	107420	49.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.932	0.001	71	164767	49.0	
$ 7 Toluene-d8 (Surr)	98	8.947	8.939	0.008	94	402500	54.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.587	11.586	0.001	82	155230	50.5	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43	3.435	3.428	0.007	1	5808	8.51	M
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96	5.942	5.940	0.002	7	1211	0.4188	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83	6.373	6.372	0.001	0	1829	0.3811	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130		7.674				ND	
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.014	9.012	0.002	70	4786	0.4920	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164	9.525	9.529	-0.004	17	432	0.2364	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

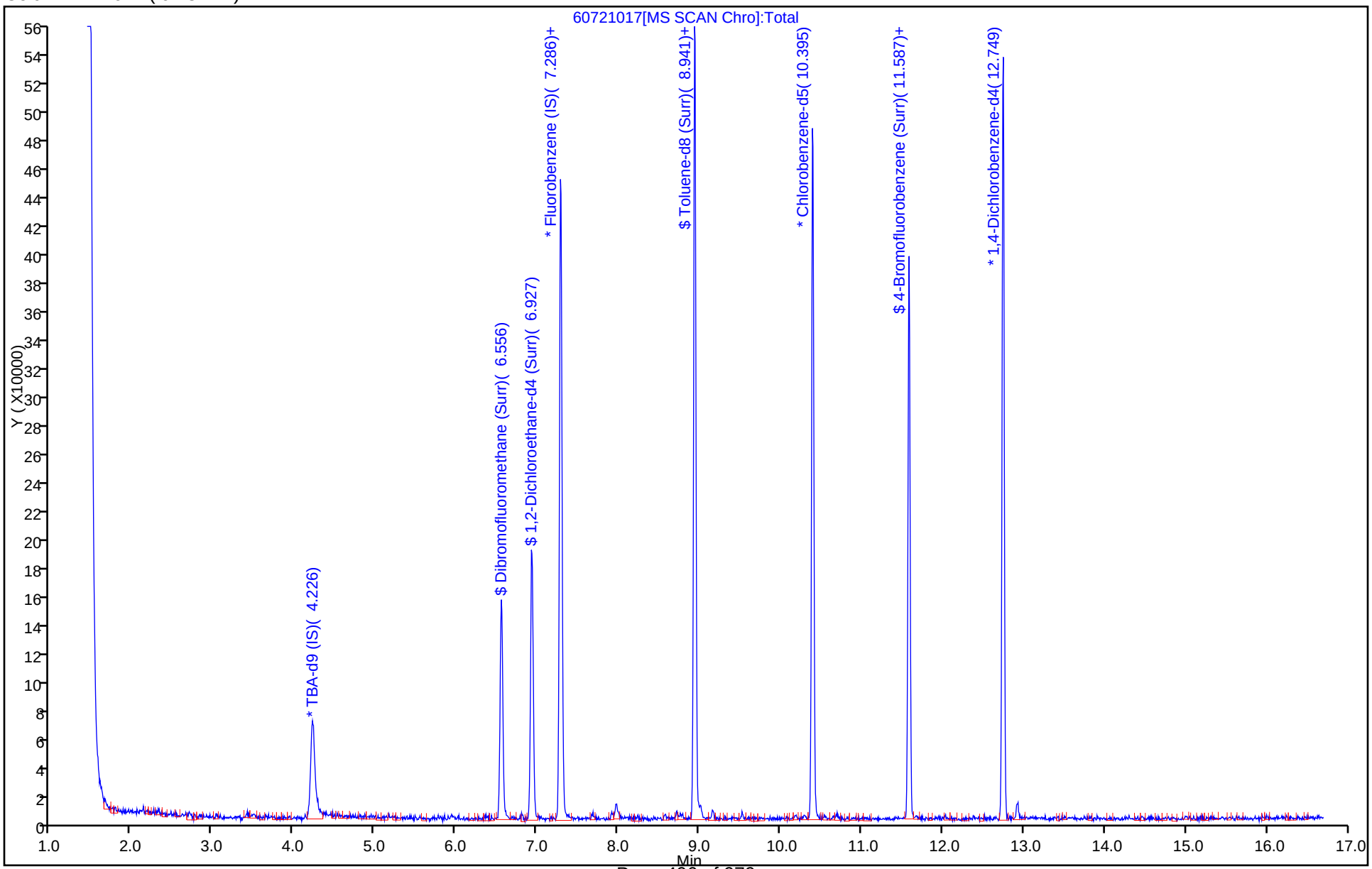
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 22-Jul-2015 08:36:59 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721017.D				
Injection Date:	21-Jul-2015 18:55:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-D-14	Lab Sample ID:	180-45946-14	Worklist Smp#:	17
Client ID:	HD-COD-SW-26-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

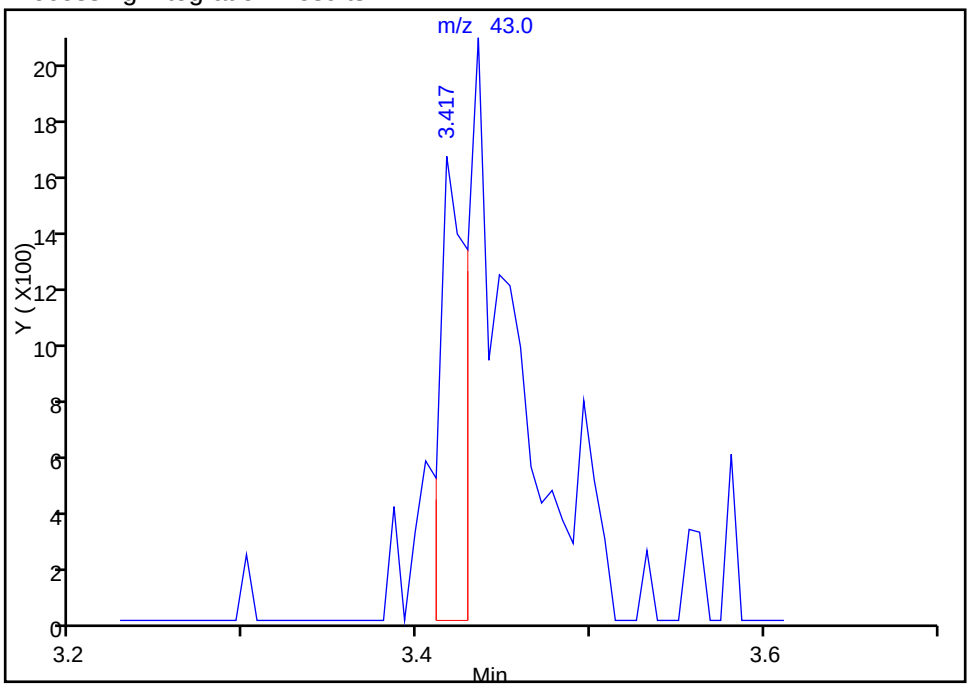
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721017.D				
Injection Date:	21-Jul-2015 18:55:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-14	Lab Sample ID:	180-45946-14		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	001562	ALS Bottle#:	17	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

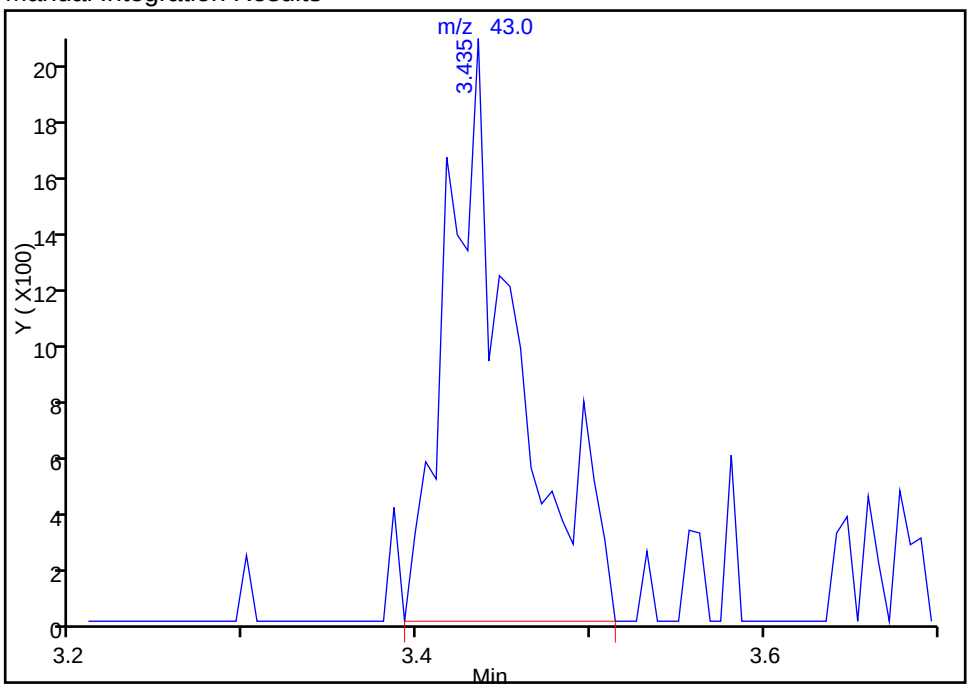
Processing Integration Results

RT: 3.42
Area: 1789
Amount: 2.621422
Amount Units: ng



Manual Integration Results

RT: 3.44
Area: 5808
Amount: 8.510464
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:36:59
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 | Lab Sample ID: 180-45946-15

Matrix: Water | Lab File ID: 60721018.D

Analysis Method: 8260C | Date Collected: 07/15/2015 13:30

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 19:19

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	^c	1.0	0.28
75-01-4	Vinyl chloride	ND	^c	1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND	^c	1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	0.26	J	1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	0.20	J	1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 | Lab Sample ID: 180-45946-15

Matrix: Water | Lab File ID: 60721018.D

Analysis Method: 8260C | Date Collected: 07/15/2015 13:30

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 19:19

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		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)	98		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721018.D
Lims ID: 180-45946-D-15 Lab Sample ID: 180-45946-15
Client ID: HD-COD-SW-27-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 19:19:30 ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-D-15
Misc. Info.: 180-0007861-018
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:38:42 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:38:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.235	4.243	-0.008	91	104116	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.285	0.004	98	445689	50.0	
* 3 Chlorobenzene-d5	119	10.398	10.399	-0.001	88	95564	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.746	12.747	-0.001	98	142767	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.559	6.548	0.011	92	104539	49.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.932	-0.002	69	156973	47.1	
$ 7 Toluene-d8 (Surr)	98	8.944	8.939	0.005	95	407993	54.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.584	11.586	-0.002	81	157347	50.2	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62	1.881	1.889	-0.007	24	1816	0.6281	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43	3.438	3.428	0.010	73	8063	11.9	
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96	5.932	5.940	-0.008	1	3757	1.31	M
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83		6.372				ND	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130	7.672	7.674	-0.002	90	2596	1.00	M
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.011	9.012	-0.001	92	6397	0.6451	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164	9.540	9.529	0.011	1	1183	0.6351	M
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

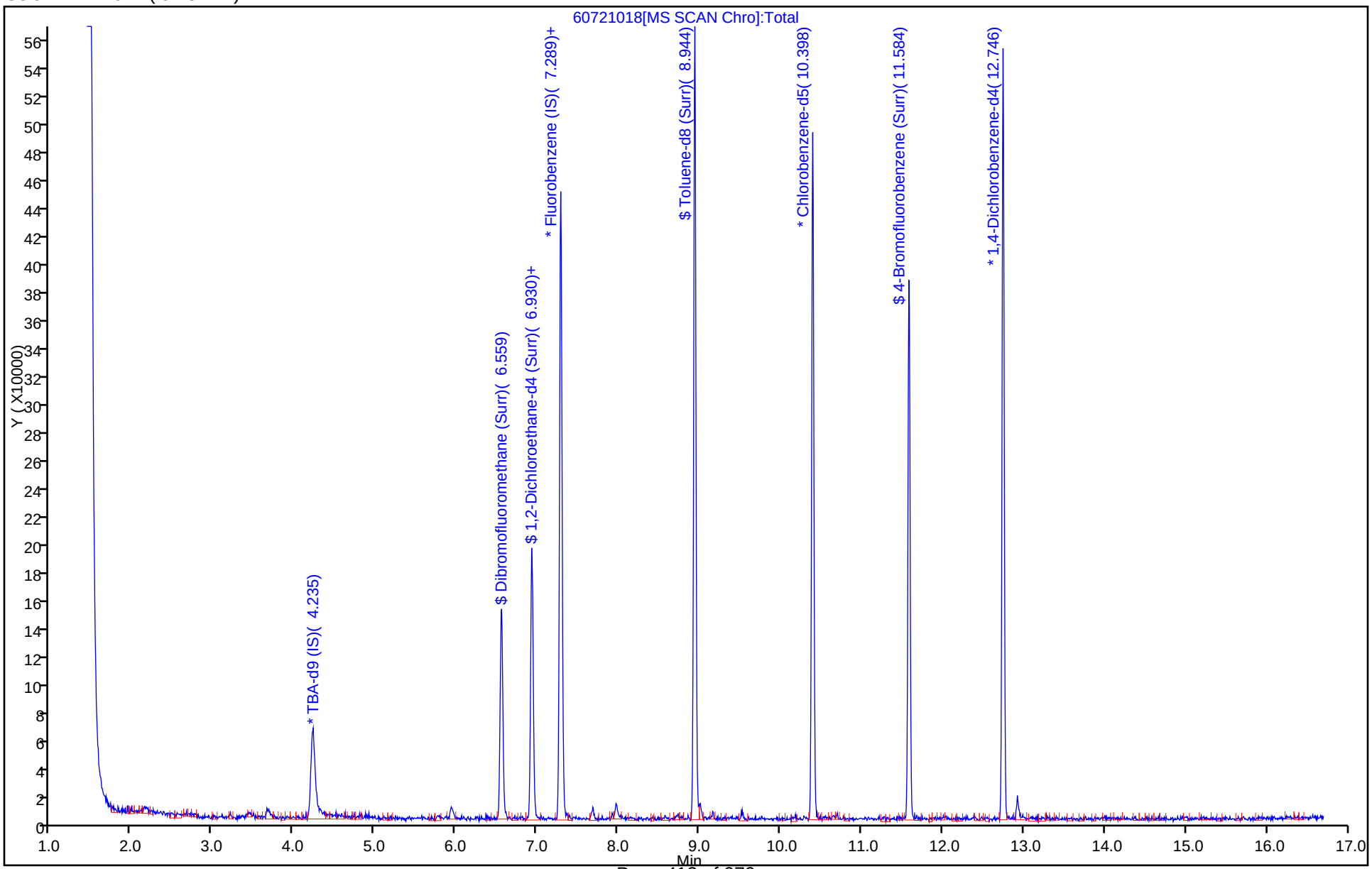
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 22-Jul-2015 08:38:42 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721018.D				
Injection Date:	21-Jul-2015 19:19:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-D-15	Lab Sample ID:	180-45946-15	Worklist Smp#:	18
Client ID:	HD-COD-SW-27-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



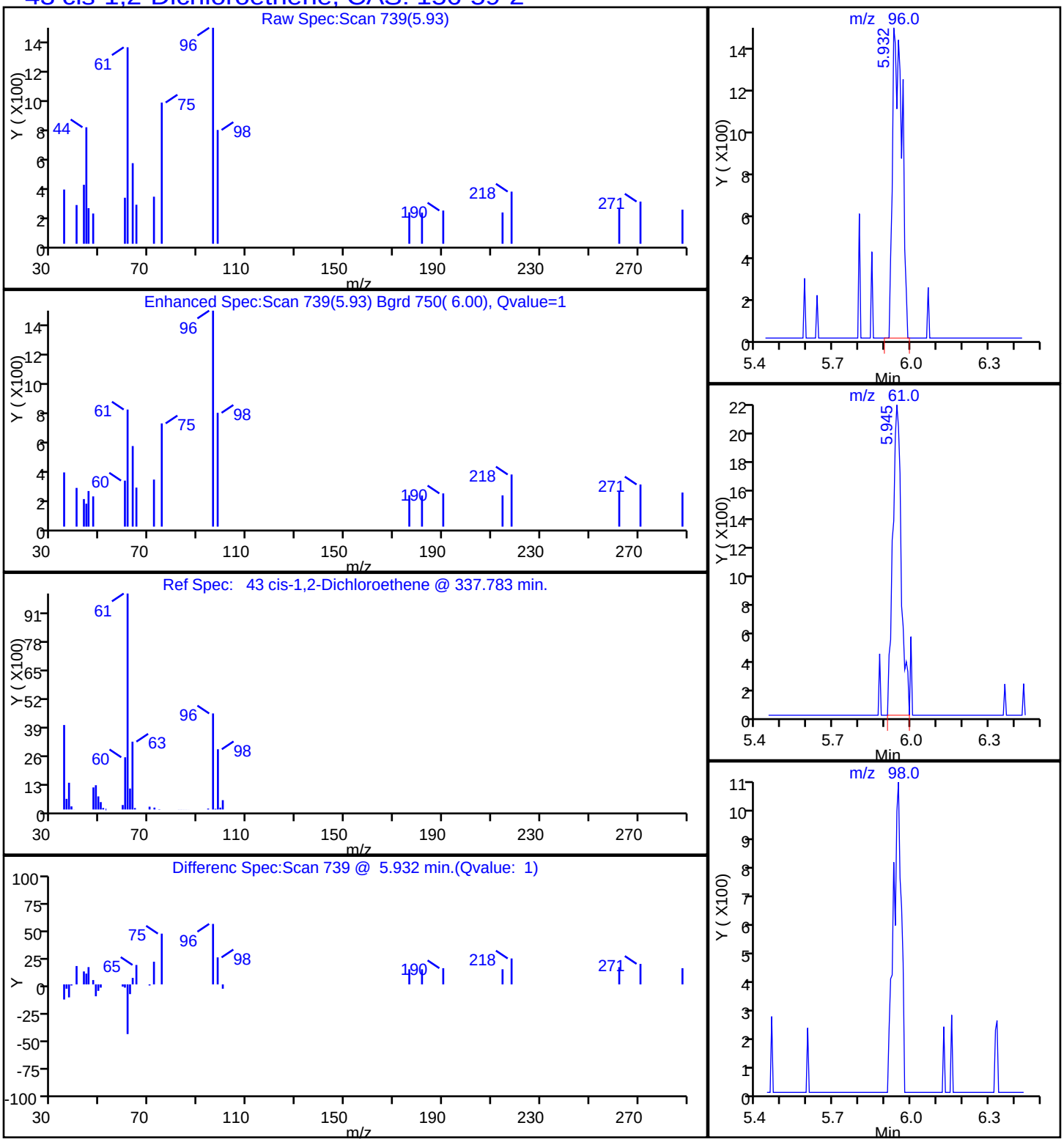
Report Date: 22-Jul-2015 08:38:43 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721018.D

Injection Date:	21-Jul-2015 19:19:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-15	Lab Sample ID:	180-45946-15		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

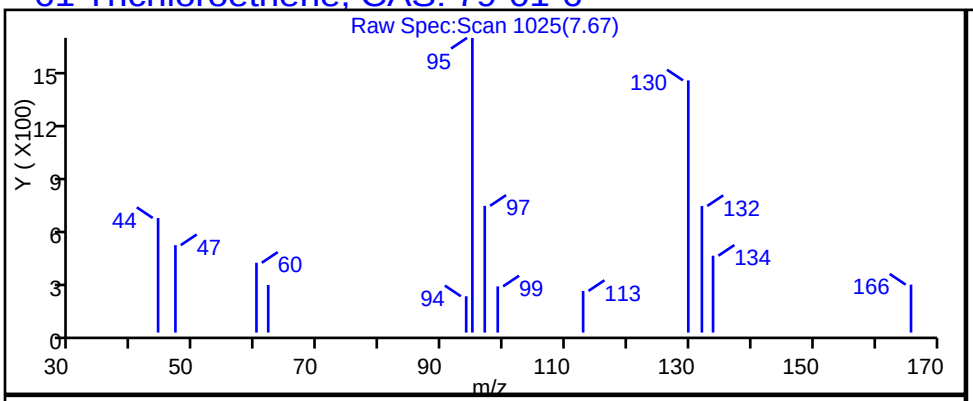


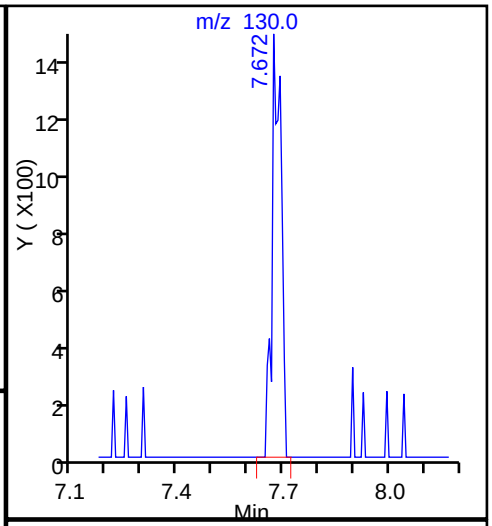
Report Date: 22-Jul-2015 08:38:43 Chrom Revision: 2.2 09-Jul-2015 10:16:20

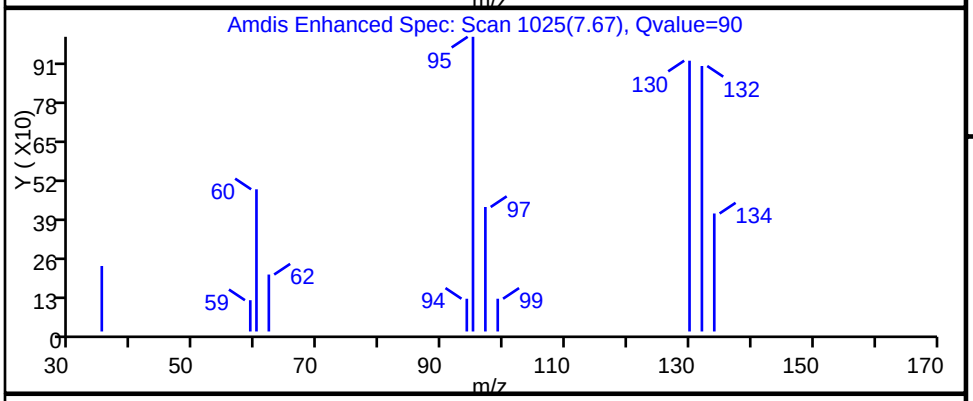
TestAmerica Pittsburgh

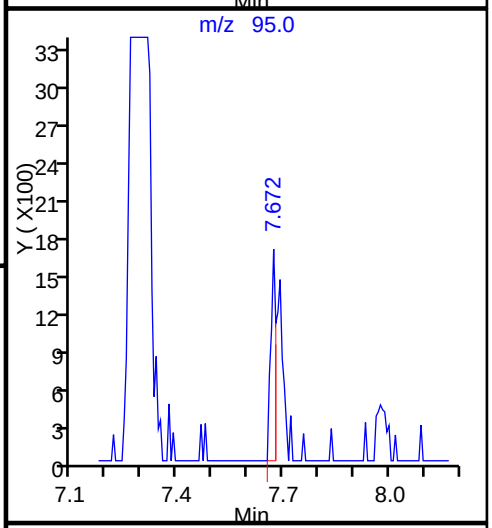
Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721018.D		
Injection Date:	21-Jul-2015 19:19:30	Instrument ID:	CHHP6
Lims ID:	180-45946-D-15	Lab Sample ID:	180-45946-15
Client ID:	HD-COD-SW-27-0/1-0		
Operator ID:	001562	ALS Bottle#:	18 Worklist Smp#: 18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

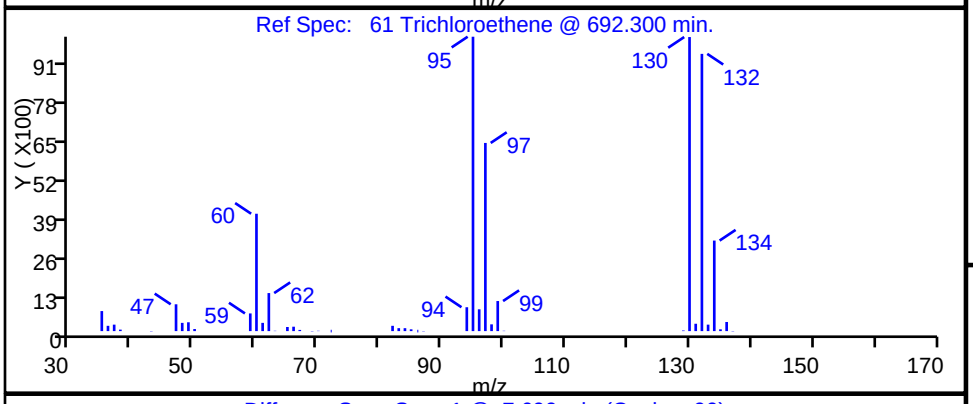
61 Trichloroethene, CAS: 79-01-6

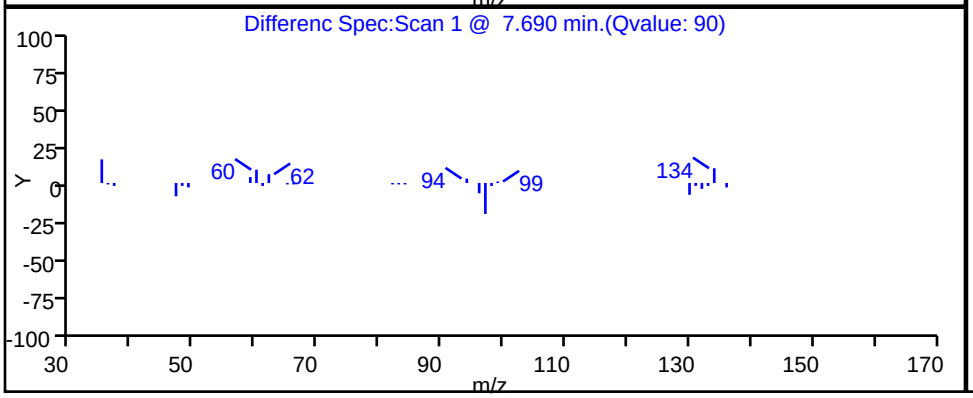


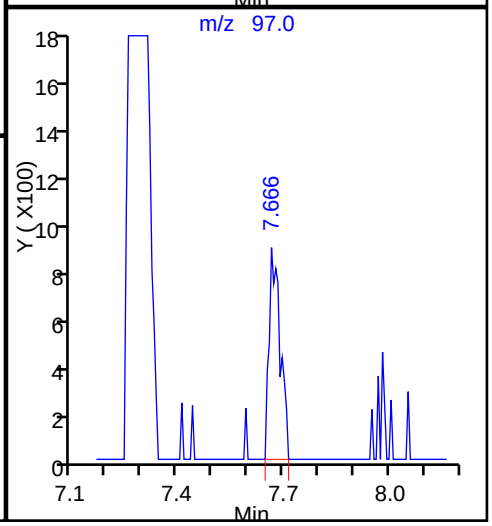












Manual Integration/User Assign Peak Report

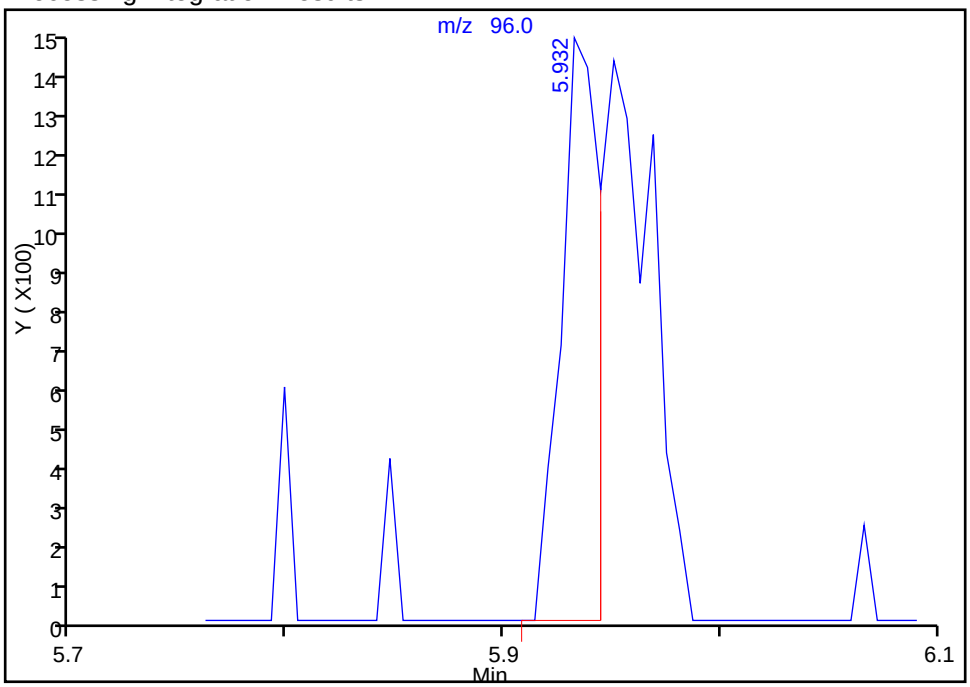
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721018.D				
Injection Date:	21-Jul-2015 19:19:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-15	Lab Sample ID:	180-45946-15		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

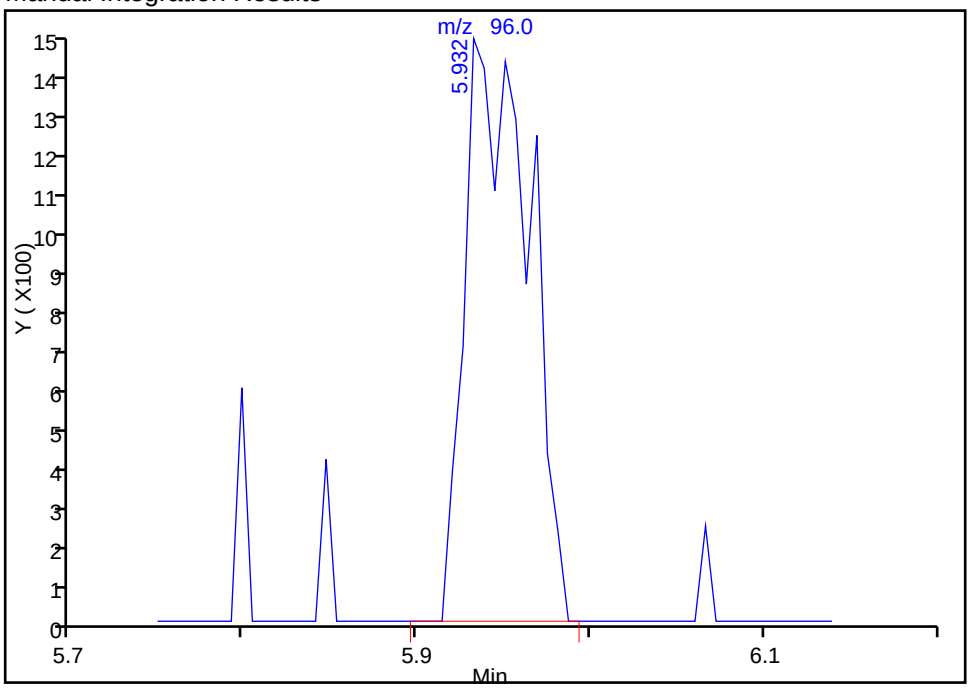
Processing Integration Results

RT: 5.93
Area: 1812
Amount: 0.631885
Amount Units: ng



Manual Integration Results

RT: 5.93
Area: 3757
Amount: 1.310150
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:38:42
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

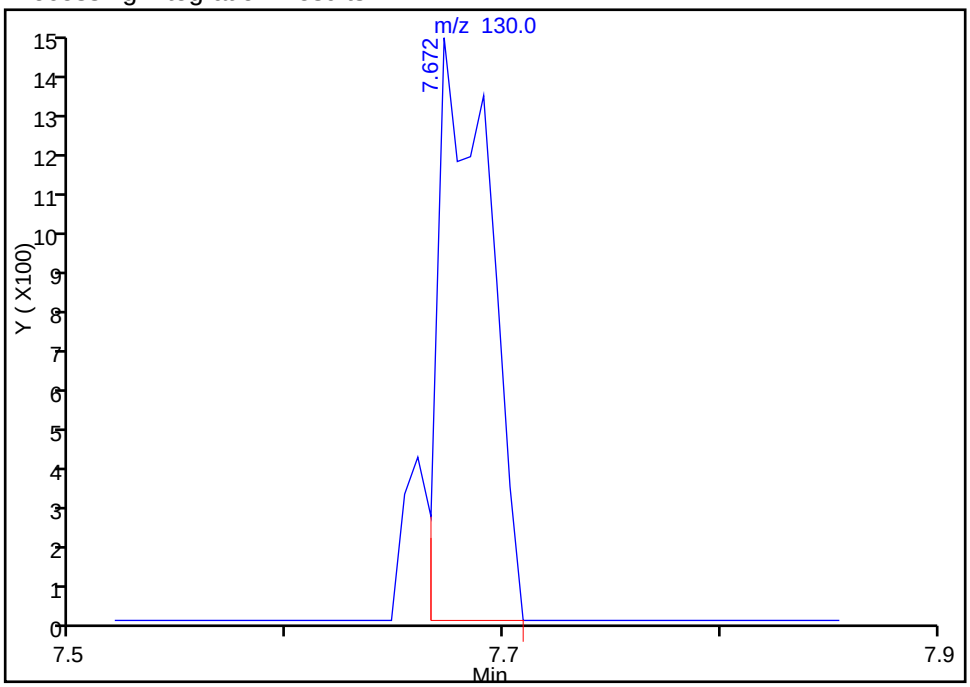
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721018.D				
Injection Date:	21-Jul-2015 19:19:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-15	Lab Sample ID:	180-45946-15		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

61 Trichloroethene, CAS: 79-01-6

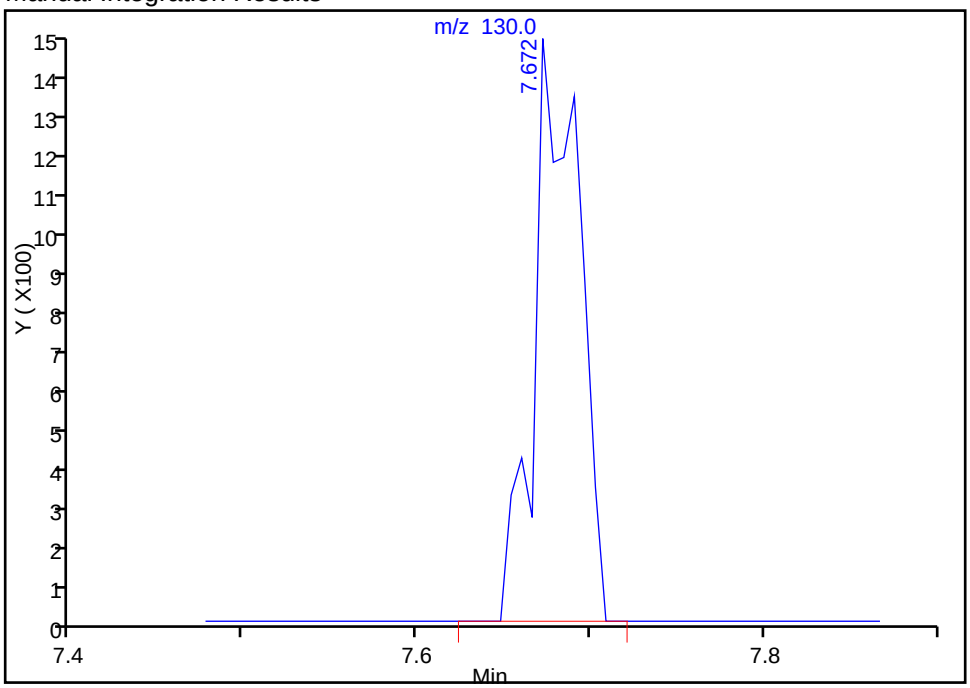
Processing Integration Results

RT: 7.67
Area: 2336
Amount: 0.896578
Amount Units: ng



Manual Integration Results

RT: 7.67
Area: 2596
Amount: 0.996368
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:38:42
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

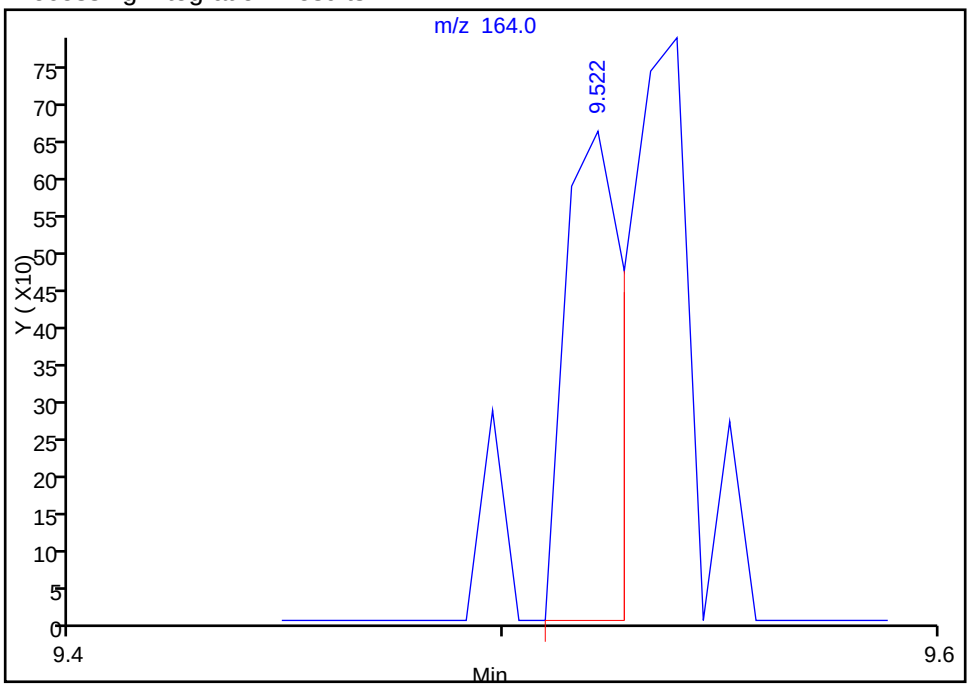
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721018.D				
Injection Date:	21-Jul-2015 19:19:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-15	Lab Sample ID:	180-45946-15		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

77 Tetrachloroethene, CAS: 127-18-4

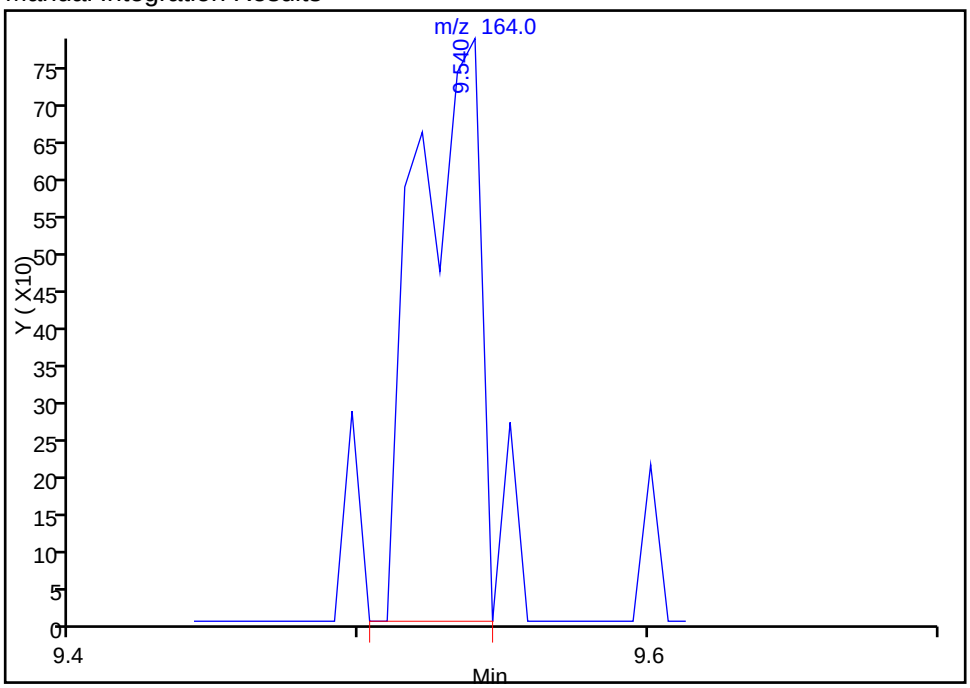
Processing Integration Results

RT: 9.52
Area: 626
Amount: 0.336064
Amount Units: ng



Manual Integration Results

RT: 9.54
Area: 1183
Amount: 0.635087
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:38:42
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 | Lab Sample ID: 180-45946-16

Matrix: Water | Lab File ID: 60721019.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 19:43

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	^c	1.0	0.28
75-01-4	Vinyl chloride	ND	^c	1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND	^c	1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	0.25	J	1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	0.21	J	1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	0.16	J	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	0.17	J	1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 | Lab Sample ID: 180-45946-16

Matrix: Water | Lab File ID: 60721019.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 19:43

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	107		71-118
460-00-4	4-Bromofluorobenzene (Surr)	97		70-118
1868-53-7	Dibromofluoromethane (Surr)	100		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721019.D
Lims ID: 180-45946-E-16 Lab Sample ID: 180-45946-16
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 19:43:30 ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-E-16
Misc. Info.: 180-0007861-019
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:40:14 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:40:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.226	4.243	-0.017	89	119364	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.285	0.001	98	441094	50.0	
* 3 Chlorobenzene-d5	119	10.395	10.399	-0.004	89	94696	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.749	12.747	0.002	98	143899	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.550	6.548	0.002	92	106085	50.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.932	0.001	70	160620	48.7	
$ 7 Toluene-d8 (Surr)	98	8.941	8.939	0.002	94	397355	53.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.587	11.586	0.001	81	150951	48.6	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43	3.429	3.428	0.001	90	7922	11.8	M
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96	5.948	5.940	0.008	22	3521	1.24	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83	6.373	6.372	0.001	24	2139	0.4541	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130	7.675	7.674	0.001	86	2733	1.06	
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.014	9.012	0.002	97	7842	0.7981	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164	9.531	9.529	0.002	21	1547	0.8381	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

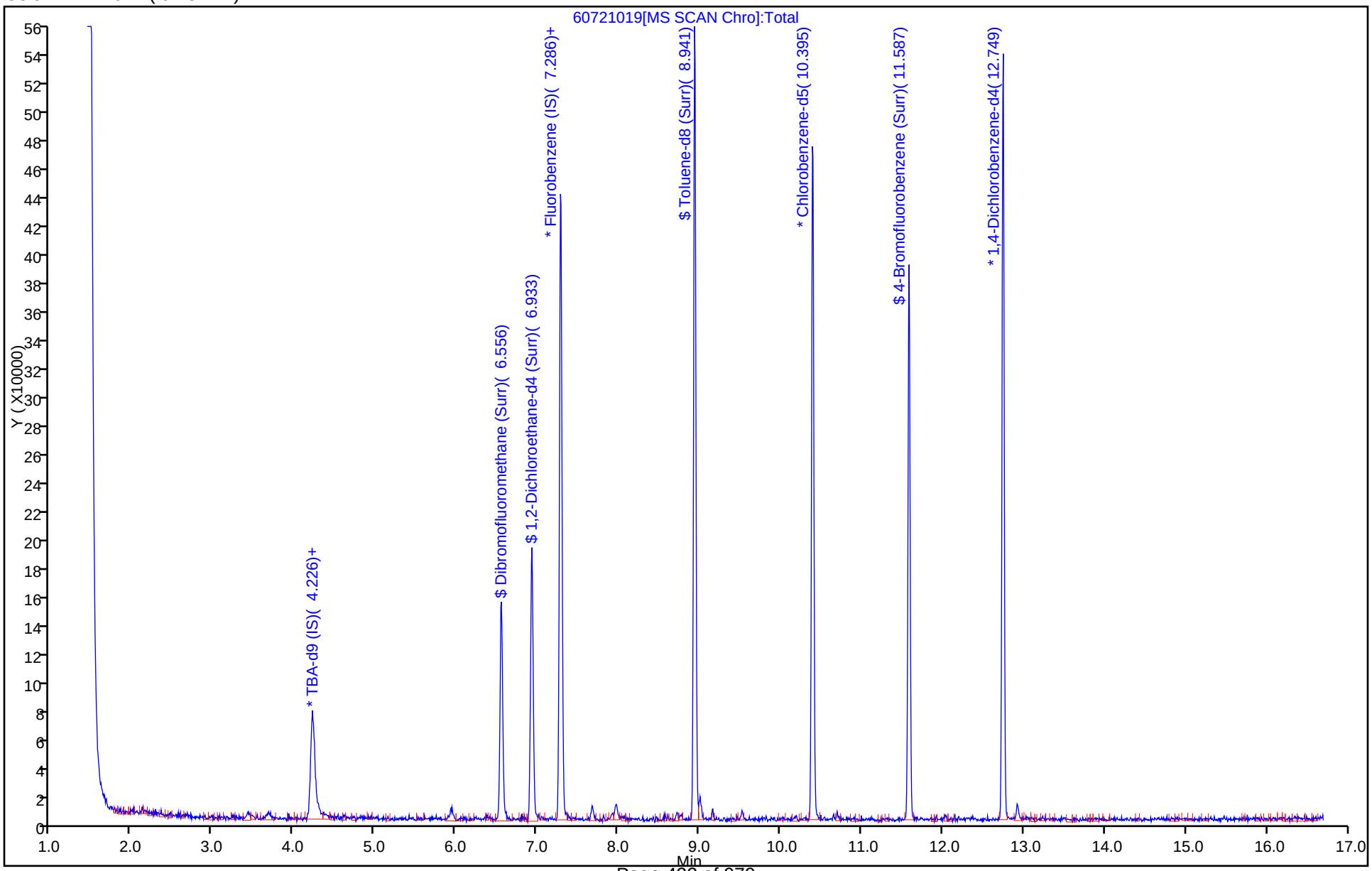
Report Date: 22-Jul-2015 08:40:14 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721019.D

Injection Date:	21-Jul-2015 19:43:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-E-16	Lab Sample ID:	180-45946-16	Worklist Smp#:	19
Client ID:	HD-COD-SW-28-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



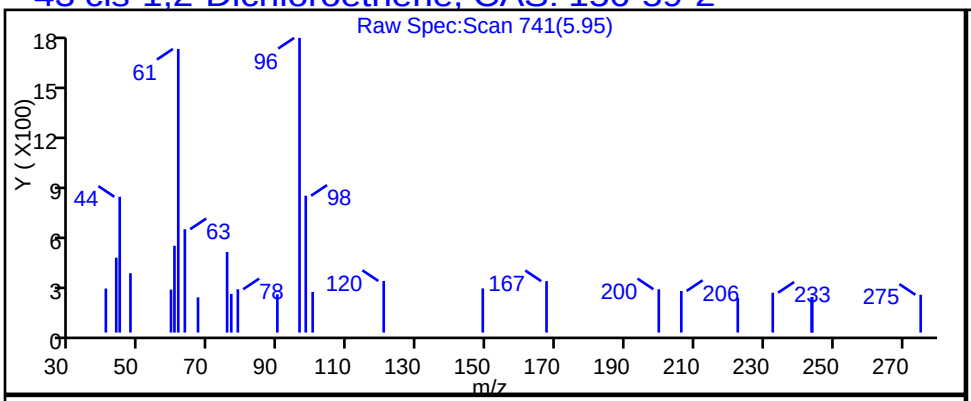
Report Date: 22-Jul-2015 08:40:14 Chrom Revision: 2.2 09-Jul-2015 10:16:20

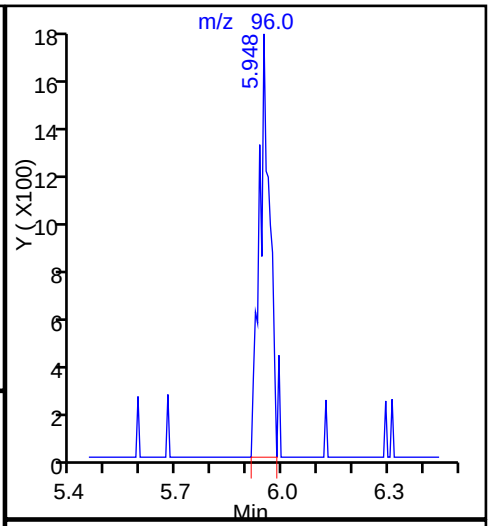
TestAmerica Pittsburgh

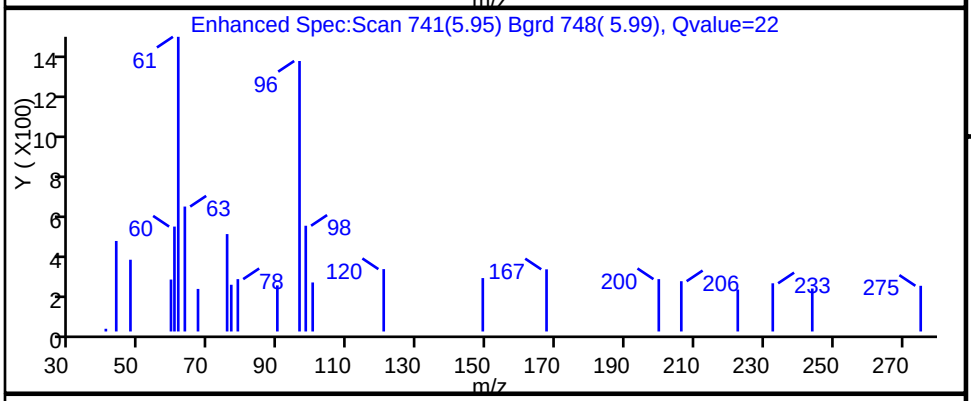
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721019.D

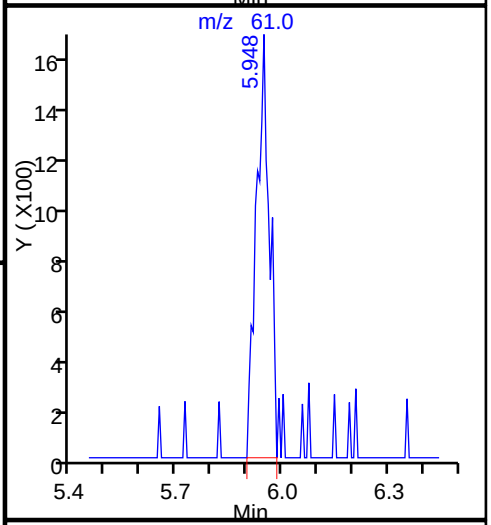
Injection Date:	21-Jul-2015 19:43:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-16	Lab Sample ID:	180-45946-16		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

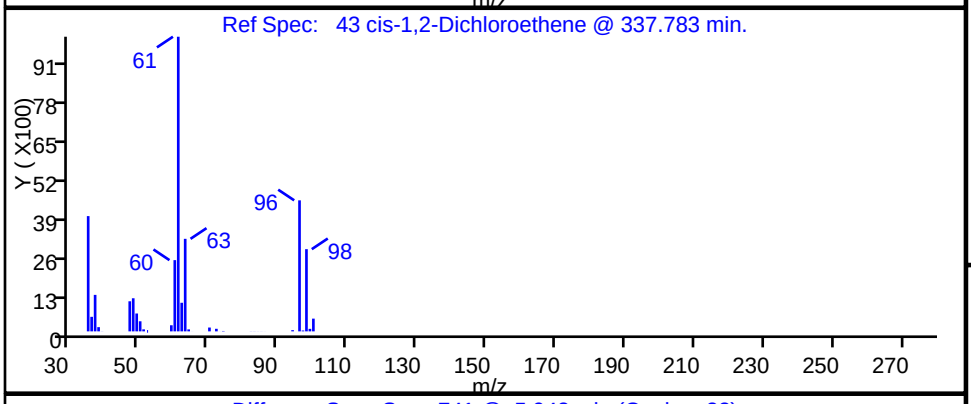
43 cis-1,2-Dichloroethene, CAS: 156-59-2

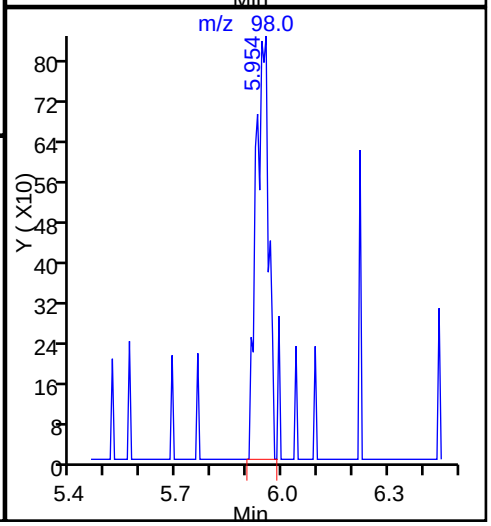


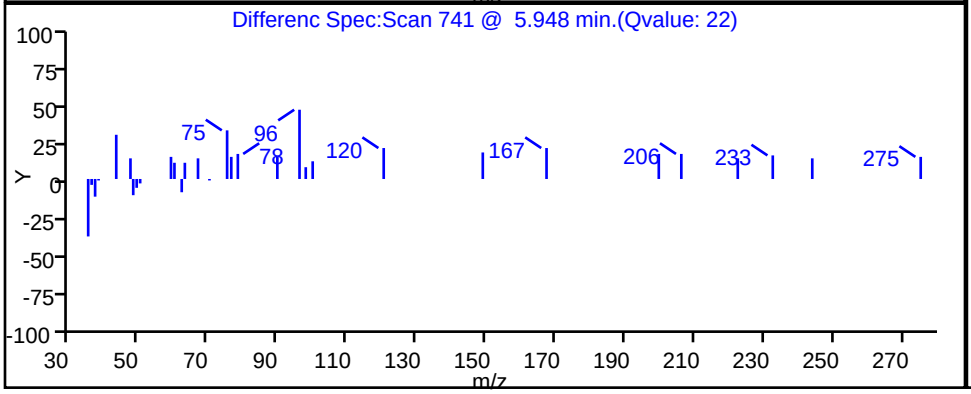










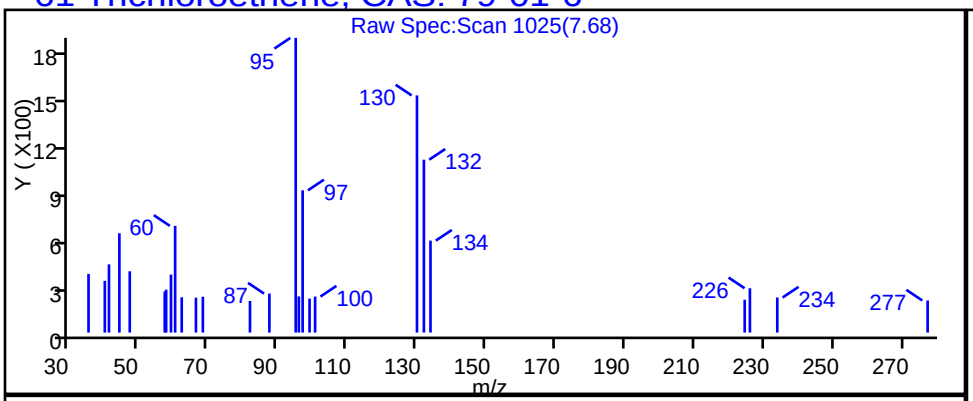


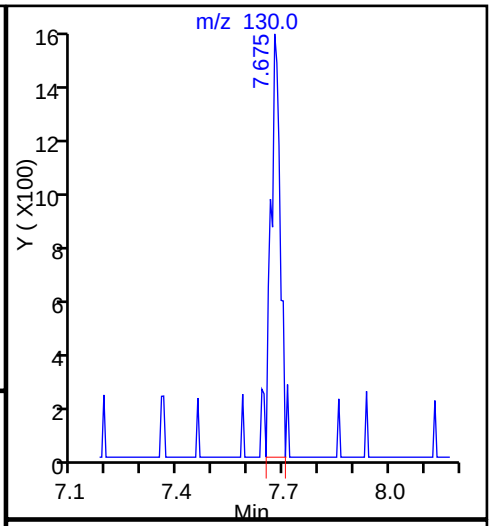
Report Date: 22-Jul-2015 08:40:14 Chrom Revision: 2.2 09-Jul-2015 10:16:20

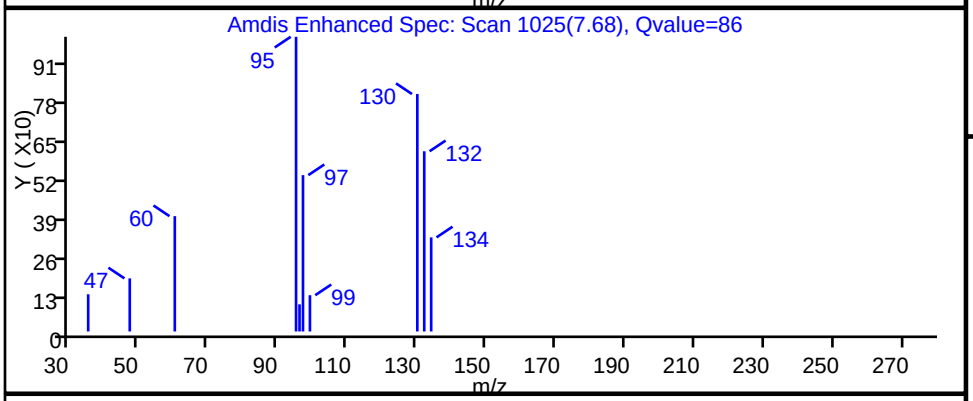
TestAmerica Pittsburgh

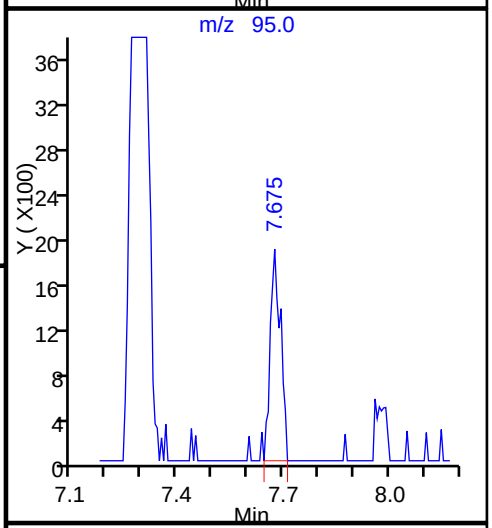
Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721019.D				
Injection Date:	21-Jul-2015 19:43:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-16	Lab Sample ID:	180-45946-16		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

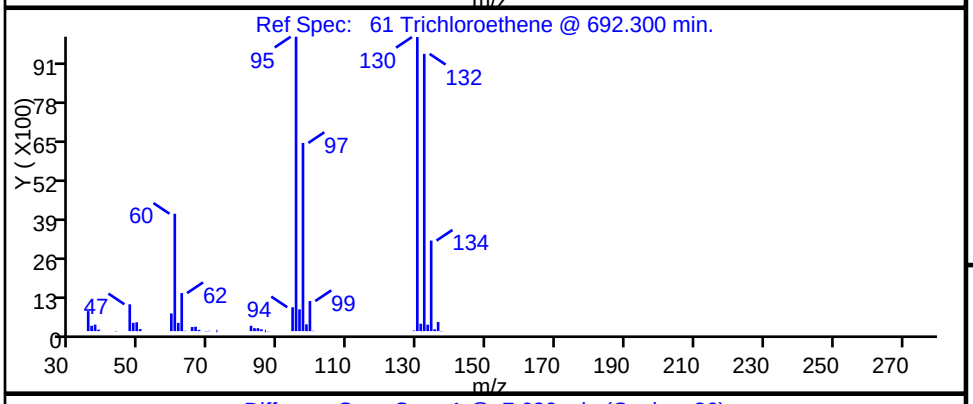
61 Trichloroethene, CAS: 79-01-6

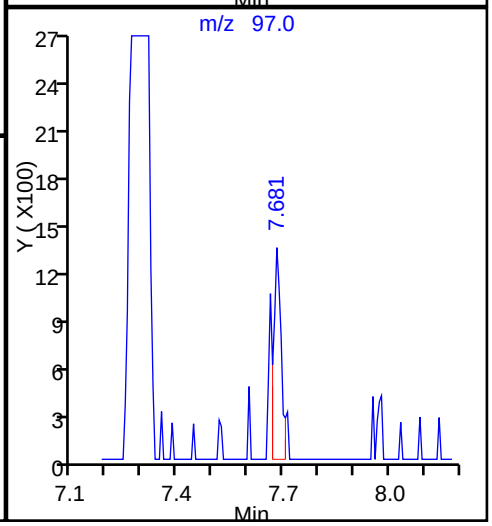


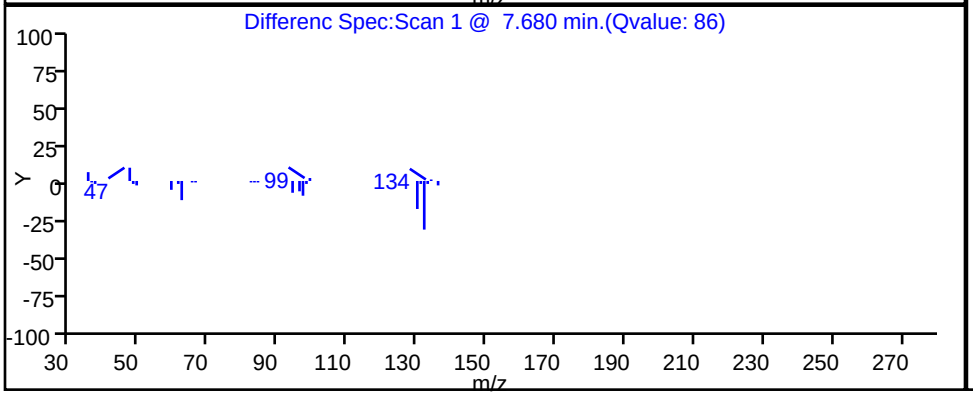












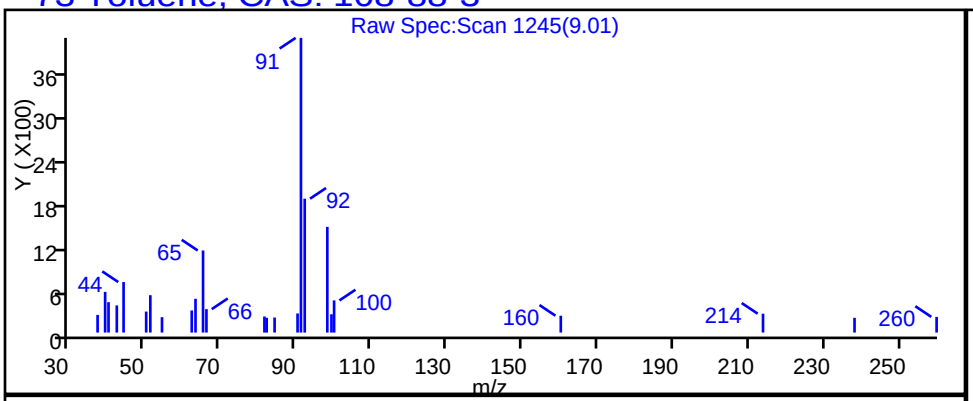
Report Date: 22-Jul-2015 08:40:14 Chrom Revision: 2.2 09-Jul-2015 10:16:20

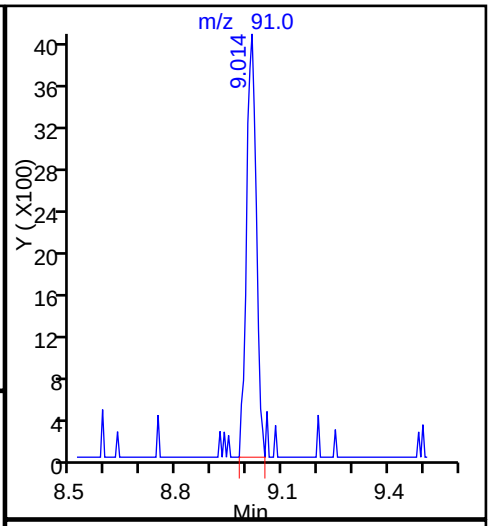
TestAmerica Pittsburgh

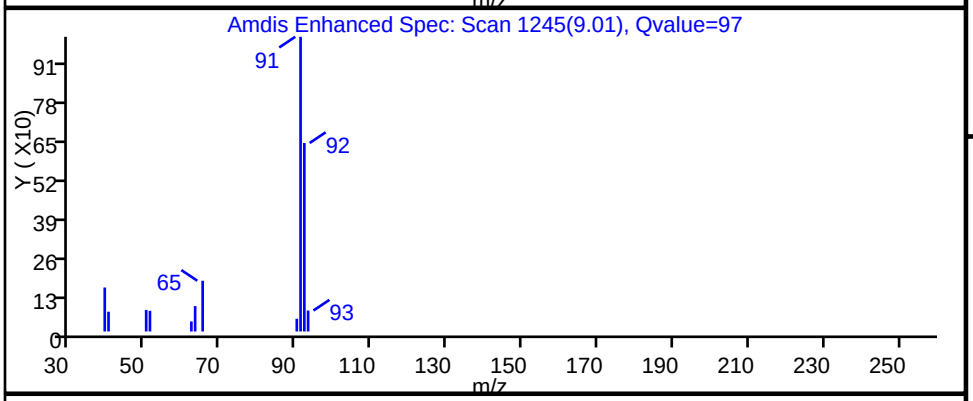
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721019.D

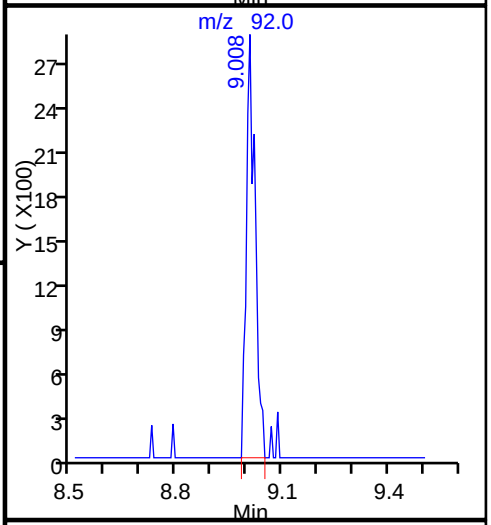
Injection Date:	21-Jul-2015 19:43:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-16	Lab Sample ID:	180-45946-16		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

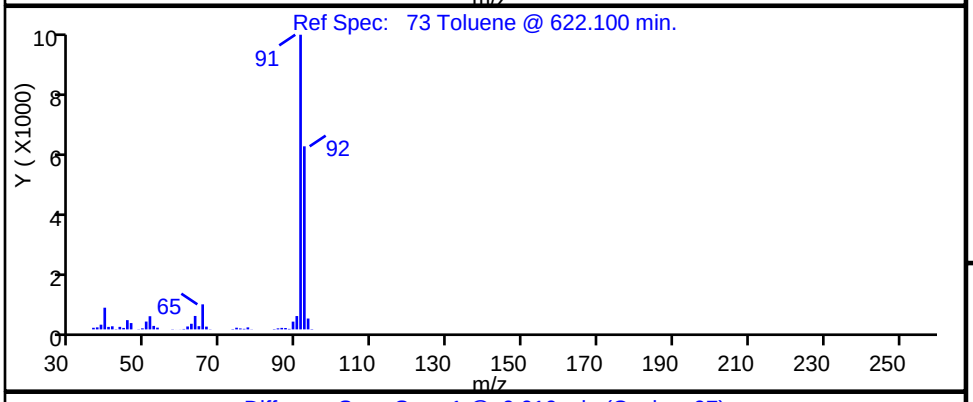
73 Toluene, CAS: 108-88-3

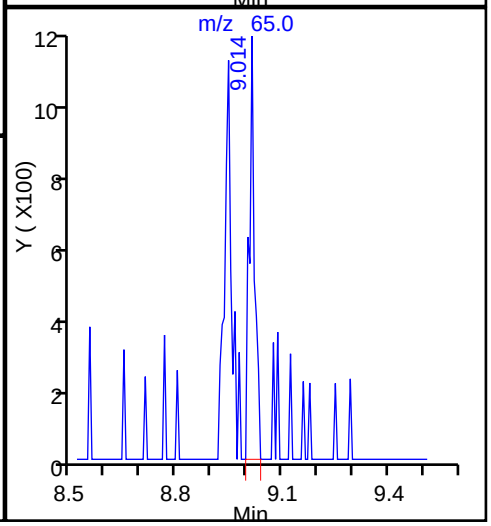


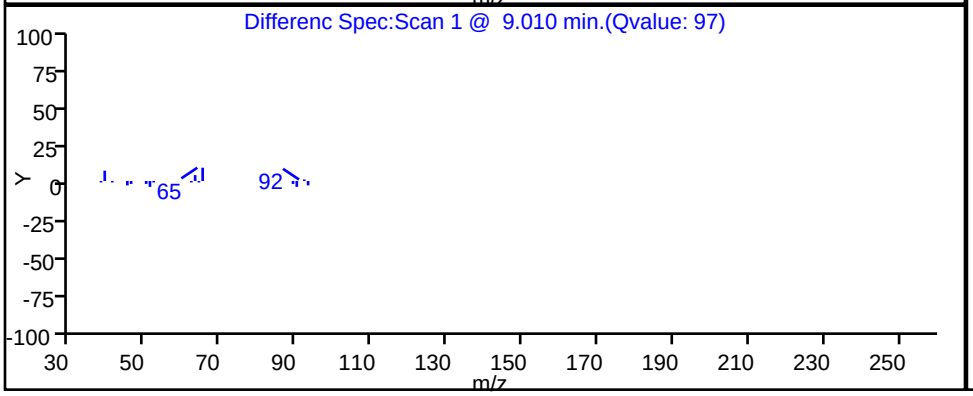












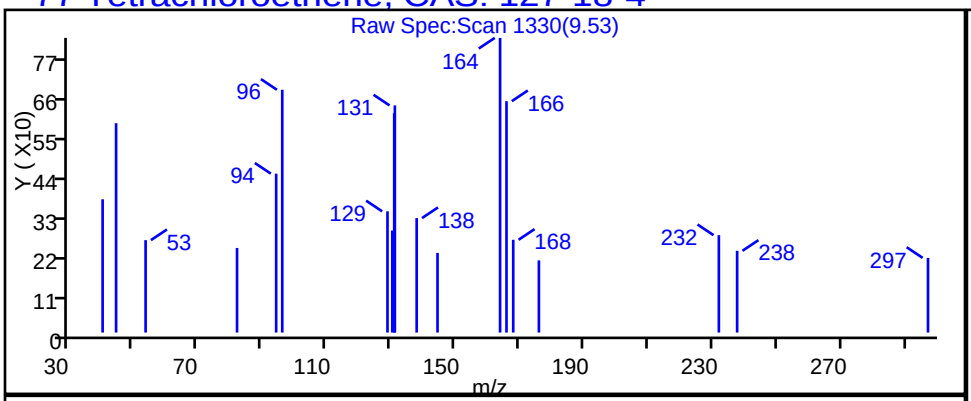
Report Date: 22-Jul-2015 08:40:14 Chrom Revision: 2.2 09-Jul-2015 10:16:20

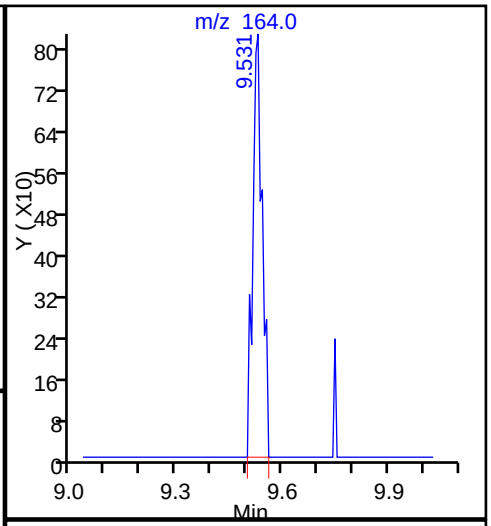
TestAmerica Pittsburgh

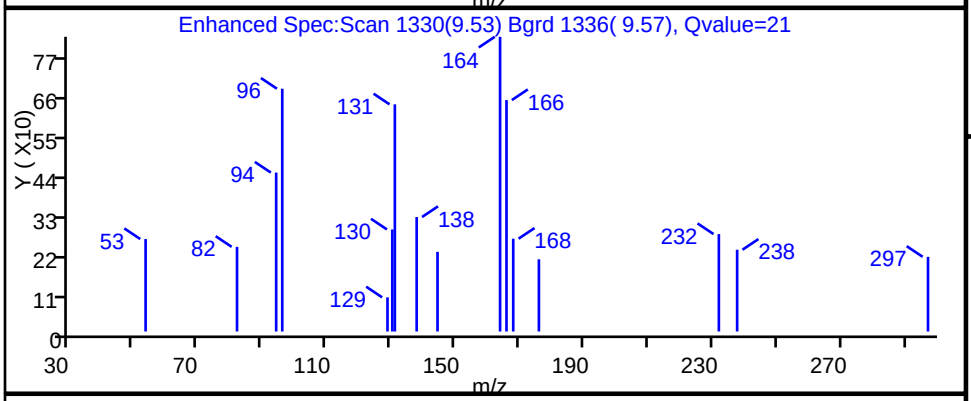
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721019.D

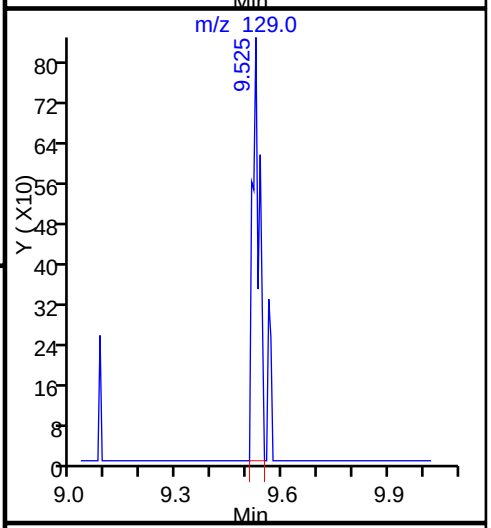
Injection Date:	21-Jul-2015 19:43:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-16	Lab Sample ID:	180-45946-16		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

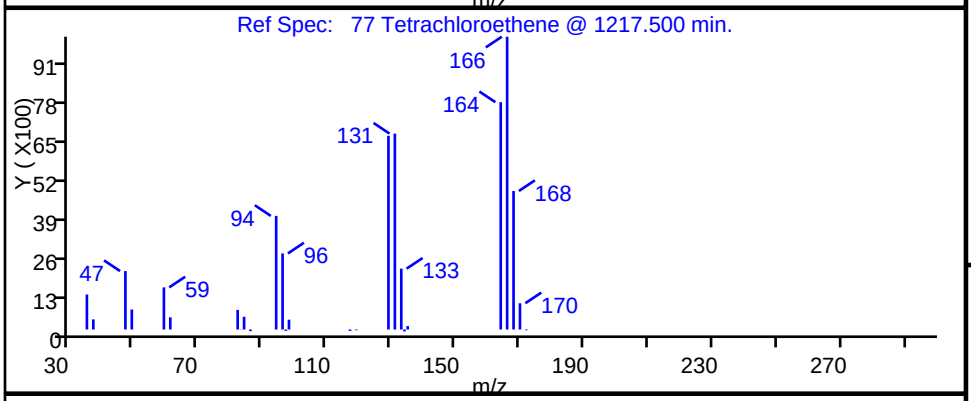
77 Tetrachloroethene, CAS: 127-18-4

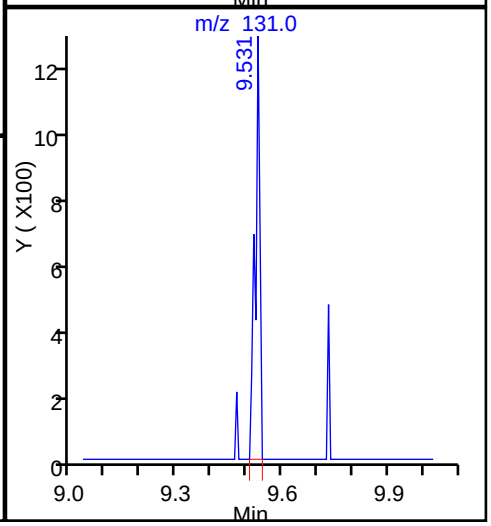


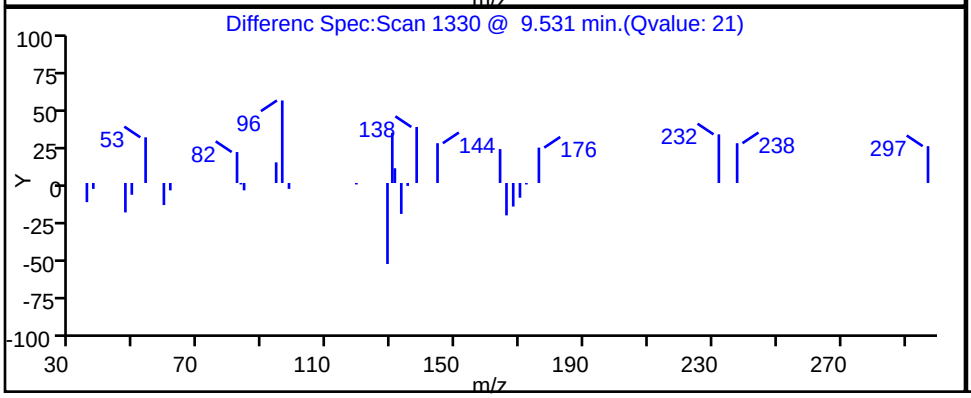












Manual Integration/User Assign Peak Report

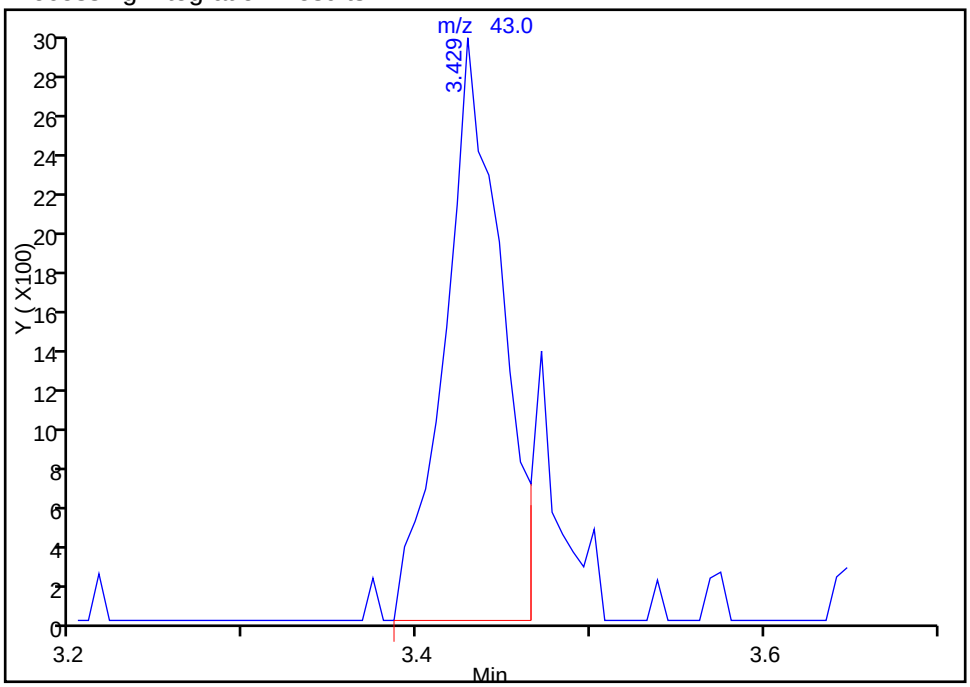
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721019.D				
Injection Date:	21-Jul-2015 19:43:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-16	Lab Sample ID:	180-45946-16		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

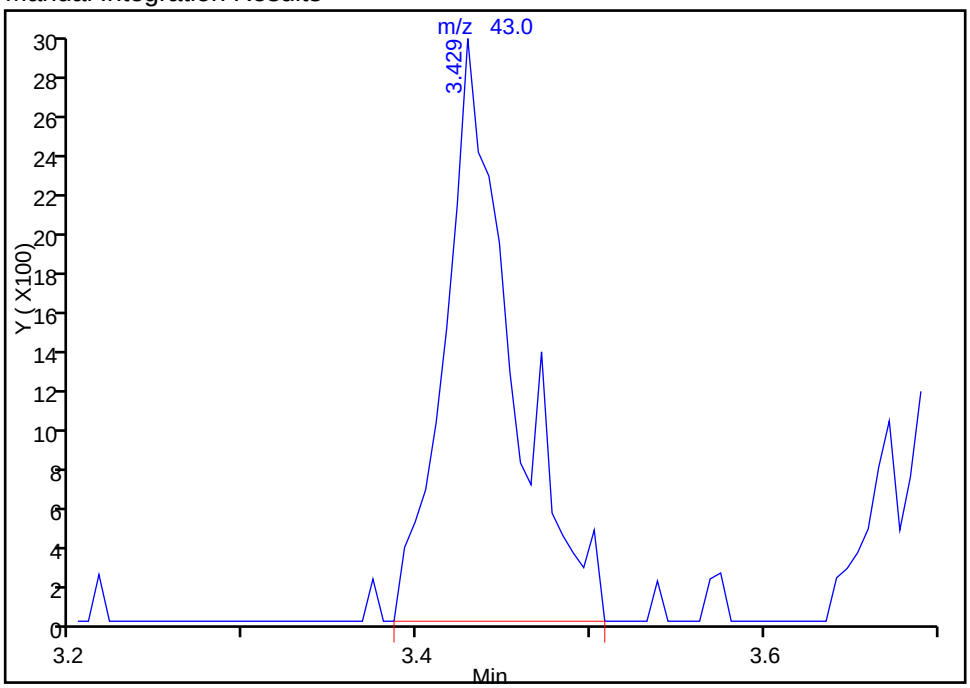
Processing Integration Results

RT: 3.43
Area: 6677
Amount: 9.968776
Amount Units: ng



Manual Integration Results

RT: 3.43
Area: 7922
Amount: 11.827563
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:40:14
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 | Lab Sample ID: 180-45946-17

Matrix: Water | Lab File ID: 60721020.D

Analysis Method: 8260C | Date Collected: 07/15/2015 08:40

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 20:07

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	^c	1.0	0.28
75-01-4	Vinyl chloride	ND	^c	1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND	^c	1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	2.7	J	5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	ND		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	0.17	J	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 | Lab Sample ID: 180-45946-17

Matrix: Water | Lab File ID: 60721020.D

Analysis Method: 8260C | Date Collected: 07/15/2015 08:40

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 20:07

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	111		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	100		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721020.D
Lims ID: 180-45946-D-17 Lab Sample ID: 180-45946-17
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 21-Jul-2015 20:07:30 ALS Bottle#: 20 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-D-17
Misc. Info.: 180-0007861-020
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:41:48 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:41:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.223	4.243	-0.020	90	105038	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.285	0.004	98	440586	50.0	
* 3 Chlorobenzene-d5	119	10.398	10.399	-0.001	89	91226	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.746	12.747	-0.001	98	140761	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.553	6.548	0.005	91	105436	50.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.932	-0.002	71	160207	48.6	
$ 7 Toluene-d8 (Surr)	98	8.944	8.939	0.005	94	398167	55.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.584	11.586	-0.002	81	151740	50.7	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43	3.426	3.428	-0.002	76	9120	13.6	M
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96	5.939	5.940	-0.001	1	1547	0.5457	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83	6.383	6.372	0.011	2	968	0.2057	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130	7.679	7.674	0.005	46	1516	0.5886	M
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.005	9.012	-0.007	93	7862	0.8306	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164	9.528	9.529	-0.001	19	771	0.4336	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

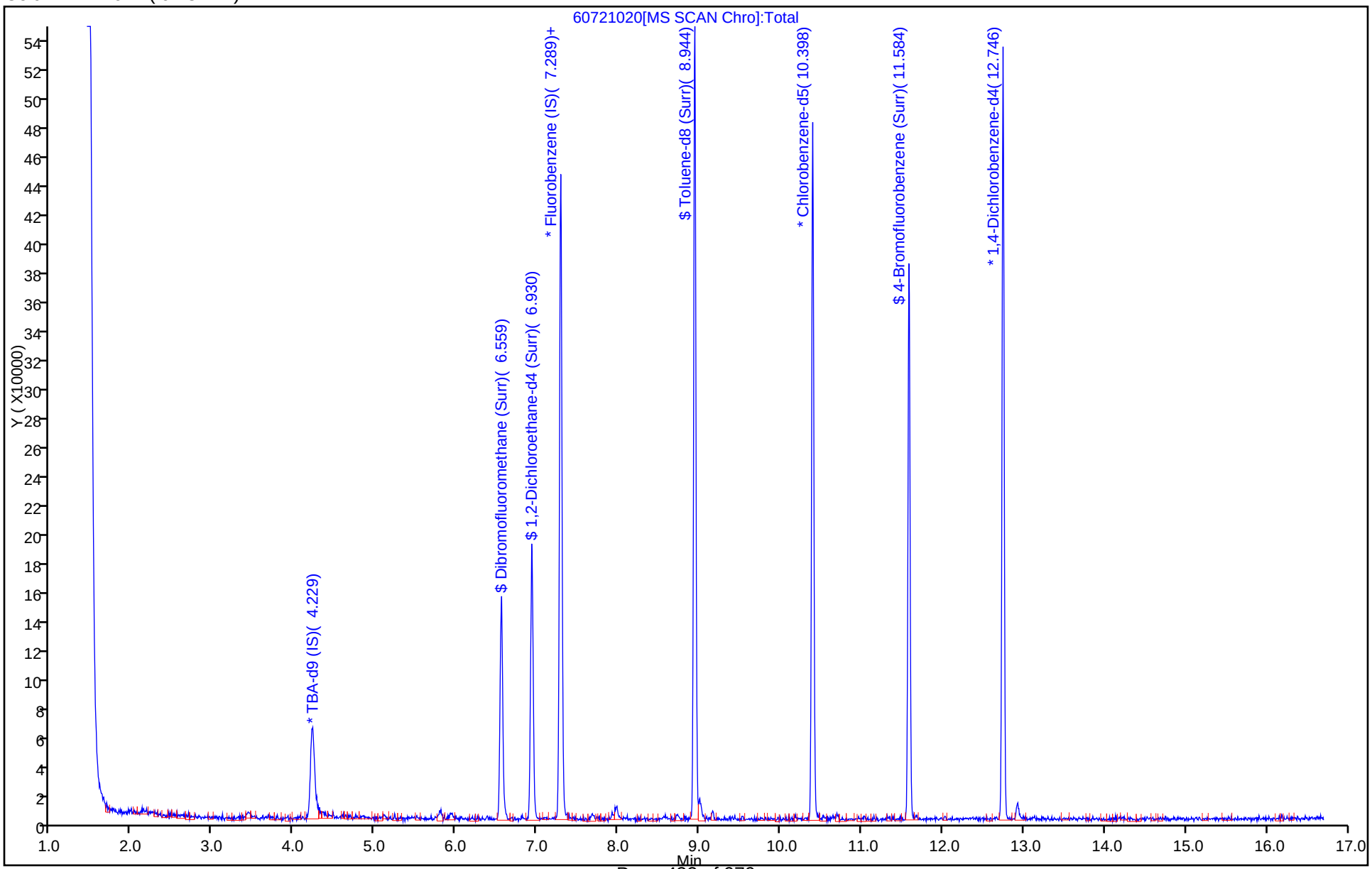
Report Date: 22-Jul-2015 08:41:48 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721020.D

Injection Date:	21-Jul-2015 20:07:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-D-17	Lab Sample ID:	180-45946-17	Worklist Smp#:	20
Client ID:	HD-COD-SW-29-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

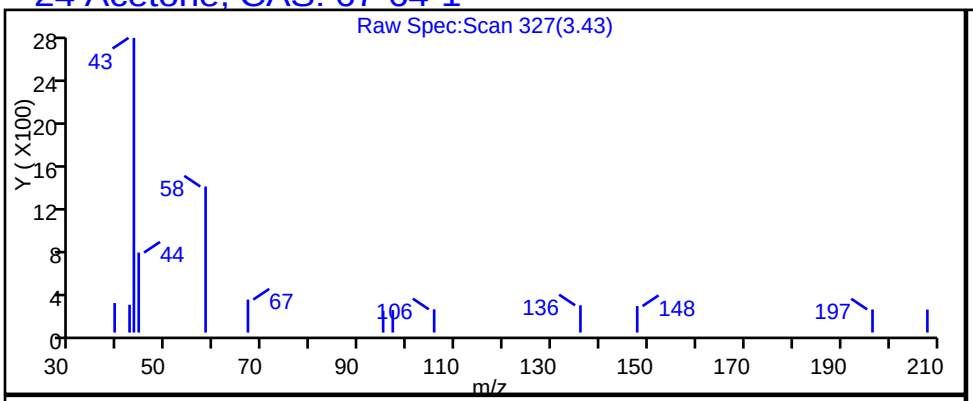


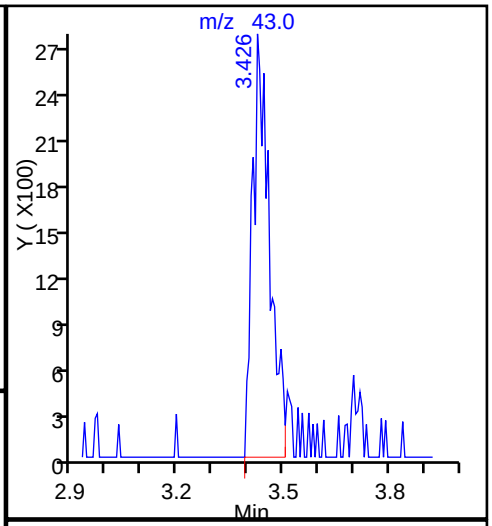
Report Date: 22-Jul-2015 08:41:48 Chrom Revision: 2.2 09-Jul-2015 10:16:20

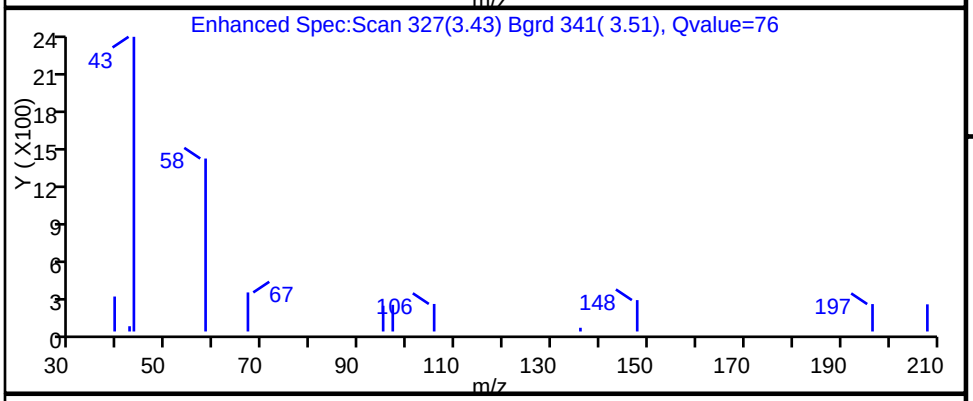
TestAmerica Pittsburgh

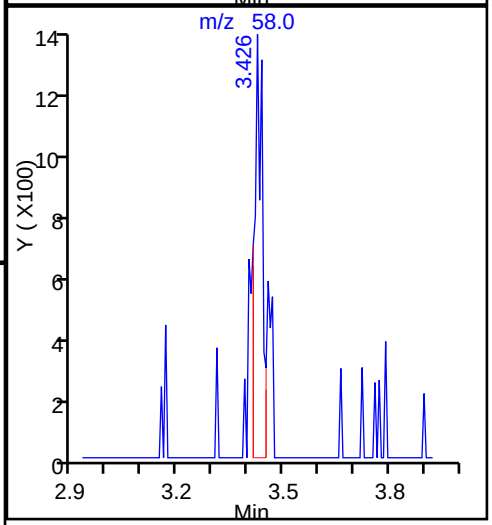
Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721020.D				
Injection Date:	21-Jul-2015 20:07:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-17	Lab Sample ID:	180-45946-17		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

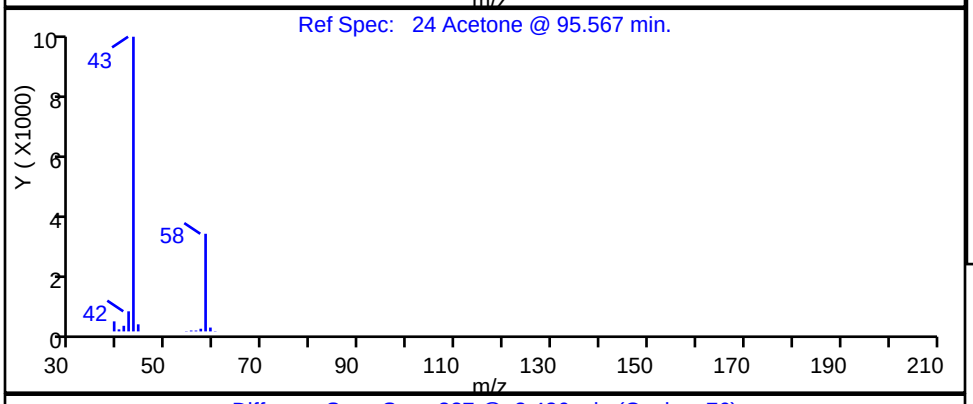
24 Acetone, CAS: 67-64-1

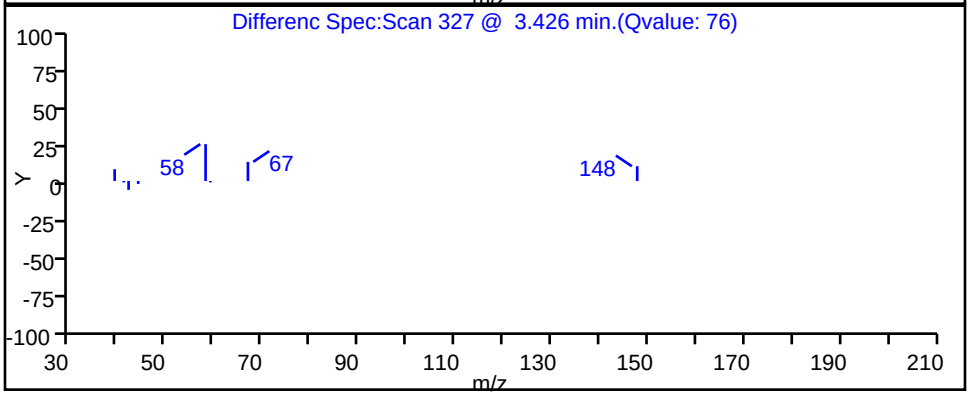












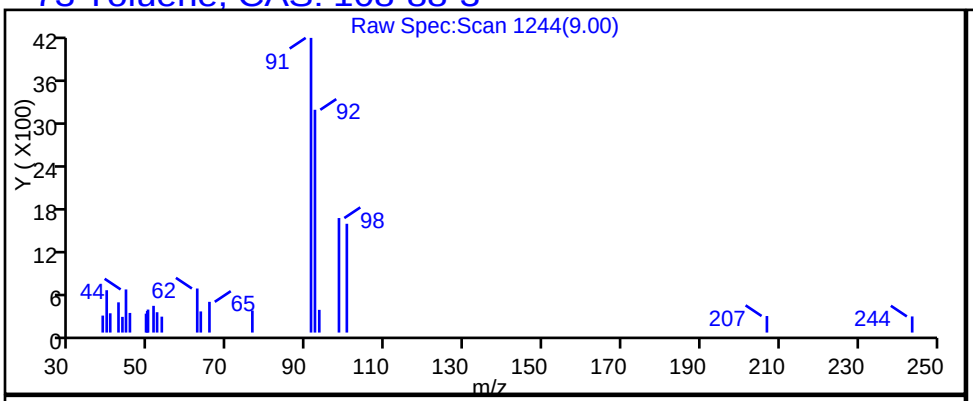
Report Date: 22-Jul-2015 08:41:49 Chrom Revision: 2.2 09-Jul-2015 10:16:20

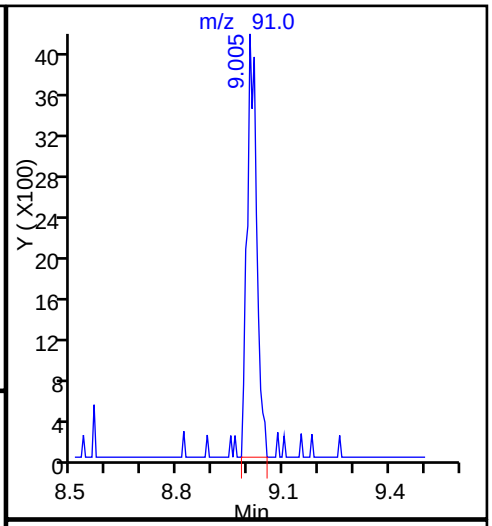
TestAmerica Pittsburgh

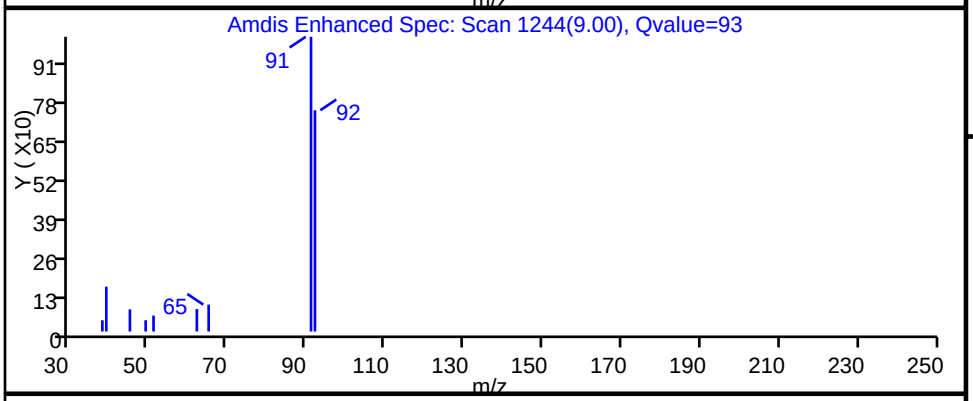
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721020.D

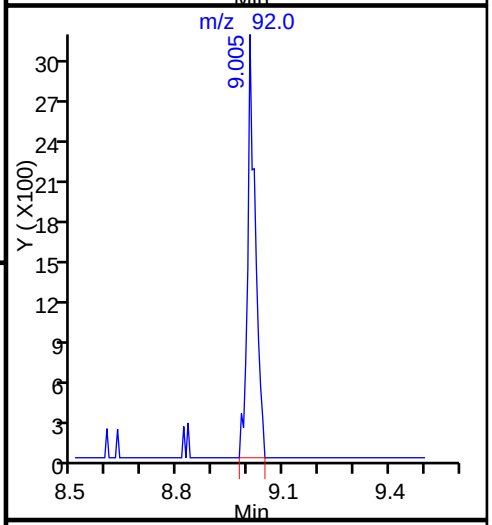
Injection Date:	21-Jul-2015 20:07:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-17	Lab Sample ID:	180-45946-17		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

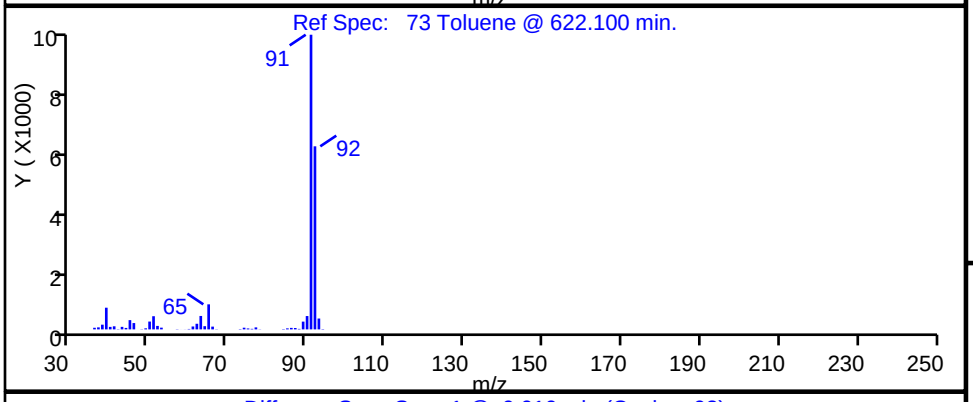
73 Toluene, CAS: 108-88-3

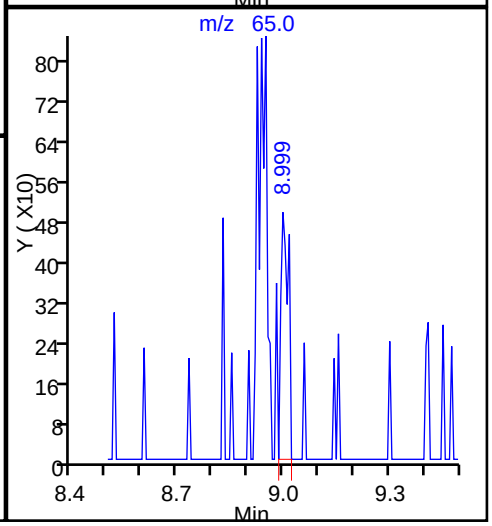


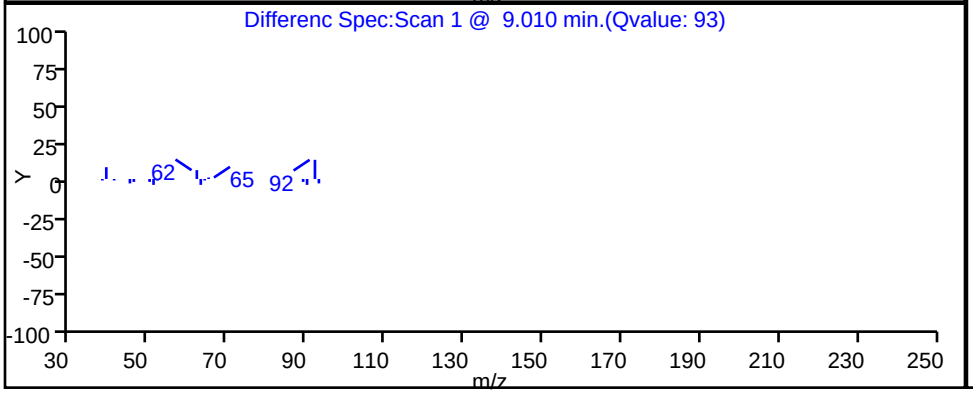












Manual Integration/User Assign Peak Report

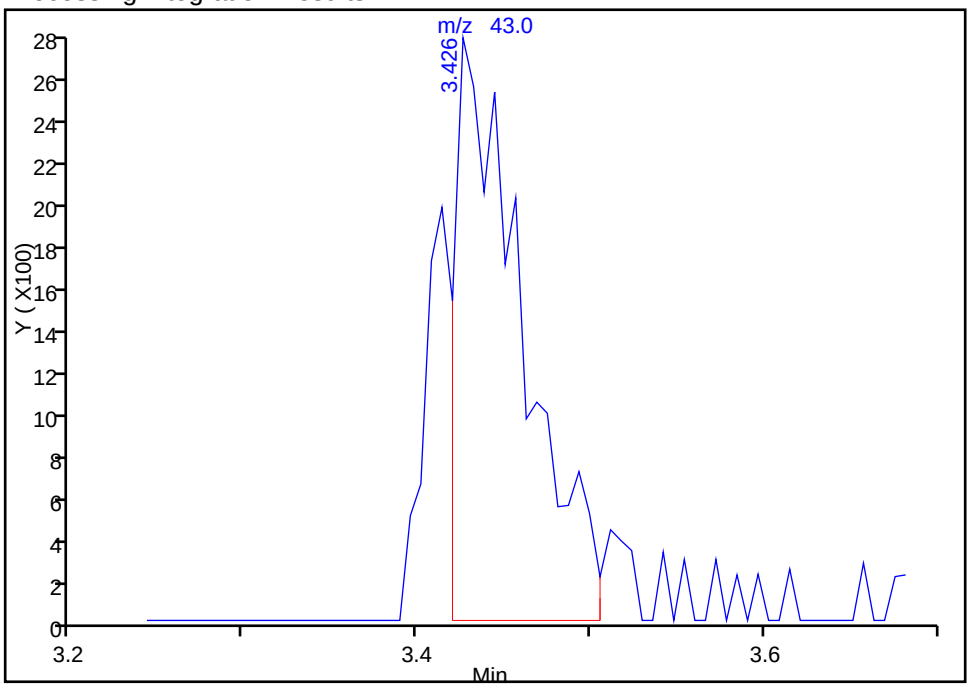
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721020.D				
Injection Date:	21-Jul-2015 20:07:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-17	Lab Sample ID:	180-45946-17		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

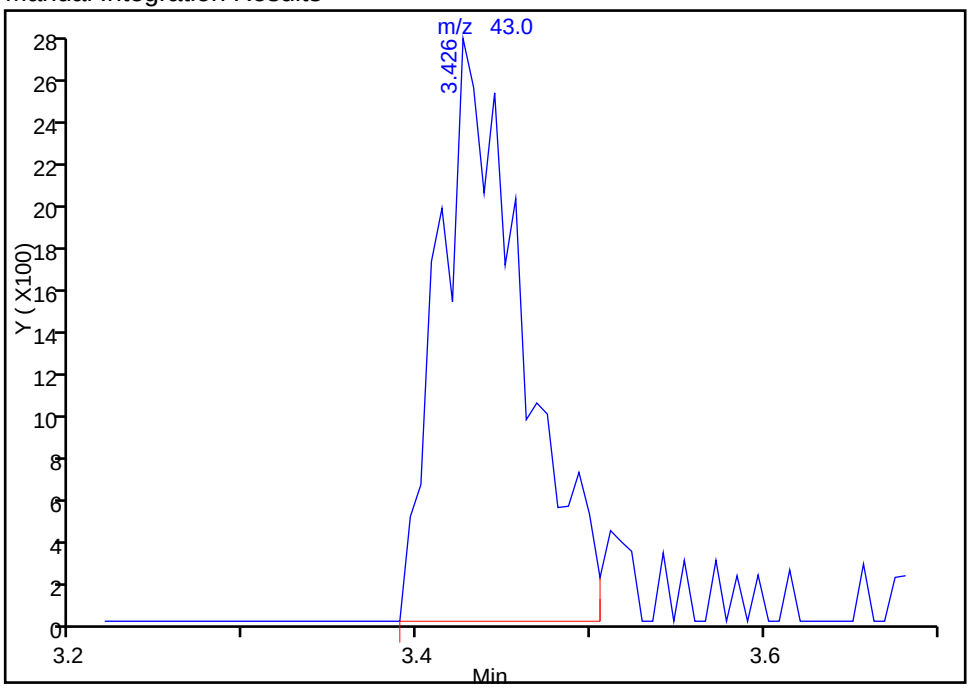
Processing Integration Results

RT: 3.43
Area: 7388
Amount: 11.043018
Amount Units: ng



Manual Integration Results

RT: 3.43
Area: 9120
Amount: 13.631880
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:41:48
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

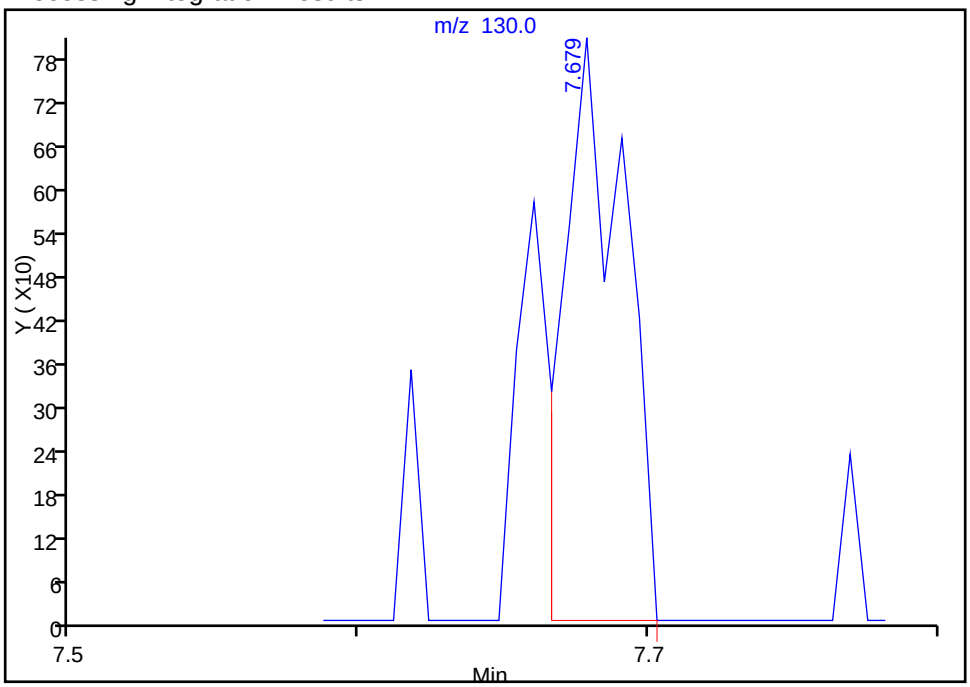
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721020.D				
Injection Date:	21-Jul-2015 20:07:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-D-17	Lab Sample ID:	180-45946-17		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

61 Trichloroethene, CAS: 79-01-6

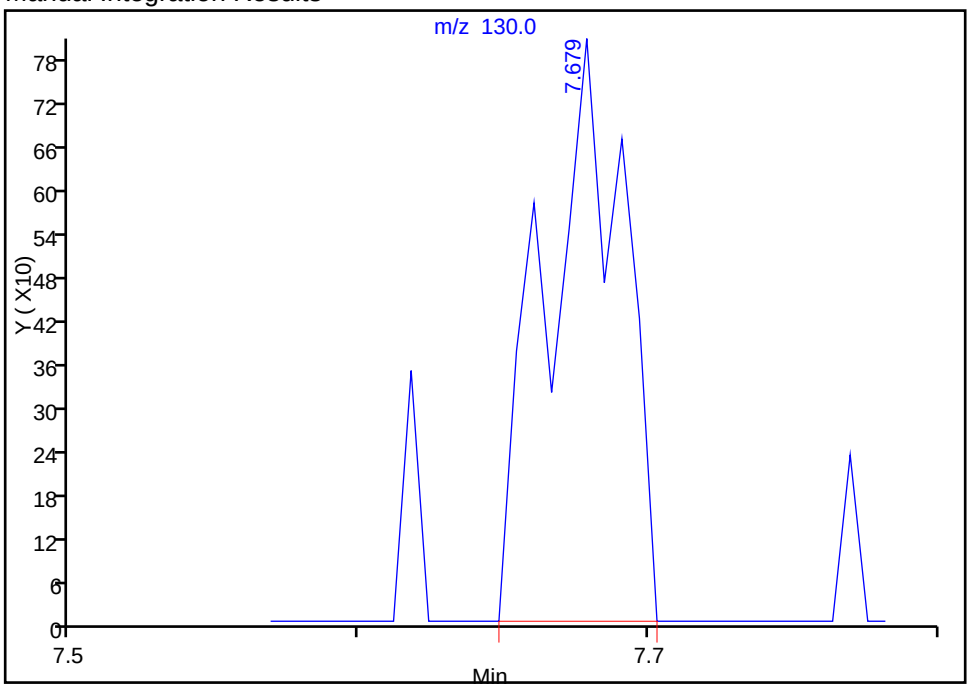
Processing Integration Results

RT: 7.68
Area: 1170
Amount: 0.454258
Amount Units: ng



Manual Integration Results

RT: 7.68
Area: 1516
Amount: 0.588594
Amount Units: ng



Reviewer: fergusond, 22-Jul-2015 08:41:48
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 | Lab Sample ID: 180-45946-18

Matrix: Water | Lab File ID: 60721021.D

Analysis Method: 8260C | Date Collected: 07/15/2015 08:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 20:31

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	^c	1.0	0.28
75-01-4	Vinyl chloride	ND	^c	1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND	^c	1.0	0.21
75-35-4	1,1-Dichloroethene	0.53	J	1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	0.14	J	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.7		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	0.37	J	1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	8.8		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	5.7		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 | Lab Sample ID: 180-45946-18

Matrix: Water | Lab File ID: 60721021.D

Analysis Method: 8260C | Date Collected: 07/15/2015 08:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 20:31

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		64-135
2037-26-5	Toluene-d8 (Surr)	111		71-118
460-00-4	4-Bromofluorobenzene (Surr)	102		70-118
1868-53-7	Dibromofluoromethane (Surr)	98		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721021.D
Lims ID: 180-45946-E-18 Lab Sample ID: 180-45946-18
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 21-Jul-2015 20:31:30 ALS Bottle#: 21 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-E-18
Misc. Info.: 180-0007861-021
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:45:37 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:45:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.223	4.243	-0.020	95	113656	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.285	0.004	98	447620	50.0	
* 3 Chlorobenzene-d5	119	10.398	10.399	-0.001	89	92277	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.746	12.747	-0.001	98	145029	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.559	6.548	0.011	92	105200	49.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.937	6.932	0.005	70	159492	47.6	
$ 7 Toluene-d8 (Surr)	98	8.944	8.939	0.005	94	403572	55.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.584	11.586	-0.002	82	154699	51.1	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96	3.353	3.336	0.017	44	5995	2.65	
24 Acetone	43	3.445	3.428	0.017	68	2833	4.17	
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96	4.570	4.565	0.005	1	822	0.3082	
35 Methyl tert-butyl ether	73	4.576	4.571	0.005	24	1453	0.1844	
37 1,1-Dichloroethane	63	5.185	5.198	-0.013	1	3377	0.6997	M
43 cis-1,2-Dichloroethene	96	5.945	5.940	0.005	80	139320	48.4	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83	6.371	6.372	-0.001	42	3555	0.7437	
51 1,1,1-Trichloroethane	97	6.541	6.542	-0.001	35	6585	1.86	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130	7.679	7.674	0.005	96	115634	44.2	
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.005	9.012	-0.007	81	5461	0.5703	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164	9.522	9.529	-0.007	95	50883	28.3	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

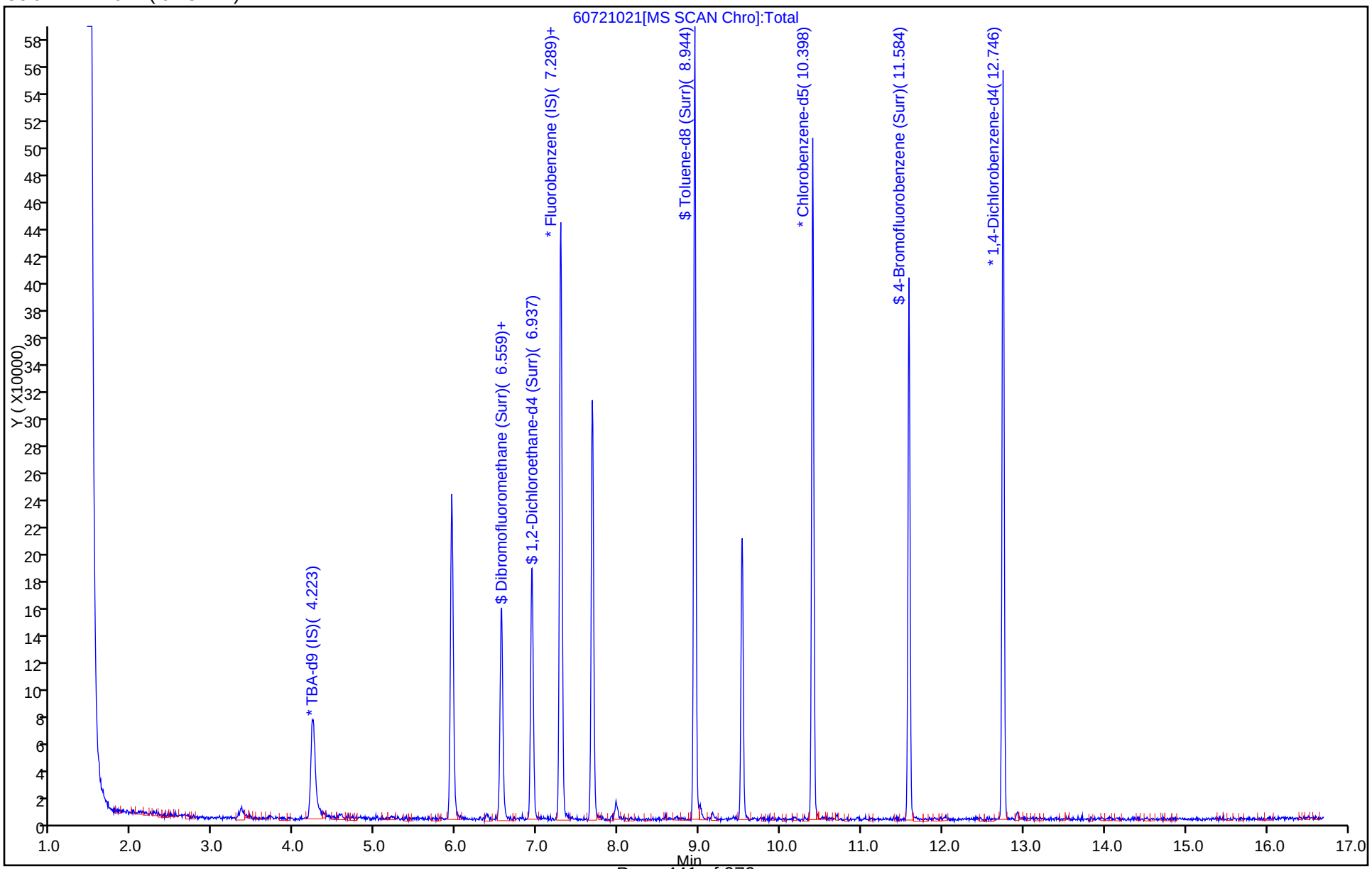
Report Date: 22-Jul-2015 08:45:37 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721021.D

Injection Date:	21-Jul-2015 20:31:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-E-18	Lab Sample ID:	180-45946-18	Worklist Smp#:	21
Client ID:	HD-QC1-0/1-1				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



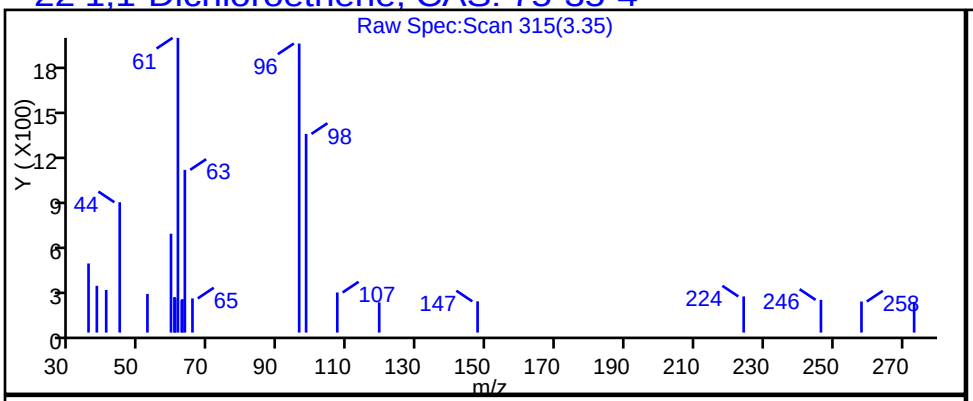
Report Date: 22-Jul-2015 08:45:37 Chrom Revision: 2.2 09-Jul-2015 10:16:20

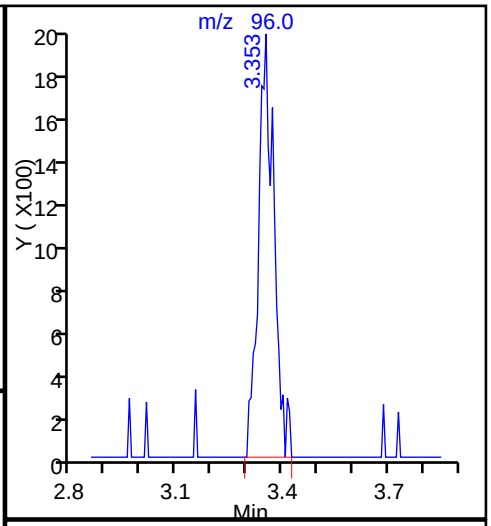
TestAmerica Pittsburgh

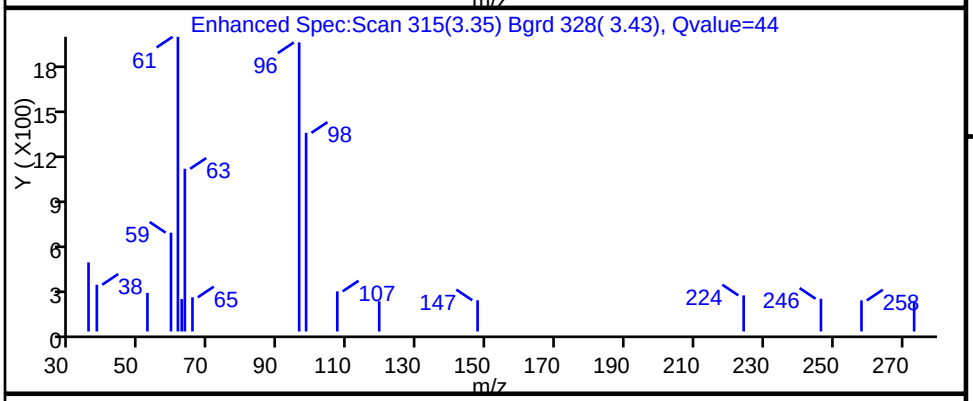
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721021.D

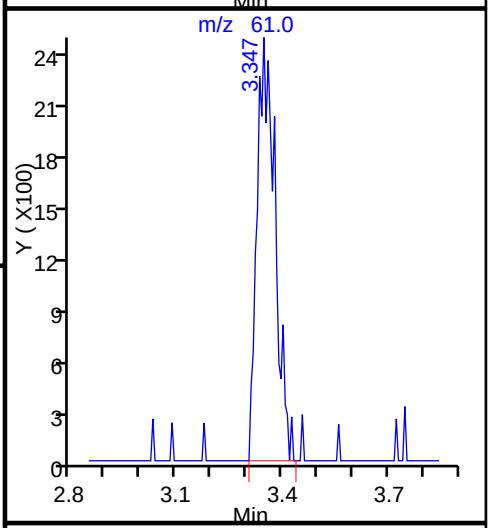
Injection Date:	21-Jul-2015 20:31:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-18	Lab Sample ID:	180-45946-18		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

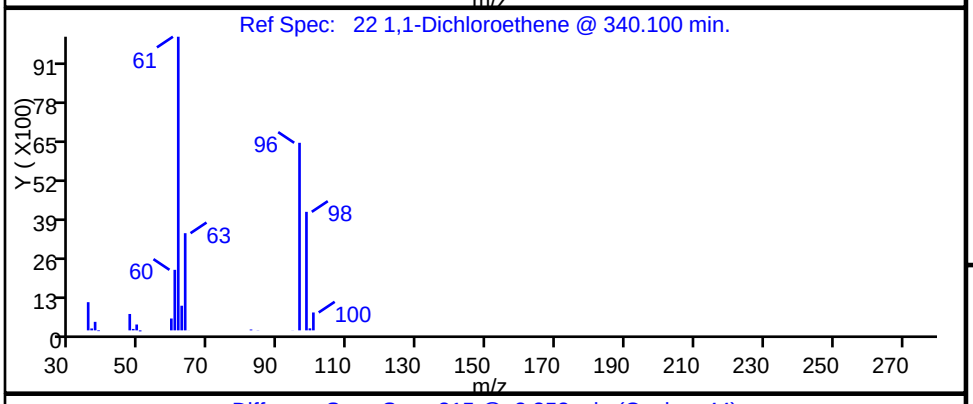
22 1,1-Dichloroethene, CAS: 75-35-4

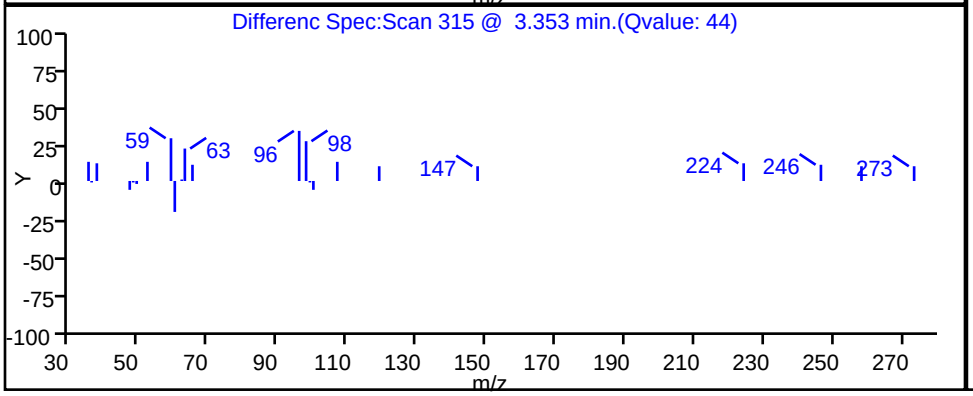


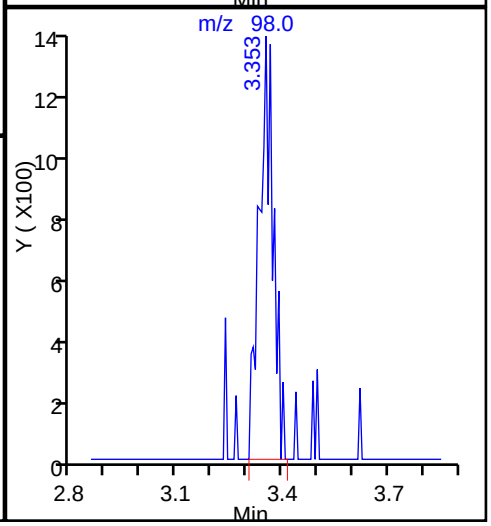












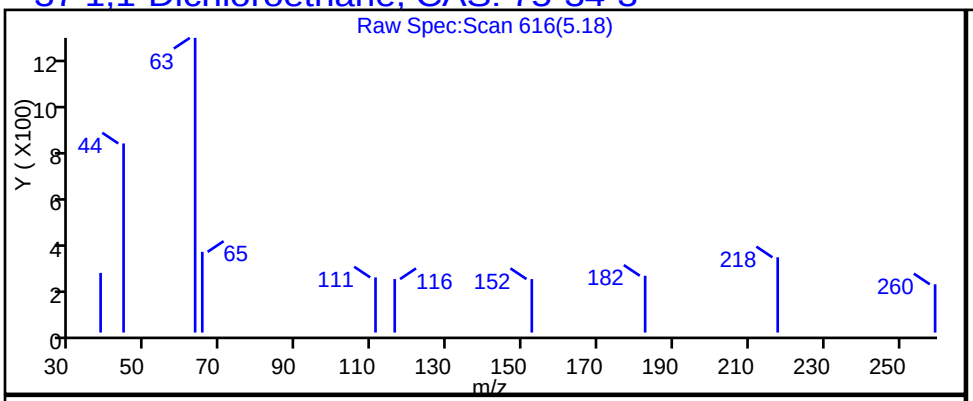
Report Date: 22-Jul-2015 08:45:38 Chrom Revision: 2.2 09-Jul-2015 10:16:20

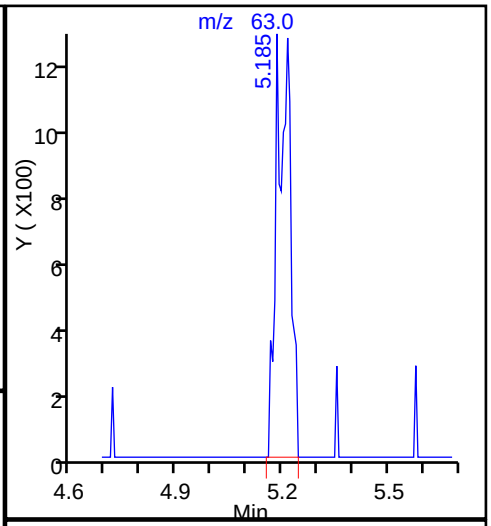
TestAmerica Pittsburgh

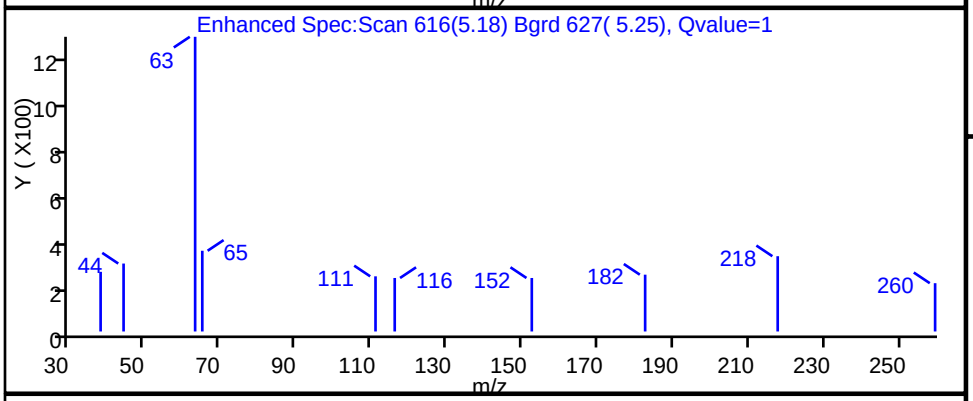
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721021.D

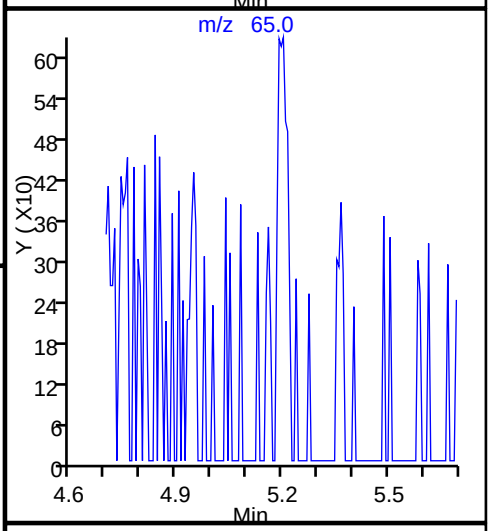
Injection Date:	21-Jul-2015 20:31:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-18	Lab Sample ID:	180-45946-18		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

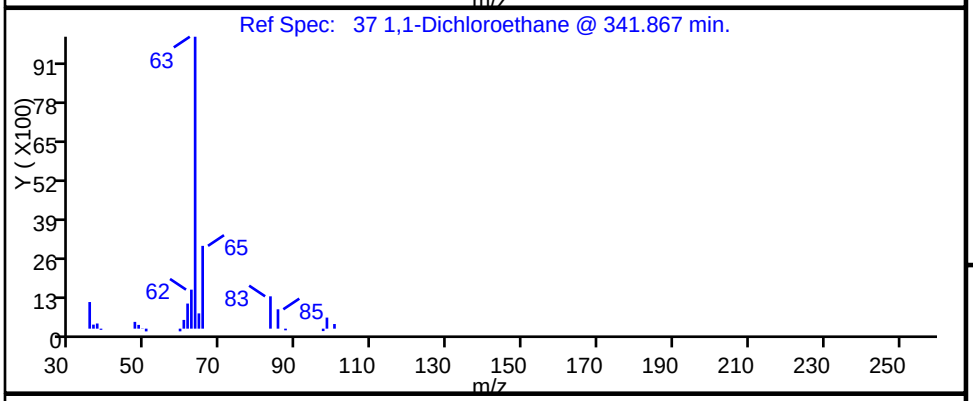
37 1,1-Dichloroethane, CAS: 75-34-3

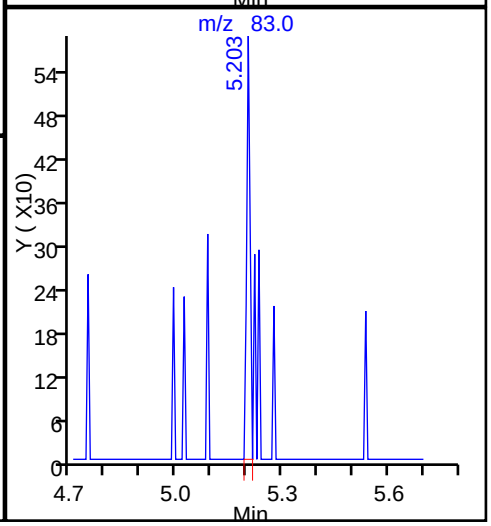


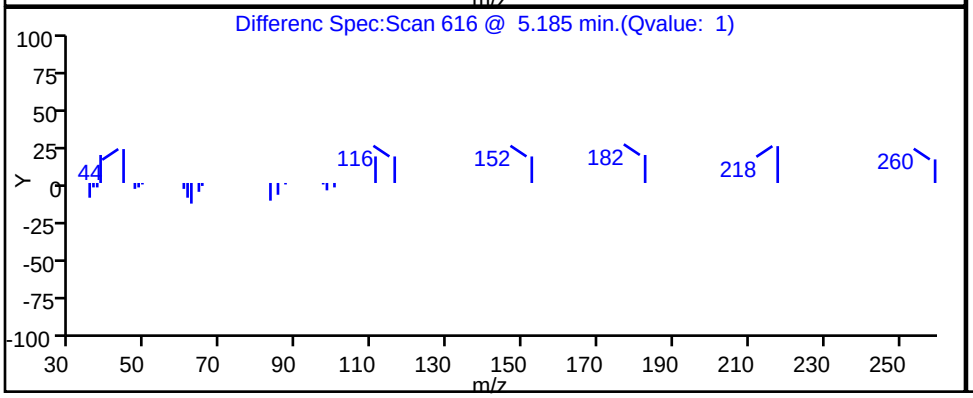










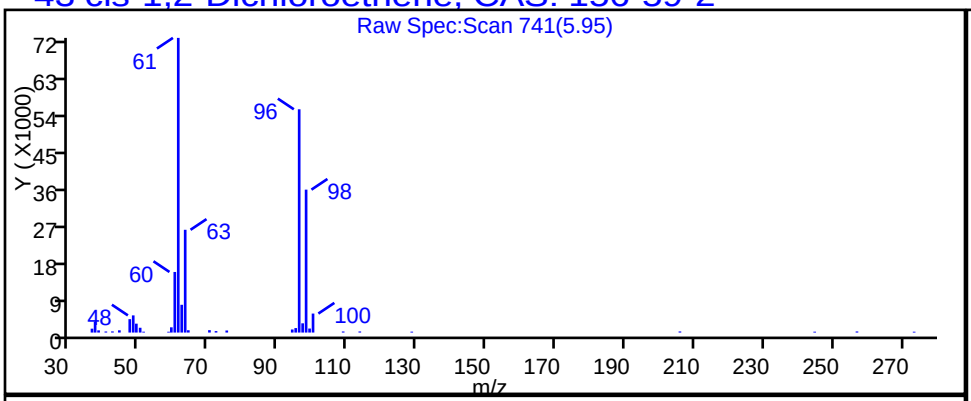


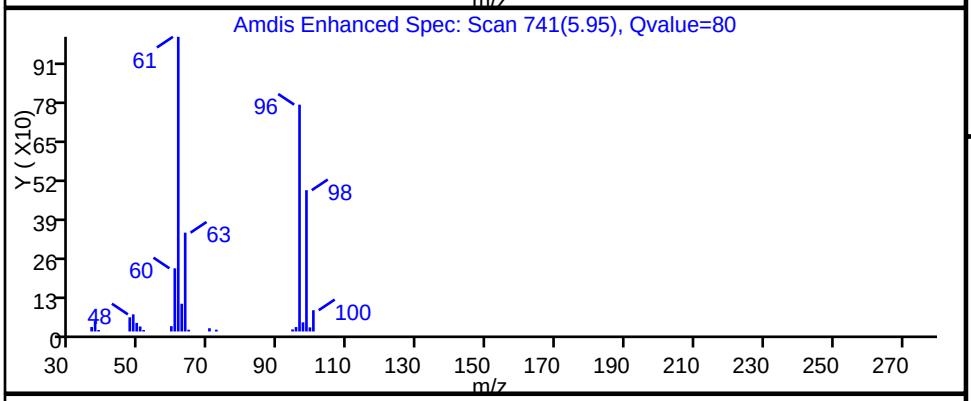
Report Date: 22-Jul-2015 08:45:39 Chrom Revision: 2.2 09-Jul-2015 10:16:20

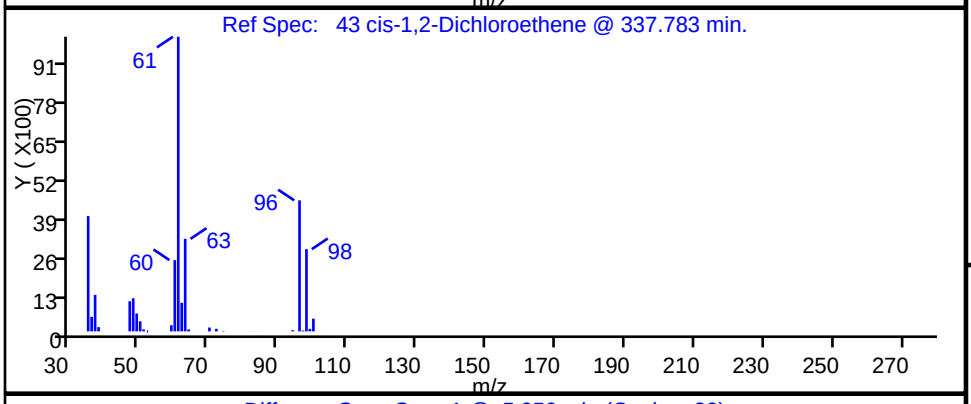
TestAmerica Pittsburgh

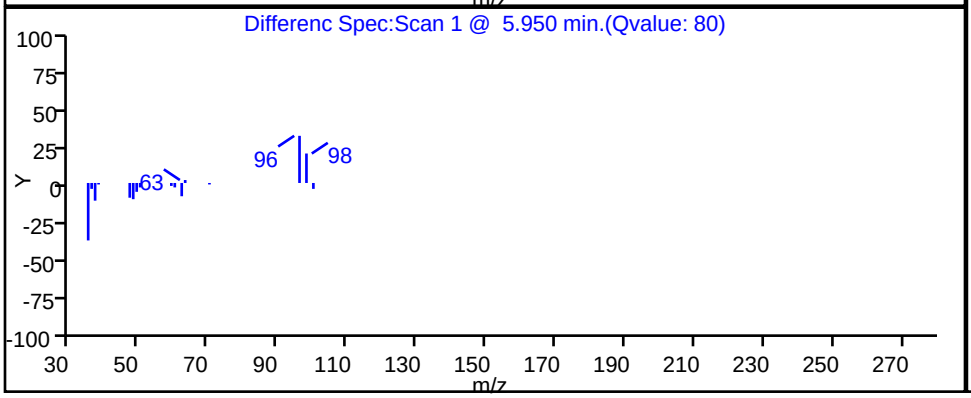
Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721021.D				
Injection Date:	21-Jul-2015 20:31:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-18	Lab Sample ID:	180-45946-18		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

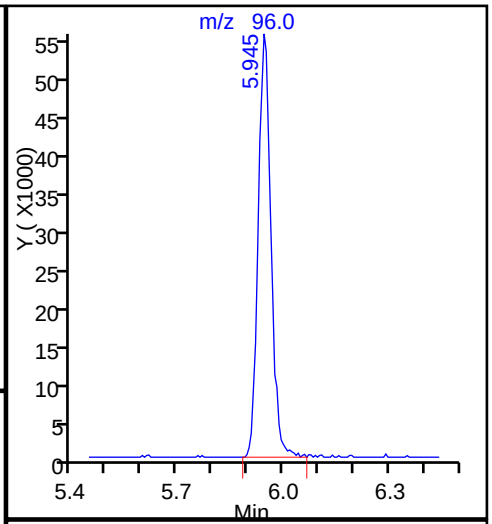
43 cis-1,2-Dichloroethene, CAS: 156-59-2

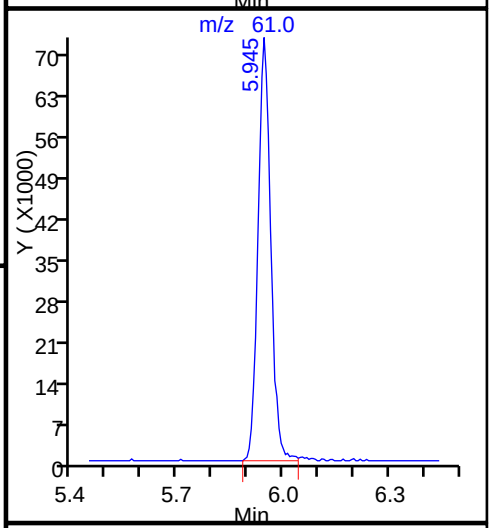


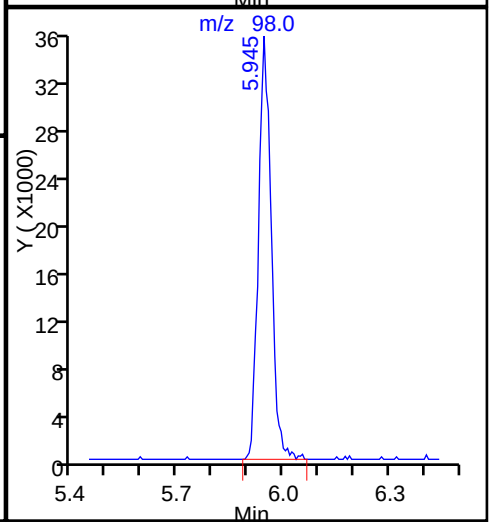












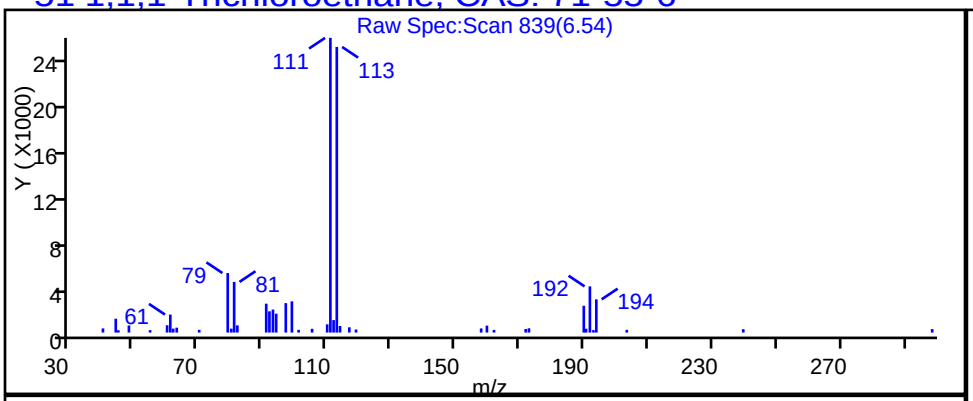
Report Date: 22-Jul-2015 08:45:39 Chrom Revision: 2.2 09-Jul-2015 10:16:20

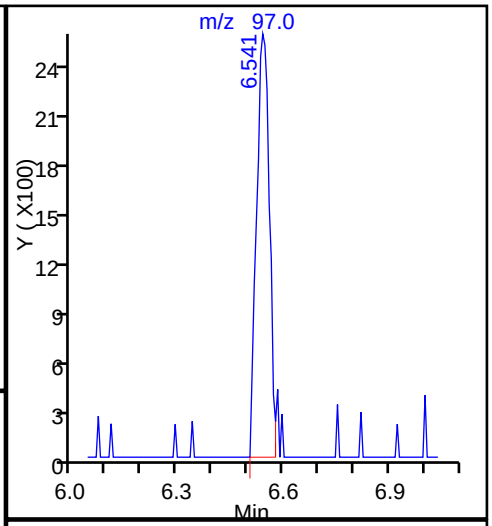
TestAmerica Pittsburgh

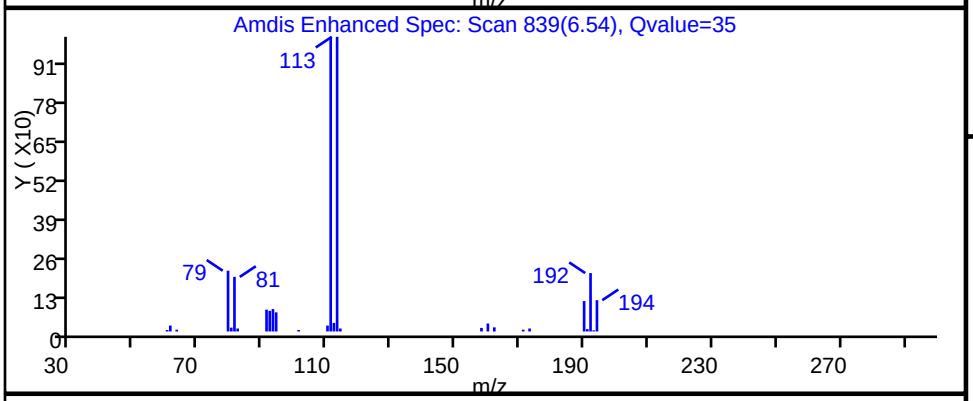
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721021.D

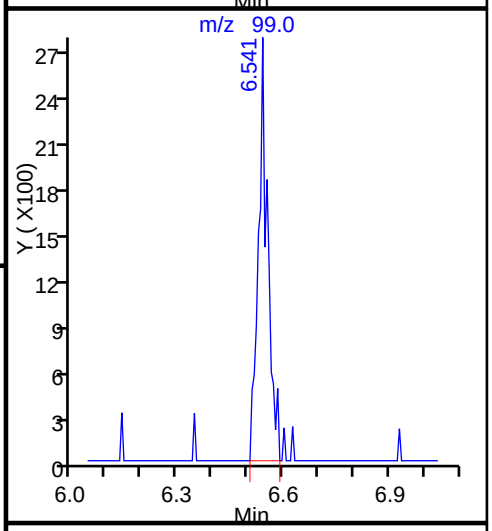
Injection Date:	21-Jul-2015 20:31:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-18	Lab Sample ID:	180-45946-18		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

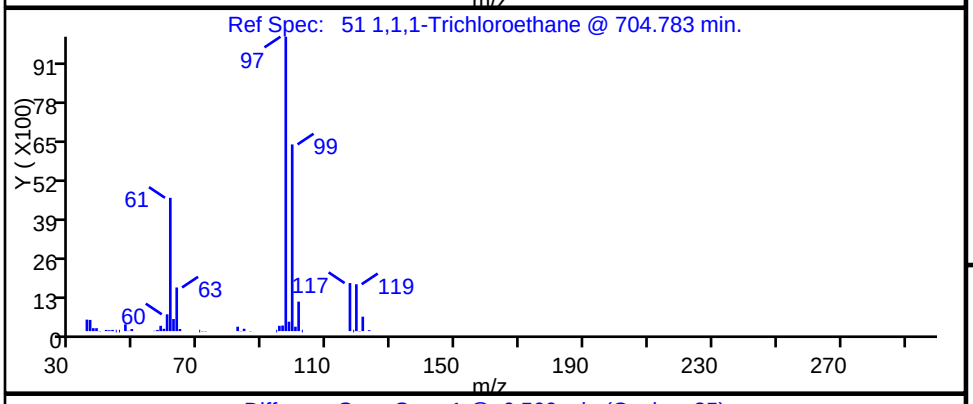
51 1,1,1-Trichloroethane, CAS: 71-55-6

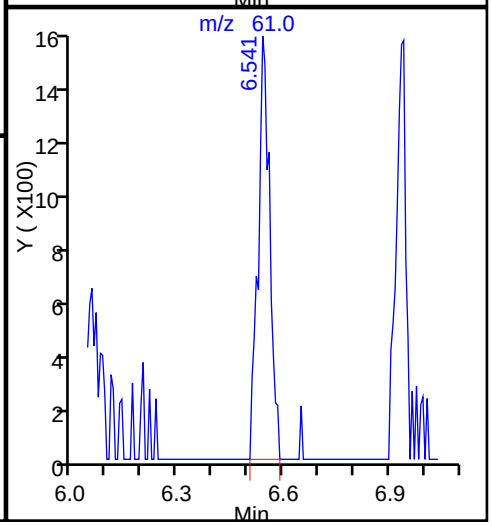


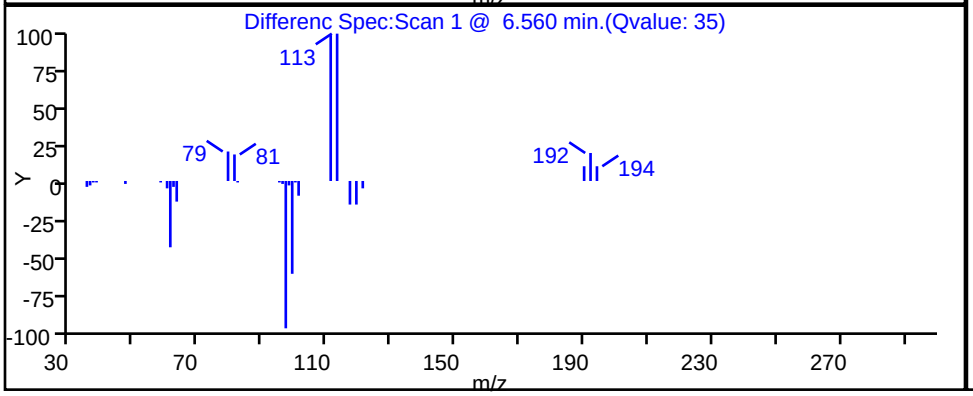












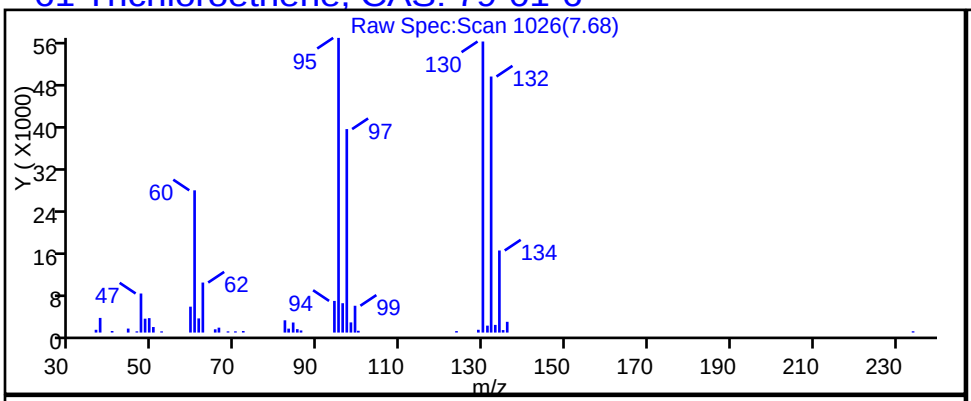
Report Date: 22-Jul-2015 08:45:39 Chrom Revision: 2.2 09-Jul-2015 10:16:20

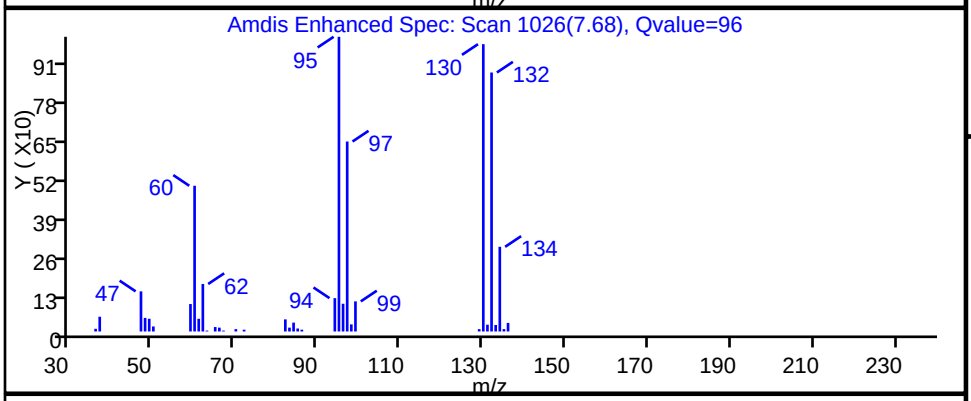
TestAmerica Pittsburgh

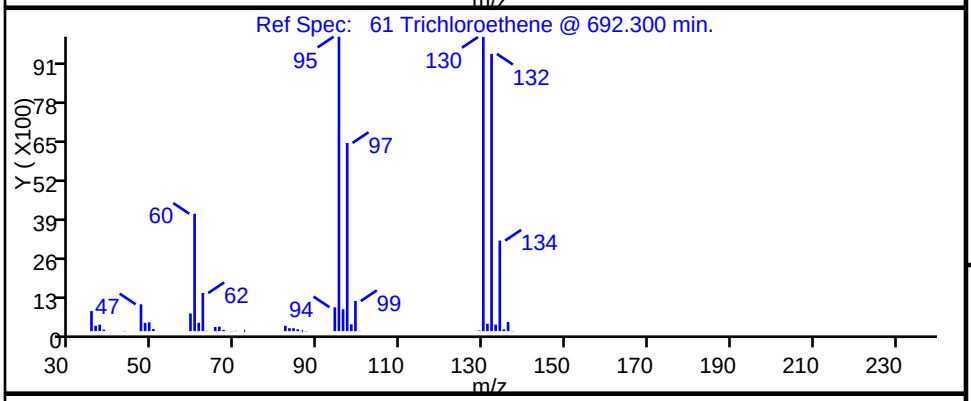
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721021.D

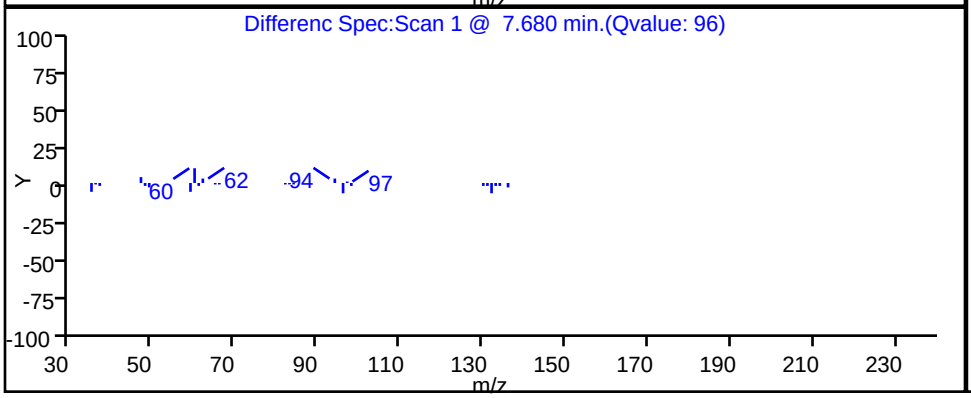
Injection Date:	21-Jul-2015 20:31:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-18	Lab Sample ID:	180-45946-18		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

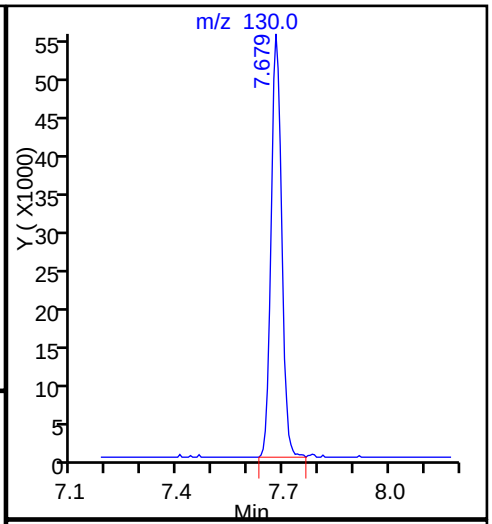
61 Trichloroethene, CAS: 79-01-6

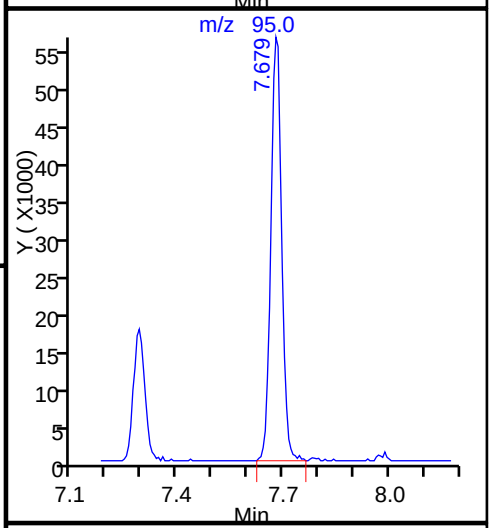


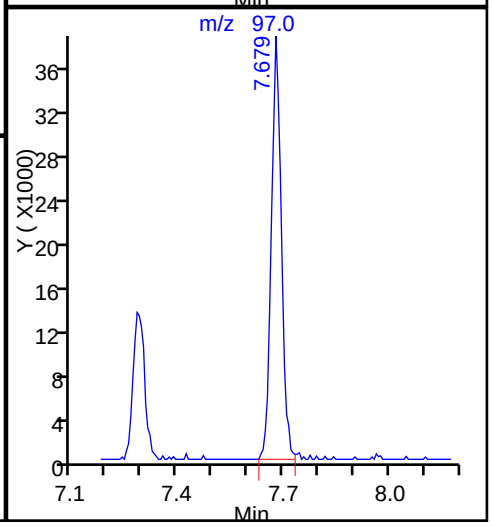












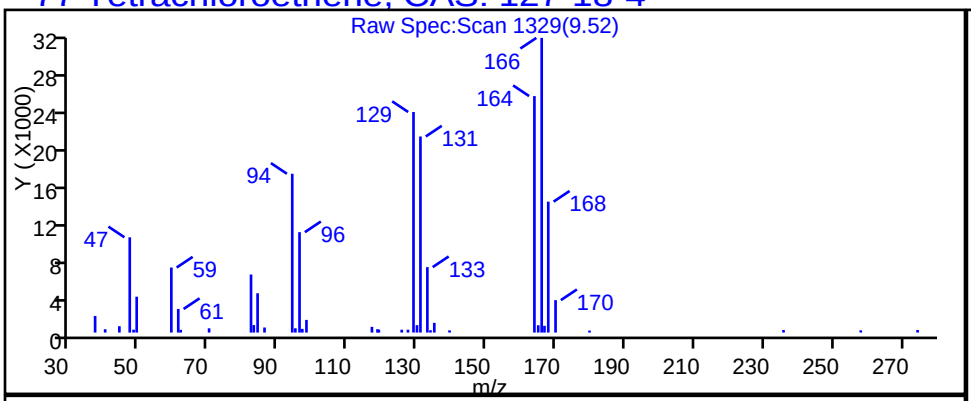
Report Date: 22-Jul-2015 08:45:39 Chrom Revision: 2.2 09-Jul-2015 10:16:20

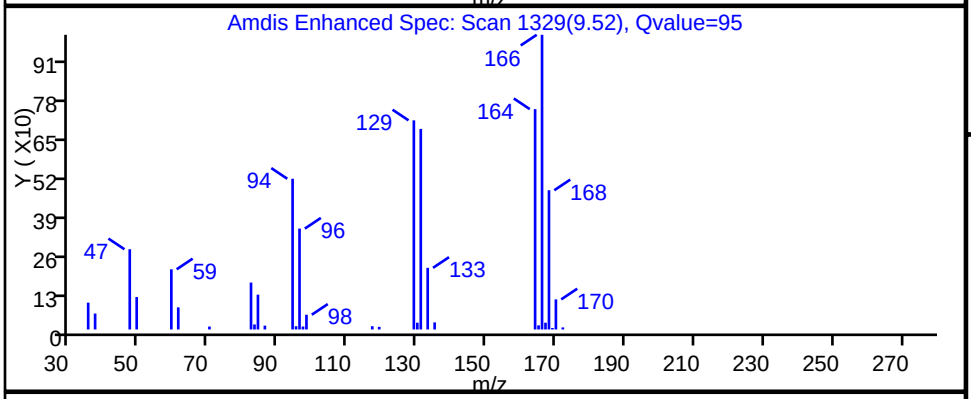
TestAmerica Pittsburgh

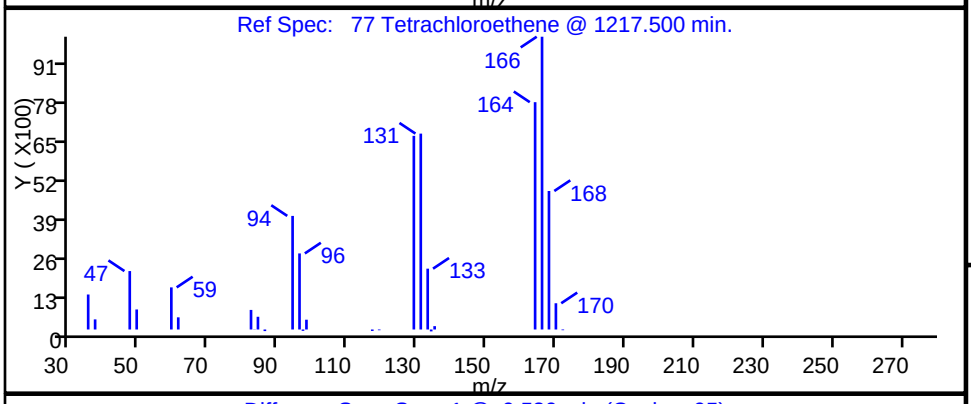
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721021.D

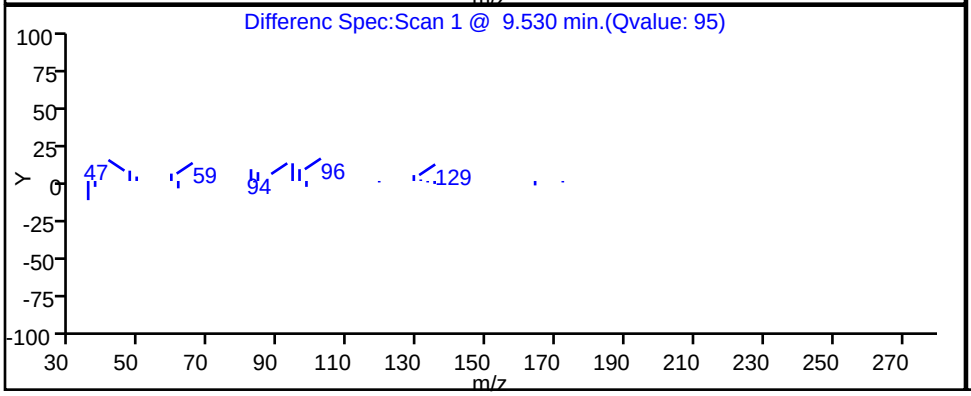
Injection Date:	21-Jul-2015 20:31:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-18	Lab Sample ID:	180-45946-18		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

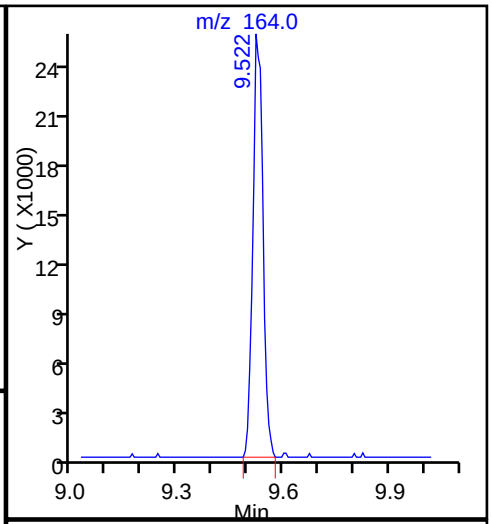
77 Tetrachloroethene, CAS: 127-18-4

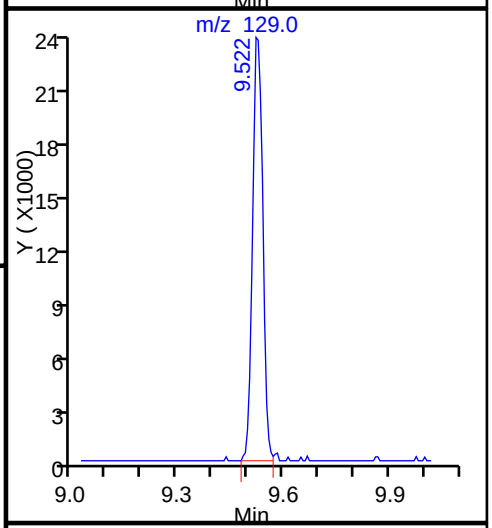


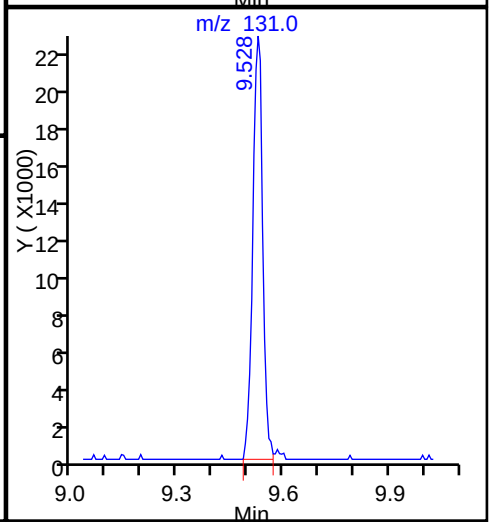












Manual Integration/User Assign Peak Report

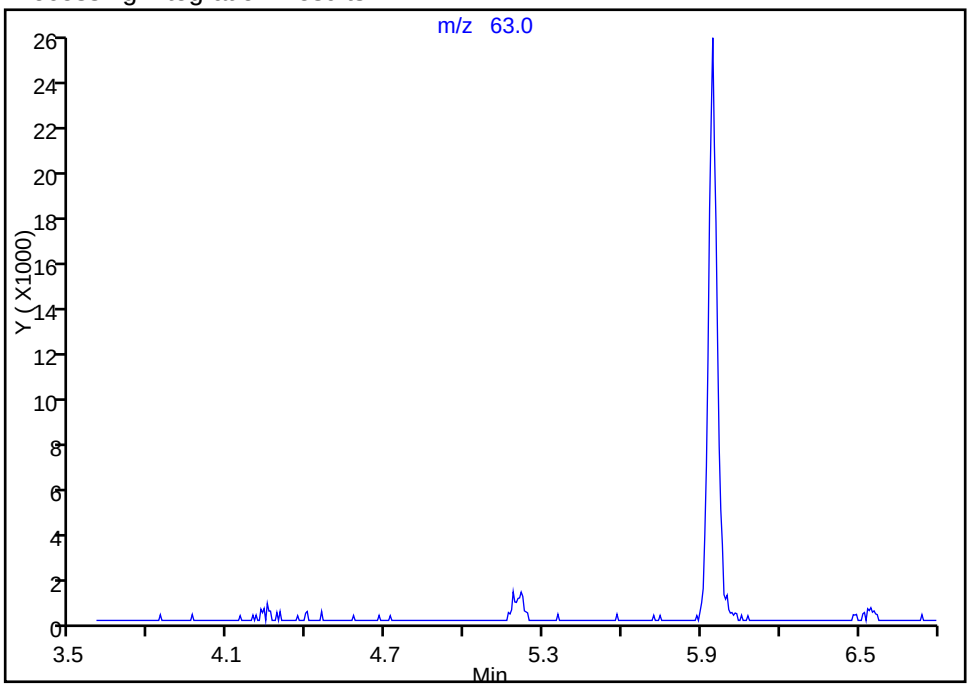
TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721021.D				
Injection Date:	21-Jul-2015 20:31:30	Instrument ID:	CHHP6		
Lims ID:	180-45946-E-18	Lab Sample ID:	180-45946-18		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

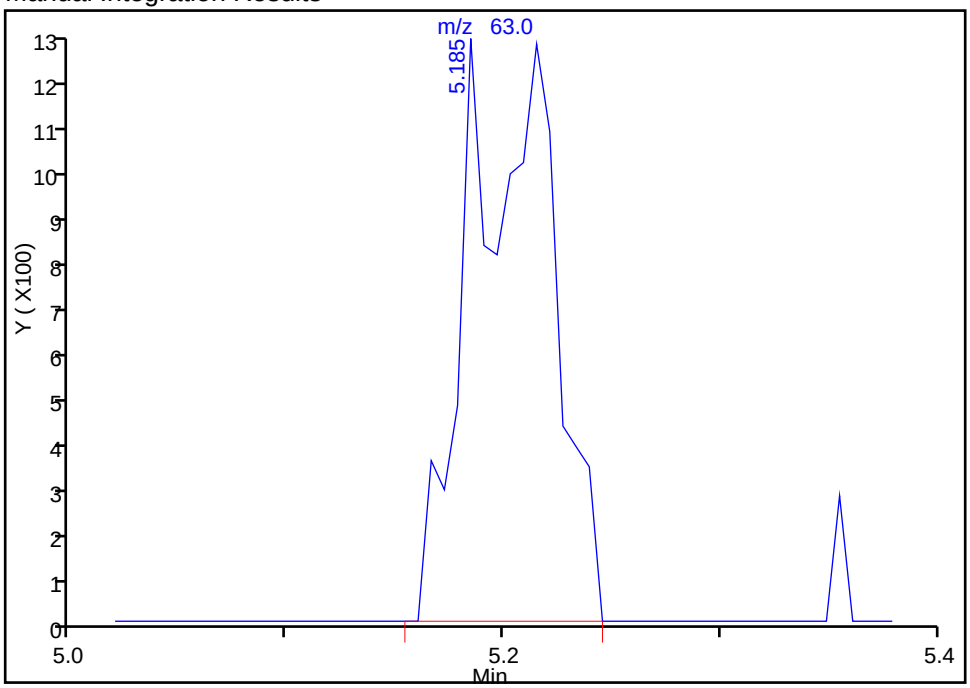
Not Detected
Expected RT: 5.20

Processing Integration Results



RT: 5.18
Area: 3377
Amount: 0.699694
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 22-Jul-2015 08:45:36
Audit Action: Manually Integrated
Audit Reason: Missed Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-QC2-0/1-2 | Lab Sample ID: 180-45946-19

Matrix: Water | Lab File ID: 60721008.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:01

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 15:05

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.: 148334 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-QC2-0/1-2 | Lab Sample ID: 180-45946-19

Matrix: Water | Lab File ID: 60721008.D

Analysis Method: 8260C | Date Collected: 07/15/2015 12:01

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 15:05

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.: 148334 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		64-135
2037-26-5	Toluene-d8 (Surr)	110		71-118
460-00-4	4-Bromofluorobenzene (Surr)	103		70-118
1868-53-7	Dibromofluoromethane (Surr)	94		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721008.D
Lims ID: 180-45946-B-19 Lab Sample ID: 180-45946-19
Client ID: HD-QC2-0/1-2
Sample Type: Client
Inject. Date: 21-Jul-2015 15:05:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-B-19
Misc. Info.: 180-0007861-008
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 21-Jul-2015 15:40:30 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: fergusond Date: 21-Jul-2015 15:40:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.229	4.243	-0.014	92	141242	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.285	0.004	98	500537	50.0	
* 3 Chlorobenzene-d5	119	10.398	10.399	-0.001	89	102792	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.746	12.747	-0.001	98	154154	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.559	6.548	0.011	93	112608	47.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.932	-0.002	71	175592	46.9	
$ 7 Toluene-d8 (Surr)	98	8.944	8.939	0.005	94	445761	55.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.590	11.586	0.004	82	173595	51.5	
12 Chloromethane	50		1.761				ND	
13 Vinyl chloride	62		1.889				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.387				ND	
22 1,1-Dichloroethene	96		3.336				ND	
24 Acetone	43		3.428				ND	
26 Carbon disulfide	76		3.634				ND	
31 Methylene Chloride	84		4.127				ND	
33 Acrylonitrile	53		4.498				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.571				ND	
37 1,1-Dichloroethane	63		5.198				ND	
43 cis-1,2-Dichloroethene	96		5.940				ND	
44 2-Butanone (MEK)	43		5.946				ND	
48 Chlorobromomethane	128		6.226				ND	
50 Chloroform	83		6.372				ND	
51 1,1,1-Trichloroethane	97		6.542				ND	
53 Carbon tetrachloride	117		6.713				ND	
56 Benzene	78		6.944				ND	
57 1,2-Dichloroethane	62		7.017				ND	
61 Trichloroethene	130		7.674				ND	
64 1,2-Dichloropropane	63		7.948				ND	
65 1,4-Dioxane	88		8.033				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
68 Dichlorobromomethane	83		8.227				ND	
71 cis-1,3-Dichloropropene	75		8.678				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
73 Toluene	91	9.011	9.012	-0.001	51	5260	0.4932	
74 trans-1,3-Dichloropropene	75		9.256				ND	
76 1,1,2-Trichloroethane	97		9.444				ND	
77 Tetrachloroethene	164		9.529				ND	
79 2-Hexanone	43		9.657				ND	
81 Chlorodibromomethane	129		9.821				ND	
82 Ethylene Dibromide	107		9.937				ND	
84 Chlorobenzene	112		10.430				ND	
86 1,1,1,2-Tetrachloroethane	131		10.521				ND	
87 Ethylbenzene	106		10.527				ND	
88 m-Xylene & p-Xylene	106		10.661				ND	
89 o-Xylene	106		11.044				ND	
90 Styrene	104		11.062				ND	
91 Bromoform	173		11.245				ND	
96 1,1,2,2-Tetrachloroethane	83		11.713				ND	
S 131 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

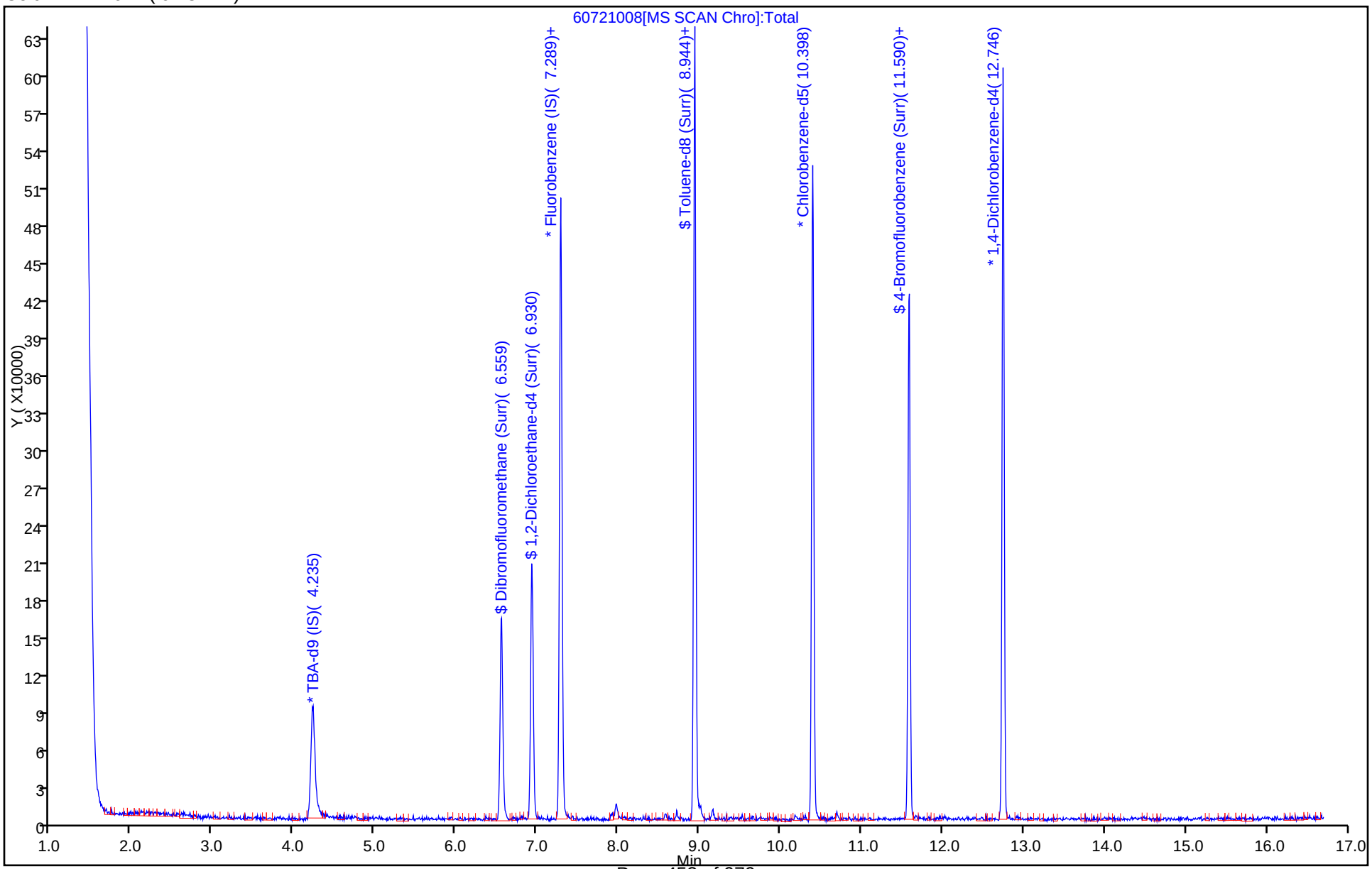
Report Date: 21-Jul-2015 15:40:30 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721008.D

Injection Date:	21-Jul-2015 15:05:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-B-19	Lab Sample ID:	180-45946-19	Worklist Smp#:	8
Client ID:	HD-QC2-0/1-2				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-145277/17	50617017.D
Level 2	IC 180-145277/6	50617006.D
Level 3	ICIS 180-145277/7	50617007.D
Level 4	IC 180-145277/8	50617008.D
Level 5	IC 180-145277/9	50617009.D
Level 6	IC 180-145277/10	50617010.D
Level 7	IC 180-145277/11	50617011.D
Level 8	IC 180-145277/12	50617012.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3789 0.3100	0.3397 0.3123	0.3567 0.3214	0.3386	0.3381	Ave		0.3369			0.1000	6.9		20.0			
Chloromethane	0.4464 0.3589	0.3920 0.3334	0.3998 0.3567	0.3687	0.3787	Ave		0.3794			0.1000	9.0		20.0			
Vinyl chloride	0.4461 0.3532	0.3931 0.3424	0.3978 0.3601	0.3760	0.3935	Ave		0.3828			0.1000	8.6		20.0			
1,3-Butadiene	0.4750 0.3768	0.4405 0.3575	0.4465 0.3761	0.3985	0.4119	Ave		0.4104			0.0100	9.9		20.0			
Bromomethane	0.2589 0.1745	0.1921 0.1584	0.1857 0.1604	0.1817	0.1776	Ave		0.1862			0.0500	17.0		20.0			
Chloroethane	0.2728 0.2170	0.2356 0.2014	0.2388 0.2148	0.2266	0.2370	Ave		0.2305			0.0500	9.3		20.0			
Dichlorofluoromethane	0.6038 0.4745	0.5399 0.4570	0.5300 0.4671	0.4963	0.5114	Ave		0.5100			0.0100	9.4		20.0			
Trichlorofluoromethane	0.4417 0.4024	0.4212 0.3824	0.4475 0.3856	0.4183	0.4311	Ave		0.4163			0.1000	5.9		20.0			
Ethyl ether	0.3314 0.2827	0.2975 0.2744	0.2827 0.2725	0.2796	0.2814	Ave		0.2878			0.0100	6.7		20.0			
Acrolein	0.0551 0.0570	0.0549 0.0581	0.0537 0.0554	0.0548	0.0526	Ave		0.0552			0.0100	3.1		20.0			
1,1-Dichloroethene	0.3231 0.2711	0.2838 0.2613	0.2843 0.2742	0.2732	0.2942	Ave		0.2832			0.1000	6.7		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3364 0.2866	0.2910 0.2741	0.3113 0.2914	0.2934	0.3073	Ave		0.2989			0.1000	6.4		20.0			
Acetone	0.1145 0.0795	0.0822 0.0801	0.0809 0.0733	0.0788	0.0733	Ave		0.0828			0.0500	16.0		20.0			
Iodomethane	0.4382 0.3770	0.3846 0.3686	0.3914 0.3901	0.3883	0.3926	Ave		0.3913			0.0100	5.3		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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

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	0.6643 0.6500	0.5328 0.6371	0.5875 0.6914	0.5922	0.6592	Ave		0.6268			0.1000	8.3		20.0			
Allyl chloride	0.1551 0.1643	0.1420 0.1563	0.1469 0.1715	0.1556	0.1615	Ave		0.1566			0.0100	6.0		20.0			
Methyl acetate	0.3016 0.2565	0.2520 0.2509	0.2534 0.2417	0.2527	0.2464	Ave		0.2569			0.1000	7.3		20.0			
Methylene Chloride	1.1481 0.3180	0.4132 0.2970	0.3604 0.3060	0.3326	0.3405	Lin2	4.3118	0.2788			0.1000				0.9950		0.9900
tert-Butyl alcohol	1.2085 1.1797	1.2289 1.1027	1.1180 1.0836	1.1179	1.0962	Ave		1.1419			0.0100	4.9		20.0			
Acrylonitrile	0.1374 0.1269	0.1198 0.1216	0.1243 0.1190	0.1245	0.1225	Ave		0.1245			0.0100	4.7		20.0			
trans-1,2-Dichloroethene	0.3481 0.2912	0.2974 0.2797	0.3074 0.2913	0.2940	0.2992	Ave		0.3011			0.1000	6.8		20.0			
Methyl tert-butyl ether	0.8363 0.7490	0.6973 0.7498	0.6947 0.7699	0.7170	0.7276	Ave		0.7427			0.1000	6.2		20.0			
Hexane	0.4948 0.4614	0.4247 0.4478	0.4768 0.4797	0.4614	0.4797	Ave		0.4658			0.0100	4.7		20.0			
1,1-Dichloroethane	0.6697 0.5568	0.5598 0.5354	0.5720 0.5622	0.5690	0.5776	Ave		0.5753			0.2000	7.0		20.0			
Vinyl acetate	0.4540 0.5520	0.4510 0.5211	0.4730 0.5116	0.4621	0.5145	Ave		0.4924			0.0100	7.6		20.0			
2,2-Dichloropropane	0.2515 0.2430	0.2465 0.2366	0.2461 0.2470	0.2450	0.2508	Ave		0.2458			0.0100	1.9		20.0			
cis-1,2-Dichloroethene	0.3618 0.3150	0.3087 0.3035	0.3142 0.3141	0.3158	0.3185	Ave		0.3190			0.1000	5.6		20.0			
2-Butanone (MEK)	0.1390 0.1278	0.1161 0.1216	0.1169 0.1208	0.1151	0.1148	Ave		0.1215			0.0500	6.8		20.0			
Bromochloromethane	0.1398 0.1350	0.1346 0.1314	0.1367 0.1329	0.1320	0.1344	Ave		0.1346			0.0100	2.0		20.0			
Tetrahydrofuran	0.1213 0.1033	0.0856 0.1036	0.0911 0.1016	0.0986	0.0939	Ave		0.0999			0.0100	10.7		20.0			
Chloroform	0.6349 0.5063	0.5307 0.4874	0.5304 0.5025	0.5272	0.5147	Ave		0.5292			0.2000	8.6		20.0			
1,1,1-Trichloroethane	0.4164 0.3978	0.3758 0.3819	0.4000 0.4030	0.3980	0.4087	Ave		0.3977			0.1000	3.3		20.0			
Cyclohexane	0.6342 0.5844	0.5521 0.5673	0.6004 0.6119	0.5855	0.6264	Ave		0.5953			0.1000	4.8		20.0			
Carbon tetrachloride	0.3694 0.3413	0.3245 0.3309	0.3538 0.3573	0.3366	0.3542	Ave		0.3460			0.1000	4.4		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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

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	0.4631 0.4305	0.4088 0.4124	0.4498 0.4373	0.4352	0.4542	Ave		0.4364			0.0100	4.4		20.0			
Isobutyl alcohol	0.0084 0.0091	0.0077 0.0080	0.0075 0.0088	0.0091	0.0080	Ave		0.0083		*	0.0100	7.4		20.0			
Benzene	1.4578 1.2027	1.2781 1.1470	1.2961 1.1714	1.2614	1.2669	Ave		1.2602			0.5000	7.6		20.0			
1,2-Dichloroethane	0.4977 0.4237	0.4381 0.4081	0.4219 0.4172	0.4185	0.4236	Ave		0.4311			0.1000	6.5		20.0			
n-Heptane	0.4395 0.4078	0.3789 0.3903	0.4254 0.4187	0.4071	0.4261	Ave		0.4117			0.0100	4.8		20.0			
Trichloroethene	0.3418 0.2891	0.2897 0.2789	0.2938 0.2956	0.2919	0.2998	Ave		0.2975			0.2000	6.3		20.0			
Methylcyclohexane	0.4650 0.5078	0.4471 0.4904	0.5134 0.5215	0.5030	0.5286	Ave		0.4971			0.1000	5.7		20.0			
1,2-Dichloropropane	0.3518 0.3050	0.2946 0.2951	0.2984 0.3102	0.2994	0.3017	Ave		0.3070			0.1000	6.1		20.0			
1,4-Dioxane	0.0016 0.0023	0.0018 0.0023	0.0022 0.0023	0.0023	0.0022	Ave		0.0021		*	0.0100	13.1		20.0			
Dibromomethane	0.1902 0.1636	0.1678 0.1603	0.1590 0.1661	0.1633	0.1584	Ave		0.1661			0.0100	6.2		20.0			
Bromodichloromethane	0.3597 0.3499	0.3058 0.3357	0.3110 0.3536	0.3279	0.3383	Ave		0.3352			0.2000	5.8		20.0			
cis-1,3-Dichloropropene	0.3478 0.4260	0.3263 0.4222	0.3601 0.4405	0.3829	0.3970	Ave		0.3878			0.2000	10.5		20.0			
4-Methyl-2-pentanone (MIBK)	1.2534 1.2472	1.0304 1.1594	1.1832 1.1879	1.2130	1.1943	Ave		1.1836			0.1000	5.9		20.0			
Toluene	6.1711 4.9176	5.6697 4.5402	5.8197 4.6853	5.6108	5.5761	Ave		5.3738			0.4000	10.9		20.0			
trans-1,3-Dichloropropene	1.4210 1.5246	1.2766 1.4456	1.3940 1.5462	1.4629	1.5014	Ave		1.4465			0.1000	5.9		20.0			
Ethyl methacrylate	1.1779 1.5078	1.1627 1.4334	1.3515 1.4923	1.4216	1.4730	Ave		1.3775			0.0100	9.9		20.0			
1,1,2-Trichloroethane	1.2519 0.9795	1.0938 0.9118	1.0632 0.9429	1.0682	1.0298	Ave		1.0426			0.1000	10.2		20.0			
Tetrachloroethene	1.1721 0.9414	1.0602 0.8734	1.0692 0.9362	1.0486	1.0769	Ave		1.0222			0.2000	9.5		20.0			
1,3-Dichloropropane	2.1871 1.8289	1.9483 1.6861	1.9806 1.7783	1.9302	1.9129	Ave		1.9065			0.0100	7.9		20.0			
2-Hexanone	0.8242 0.8130	0.6781 0.7394	0.7654 0.7638	0.7481	0.7513	Ave		0.7604			0.1000	5.9		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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

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	0.9056 0.8758	0.7668 0.8290	0.8046 0.8931	0.8428	0.8760	Ave		0.8492			0.1000	5.6		20.0			
1,2-Dibromoethane (EDB)	1.0369 0.9639	0.9543 0.9083	0.9943 0.9466	0.9944	0.9954	Ave		0.9743			0.1000	4.0		20.0			
3-Chlorobenzotrifluoride	2.0552 1.6732	1.8669 1.5578	1.8134 1.5255	1.7644	1.8271	Ave		1.7604			0.0100	9.8		20.0			
Chlorobenzene	4.1242 3.0932	3.4839 2.8830	3.5109 3.0138	3.3752	3.3640	Ave		3.3560			0.5000	11.5		20.0			
4-Chlorobenzotrifluoride	1.9609 1.5902	1.6374 1.5004	1.7439 1.4520	1.6528	1.7330	Ave		1.6588			0.0100	9.6		20.0			
1,1,1,2-Tetrachloroethane	1.0740 1.0321	1.0143 0.9696	1.0442 1.0099	1.0652	1.0783	Ave		1.0359			0.0100	3.6		20.0			
Ethylbenzene	1.8940 1.7932	1.8209 1.6586	1.9452 1.7684	1.9264	1.9579	Ave		1.8456			0.1000	5.6		20.0			
m-Xylene & p-Xylene	2.1452 2.1725	2.2094 2.0526	2.3572 2.1434	2.3587	2.3848	Ave		2.2280			0.1000	5.5		20.0			
o-Xylene	2.0743 2.0931	2.0859 1.9776	2.2674 2.0624	2.2610	2.2898	Ave		2.1390			0.3000	5.5		20.0			
Styrene	3.1100 3.4473	3.5127 3.2256	3.7596 3.3888	3.7510	3.7561	Ave		3.4939			0.3000	7.2		20.0			
Bromoform	0.4373 0.4827	0.4096 0.4651	0.4124 0.5080	0.4357	0.4557	Ave		0.4508			0.1000	7.5		20.0			
2-Chlorobenzotrifluoride	1.9344 1.5826	1.6798 1.5159	1.6733 1.4688	1.6701	1.7509	Ave		1.6595			0.0100	8.7		20.0			
Isopropylbenzene	5.0800 4.9867	5.2319 4.6988	5.7705 4.8646	5.5778	5.7052	Ave		5.2394			0.1000	7.7		20.0			
1,1,2,2-Tetrachloroethane	1.5224 1.2588	1.4149 1.1942	1.3347 1.2264	1.3061	1.2909	Ave		1.3186			0.3000	8.1		20.0			
Bromobenzene	1.0611 0.9637	0.9226 0.9042	0.9693 0.9883	0.9765	1.0017	Ave		0.9734			0.0100	4.9		20.0			
trans-1,4-Dichloro-2-butene	0.2997 0.3606	0.2725 0.3450	0.3143 0.3740	0.3328	0.3335	Ave		0.3290			0.0100	10.0		20.0			
1,2,3-Trichloropropane	0.4003 0.3444	0.3299 0.3268	0.3434 0.3469	0.3290	0.3378	Ave		0.3448			0.0100	6.9		20.0			
N-Propylbenzene	1.0305 1.1769	1.0496 1.1095	1.1892 1.2189	1.1958	1.2262	Ave		1.1496			0.0100	6.7		20.0			
2-Chlorotoluene	1.0850 0.9772	0.9205 0.9428	0.9967 1.0081	0.9868	1.0223	Ave		0.9924			0.0100	5.1		20.0			
3-Chlorotoluene	1.0331 1.0523	0.9837 1.0029	1.0324 1.0130	1.0268	1.0735	Ave		1.0272			0.0100	2.7		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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

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	3.0237 3.3111	3.3245 3.1136	3.6197 3.3043	3.5081	3.5504	Ave		3.3444			0.0100	6.2		20.0			
4-Chlorotoluene	1.1654 1.0667	1.0510 0.9893	1.1054 1.0809	1.0606	1.0825	Ave		1.0752			0.0100	4.6		20.0			
tert-Butylbenzene	2.4388 2.6754	2.4315 2.5569	2.8015 2.7285	2.7900	2.8591	Ave		2.6602			0.0100	6.2		20.0			
1,2,4-Trimethylbenzene	2.9527 3.3087	3.1796 3.1218	3.5446 3.2815	3.4454	3.5129	Ave		3.2934			0.0100	6.2		20.0			
3,4-Dichlorobenzotrifluoride	1.1480 0.9438	0.9539 0.9099	0.9578 0.8947	0.9350	0.9711	Ave		0.9643			0.0100	8.1		20.0			
sec-Butylbenzene	3.5996 3.7756	3.6982 3.5744	4.0948 3.7960	4.0177	4.1302	Ave		3.8358			0.0100	5.7		20.0			
1,3-Dichlorobenzene	2.1265 1.7032	1.7173 1.6225	1.7467 1.7233	1.7425	1.7720	Ave		1.7693			0.6000	8.5		20.0			
4-Isopropyltoluene	2.7083 3.1020	2.9124 2.9631	3.2839 3.1471	3.2465	3.3452	Ave		3.0886			0.0100	7.0		20.0			
1,4-Dichlorobenzene	2.0878 1.7387	1.7885 1.6329	1.7957 1.7617	1.7898	1.8027	Ave		1.7997			0.5000	7.2		20.0			
2,4-Dichlorobenzotrifluoride	1.0106 0.8739	0.8677 0.8114	0.8733 0.8001	0.8877	0.8840	Ave		0.8761			0.0100	7.3		20.0			
2,5-Dichlorobenzotrifluoride	1.0822 0.9166	0.9278 0.9195	0.9011 0.9098	0.9207	1.0029	Ave		0.9476			0.0100	6.6		20.0			
n-Butylbenzene	2.2811 2.6842	2.4658 2.5552	2.7112 2.7456	2.8171	2.8649	Ave		2.6406			0.0100	7.4		20.0			
1,2-Dichlorobenzene	1.8093 1.5224	1.5492 1.4342	1.5338 1.5226	1.5907	1.5720	Ave		1.5668			0.4000	6.9		20.0			
1,2-Dibromo-3-Chloropropane	0.1739 0.1365	0.1114 0.1317	0.1158 0.1489	0.1272	0.1307	Ave		0.1345			0.0500	14.7		20.0			
1,2,4-Trichlorobenzene	0.5005 0.5904	0.5296 0.5558	0.4902 0.6255	0.5887	0.5957	Ave		0.5596			0.2000	8.7		20.0			
Hexachlorobutadiene	0.4072 0.2861	0.3242 0.2658	0.2903 0.2960	0.3094	0.3064	Ave		0.3107			0.0100	13.7		20.0			
Naphthalene	1.2108 1.6342	1.1808 1.5586	1.1819 1.7463	1.5144	1.5675	Ave		1.4493			0.0100	15.5		20.0			
1,2,3-Trichlorobenzene	0.4529 0.4667	0.4561 0.4485	0.3657 0.5042	0.4843	0.4660	Ave		0.4556			0.0100	8.9		20.0			
2,4,5-Trichlorotoluene	0.1816 0.1880	0.1236 0.2085	0.1215 0.2320	0.1644	0.1667	Qua	0.2667	0.1098	0.0004799		0.0100				0.9990		0.9900
2,3,6-Trichlorotoluene	0.1758 +++++	0.1419 +++++	0.1144 +++++	0.1621	0.1679	Qua	0.2057	0.1127	0.0004750		0.0100				0.9990		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

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								
Dibromofluoromethane (Surr)	0.2623 0.2320	0.2273 0.2231	0.2360 0.2248	0.2360	0.2236	Ave		0.2331				5.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.4097 0.3261	0.3392 0.3141	0.3317 0.3173	0.3375	0.3163	Ave		0.3365				9.2		20.0			
Toluene-d8 (Surr)	4.9751 3.8804	4.3178 3.6003	4.5129 3.5692	4.3426	4.0028	Ave		4.1502				11.6		20.0			
4-Bromofluorobenzene (Surr)	1.7358 1.4589	1.5710 1.3944	1.5724 1.4413	1.5656	1.4690	Ave		1.5261				7.1		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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-145277/17	50617017.D
Level 2	IC 180-145277/6	50617006.D
Level 3	ICIS 180-145277/7	50617007.D
Level 4	IC 180-145277/8	50617008.D
Level 5	IC 180-145277/9	50617009.D
Level 6	IC 180-145277/10	50617010.D
Level 7	IC 180-145277/11	50617011.D
Level 8	IC 180-145277/12	50617012.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	13985 406279	61850 490752	131293 633416	190707	258891	5.00 175	25.0 200	50.0 250	75.0	100
Chloromethane	FB	Ave	16479 470358	71382 523991	147191 703080	207710	290013	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl chloride	FB	Ave	16468 462809	71583 538171	146437 709759	211773	301311	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Butadiene	FB	Ave	17534 493792	80205 561800	164375 741355	224490	315376	5.00 175	25.0 200	50.0 250	75.0	100
Bromomethane	FB	Ave	9558 228703	34976 248868	68351 316164	102333	135973	5.00 175	25.0 200	50.0 250	75.0	100
Chloroethane	FB	Ave	10069 284353	42901 316475	87910 423350	127616	181501	5.00 175	25.0 200	50.0 250	75.0	100
Dichlorofluoromethane	FB	Ave	22288 621763	98310 718183	195088 920746	279582	391592	5.00 175	25.0 200	50.0 250	75.0	100
Trichlorofluoromethane	FB	Ave	16306 527308	76687 600930	164743 760123	235615	330063	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl ether	FB	Ave	12234 370505	54177 431207	104081 537080	157481	215472	5.00 175	25.0 200	50.0 250	75.0	100
Acrolein	FB	Ave	40673 96004	49960 114067	59325 120047	72042	80592	100 225	125 250	150 275	175	200
1,1-Dichloroethene	FB	Ave	11927 355250	51665 410599	104659 540491	153911	225297	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	12416 375509	52979 430718	114588 574450	165277	235316	5.00 175	25.0 200	50.0 250	75.0	100
Acetone	FB	Ave	21142 208479	29930 251920	59535 288844	88741	112327	25.0 350	50.0 400	100 500	150	200
Iodomethane	FB	Ave	16174 494039	70032 579231	144076 768838	218721	300629	5.00 175	25.0 200	50.0 250	75.0	100
Carbon disulfide	FB	Ave	24523 851784	97009 1001334	216284 1362874	333568	504737	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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

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	5725 215345	25848 245584	54063 337990	87643	123678	5.00 175	25.0 200	50.0 250	75.0	100
Methyl acetate	FB	Ave	55670 1680625	229444 1971351	466467 2382208	711636	943344	25.0 875	125 1000	250 1250	375	500
Methylene Chloride	FB	Lin2	42380 416721	75234 466826	132678 603105	187350	260743	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butyl alcohol	TBA	Ave	5750 226221	29086 269586	55749 308656	92171	122036	50.0 1750	250 2000	500 2500	750	1000
Acrylonitrile	FB	Ave	50704 1662395	218071 1910483	457488 2346331	701092	938260	50.0 1750	250 2000	500 2500	750	1000
trans-1,2-Dichloroethene	FB	Ave	12851 381648	54149 439641	113174 574249	165608	229120	5.00 175	25.0 200	50.0 250	75.0	100
Methyl tert-butyl ether	FB	Ave	30869 981534	126963 1178416	255720 1517466	403865	557161	5.00 175	25.0 200	50.0 250	75.0	100
Hexane	FB	Ave	18266 604571	77336 703743	175506 945438	259892	367307	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloroethane	FB	Ave	24720 729616	101924 841498	210563 1108115	320495	442302	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl acetate	FB	Ave	16760 723334	82115 819004	174104 1008331	260276	393966	5.00 175	25.0 200	50.0 250	75.0	100
2,2-Dichloropropane	FB	Ave	9285 318442	44890 371771	90602 486802	137988	192057	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,2-Dichloroethene	FB	Ave	13356 412793	56211 476914	115658 619117	177912	243856	5.00 175	25.0 200	50.0 250	75.0	100
2-Butanone (MEK)	FB	Ave	25657 335015	42291 382226	86075 476377	129631	175815	25.0 350	50.0 400	100 500	150	200
Bromochloromethane	FB	Ave	5160 176872	24506 206501	50339 261865	74378	102910	5.00 175	25.0 200	50.0 250	75.0	100
Tetrahydrofuran	FB	Ave	8952 270631	31179 325712	67105 400339	111135	143767	10.0 350	50.0 400	100 500	150	200
Chloroform	FB	Ave	23436 663409	96620 766034	195248 990455	296949	394079	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1-Trichloroethane	FB	Ave	15369 521331	68417 600207	147248 794369	224170	312928	5.00 175	25.0 200	50.0 250	75.0	100
Cyclohexane	FB	Ave	23411 765785	100526 891635	221024 1206014	329815	479657	5.00 175	25.0 200	50.0 250	75.0	100
Carbon tetrachloride	FB	Ave	13635 447259	59080 520097	130225 704165	189615	271218	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloropropene	FB	Ave	17095 564179	74440 648085	165562 861875	245133	347816	5.00 175	25.0 200	50.0 250	75.0	100
Isobutyl alcohol	FB	Ave	7732 299025	35170 315367	69370 431449	128711	152861	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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

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	53813 1576107	232716 1802599	477132 2308789	710542	970078	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane	FB	Ave	18373 555180	79766 641336	155314 822349	235728	324383	5.00 175	25.0 200	50.0 250	75.0	100
n-Heptane	FB	Ave	16224 534358	68983 613406	156586 825317	229309	326259	5.00 175	25.0 200	50.0 250	75.0	100
Trichloroethene	FB	Ave	12617 378840	52740 438244	108145 582600	164400	229535	5.00 175	25.0 200	50.0 250	75.0	100
Methylcyclohexane	FB	Ave	17166 665394	81408 770738	188978 1027848	283358	404786	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloropropane	FB	Ave	12987 399628	53633 463847	109841 611506	168672	231010	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dioxane	FB	Ave	1168 60747	6452 72079	16354 89366	25534	32972	100 3500	500 4000	1000 5000	1500	2000
Dibromomethane	FB	Ave	7021 214398	30549 251996	58547 327328	91973	121298	5.00 175	25.0 200	50.0 250	75.0	100
Bromodichloromethane	FB	Ave	13279 458579	55672 527553	114470 696885	184708	259051	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,3-Dichloropropene	FB	Ave	12838 558268	59408 663516	132564 868238	215665	304012	5.00 175	25.0 200	50.0 250	75.0	100
4-Methyl-2-pentanone (MIBK)	CBZ	Ave	49926 808801	82393 927073	194304 1183396	307905	416339	25.0 350	50.0 400	100 500	150	200
Toluene	CBZ	Ave	49160 1594574	226679 1815140	477853 2333889	712142	971897	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,3-Dichloropropene	CBZ	Ave	11320 494360	51041 577958	114458 770190	185676	261694	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl methacrylate	CBZ	Ave	9383 488926	46485 573048	110969 743353	180438	256749	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloroethane	CBZ	Ave	9973 317622	43730 364522	87301 469658	135577	179495	5.00 175	25.0 200	50.0 250	75.0	100
Tetrachloroethene	CBZ	Ave	9337 305258	42386 349165	87791 466332	133093	187697	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichloropropane	CBZ	Ave	17423 593034	77894 674090	162627 885819	244987	333410	5.00 175	25.0 200	50.0 250	75.0	100
2-Hexanone	CBZ	Ave	32828 527235	54222 591225	125695 760964	189893	261891	25.0 350	50.0 400	100 500	150	200
Dibromochloromethane	CBZ	Ave	7214 283987	30659 331408	66065 444869	106966	152688	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromoethane (EDB)	CBZ	Ave	8260 312538	38153 363127	81646 471517	126213	173491	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorobenzotrifluoride	CBZ	Ave	16372 542554	74638 622777	148897 759876	223941	318462	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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

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	32854 1002990	139289 1152586	288276 1501256	428389	586338	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorobenzotrifluoride	CBZ	Ave	15621 515650	65463 599843	143190 723279	209779	302059	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1,2-Tetrachloroethane	CBZ	Ave	8556 334679	40551 387650	85737 503057	135194	187943	5.00 175	25.0 200	50.0 250	75.0	100
Ethylbenzene	CBZ	Ave	15088 581465	72799 663092	159720 880883	244510	341262	5.00 175	25.0 200	50.0 250	75.0	100
m-Xylene & p-Xylene	CBZ	Ave	17089 704459	88332 820612	193548 1067701	299376	415658	5.00 175	25.0 200	50.0 250	75.0	100
o-Xylene	CBZ	Ave	16524 678709	83396 790630	186179 1027331	286981	399112	5.00 175	25.0 200	50.0 250	75.0	100
Styrene	CBZ	Ave	24775 1117800	140441 1289578	308704 1688053	476097	654687	5.00 175	25.0 200	50.0 250	75.0	100
Bromoform	CBZ	Ave	3484 156513	16378 185935	33865 253044	55299	79426	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorobenzotrifluoride	CBZ	Ave	15410 513173	67161 606064	137397 731650	211979	305182	5.00 175	25.0 200	50.0 250	75.0	100
Isopropylbenzene	CBZ	Ave	40468 1616980	209172 1878555	473817 2423171	707962	994404	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2,2-Tetrachloroethane	CBZ	Ave	12128 408165	56570 477417	109592 610898	165776	225004	5.00 175	25.0 200	50.0 250	75.0	100
Bromobenzene	DCB	Ave	10764 380076	50918 442468	103286 586242	161084	223666	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,4-Dichloro-2-butene	DCB	Ave	3040 142204	15042 168794	33494 221836	54904	74465	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichloropropane	DCB	Ave	4061 135814	18208 159888	36596 205782	54278	75422	5.00 175	25.0 200	50.0 250	75.0	100
N-Propylbenzene	DCB	Ave	10453 464167	57927 542910	126725 723043	197258	273796	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorotoluene	DCB	Ave	11006 385419	50806 461338	106205 598001	162789	228249	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorotoluene	DCB	Ave	10480 415021	54294 490765	110015 600892	169380	239692	5.00 175	25.0 200	50.0 250	75.0	100
1,3,5-Trimethylbenzene	DCB	Ave	30672 1305913	183486 1523592	385709 1960117	578714	792740	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorotoluene	DCB	Ave	11822 420730	58008 484074	117792 641189	174953	241693	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butylbenzene	DCB	Ave	24739 1055188	134199 1251164	298526 1618547	460243	638390	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trimethylbenzene	DCB	Ave	29952 1304956	175487 1527586	377713 1946593	568369	784367	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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

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	11645 372233	52646 445231	102057 530743	154242	216824	5.00 175	25.0 200	50.0 250	75.0	100
sec-Butylbenzene	DCB	Ave	36514 1489124	204111 1749050	436333 2251780	662774	922192	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichlorobenzene	DCB	Ave	21571 671741	94781 793952	186128 1022265	287457	395663	5.00 175	25.0 200	50.0 250	75.0	100
4-Isopropyltoluene	DCB	Ave	27473 1223451	160740 1449933	349926 1866871	535559	746924	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dichlorobenzene	DCB	Ave	21178 685744	98711 799016	191352 1045055	295251	402496	5.00 175	25.0 200	50.0 250	75.0	100
2,4-Dichlorobenzotrifluoride	DCB	Ave	10251 344654	47888 397020	93053 474617	146435	197387	5.00 175	25.0 200	50.0 250	75.0	100
2,5-Dichlorobenzotrifluoride	DCB	Ave	10978 361493	51205 449922	96025 539686	151889	223938	5.00 175	25.0 200	50.0 250	75.0	100
n-Butylbenzene	DCB	Ave	23139 1058649	136090 1250309	288901 1628698	464713	639686	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichlorobenzene	DCB	Ave	18353 600426	85501 701795	163440 903210	262407	351002	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromo-3-Chloropropane	DCB	Ave	1764 53852	6148 64433	12341 88331	20984	29188	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trichlorobenzene	DCB	Ave	5077 232870	29232 271980	52233 371041	97122	133002	5.00 175	25.0 200	50.0 250	75.0	100
Hexachlorobutadiene	DCB	Ave	4131 112857	17896 130058	30937 175617	51045	68407	5.00 175	25.0 200	50.0 250	75.0	100
Naphthalene	DCB	Ave	12282 644555	65173 762683	125945 1035925	249815	349999	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichlorobenzene	DCB	Ave	4594 184060	25174 219483	38967 299099	79889	104055	5.00 175	25.0 200	50.0 250	75.0	100
2,4,5-Trichlorotoluene	DCB	Qua	1842 74150	6820 102047	12944 137650	27113	37231	5.00 175	25.0 200	50.0 250	75.0	100
2,3,6-Trichlorotoluene	DCB	Qua	1783 +++++	7830 +++++	12194 +++++	26738	37479	5.00 +++++	25.0 +++++	50.0 +++++	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	9682 304086	41380 350611	86872 443187	132928	171222	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	15123 427373	61757 493641	122115 625499	190096	242219	5.00 175	25.0 200	50.0 250	75.0	100
Toluene-d8 (Surr)	CBZ	Ave	39633 1258264	172629 1439382	370552 1777930	551180	697675	5.00 175	25.0 200	50.0 250	75.0	100
4-Bromofluorobenzene (Surr)	CBZ	Ave	13828 473052	62811 557463	129109 717948	198709	256052	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.: 180-45946-1 Analy Batch No.: 145277

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/17/2015 14:07 Calibration End Date: 06/17/2015 18:04 Calibration ID: 24418

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617006.D
Lims ID: IC VSTD5
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 17-Jun-2015 14:07:30 ALS Bottle#: 4 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD5
Misc. Info.: 180-0007443-006
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Jun-2015 11:19:45 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: fergusond Date: 18-Jun-2015 08:36:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.272	4.265	0.007	0	94671	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.289	0.000	98	364154	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.385	0.001	89	79961	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.727	0.001	97	110384	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.565	6.565	0.000	92	41380	25.0	24.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.930	0.000	0	61757	25.0	25.2	
$ 7 Toluene-d8 (Surr)	98	8.932	8.937	-0.005	94	172629	25.0	26.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.571	0.001	83	62811	25.0	25.7	
11 Dichlorodifluoromethane	85	1.619	1.619	0.000	100	61850	25.0	25.2	
12 Chloromethane	50	1.765	1.765	0.000	99	71382	25.0	25.8	
13 Vinyl chloride	62	1.899	1.893	0.006	98	71583	25.0	25.7	
14 Butadiene	39	1.942	1.941	0.001	98	80205	25.0	26.8	
15 Bromomethane	94	2.264	2.258	0.006	90	34976	25.0	25.8	
16 Chloroethane	64	2.392	2.392	0.000	99	42901	25.0	25.6	
17 Dichlorofluoromethane	67	2.666	2.671	-0.005	97	98310	25.0	26.5	
18 Trichlorofluoromethane	101	2.714	2.702	0.012	95	76687	25.0	25.3	
20 Ethyl ether	59	3.049	3.049	0.000	96	54177	25.0	25.8	
21 Acrolein	56	3.237	3.225	0.012	98	49960	125.0	124.3	M
22 1,1-Dichloroethene	96	3.347	3.347	0.000	94	51665	25.0	25.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.414	3.414	0.000	92	52979	25.0	24.3	
24 Acetone	43	3.438	3.444	-0.006	99	29930	50.0	49.6	
25 Iodomethane	142	3.542	3.535	0.007	99	70032	25.0	24.6	
26 Carbon disulfide	76	3.627	3.633	-0.006	100	97009	25.0	21.2	
28 3-Chloro-1-propene	76	3.925	3.931	-0.006	87	25848	25.0	22.7	
30 Methyl acetate	43	3.937	3.943	-0.006	99	229444	125.0	122.6	
31 Methylene Chloride	84	4.150	4.137	0.013	91	75234	25.0	21.6	
32 2-Methyl-2-propanol	59	4.406	4.399	0.007	89	29086	250.0	269.0	
33 Acrylonitrile	53	4.521	4.521	0.000	99	218071	250.0	240.5	
34 trans-1,2-Dichloroethene	96	4.570	4.569	0.001	95	54149	25.0	24.7	
35 Methyl tert-butyl ether	73	4.576	4.575	0.001	96	126963	25.0	23.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.989	0.001	93	77336	25.0	22.8	
37 1,1-Dichloroethane	63	5.202	5.202	0.000	97	101924	25.0	24.3	
38 Vinyl acetate	43	5.245	5.251	-0.006	98	82115	25.0	22.9	
44 2,2-Dichloropropane	77	5.945	5.944	0.001	65	44890	25.0	25.1	
45 cis-1,2-Dichloroethene	96	5.951	5.950	0.001	83	56211	25.0	24.2	
46 2-Butanone (MEK)	43	5.957	5.963	-0.005	52	42291	50.0	47.8	
49 Chlorobromomethane	128	6.231	6.236	-0.005	94	24506	25.0	25.0	
51 Tetrahydrofuran	42	6.255	6.255	0.001	87	31179	50.0	42.9	
52 Chloroform	83	6.383	6.382	0.001	94	96620	25.0	25.1	
53 1,1,1-Trichloroethane	97	6.541	6.547	-0.006	96	68417	25.0	23.6	
54 Cyclohexane	56	6.620	6.613	0.007	93	100526	25.0	23.2	
56 Carbon tetrachloride	117	6.717	6.717	0.000	96	59080	25.0	23.4	
55 1,1-Dichloropropene	75	6.729	6.729	0.000	92	74440	25.0	23.4	
57 Isobutyl alcohol	41	6.924	6.930	-0.006	71	35170	625.0	579.4	
58 Benzene	78	6.942	6.942	0.000	97	232716	25.0	25.4	
59 1,2-Dichloroethane	62	7.021	7.021	0.000	98	79766	25.0	25.4	
62 n-Heptane	43	7.307	7.307	0.000	93	68983	25.0	23.0	
64 Trichloroethene	130	7.678	7.678	0.000	98	52740	25.0	24.3	
66 Methylcyclohexane	83	7.916	7.915	0.001	95	81408	25.0	22.5	
67 1,2-Dichloropropane	63	7.946	7.952	-0.006	94	53633	25.0	24.0	
70 1,4-Dioxane	88	8.025	8.025	0.000	38	6452	500.0	420.0	
68 Dibromomethane	93	8.037	8.037	0.000	94	30549	25.0	25.3	
71 Dichlorobromomethane	83	8.232	8.232	0.000	98	55672	25.0	22.8	
74 cis-1,3-Dichloropropene	75	8.670	8.676	-0.006	91	59408	25.0	21.0	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.828	0.000	98	82393	50.0	43.5	
76 Toluene	91	9.005	9.004	0.001	97	226679	25.0	26.4	
77 trans-1,3-Dichloropropene	75	9.254	9.254	0.000	99	51041	25.0	22.1	
78 Ethyl methacrylate	69	9.309	9.308	0.001	92	46485	25.0	21.1	
79 1,1,2-Trichloroethane	97	9.449	9.442	0.007	94	43730	25.0	26.2	
80 Tetrachloroethene	164	9.522	9.521	0.001	96	42386	25.0	25.9	
81 1,3-Dichloropropane	76	9.601	9.600	0.001	96	77894	25.0	25.5	
82 2-Hexanone	43	9.656	9.655	0.001	99	54222	50.0	44.6	
84 Chlorodibromomethane	129	9.814	9.813	0.001	91	30659	25.0	22.6	
85 Ethylene Dibromide	107	9.929	9.929	0.000	98	38153	25.0	24.5	
86 3-Chlorobenzotrifluoride	180	10.392	10.385	0.007	88	74638	25.0	26.5	
87 Chlorobenzene	112	10.416	10.416	0.000	92	139289	25.0	26.0	
88 4-Chlorobenzotrifluoride	180	10.477	10.476	0.001	96	65463	25.0	24.7	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.507	0.000	88	40551	25.0	24.5	
90 Ethylbenzene	106	10.513	10.519	-0.006	99	72799	25.0	24.7	
91 m-Xylene & p-Xylene	106	10.647	10.647	0.000	0	88332	25.0	24.8	
92 o-Xylene	106	11.024	11.024	0.000	98	83396	25.0	24.4	
93 Styrene	104	11.049	11.048	0.001	96	140441	25.0	25.1	
94 Bromoform	173	11.231	11.231	0.000	96	16378	25.0	22.7	
96 2-Chlorobenzotrifluoride	180	11.298	11.298	0.000	92	67161	25.0	25.3	
97 Isopropylbenzene	105	11.395	11.395	0.000	97	209172	25.0	25.0	
99 1,1,2,2-Tetrachloroethane	83	11.706	11.705	0.001	78	56570	25.0	26.8	
100 Bromobenzene	156	11.706	11.711	-0.005	97	50918	25.0	23.7	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	76	15042	25.0	20.7	
101 1,2,3-Trichloropropane	110	11.766	11.760	0.006	87	18208	25.0	23.9	
103 N-Propylbenzene	120	11.809	11.809	0.000	99	57927	25.0	22.8	
104 2-Chlorotoluene	126	11.900	11.900	0.000	95	50806	25.0	23.2	
105 3-Chlorotoluene	126	11.967	11.967	0.000	96	54294	25.0	23.9	

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	11.998	11.997	0.001	93	183486	25.0	24.9	
107 4-Chlorotoluene	126	12.022	12.022	0.000	99	58008	25.0	24.4	
108 tert-Butylbenzene	119	12.308	12.308	0.000	95	134199	25.0	22.9	
110 1,2,4-Trimethylbenzene	105	12.369	12.368	0.001	98	175487	25.0	24.1	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.411	0.000	97	52646	25.0	24.7	
112 sec-Butylbenzene	105	12.533	12.533	0.000	95	204111	25.0	24.1	
113 1,3-Dichlorobenzene	146	12.649	12.648	0.001	96	94781	25.0	24.3	
114 4-Isopropyltoluene	119	12.691	12.691	0.000	97	160740	25.0	23.6	
115 1,4-Dichlorobenzene	146	12.752	12.752	0.000	93	98711	25.0	24.8	
116 2,4-Dichloro-1-(triflourom	214	12.782	12.776	0.006	96	47888	25.0	24.8	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.819	0.000	0	51205	25.0	24.5	
120 n-Butylbenzene	91	13.099	13.098	0.001	98	136090	25.0	23.3	
121 1,2-Dichlorobenzene	146	13.111	13.111	0.000	95	85501	25.0	24.7	
122 1,2-Dibromo-3-Chloropropan	75	13.902	13.901	0.001	71	6148	25.0	20.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.042	14.041	0.001	0	131762	75.0	67.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.455	14.461	-0.006	0	79928	50.0	44.4	
126 1,2,4-Trichlorobenzene	180	14.723	14.723	0.000	92	29232	25.0	23.7	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	96	17896	25.0	26.1	
128 Naphthalene	128	14.991	14.990	0.001	98	65173	25.0	20.4	
129 1,2,3-Trichlorobenzene	180	15.216	15.215	0.001	95	25174	25.0	25.0	
131 2,4,5-Trichlorotoluene	159	15.995	15.988	0.006	0	6820	25.0	23.3	
130 2,3,6-Trichlorotoluene	159	16.092	16.091	0.001	96	7830	25.0	26.6	
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		50.0	49.2	
S 134 1,2-Dichloroethene, Total	96				0		50.0	48.9	
S 135 1,3-Dichloropropene, Total	1				0		50.0	43.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRLOEINPR_00001	Amount Added:	5.00	Units: uL		
voaWketmix1Re_00001	Amount Added:	1.00	Units: uL		
voaWEEmix1st_00002	Amount Added:	1.00	Units: uL		
VOA8260VOAPRI_00125	Amount Added:	1.00	Units: uL		
voaWVA2nd Res_00007	Amount Added:	1.00	Units: uL		
VOA8260SURR_00038	Amount Added:	1.00	Units: uL		
VOA8260INT_00038	Amount Added:	2.00	Units: uL	Run Reagent	

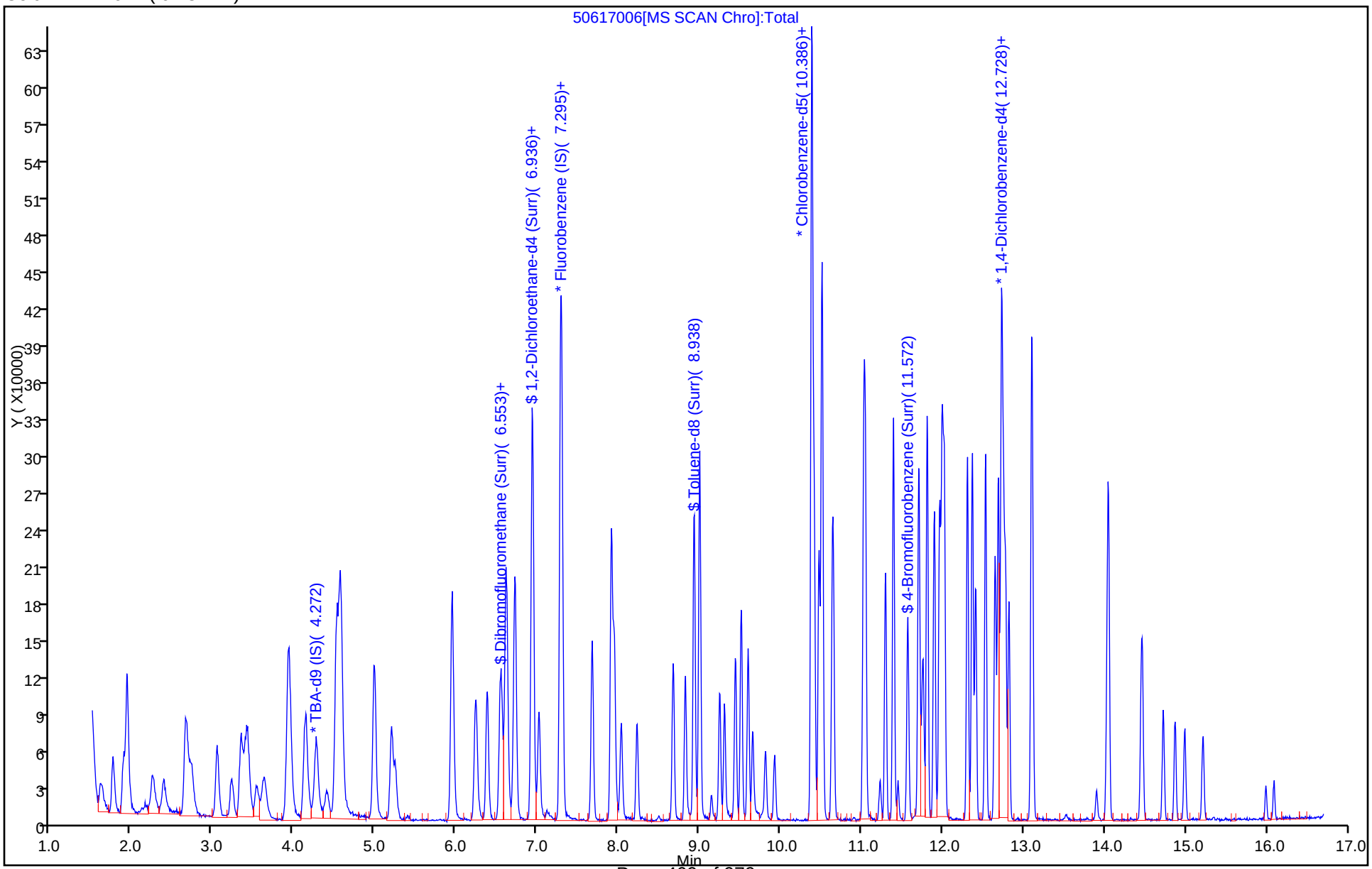
Report Date: 18-Jun-2015 11:19:46 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617006.D

Injection Date:	17-Jun-2015 14:07:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD5			Worklist Smp#:	6
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)



Manual Integration/User Assign Peak Report

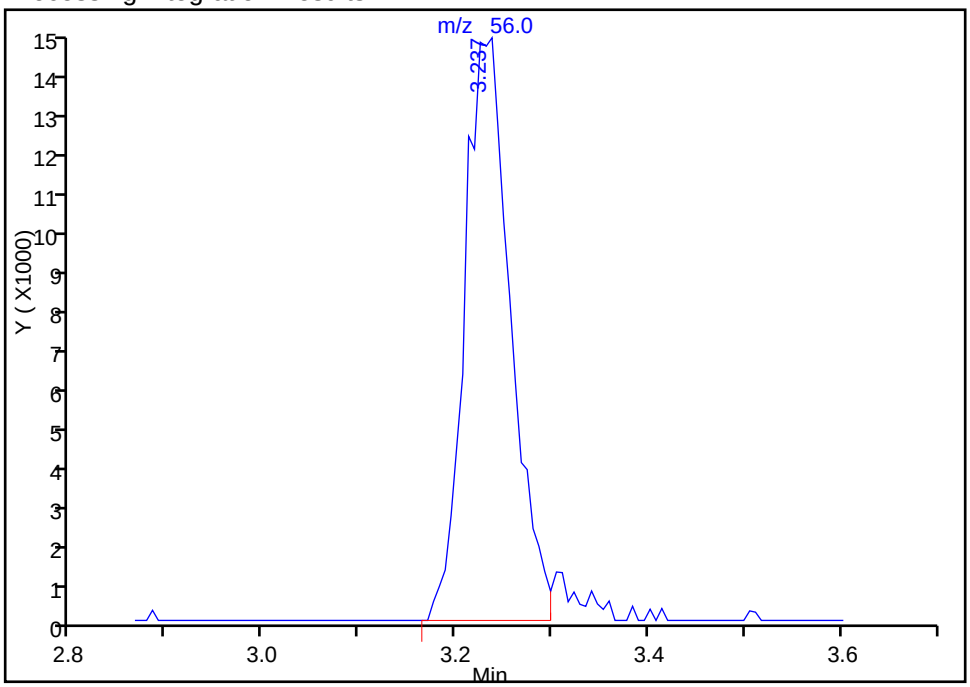
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617006.D
Injection Date: 17-Jun-2015 14:07:30 Instrument ID: CHHP5
Lims ID: IC VSTD5
Client ID:
Operator ID: 001562 ALS Bottle#: 4 Worklist Smp#: 6
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

21 Acrolein, CAS: 107-02-8

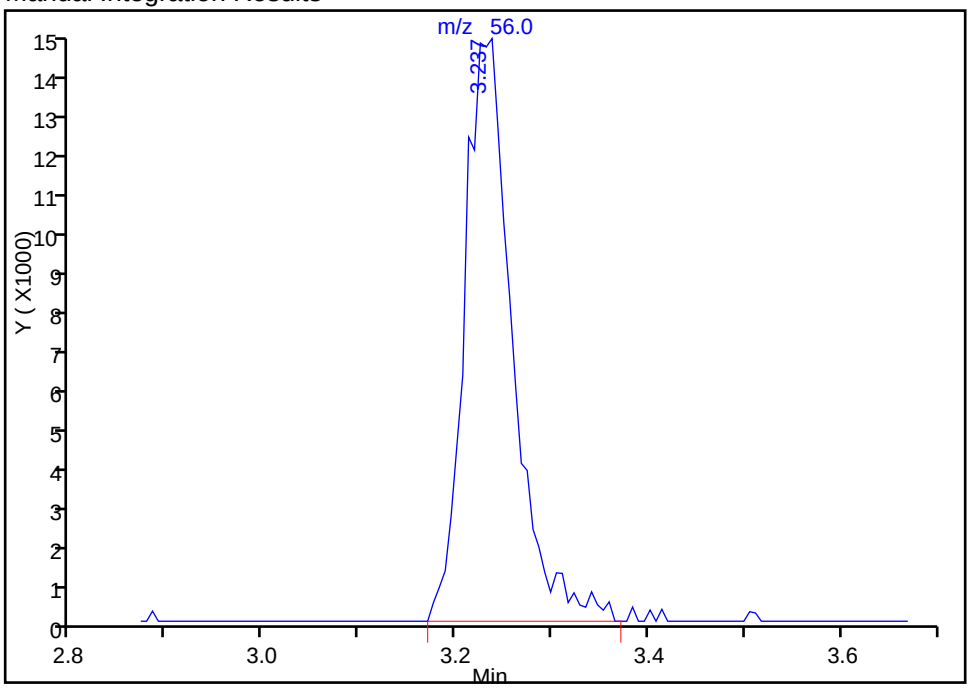
Processing Integration Results

RT: 3.24
Area: 47722
Amount: 118.6567
Amount Units: ng



Manual Integration Results

RT: 3.24
Area: 49960
Amount: 124.2873
Amount Units: ng



Reviewer: fergusond, 18-Jun-2015 09:47:59
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617007.D
Lims ID: ICIS VSTD10
Client ID:
Sample Type: ICIS Calib Level: 3
Inject. Date: 17-Jun-2015 14:30:30 ALS Bottle#: 5 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS VSTD10
Misc. Info.: 180-0007443-007
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Jun-2015 11:47:50 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: fergusond Date: 18-Jun-2015 11:31:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.265	4.265	0.000	0	99728	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.289	0.000	98	368117	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.385	0.000	88	82110	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.727	12.727	0.000	96	106559	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.565	6.565	0.000	93	86872	50.0	50.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.930	0.000	0	122115	50.0	49.3	
$ 7 Toluene-d8 (Surr)	98	8.937	8.937	0.000	94	370552	50.0	54.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.571	11.571	0.000	85	129109	50.0	51.5	
11 Dichlorodifluoromethane	85	1.619	1.619	0.000	100	131293	50.0	52.9	
12 Chloromethane	50	1.765	1.765	0.000	99	147191	50.0	52.7	
13 Vinyl chloride	62	1.893	1.893	0.000	98	146437	50.0	52.0	
14 Butadiene	39	1.941	1.941	0.000	96	164375	50.0	54.4	
15 Bromomethane	94	2.258	2.258	0.000	90	68351	50.0	49.9	
16 Chloroethane	64	2.392	2.392	0.000	100	87910	50.0	51.8	
17 Dichlorofluoromethane	67	2.671	2.671	0.000	97	195088	50.0	52.0	
18 Trichlorofluoromethane	101	2.702	2.702	0.000	98	164743	50.0	53.8	
20 Ethyl ether	59	3.049	3.049	0.000	96	104081	50.0	49.1	
21 Acrolein	56	3.225	3.225	0.000	97	59325	150.0	146.0	
22 1,1-Dichloroethene	96	3.347	3.347	0.000	94	104659	50.0	50.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.414	3.414	0.000	95	114588	50.0	52.1	
24 Acetone	43	3.444	3.444	0.000	99	59535	100.0	97.6	
25 Iodomethane	142	3.535	3.535	0.000	100	144076	50.0	50.0	
26 Carbon disulfide	76	3.633	3.633	0.000	100	216284	50.0	46.9	
28 3-Chloro-1-propene	76	3.931	3.931	0.000	88	54063	50.0	46.9	
30 Methyl acetate	43	3.943	3.943	0.000	98	466467	250.0	246.6	
31 Methylene Chloride	84	4.137	4.137	0.000	97	132678	50.0	49.2	
32 2-Methyl-2-propanol	59	4.399	4.399	0.000	87	55749	500.0	489.5	
33 Acrylonitrile	53	4.521	4.521	0.000	98	457488	500.0	499.2	
34 trans-1,2-Dichloroethene	96	4.569	4.569	0.000	96	113174	50.0	51.1	
35 Methyl tert-butyl ether	73	4.575	4.575	0.000	96	255720	50.0	46.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.989	4.989	0.000	95	175506	50.0	51.2	
37 1,1-Dichloroethane	63	5.202	5.202	0.000	97	210563	50.0	49.7	
38 Vinyl acetate	43	5.251	5.251	0.000	98	174104	50.0	48.0	
44 2,2-Dichloropropane	77	5.944	5.944	0.000	60	90602	50.0	50.1	
45 cis-1,2-Dichloroethene	96	5.950	5.950	0.000	84	115658	50.0	49.3	
46 2-Butanone (MEK)	43	5.963	5.963	0.000	66	86075	100.0	96.2	
49 Chlorobromomethane	128	6.236	6.236	0.000	94	50339	50.0	50.8	
51 Tetrahydrofuran	42	6.255	6.255	0.000	88	67105	100.0	91.3	
52 Chloroform	83	6.382	6.382	0.000	96	195248	50.0	50.1	
53 1,1,1-Trichloroethane	97	6.547	6.547	0.000	96	147248	50.0	50.3	
54 Cyclohexane	56	6.613	6.613	0.000	92	221024	50.0	50.4	
56 Carbon tetrachloride	117	6.717	6.717	0.000	95	130225	50.0	51.1	
55 1,1-Dichloropropene	75	6.729	6.729	0.000	93	165562	50.0	51.5	
57 Isobutyl alcohol	41	6.930	6.930	0.000	89	69370	1250.0	1130.5	
58 Benzene	78	6.942	6.942	0.000	98	477132	50.0	51.4	
59 1,2-Dichloroethane	62	7.021	7.021	0.000	97	155314	50.0	48.9	
62 n-Heptane	43	7.307	7.307	0.000	92	156586	50.0	51.7	
64 Trichloroethene	130	7.678	7.678	0.000	97	108145	50.0	49.4	
66 Methylcyclohexane	83	7.915	7.915	0.000	94	188978	50.0	51.6	
67 1,2-Dichloropropane	63	7.952	7.952	0.000	93	109841	50.0	48.6	
70 1,4-Dioxane	88	8.025	8.025	0.000	38	16354	1000.0	1053.2	
68 Dibromomethane	93	8.037	8.037	0.000	96	58547	50.0	47.9	
71 Dichlorobromomethane	83	8.232	8.232	0.000	98	114470	50.0	46.4	
74 cis-1,3-Dichloropropene	75	8.676	8.676	0.000	91	132564	50.0	46.4	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.828	0.000	99	194304	100.0	100.0	
76 Toluene	91	9.004	9.004	0.000	98	477853	50.0	54.1	
77 trans-1,3-Dichloropropene	75	9.254	9.254	0.000	97	114458	50.0	48.2	
78 Ethyl methacrylate	69	9.308	9.308	0.000	91	110969	50.0	49.1	
79 1,1,2-Trichloroethane	97	9.442	9.442	0.000	93	87301	50.0	51.0	
80 Tetrachloroethene	164	9.521	9.521	0.000	96	87791	50.0	52.3	
81 1,3-Dichloropropane	76	9.600	9.600	0.000	95	162627	50.0	51.9	
82 2-Hexanone	43	9.655	9.655	0.000	99	125695	100.0	100.7	
84 Chlorodibromomethane	129	9.813	9.813	0.000	91	66065	50.0	47.4	
85 Ethylene Dibromide	107	9.929	9.929	0.000	97	81646	50.0	51.0	
86 3-Chlorobenzotrifluoride	180	10.385	10.385	0.000	88	148897	50.0	51.5	
87 Chlorobenzene	112	10.416	10.416	0.000	93	288276	50.0	52.3	
88 4-Chlorobenzotrifluoride	180	10.476	10.476	0.000	96	143190	50.0	52.6	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.507	0.000	91	85737	50.0	50.4	
90 Ethylbenzene	106	10.519	10.519	0.000	99	159720	50.0	52.7	
91 m-Xylene & p-Xylene	106	10.647	10.647	0.000	0	193548	50.0	52.9	
92 o-Xylene	106	11.024	11.024	0.000	97	186179	50.0	53.0	
93 Styrene	104	11.048	11.048	0.000	94	308704	50.0	53.8	
94 Bromoform	173	11.231	11.231	0.000	94	33865	50.0	45.7	
96 2-Chlorobenzotrifluoride	180	11.298	11.298	0.000	95	137397	50.0	50.4	
97 Isopropylbenzene	105	11.395	11.395	0.000	97	473817	50.0	55.1	
99 1,1,2,2-Tetrachloroethane	83	11.705	11.705	0.000	92	109592	50.0	50.6	
100 Bromobenzene	156	11.711	11.711	0.000	97	103286	50.0	49.8	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	70	33494	50.0	47.8	
101 1,2,3-Trichloropropane	110	11.760	11.760	0.000	86	36596	50.0	49.8	
103 N-Propylbenzene	120	11.809	11.809	0.000	99	126725	50.0	51.7	
104 2-Chlorotoluene	126	11.900	11.900	0.000	95	106205	50.0	50.2	
105 3-Chlorotoluene	126	11.967	11.967	0.000	96	110015	50.0	50.3	

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	11.997	11.997	0.000	95	385709	50.0	54.1	
107 4-Chlorotoluene	126	12.022	12.022	0.000	99	117792	50.0	51.4	
108 tert-Butylbenzene	119	12.308	12.308	0.000	93	298526	50.0	52.7	
110 1,2,4-Trimethylbenzene	105	12.368	12.368	0.000	98	377713	50.0	53.8	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.411	0.000	98	102057	50.0	49.7	
112 sec-Butylbenzene	105	12.533	12.533	0.000	95	436333	50.0	53.4	
113 1,3-Dichlorobenzene	146	12.648	12.648	0.000	97	186128	50.0	49.4	
114 4-Isopropyltoluene	119	12.691	12.691	0.000	96	349926	50.0	53.2	
115 1,4-Dichlorobenzene	146	12.752	12.752	0.000	93	191352	50.0	49.9	
116 2,4-Dichloro-1-(triflourom	214	12.776	12.776	0.000	95	93053	50.0	49.8	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.819	0.000	0	96025	50.0	47.5	
120 n-Butylbenzene	91	13.098	13.098	0.000	99	288901	50.0	51.3	
121 1,2-Dichlorobenzene	146	13.111	13.111	0.000	93	163440	50.0	48.9	
122 1,2-Dibromo-3-Chloropropan	75	13.901	13.901	0.000	74	12341	50.0	43.0	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.041	14.041	0.000	0	261552	150.0	137.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.461	14.461	0.000	0	148094	100.0	85.3	
126 1,2,4-Trichlorobenzene	180	14.723	14.723	0.000	94	52233	50.0	43.8	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	96	30937	50.0	46.7	
128 Naphthalene	128	14.990	14.990	0.000	98	125945	50.0	40.8	
129 1,2,3-Trichlorobenzene	180	15.215	15.215	0.000	94	38967	50.0	40.1	
131 2,4,5-Trichlorotoluene	159	15.988	15.988	0.000	0	12944	50.0	44.3	
130 2,3,6-Trichlorotoluene	159	16.091	16.091	0.000	91	12194	50.0	41.6	
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	105.9	
S 134 1,2-Dichloroethene, Total	96				0		100.0	100.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	94.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260SURR_00038	Amount Added:	2.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	2.00	Units: uL	
voaWEEmix1st_00002	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00125	Amount Added:	2.00	Units: uL	
voaWVA2nd Res_00007	Amount Added:	2.00	Units: uL	
VOAACRLOEINPR_00001	Amount Added:	6.00	Units: uL	
VOA8260INT_00038	Amount Added:	2.00	Units: uL	Run Reagent

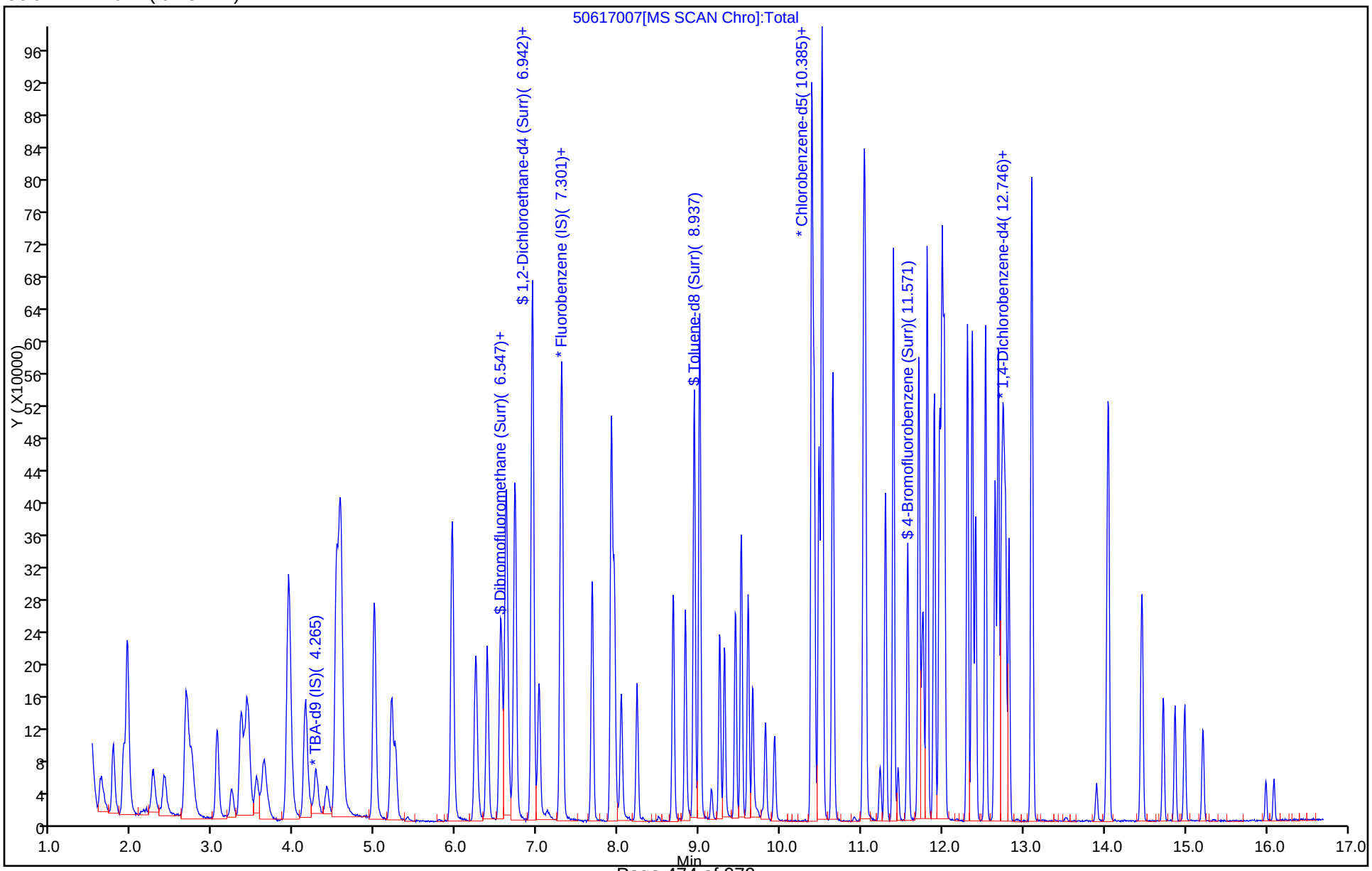
Report Date: 18-Jun-2015 11:47:51 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617007.D

Injection Date:	17-Jun-2015 14:30:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	ICIS VSTD10			Worklist Smp#:	7
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)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617008.D
Lims ID: IC VSTD15
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 17-Jun-2015 14:54:30 ALS Bottle#: 6 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD15
Misc. Info.: 180-0007443-008
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Jun-2015 11:19:48 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: fergusond Date: 18-Jun-2015 08:49:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.272	4.272	0.000	0	109934	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.289	0.000	95	375524	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.386	0.000	87	84616	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.728	0.000	84	109976	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.565	6.565	0.000	61	132928	75.0	75.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.936	0.000	0	190096	75.0	75.2	
$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	79	551180	75.0	78.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.572	0.000	84	198709	75.0	76.9	
11 Dichlorodifluoromethane	85	1.619	1.619	0.000	64	190707	75.0	75.4	
12 Chloromethane	50	1.771	1.771	0.000	89	207710	75.0	72.9	
13 Vinyl chloride	62	1.899	1.899	0.000	83	211773	75.0	73.7	
14 Butadiene	39	1.942	1.942	0.000	92	224490	75.0	72.8	
15 Bromomethane	94	2.258	2.258	0.000	89	102333	75.0	73.2	
16 Chloroethane	64	2.398	2.398	0.000	94	127616	75.0	73.7	
17 Dichlorofluoromethane	67	2.672	2.672	0.000	97	279582	75.0	73.0	
18 Trichlorofluoromethane	101	2.708	2.708	0.000	83	235615	75.0	75.4	
20 Ethyl ether	59	3.049	3.049	0.000	91	157481	75.0	72.9	
21 Acrolein	56	3.225	3.225	0.000	91	72042	175.0	173.8	
22 1,1-Dichloroethene	96	3.347	3.347	0.000	89	153911	75.0	72.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.420	3.420	0.000	95	165277	75.0	73.6	
24 Acetone	43	3.444	3.444	0.000	86	88741	150.0	142.6	
25 Iodomethane	142	3.542	3.542	0.000	98	218721	75.0	74.4	
26 Carbon disulfide	76	3.633	3.633	0.000	100	333568	75.0	70.9	
28 3-Chloro-1-propene	76	3.919	3.919	0.000	79	87643	75.0	74.5	
30 Methyl acetate	43	3.943	3.943	0.000	98	711636	375.0	368.8	
31 Methylene Chloride	84	4.138	4.138	0.000	88	187350	75.0	74.0	
32 2-Methyl-2-propanol	59	4.406	4.406	0.000	85	92171	750.0	734.2	
33 Acrylonitrile	53	4.521	4.521	0.000	98	701092	750.0	749.9	
34 trans-1,2-Dichloroethene	96	4.564	4.564	0.000	89	165608	75.0	73.2	
35 Methyl tert-butyl ether	73	4.582	4.582	0.000	91	403865	75.0	72.4	

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	95	259892	75.0	74.3	
37 1,1-Dichloroethane	63	5.203	5.203	0.000	85	320495	75.0	74.2	
38 Vinyl acetate	43	5.251	5.251	0.000	97	260276	75.0	70.4	
44 2,2-Dichloropropane	77	5.945	5.945	0.000	59	137988	75.0	74.7	
45 cis-1,2-Dichloroethene	96	5.951	5.951	0.000	73	177912	75.0	74.3	
46 2-Butanone (MEK)	43	5.963	5.963	0.000	65	129631	150.0	142.0	
49 Chlorobromomethane	128	6.231	6.231	0.000	90	74378	75.0	73.6	
51 Tetrahydrofuran	42	6.255	6.255	0.000	91	111135	150.0	148.2	
52 Chloroform	83	6.383	6.383	0.000	83	296949	75.0	74.7	
53 1,1,1-Trichloroethane	97	6.541	6.541	0.000	54	224170	75.0	75.1	
54 Cyclohexane	56	6.614	6.614	0.000	94	329815	75.0	73.8	
56 Carbon tetrachloride	117	6.717	6.717	0.000	81	189615	75.0	73.0	
55 1,1-Dichloropropene	75	6.729	6.729	0.000	90	245133	75.0	74.8	
57 Isobutyl alcohol	41	6.930	6.930	0.000	49	128711	1875.0	2056.2	
58 Benzene	78	6.942	6.942	0.000	98	710542	75.0	75.1	
59 1,2-Dichloroethane	62	7.021	7.021	0.000	91	235728	75.0	72.8	
62 n-Heptane	43	7.307	7.307	0.000	91	229309	75.0	74.2	
64 Trichloroethene	130	7.678	7.678	0.000	97	164400	75.0	73.6	
66 Methylcyclohexane	83	7.916	7.916	0.000	94	283358	75.0	75.9	
67 1,2-Dichloropropane	63	7.952	7.952	0.000	85	168672	75.0	73.1	
70 1,4-Dioxane	88	8.037	8.037	0.000	37	25534	1500.0	1612.0	M
68 Dibromomethane	93	8.037	8.037	0.000	92	91973	75.0	73.7	
71 Dichlorobromomethane	83	8.232	8.232	0.000	92	184708	75.0	73.4	
74 cis-1,3-Dichloropropene	75	8.676	8.676	0.000	86	215665	75.0	74.0	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.828	0.000	97	307905	150.0	153.7	
76 Toluene	91	9.005	9.005	0.000	96	712142	75.0	78.3	
77 trans-1,3-Dichloropropene	75	9.248	9.248	0.000	95	185676	75.0	75.8	
78 Ethyl methacrylate	69	9.309	9.309	0.000	91	180438	75.0	77.4	
79 1,1,2-Trichloroethane	97	9.443	9.443	0.000	90	135577	75.0	76.8	
80 Tetrachloroethene	164	9.516	9.516	0.000	91	133093	75.0	76.9	
81 1,3-Dichloropropane	76	9.601	9.601	0.000	96	244987	75.0	75.9	
82 2-Hexanone	43	9.656	9.656	0.000	98	189893	150.0	147.6	
84 Chlorodibromomethane	129	9.814	9.814	0.000	90	106966	75.0	74.4	
85 Ethylene Dibromide	107	9.929	9.929	0.000	96	126213	75.0	76.6	
86 3-Chlorobenzotrifluoride	180	10.386	10.386	0.000	91	223941	75.0	75.2	
87 Chlorobenzene	112	10.416	10.416	0.000	89	428389	75.0	75.4	
88 4-Chlorobenzotrifluoride	180	10.477	10.477	0.000	92	209779	75.0	74.7	
89 1,1,1,2-Tetrachloroethane	131	10.513	10.513	0.000	37	135194	75.0	77.1	
90 Ethylbenzene	106	10.513	10.513	0.000	99	244510	75.0	78.3	
91 m-Xylene & p-Xylene	106	10.647	10.647	0.000	0	299376	75.0	79.4	
92 o-Xylene	106	11.024	11.024	0.000	97	286981	75.0	79.3	
93 Styrene	104	11.049	11.049	0.000	94	476097	75.0	80.5	
94 Bromoform	173	11.231	11.231	0.000	92	55299	75.0	72.5	
96 2-Chlorobenzotrifluoride	180	11.298	11.298	0.000	95	211979	75.0	75.5	
97 Isopropylbenzene	105	11.395	11.395	0.000	97	707962	75.0	79.8	
99 1,1,2,2-Tetrachloroethane	83	11.706	11.706	0.000	41	165776	75.0	74.3	
100 Bromobenzene	156	11.712	11.712	0.000	74	161084	75.0	75.2	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	78	54904	75.0	75.9	
101 1,2,3-Trichloropropane	110	11.767	11.767	0.000	71	54278	75.0	71.6	
103 N-Propylbenzene	120	11.809	11.809	0.000	97	197258	75.0	78.0	
104 2-Chlorotoluene	126	11.900	11.900	0.000	95	162789	75.0	74.6	
105 3-Chlorotoluene	126	11.961	11.961	0.000	75	169380	75.0	75.0	

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	11.992	11.992	0.000	93	578714	75.0	78.7	
107 4-Chlorotoluene	126	12.022	12.022	0.000	98	174953	75.0	74.0	
108 tert-Butylbenzene	119	12.308	12.308	0.000	81	460243	75.0	78.7	
110 1,2,4-Trimethylbenzene	105	12.369	12.369	0.000	98	568369	75.0	78.5	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.411	0.000	97	154242	75.0	72.7	
112 sec-Butylbenzene	105	12.533	12.533	0.000	95	662774	75.0	78.6	
113 1,3-Dichlorobenzene	146	12.649	12.649	0.000	93	287457	75.0	73.9	
114 4-Isopropyltoluene	119	12.685	12.685	0.000	83	535559	75.0	78.8	
115 1,4-Dichlorobenzene	146	12.752	12.752	0.000	94	295251	75.0	74.6	
116 2,4-Dichloro-1-(triflourom	214	12.776	12.776	0.000	85	146435	75.0	76.0	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.819	0.000	0	151889	75.0	72.9	
120 n-Butylbenzene	91	13.099	13.099	0.000	97	464713	75.0	80.0	
121 1,2-Dichlorobenzene	146	13.111	13.111	0.000	94	262407	75.0	76.1	
122 1,2-Dibromo-3-Chloropropan	75	13.896	13.896	0.000	63	20984	75.0	70.9	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.042	14.042	0.000	0	472818	225.0	241.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.462	14.462	0.000	0	288213	150.0	160.8	
126 1,2,4-Trichlorobenzene	180	14.723	14.723	0.000	93	97122	75.0	78.9	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	93	51045	75.0	74.7	
128 Naphthalene	128	14.991	14.991	0.000	97	249815	75.0	78.4	
129 1,2,3-Trichlorobenzene	180	15.210	15.210	0.000	93	79889	75.0	79.7	
131 2,4,5-Trichlorotoluene	159	15.988	15.988	0.000	0	27113	75.0	81.1	
130 2,3,6-Trichlorotoluene	159	16.086	16.086	0.000	90	26738	75.0	79.4	
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		150.0	158.7	
S 134 1,2-Dichloroethene, Total	96				0		150.0	147.5	
S 135 1,3-Dichloropropene, Total	1				0		150.0	149.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRLOEINPR_00001	Amount Added:	7.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	3.00	Units: uL	
voaWEEmix1st_00002	Amount Added:	3.00	Units: uL	
VOA8260VOAPRI_00125	Amount Added:	3.00	Units: uL	
voaWVA2nd Res_00007	Amount Added:	3.00	Units: uL	
VOA8260SURR_00038	Amount Added:	3.00	Units: uL	
VOA8260INT_00038	Amount Added:	2.00	Units: uL	Run Reagent

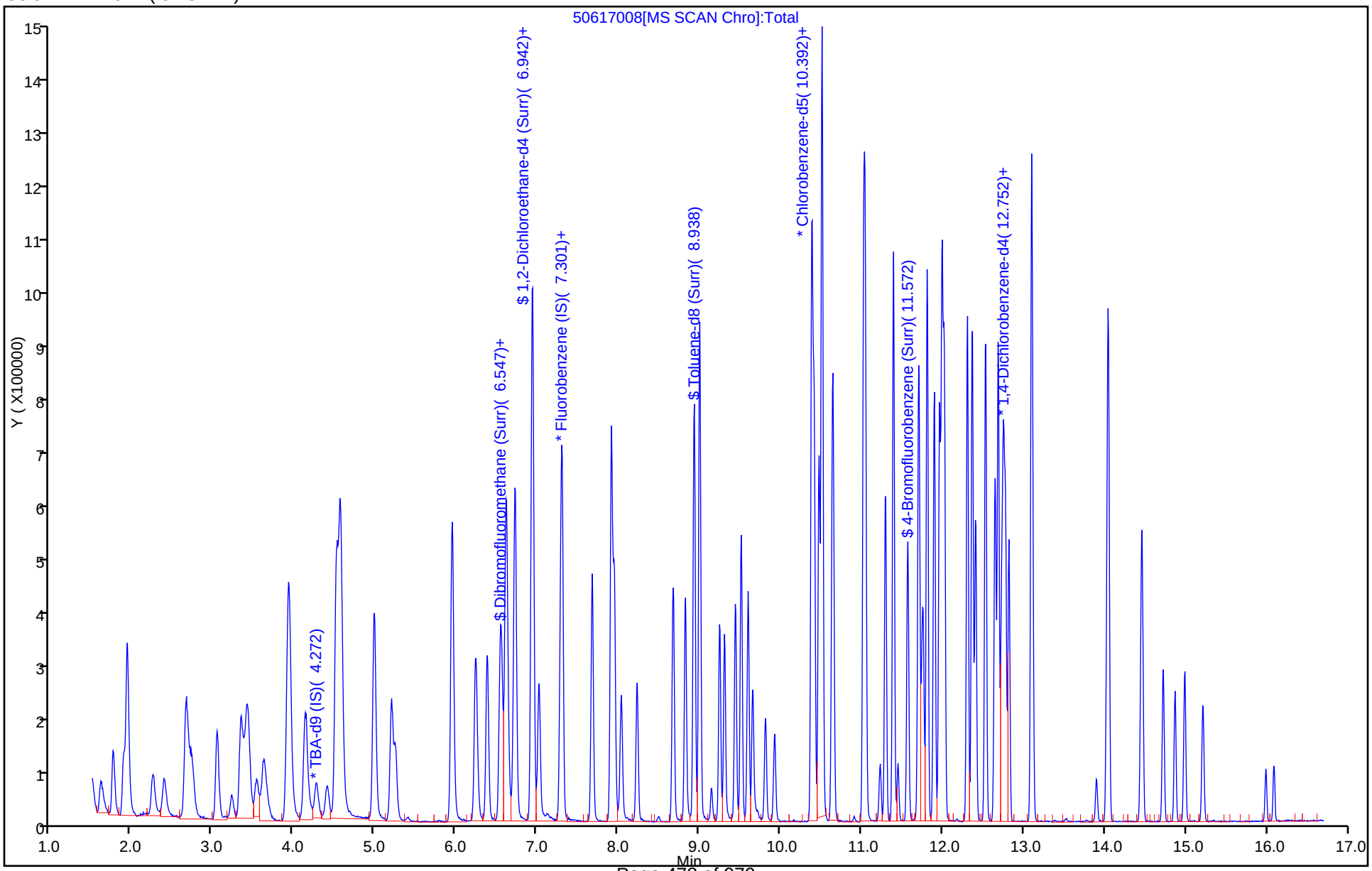
Report Date: 18-Jun-2015 11:19:49 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617008.D

Injection Date:	17-Jun-2015 14:54:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD15			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)



Manual Integration/User Assign Peak Report

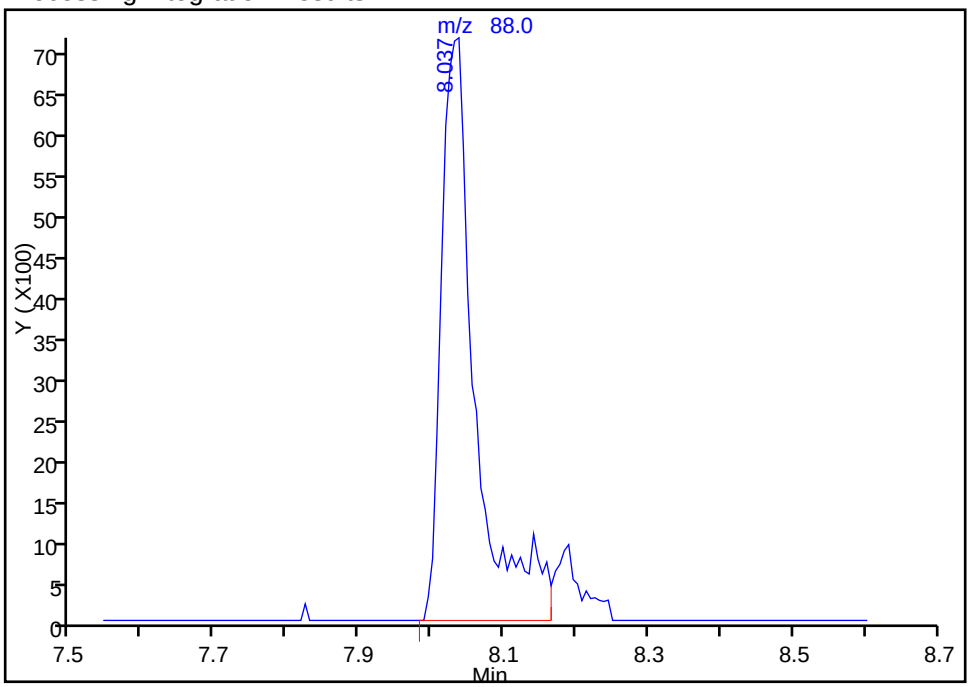
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617008.D				
Injection Date:	17-Jun-2015 14:54:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD15				
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

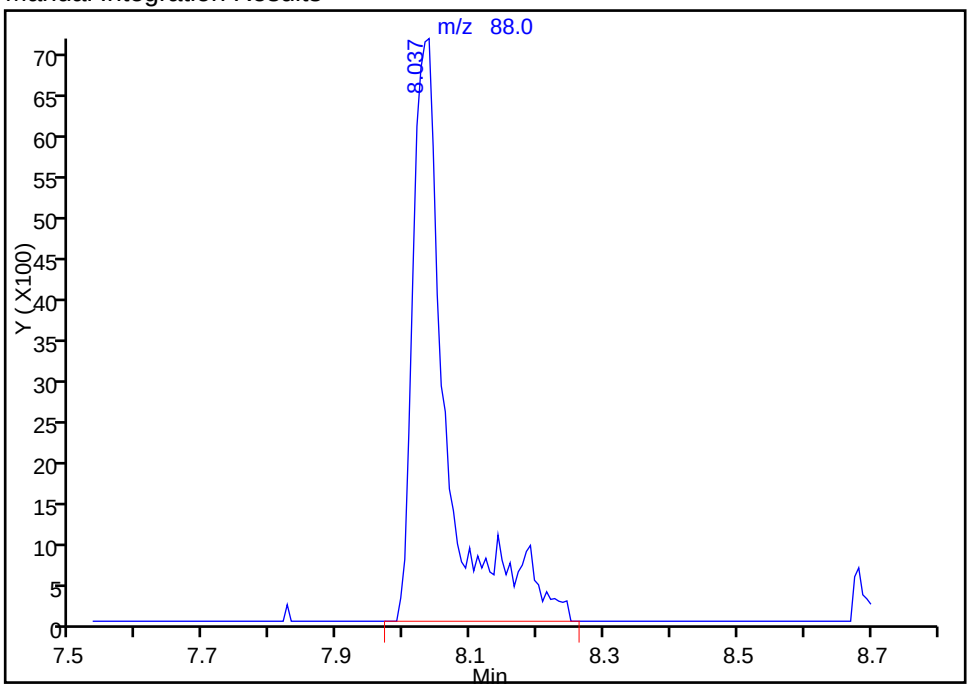
Processing Integration Results

RT: 8.04
Area: 23368
Amount: 1488.6474
Amount Units: ng



Manual Integration Results

RT: 8.04
Area: 25534
Amount: 1611.9735
Amount Units: ng



Reviewer: fergusond, 18-Jun-2015 08:49:04
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617009.D
Lims ID: IC VSTD20
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 17-Jun-2015 15:18:30 ALS Bottle#: 7 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD20
Misc. Info.: 180-0007443-009
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Jun-2015 11:19:50 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: fergusond Date: 18-Jun-2015 08:50:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.274	4.272	0.002	0	111324	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.292	7.289	0.003	94	382859	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.382	10.386	-0.004	81	87149	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.728	0.002	91	111640	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.562	6.565	-0.003	59	171222	100.0	95.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.939	6.936	0.003	0	242219	100.0	94.0	
$ 7 Toluene-d8 (Surr)	98	8.934	8.938	-0.004	79	697675	100.0	96.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.568	11.572	-0.004	84	256052	100.0	96.3	
11 Dichlorodifluoromethane	85	1.622	1.619	0.003	88	258891	100.0	100.3	
12 Chloromethane	50	1.768	1.771	-0.003	89	290013	100.0	99.8	
13 Vinyl chloride	62	1.902	1.899	0.003	84	301311	100.0	102.8	
14 Butadiene	39	1.944	1.942	0.002	93	315376	100.0	100.4	
15 Bromomethane	94	2.255	2.258	-0.003	89	135973	100.0	95.4	
16 Chloroethane	64	2.401	2.398	0.003	76	181501	100.0	102.8	
17 Dichlorofluoromethane	67	2.674	2.672	0.002	82	391592	100.0	100.3	
18 Trichlorofluoromethane	101	2.705	2.708	-0.003	84	330063	100.0	103.5	
20 Ethyl ether	59	3.052	3.049	0.003	93	215472	100.0	97.8	
21 Acrolein	56	3.234	3.225	0.009	84	80592	200.0	190.7	
22 1,1-Dichloroethene	96	3.350	3.347	0.003	89	225297	100.0	103.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.417	3.420	-0.003	86	235316	100.0	102.8	
24 Acetone	43	3.447	3.444	0.003	87	112327	200.0	177.1	
25 Iodomethane	142	3.544	3.542	0.002	100	300629	100.0	100.3	
26 Carbon disulfide	76	3.636	3.633	0.003	100	504737	100.0	105.2	
28 3-Chloro-1-propene	76	3.928	3.919	0.009	74	123678	100.0	103.1	
30 Methyl acetate	43	3.940	3.943	-0.003	97	943344	500.0	479.5	
31 Methylene Chloride	84	4.141	4.138	0.003	89	260743	100.0	106.7	
32 2-Methyl-2-propanol	59	4.402	4.406	-0.004	74	122036	1000.0	960.0	
33 Acrylonitrile	53	4.524	4.521	0.003	97	938260	1000.0	984.3	
34 trans-1,2-Dichloroethene	96	4.572	4.564	0.008	76	229120	100.0	99.4	
35 Methyl tert-butyl ether	73	4.585	4.582	0.003	92	557161	100.0	98.0	

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	95	367307	100.0	103.0	
37 1,1-Dichloroethane	63	5.205	5.203	0.003	85	442302	100.0	100.4	
38 Vinyl acetate	43	5.254	5.251	0.003	97	393966	100.0	104.5	
44 2,2-Dichloropropane	77	5.947	5.945	0.002	59	192057	100.0	102.0	
45 cis-1,2-Dichloroethene	96	5.947	5.951	-0.004	73	243856	100.0	99.8	
46 2-Butanone (MEK)	43	5.966	5.963	0.003	70	175815	200.0	188.9	
49 Chlorobromomethane	128	6.239	6.231	0.008	78	102910	100.0	99.9	
51 Tetrahydrofuran	42	6.252	6.255	-0.003	88	143767	200.0	188.0	
52 Chloroform	83	6.385	6.383	0.002	83	394079	100.0	97.2	
53 1,1,1-Trichloroethane	97	6.544	6.541	0.003	58	312928	100.0	102.8	
54 Cyclohexane	56	6.617	6.614	0.002	95	479657	100.0	105.2	
56 Carbon tetrachloride	117	6.714	6.717	-0.003	81	271218	100.0	102.4	
55 1,1-Dichloropropene	75	6.726	6.729	-0.003	90	347816	100.0	104.1	
57 Isobutyl alcohol	41	6.927	6.930	-0.003	55	152861	2500.0	2395.2	M
58 Benzene	78	6.945	6.942	0.003	97	970078	100.0	100.5	
59 1,2-Dichloroethane	62	7.024	7.021	0.003	90	324383	100.0	98.3	
62 n-Heptane	43	7.310	7.307	0.003	92	326259	100.0	103.5	
64 Trichloroethene	130	7.675	7.678	-0.003	94	229535	100.0	100.7	
66 Methylcyclohexane	83	7.912	7.916	-0.004	94	404786	100.0	106.3	
67 1,2-Dichloropropane	63	7.949	7.952	-0.003	86	231010	100.0	98.3	
70 1,4-Dioxane	88	8.034	8.037	-0.003	30	32972	2000.0	2041.7	
68 Dibromomethane	93	8.034	8.037	-0.003	92	121298	100.0	95.4	
71 Dichlorobromomethane	83	8.235	8.232	0.003	93	259051	100.0	100.9	
74 cis-1,3-Dichloropropene	75	8.673	8.676	-0.003	86	304012	100.0	102.4	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.828	-0.003	96	416339	200.0	201.8	
76 Toluene	91	9.001	9.005	-0.004	98	971897	100.0	103.8	
77 trans-1,3-Dichloropropene	75	9.251	9.248	0.003	93	261694	100.0	103.8	
78 Ethyl methacrylate	69	9.311	9.309	0.002	90	256749	100.0	106.9	
79 1,1,2-Trichloroethane	97	9.445	9.443	0.002	82	179495	100.0	98.8	
80 Tetrachloroethene	164	9.518	9.516	0.002	91	187697	100.0	105.3	
81 1,3-Dichloropropane	76	9.603	9.601	0.002	94	333410	100.0	100.3	
82 2-Hexanone	43	9.658	9.656	0.002	74	261891	200.0	197.6	
84 Chlorodibromomethane	129	9.816	9.814	0.002	87	152688	100.0	103.2	
85 Ethylene Dibromide	107	9.926	9.929	-0.003	97	173491	100.0	102.2	
86 3-Chlorobenzotrifluoride	180	10.388	10.386	0.002	93	318462	100.0	103.8	
87 Chlorobenzene	112	10.419	10.416	0.003	89	586338	100.0	100.2	
88 4-Chlorobenzotrifluoride	180	10.473	10.477	-0.004	85	302059	100.0	104.5	
89 1,1,1,2-Tetrachloroethane	131	10.510	10.513	-0.003	39	187943	100.0	104.1	
90 Ethylbenzene	106	10.516	10.513	0.003	99	341262	100.0	106.1	
91 m-Xylene & p-Xylene	106	10.644	10.647	-0.003	0	415658	100.0	107.0	
92 o-Xylene	106	11.027	11.024	0.003	95	399112	100.0	107.1	
93 Styrene	104	11.045	11.049	-0.004	92	654687	100.0	107.5	
94 Bromoform	173	11.228	11.231	-0.003	92	79426	100.0	101.1	
96 2-Chlorobenzotrifluoride	180	11.295	11.298	-0.003	94	305182	100.0	105.5	
97 Isopropylbenzene	105	11.392	11.395	-0.003	97	994404	100.0	108.9	
99 1,1,2,2-Tetrachloroethane	83	11.708	11.706	0.002	49	225004	100.0	97.9	
100 Bromobenzene	156	11.708	11.712	-0.004	93	223666	100.0	102.9	
102 trans-1,4-Dichloro-2-buten	53	11.745	11.742	0.003	66	74465	100.0	101.4	
101 1,2,3-Trichloropropane	110	11.763	11.767	-0.004	54	75422	100.0	98.0	
103 N-Propylbenzene	120	11.812	11.809	0.003	97	273796	100.0	106.7	
104 2-Chlorotoluene	126	11.897	11.900	-0.003	95	228249	100.0	103.0	
105 3-Chlorotoluene	126	11.964	11.961	0.003	75	239692	100.0	104.5	

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	11.994	11.992	0.002	94	792740	100.0	106.2	
107 4-Chlorotoluene	126	12.025	12.022	0.003	98	241693	100.0	100.7	
108 tert-Butylbenzene	119	12.305	12.308	-0.003	78	638390	100.0	107.5	
110 1,2,4-Trimethylbenzene	105	12.365	12.369	-0.004	99	784367	100.0	106.7	
111 1,2-dichloro-4-(trifluorom	214	12.408	12.411	-0.003	97	216824	100.0	100.7	
112 sec-Butylbenzene	105	12.530	12.533	-0.003	89	922192	100.0	107.7	
113 1,3-Dichlorobenzene	146	12.651	12.649	0.002	95	395663	100.0	100.2	
114 4-Isopropyltoluene	119	12.688	12.685	0.003	88	746924	100.0	108.3	
115 1,4-Dichlorobenzene	146	12.755	12.752	0.003	91	402496	100.0	100.2	
116 2,4-Dichloro-1-(triflourom	214	12.779	12.776	0.003	91	197387	100.0	100.9	
118 2,5-Dichlorobenzotrifluori	214	12.822	12.819	0.003	0	223938	100.0	105.8	
120 n-Butylbenzene	91	13.095	13.099	-0.004	95	639686	100.0	108.5	
121 1,2-Dichlorobenzene	146	13.108	13.111	-0.003	86	351002	100.0	100.3	
122 1,2-Dibromo-3-Chloropropan	75	13.905	13.896	0.008	66	29188	100.0	97.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.038	14.042	-0.004	0	660651	300.0	332.3	
125 2,3- & 3,4- Dichlorotoluen	125	14.458	14.462	-0.004	0	401024	200.0	220.3	
126 1,2,4-Trichlorobenzene	180	14.726	14.723	0.003	94	133002	100.0	106.5	
127 Hexachlorobutadiene	225	14.872	14.869	0.003	94	68407	100.0	98.6	
128 Naphthalene	128	14.987	14.991	-0.004	98	349999	100.0	108.2	
129 1,2,3-Trichlorobenzene	180	15.212	15.210	0.002	92	104055	100.0	102.3	
131 2,4,5-Trichlorotoluene	159	15.991	15.988	0.003	0	37231	100.0	103.0	
130 2,3,6-Trichlorotoluene	159	16.088	16.086	0.002	90	37479	100.0	102.7	
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		200.0	214.1	
S 134 1,2-Dichloroethene, Total	96				0		200.0	199.2	
S 135 1,3-Dichloropropene, Total	1				0		200.0	206.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00038	Amount Added:	4.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	4.00	Units: uL	
voaWEEmix1st_00002	Amount Added:	4.00	Units: uL	
VOA8260VOAPRI_00125	Amount Added:	4.00	Units: uL	
voaWVA2nd Res_00007	Amount Added:	4.00	Units: uL	
VOAACRLOEINPR_00001	Amount Added:	8.00	Units: uL	
VOA8260INT_00038	Amount Added:	2.00	Units: uL	Run Reagent

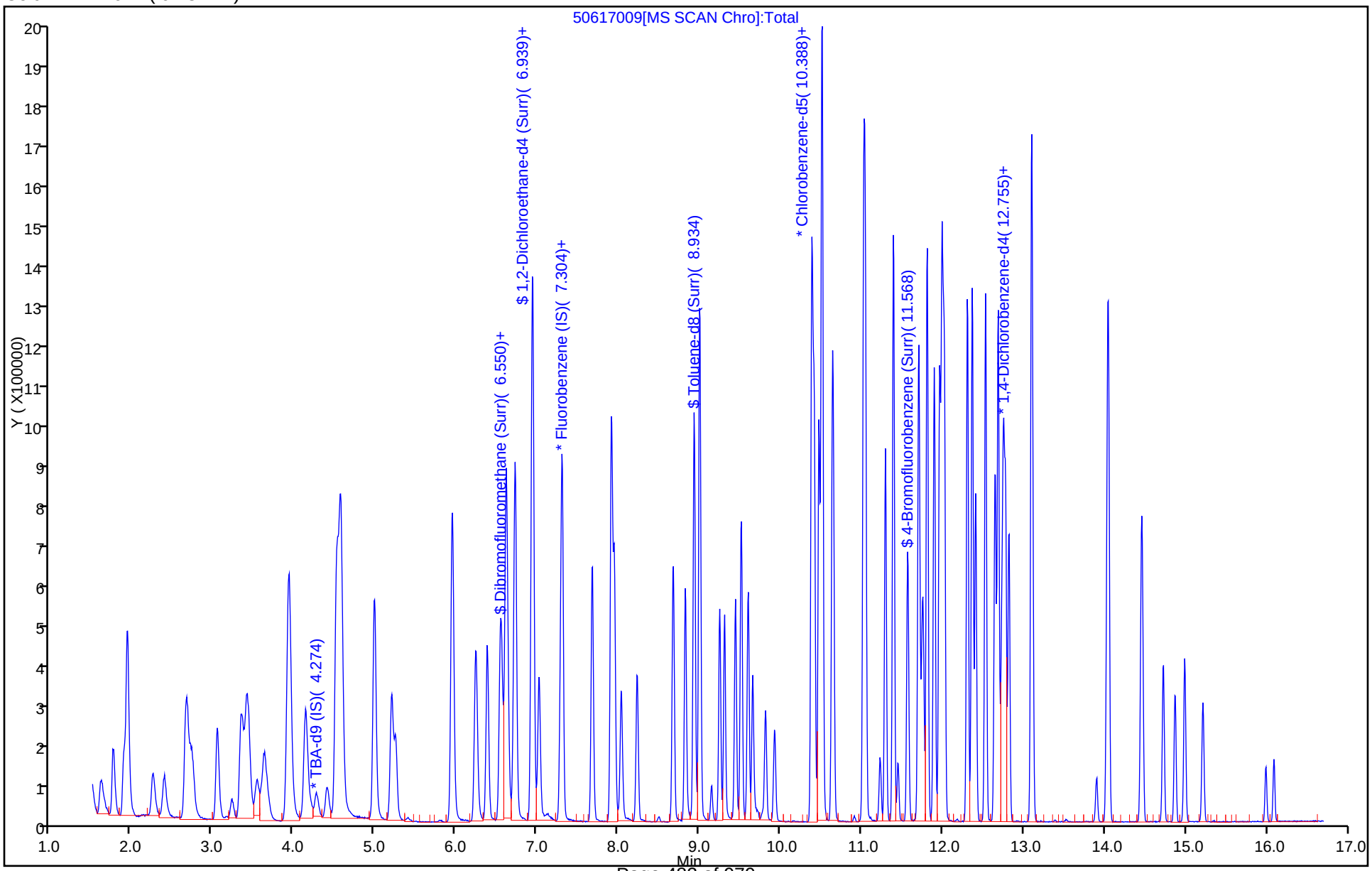
Report Date: 18-Jun-2015 11:19:50 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617009.D

Injection Date:	17-Jun-2015 15:18:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD20			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)



Manual Integration/User Assign Peak Report

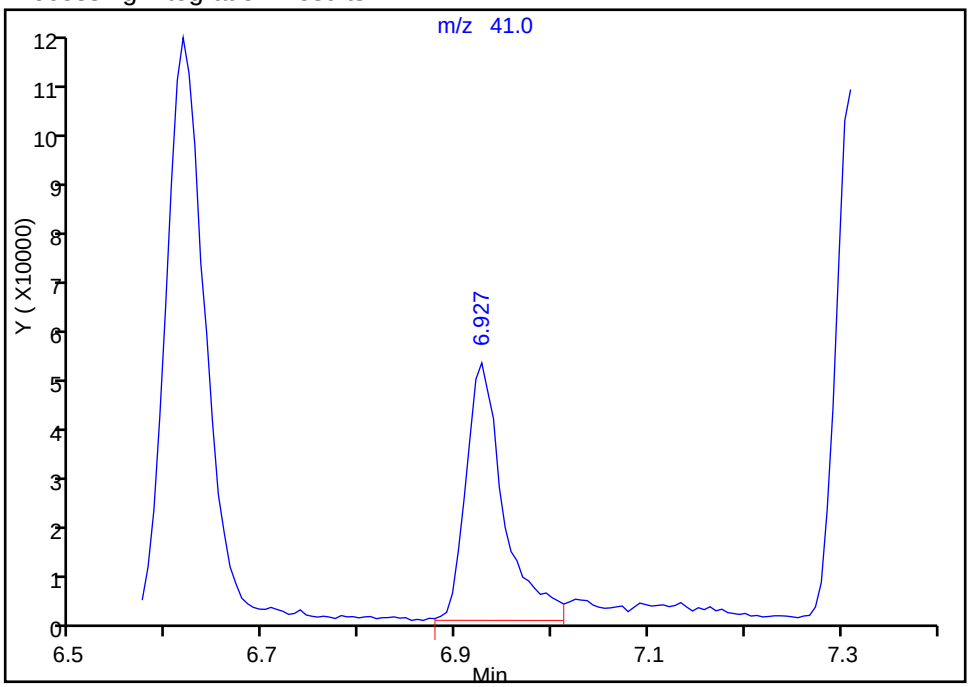
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617009.D
Injection Date: 17-Jun-2015 15:18:30 Instrument ID: CHHP5
Lims ID: IC VSTD20
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

57 Isobutyl alcohol, CAS: 78-83-1

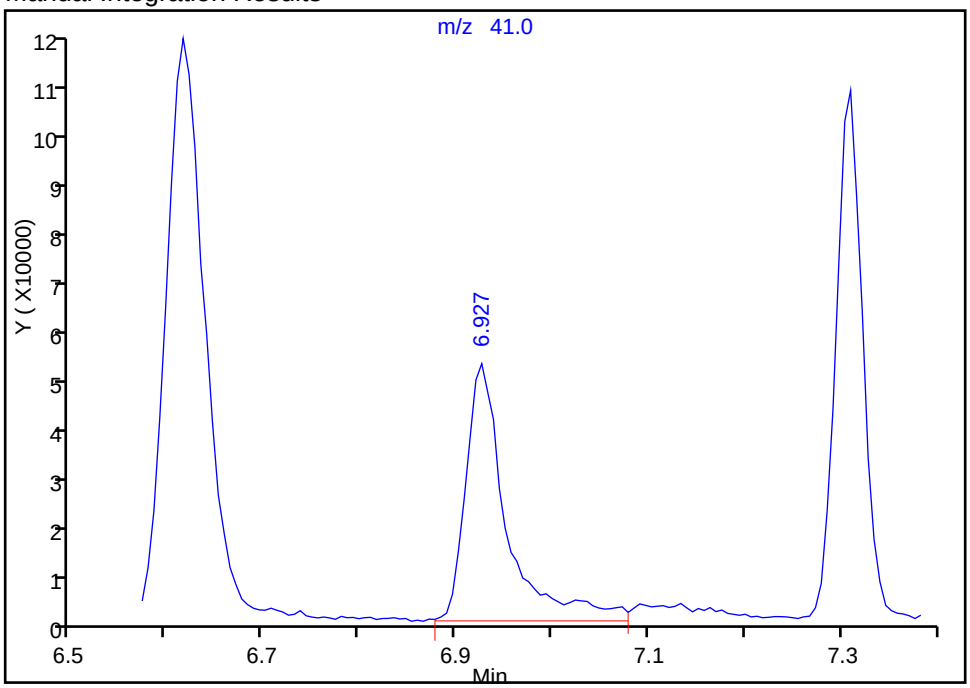
Processing Integration Results

RT: 6.93
Area: 141188
Amount: 2192.4652
Amount Units: ng



Manual Integration Results

RT: 6.93
Area: 152861
Amount: 2395.1695
Amount Units: ng



Reviewer: fergusond, 18-Jun-2015 08:50:54
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617010.D
Lims ID: IC VSTD35
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 17-Jun-2015 15:42:30 ALS Bottle#: 8 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD35
Misc. Info.: 180-0007443-010
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Jun-2015 11:19:51 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: fergusond Date: 18-Jun-2015 09:32:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.278	4.272	0.006	0	109577	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.289	0.000	92	374410	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.386	0.000	56	92645	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.728	0.000	75	112687	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.565	6.565	0.000	57	304086	175.0	174.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.936	-0.006	0	427373	175.0	169.6	
$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	94	1258264	175.0	163.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.572	0.000	85	473052	175.0	167.3	
11 Dichlorodifluoromethane	85	1.619	1.619	0.000	98	406279	175.0	161.0	
12 Chloromethane	50	1.771	1.771	0.000	85	470358	175.0	165.6	
13 Vinyl chloride	62	1.905	1.899	0.006	83	462809	175.0	161.5	
14 Butadiene	39	1.942	1.942	0.000	94	493792	175.0	160.7	
15 Bromomethane	94	2.258	2.258	0.000	84	228703	175.0	164.1	
16 Chloroethane	64	2.404	2.398	0.006	95	284353	175.0	164.7	
17 Dichlorofluoromethane	67	2.672	2.672	0.000	98	621763	175.0	162.8	
18 Trichlorofluoromethane	101	2.714	2.708	0.006	98	527308	175.0	169.2	
20 Ethyl ether	59	3.049	3.049	0.000	93	370505	175.0	171.9	
21 Acrolein	56	3.231	3.225	0.006	88	96004	225.0	232.3	
22 1,1-Dichloroethene	96	3.341	3.347	-0.006	88	355250	175.0	167.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.420	3.420	0.000	86	375509	175.0	167.8	
24 Acetone	43	3.444	3.444	0.000	93	208479	350.0	336.1	
25 Iodomethane	142	3.542	3.542	0.000	98	494039	175.0	168.6	
26 Carbon disulfide	76	3.633	3.633	0.000	100	851784	175.0	181.5	
28 3-Chloro-1-propene	76	3.925	3.919	0.006	61	215345	175.0	183.6	
30 Methyl acetate	43	3.943	3.943	0.000	97	1680625	875.0	873.6	
31 Methylene Chloride	84	4.144	4.138	0.006	92	416721	175.0	184.1	
32 2-Methyl-2-propanol	59	4.406	4.406	0.000	84	226221	1750.0	1807.9	
33 Acrylonitrile	53	4.527	4.521	0.006	99	1662395	1750.0	1783.4	
34 trans-1,2-Dichloroethene	96	4.570	4.564	0.006	76	381648	175.0	169.3	
35 Methyl tert-butyl ether	73	4.582	4.582	0.000	92	981534	175.0	176.5	

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	95	604571	175.0	173.3	
37 1,1-Dichloroethane	63	5.202	5.203	0.000	85	729616	175.0	169.4	
38 Vinyl acetate	43	5.251	5.251	0.000	97	723334	175.0	196.2	
44 2,2-Dichloropropane	77	5.951	5.945	0.006	57	318442	175.0	173.0	
45 cis-1,2-Dichloroethene	96	5.951	5.951	0.000	71	412793	175.0	172.8	
46 2-Butanone (MEK)	43	5.957	5.963	-0.006	64	335015	350.0	368.1	
49 Chlorobromomethane	128	6.237	6.231	0.006	79	176872	175.0	175.5	
51 Tetrahydrofuran	42	6.249	6.255	-0.006	87	270631	350.0	361.9	
52 Chloroform	83	6.383	6.383	0.000	83	663409	175.0	167.4	
53 1,1,1-Trichloroethane	97	6.541	6.541	0.000	51	521331	175.0	175.1	
54 Cyclohexane	56	6.614	6.614	0.000	77	765785	175.0	171.8	
56 Carbon tetrachloride	117	6.711	6.717	-0.006	84	447259	175.0	172.6	
55 1,1-Dichloropropene	75	6.729	6.729	0.000	91	564179	175.0	172.6	
57 Isobutyl alcohol	41	6.930	6.930	0.000	52	299025	4375.0	4791.1	
58 Benzene	78	6.942	6.942	0.000	96	1576107	175.0	167.0	
59 1,2-Dichloroethane	62	7.021	7.021	0.000	91	555180	175.0	172.0	
62 n-Heptane	43	7.307	7.307	0.000	93	534358	175.0	173.3	
64 Trichloroethene	130	7.672	7.678	-0.006	93	378840	175.0	170.0	
66 Methylcyclohexane	83	7.916	7.916	0.000	94	665394	175.0	178.8	
67 1,2-Dichloropropane	63	7.952	7.952	0.000	88	399628	175.0	173.8	
68 Dibromomethane	93	8.037	8.037	0.000	95	214398	175.0	172.4	
70 1,4-Dioxane	88	8.031	8.037	-0.006	40	60747	3500.0	3846.4	
71 Dichlorobromomethane	83	8.232	8.232	0.000	99	458579	175.0	182.7	
74 cis-1,3-Dichloropropene	75	8.676	8.676	0.000	89	558268	175.0	192.2	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.828	0.000	95	808801	350.0	368.8	
76 Toluene	91	9.005	9.005	0.000	97	1594574	175.0	160.1	
77 trans-1,3-Dichloropropene	75	9.254	9.248	0.006	94	494360	175.0	184.4	
78 Ethyl methacrylate	69	9.309	9.309	0.000	75	488926	175.0	191.6	
79 1,1,2-Trichloroethane	97	9.443	9.443	0.000	88	317622	175.0	164.4	
80 Tetrachloroethene	164	9.516	9.516	0.000	89	305258	175.0	161.2	
81 1,3-Dichloropropane	76	9.601	9.601	0.000	94	593034	175.0	167.9	
82 2-Hexanone	43	9.656	9.656	0.000	97	527235	350.0	374.2	
84 Chlorodibromomethane	129	9.814	9.814	0.000	89	283987	175.0	180.5	
85 Ethylene Dibromide	107	9.923	9.929	-0.006	97	312538	175.0	173.1	
86 3-Chlorobenzotrifluoride	180	10.386	10.386	0.000	91	542554	175.0	166.3	
87 Chlorobenzene	112	10.416	10.416	0.000	91	1002990	175.0	161.3	
88 4-Chlorobenzotrifluoride	180	10.477	10.477	0.000	96	515650	175.0	167.8	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.513	-0.006	41	334679	175.0	174.4	
90 Ethylbenzene	106	10.513	10.513	0.000	98	581465	175.0	170.0	
91 m-Xylene & p-Xylene	106	10.647	10.647	0.000	0	704459	175.0	170.6	
92 o-Xylene	106	11.024	11.024	0.000	96	678709	175.0	171.3	
93 Styrene	104	11.049	11.049	0.000	93	1117800	175.0	172.7	
94 Bromoform	173	11.231	11.231	0.000	94	156513	175.0	187.4	
96 2-Chlorobenzotrifluoride	180	11.298	11.298	0.000	96	513173	175.0	166.9	
97 Isopropylbenzene	105	11.395	11.395	0.000	97	1616980	175.0	166.6	
99 1,1,2,2-Tetrachloroethane	83	11.706	11.706	0.000	52	408165	175.0	167.1	
100 Bromobenzene	156	11.706	11.712	-0.006	82	380076	175.0	173.2	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	74	142204	175.0	191.8	
101 1,2,3-Trichloropropane	110	11.760	11.767	-0.007	82	135814	175.0	174.8	
103 N-Propylbenzene	120	11.809	11.809	0.000	86	464167	175.0	179.2	
104 2-Chlorotoluene	126	11.900	11.900	0.000	95	385419	175.0	172.3	
105 3-Chlorotoluene	126	11.961	11.961	0.000	74	415021	175.0	179.3	

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	11.992	11.992	0.000	93	1305913	175.0	173.3	
107 4-Chlorotoluene	126	12.022	12.022	0.000	99	420730	175.0	173.6	
108 tert-Butylbenzene	119	12.308	12.308	0.000	90	1055188	175.0	176.0	
110 1,2,4-Trimethylbenzene	105	12.369	12.369	0.000	98	1304956	175.0	175.8	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.411	0.000	98	372233	175.0	171.3	
112 sec-Butylbenzene	105	12.527	12.533	-0.006	83	1489124	175.0	172.3	
113 1,3-Dichlorobenzene	146	12.649	12.649	0.000	94	671741	175.0	168.5	
114 4-Isopropyltoluene	119	12.685	12.685	0.000	90	1223451	175.0	175.8	
115 1,4-Dichlorobenzene	146	12.752	12.752	0.000	91	685744	175.0	169.1	
116 2,4-Dichloro-1-(triflourom	214	12.776	12.776	0.000	87	344654	175.0	174.6	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.819	0.000	0	361493	175.0	169.3	
120 n-Butylbenzene	91	13.099	13.099	0.000	95	1058649	175.0	177.9	
121 1,2-Dichlorobenzene	146	13.105	13.111	-0.006	82	600426	175.0	170.0	
122 1,2-Dibromo-3-Chloropropan	75	13.896	13.896	0.000	71	53852	175.0	177.6	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.042	14.042	0.000	0	1122389	525.0	559.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.461	14.462	-0.001	0	697008	350.0	379.4	
126 1,2,4-Trichlorobenzene	180	14.723	14.723	0.000	92	232870	175.0	184.7	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	94	112857	175.0	161.2	
128 Naphthalene	128	14.991	14.991	0.000	98	644555	175.0	197.3	
129 1,2,3-Trichlorobenzene	180	15.216	15.210	0.006	95	184060	175.0	179.3	
131 2,4,5-Trichlorotoluene	159	15.988	15.988	0.000	0	74150	175.0	170.3	
130 2,3,6-Trichlorotoluene	159	16.092	16.086	0.006	95	76853	175.0	173.1	
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		350.0	341.9	
S 134 1,2-Dichloroethene, Total	96				0		350.0	342.1	
S 135 1,3-Dichloropropene, Total	1				0		350.0	376.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

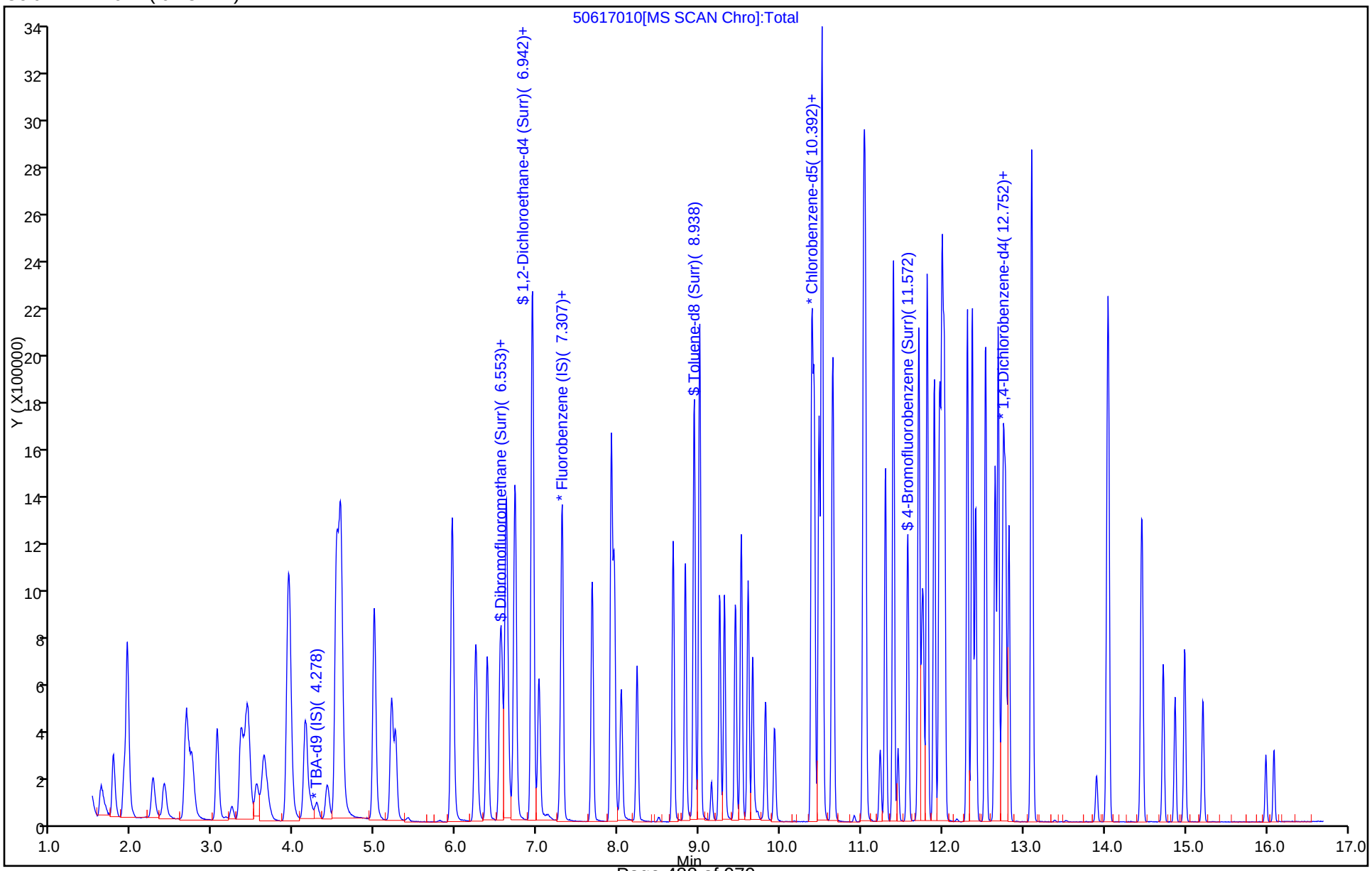
VOAACRLOEINPR_00001	Amount Added:	9.00	Units: uL	
VOA8260SURR_00038	Amount Added:	7.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	7.00	Units: uL	
VOA8260VOAPRI_00125	Amount Added:	7.00	Units: uL	
voaWVA2nd Res_00007	Amount Added:	7.00	Units: uL	
voaWEEmix1st_00002	Amount Added:	7.00	Units: uL	
VOA8260INT_00038	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Jun-2015 11:19:52 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617010.D				
Injection Date:	17-Jun-2015 15:42:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD35			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
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617011.D
Lims ID: IC VSTD40
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 17-Jun-2015 16:06:30 ALS Bottle#: 9 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD40
Misc. Info.: 180-0007443-011
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Jun-2015 11:19:53 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: fergusond Date: 18-Jun-2015 09:35:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.268	4.272	-0.004	0	122239	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.289	-0.003	98	392901	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.388	10.386	0.002	57	99948	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.731	12.728	0.003	92	122332	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.562	6.565	-0.003	93	350611	200.0	191.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.936	-0.003	0	493641	200.0	186.7	
$ 7 Toluene-d8 (Surr)	98	8.934	8.938	-0.004	94	1439382	200.0	173.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.569	11.572	-0.003	90	557463	200.0	182.7	
11 Dichlorodifluoromethane	85	1.616	1.619	-0.003	99	490752	200.0	185.4	
12 Chloromethane	50	1.768	1.771	-0.003	100	523991	200.0	175.8	
13 Vinyl chloride	62	1.902	1.899	0.003	98	538171	200.0	178.9	
14 Butadiene	39	1.938	1.942	-0.004	93	561800	200.0	174.2	
15 Bromomethane	94	2.255	2.258	-0.003	91	248868	200.0	170.1	
16 Chloroethane	64	2.389	2.398	-0.009	100	316475	200.0	174.7	
17 Dichlorofluoromethane	67	2.668	2.672	-0.004	97	718183	200.0	179.2	
18 Trichlorofluoromethane	101	2.699	2.708	-0.009	99	600930	200.0	183.7	
20 Ethyl ether	59	3.046	3.049	-0.003	94	431207	200.0	190.7	
21 Acrolein	56	3.228	3.225	0.003	98	114067	250.0	263.0	
22 1,1-Dichloroethene	96	3.338	3.347	-0.009	95	410599	200.0	184.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.417	3.420	-0.003	95	430718	200.0	183.4	
24 Acetone	43	3.435	3.444	-0.009	99	251920	400.0	387.0	
25 Iodomethane	142	3.532	3.542	-0.010	100	579231	200.0	188.4	
26 Carbon disulfide	76	3.630	3.633	-0.003	100	1001334	200.0	203.3	
28 3-Chloro-1-propene	76	3.916	3.919	-0.003	89	245584	200.0	199.5	
30 Methyl acetate	43	3.940	3.943	-0.003	98	1971351	1000.0	976.5	
31 Methylene Chloride	84	4.141	4.138	0.003	96	466826	200.0	197.6	
32 2-Methyl-2-propanol	59	4.408	4.406	0.002	91	269586	2000.0	1931.3	
33 Acrylonitrile	53	4.524	4.521	0.003	97	1910483	2000.0	1953.1	
34 trans-1,2-Dichloroethene	96	4.560	4.564	-0.004	96	439641	200.0	185.8	
35 Methyl tert-butyl ether	73	4.579	4.582	-0.003	98	1178416	200.0	201.9	

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	95	703743	200.0	192.3	
37 1,1-Dichloroethane	63	5.205	5.203	0.003	97	841498	200.0	186.1	
38 Vinyl acetate	43	5.248	5.251	-0.003	98	819004	200.0	211.7	
44 2,2-Dichloropropane	77	5.947	5.945	0.002	88	371771	200.0	192.5	
45 cis-1,2-Dichloroethene	96	5.954	5.951	0.003	84	476914	200.0	190.3	
46 2-Butanone (MEK)	43	5.960	5.963	-0.003	100	382226	400.0	400.3	
49 Chlorobromomethane	128	6.239	6.231	0.008	96	206501	200.0	195.2	
51 Tetrahydrofuran	42	6.252	6.255	-0.003	88	325712	400.0	415.0	
52 Chloroform	83	6.379	6.383	-0.004	95	766034	200.0	184.2	
53 1,1,1-Trichloroethane	97	6.538	6.541	-0.003	97	600207	200.0	192.1	
54 Cyclohexane	56	6.617	6.614	0.003	94	891635	200.0	190.6	
56 Carbon tetrachloride	117	6.714	6.717	-0.003	94	520097	200.0	191.3	
55 1,1-Dichloropropene	75	6.726	6.729	-0.003	92	648085	200.0	189.0	
57 Isobutyl alcohol	41	6.927	6.930	-0.003	94	315367	5000.0	4815.2	
58 Benzene	78	6.945	6.942	0.003	98	1802599	200.0	182.0	
59 1,2-Dichloroethane	62	7.018	7.021	-0.003	98	641336	200.0	189.3	
62 n-Heptane	43	7.310	7.307	0.003	94	613406	200.0	189.6	
64 Trichloroethene	130	7.675	7.678	-0.003	97	438244	200.0	187.4	
66 Methylcyclohexane	83	7.912	7.916	-0.004	94	770738	200.0	197.3	
67 1,2-Dichloropropane	63	7.949	7.952	-0.003	94	463847	200.0	192.3	
68 Dibromomethane	93	8.034	8.037	-0.003	97	251996	200.0	193.1	
70 1,4-Dioxane	88	8.028	8.037	-0.009	42	72079	4000.0	4349.1	
71 Dichlorobromomethane	83	8.229	8.232	-0.003	99	527553	200.0	200.3	
74 cis-1,3-Dichloropropene	75	8.673	8.676	-0.003	91	663516	200.0	217.7	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.828	-0.003	97	927073	400.0	391.8	
76 Toluene	91	9.001	9.005	-0.004	98	1815140	200.0	169.0	
77 trans-1,3-Dichloropropene	75	9.251	9.248	0.003	98	577958	200.0	199.9	
78 Ethyl methacrylate	69	9.312	9.309	0.003	91	573048	200.0	208.1	
79 1,1,2-Trichloroethane	97	9.445	9.443	0.002	93	364522	200.0	174.9	
80 Tetrachloroethene	164	9.518	9.516	0.002	95	349165	200.0	170.9	
81 1,3-Dichloropropane	76	9.604	9.601	0.003	95	674090	200.0	176.9	
82 2-Hexanone	43	9.658	9.656	0.002	98	591225	400.0	389.0	
84 Chlorodibromomethane	129	9.817	9.814	0.003	91	331408	200.0	195.2	
85 Ethylene Dibromide	107	9.926	9.929	-0.003	98	363127	200.0	186.5	
86 3-Chlorobenzotrifluoride	180	10.388	10.386	0.002	91	622777	200.0	177.0	
87 Chlorobenzene	112	10.419	10.416	0.003	91	1152586	200.0	171.8	
88 4-Chlorobenzotrifluoride	180	10.474	10.477	-0.003	97	599843	200.0	180.9	
89 1,1,1,2-Tetrachloroethane	131	10.510	10.513	-0.003	93	387650	200.0	187.2	
90 Ethylbenzene	106	10.516	10.513	0.003	98	663092	200.0	179.7	
91 m-Xylene & p-Xylene	106	10.644	10.647	-0.003	0	820612	200.0	184.3	
92 o-Xylene	106	11.027	11.024	0.003	97	790630	200.0	184.9	
93 Styrene	104	11.045	11.049	-0.004	94	1289578	200.0	184.6	
94 Bromoform	173	11.228	11.231	-0.003	95	185935	200.0	206.3	
96 2-Chlorobenzotrifluoride	180	11.295	11.298	-0.003	94	606064	200.0	182.7	
97 Isopropylbenzene	105	11.392	11.395	-0.003	98	1878555	200.0	179.4	
99 1,1,2,2-Tetrachloroethane	83	11.709	11.706	0.002	77	477417	200.0	181.1	
100 Bromobenzene	156	11.709	11.712	-0.004	96	442468	200.0	185.8	
102 trans-1,4-Dichloro-2-buten	53	11.745	11.742	0.003	79	168794	200.0	209.7	
101 1,2,3-Trichloropropane	110	11.763	11.767	-0.004	86	159888	200.0	189.5	
103 N-Propylbenzene	120	11.812	11.809	0.003	98	542910	200.0	193.0	
104 2-Chlorotoluene	126	11.897	11.900	-0.003	95	461338	200.0	190.0	
105 3-Chlorotoluene	126	11.964	11.961	0.003	95	490765	200.0	195.3	

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	11.994	11.992	0.002	95	1523592	200.0	186.2	
107 4-Chlorotoluene	126	12.025	12.022	0.003	98	484074	200.0	184.0	
108 tert-Butylbenzene	119	12.305	12.308	-0.003	93	1251164	200.0	192.2	
110 1,2,4-Trimethylbenzene	105	12.366	12.369	-0.003	99	1527586	200.0	189.6	
111 1,2-dichloro-4-(trifluorom	214	12.408	12.411	-0.003	98	445231	200.0	188.7	
112 sec-Butylbenzene	105	12.530	12.533	-0.003	96	1749050	200.0	186.4	
113 1,3-Dichlorobenzene	146	12.651	12.649	0.002	96	793952	200.0	183.4	
114 4-Isopropyltoluene	119	12.688	12.685	0.003	96	1449933	200.0	191.9	
115 1,4-Dichlorobenzene	146	12.755	12.752	0.003	93	799016	200.0	181.5	
116 2,4-Dichloro-1-(triflourom	214	12.779	12.776	0.003	96	397020	200.0	185.2	
118 2,5-Dichlorobenzotrifluori	214	12.822	12.819	0.003	0	449922	200.0	194.1	
120 n-Butylbenzene	91	13.096	13.099	-0.003	97	1250309	200.0	193.5	
121 1,2-Dichlorobenzene	146	13.108	13.111	-0.003	94	701795	200.0	183.1	
122 1,2-Dibromo-3-Chloropropan	75	13.899	13.896	0.003	77	64433	200.0	195.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.045	14.042	0.003	0	1312774	600.0	602.7	
125 2,3- & 3,4- Dichlorotoluen	125	14.458	14.462	-0.004	0	813548	400.0	407.9	
126 1,2,4-Trichlorobenzene	180	14.720	14.723	-0.003	95	271980	200.0	198.7	
127 Hexachlorobutadiene	225	14.872	14.869	0.003	96	130058	200.0	171.1	
128 Naphthalene	128	14.988	14.991	-0.003	98	762683	200.0	215.1	
129 1,2,3-Trichlorobenzene	180	15.213	15.210	0.003	94	219483	200.0	196.9	
131 2,4,5-Trichlorotoluene	159	15.991	15.988	0.003	0	102047	200.0	200.9	
130 2,3,6-Trichlorotoluene	159	16.089	16.086	0.003	96	101530	200.0	198.8	
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		400.0	369.2	
S 134 1,2-Dichloroethene, Total	96				0		400.0	376.1	
S 135 1,3-Dichloropropene, Total	1				0		400.0	417.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260SURR_00038	Amount Added:	8.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	8.00	Units: uL	
voaWEEmix1st_00002	Amount Added:	8.00	Units: uL	
VOA8260VOAPRI_00125	Amount Added:	8.00	Units: uL	
voaWVA2nd Res_00007	Amount Added:	8.00	Units: uL	
VOAACRLOEINPR_00001	Amount Added:	10.00	Units: uL	
VOA8260INT_00038	Amount Added:	2.00	Units: uL	Run Reagent

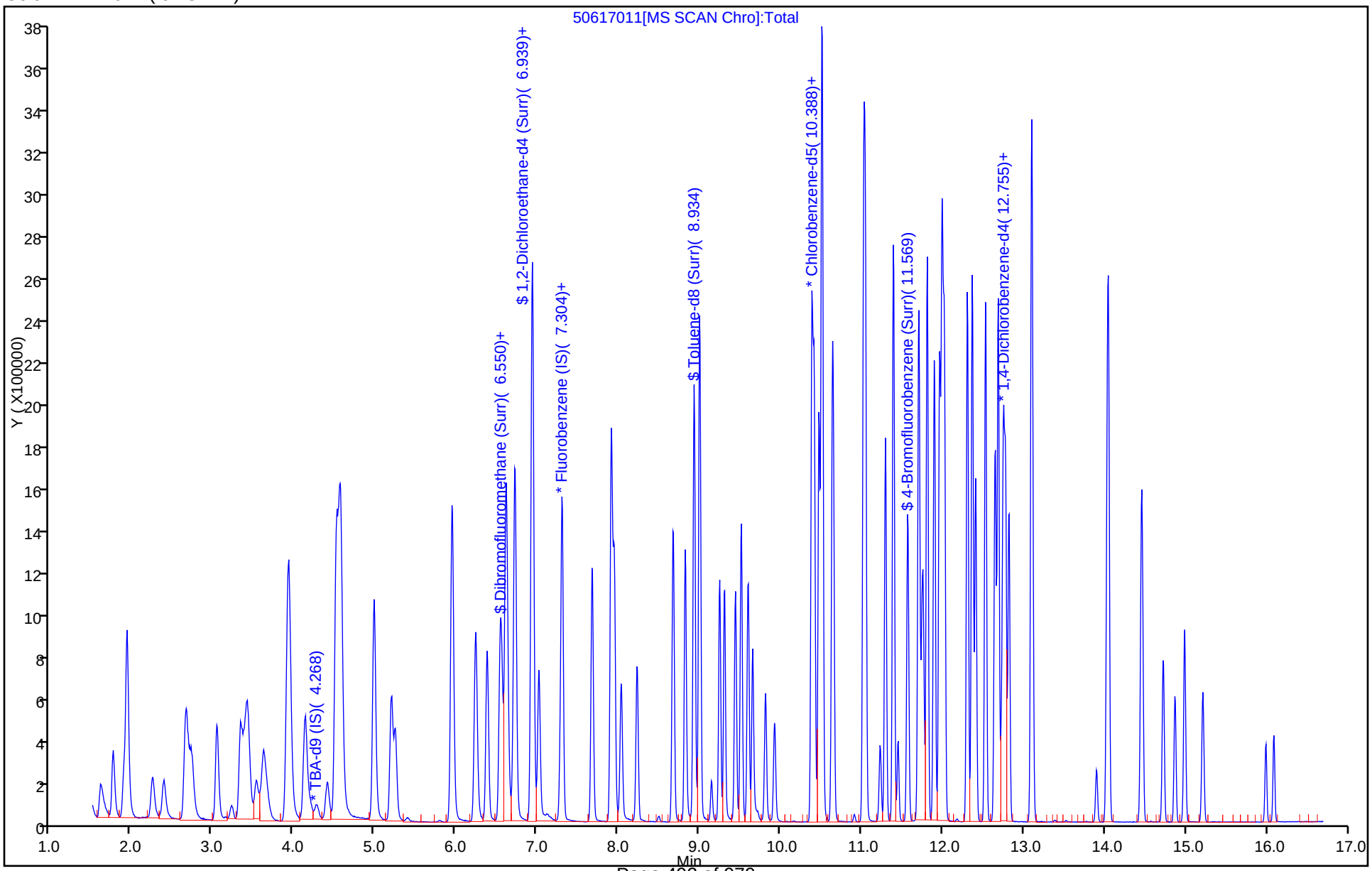
Report Date: 18-Jun-2015 11:19:53 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617011.D

Injection Date:	17-Jun-2015 16:06:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD40			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
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617012.D
Lims ID: IC VSTD50
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 17-Jun-2015 16:29:30 ALS Bottle#: 10 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD50
Misc. Info.: 180-0007443-012
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Jun-2015 11:19:54 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: fergusond Date: 18-Jun-2015 09:42:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.287	4.272	0.015	0	113940	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.289	-0.003	98	394209	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.389	10.386	0.003	53	99625	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.725	12.728	-0.003	96	118641	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.562	6.565	-0.003	93	443187	250.0	241.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.936	-0.003	0	625499	250.0	235.8	
$ 7 Toluene-d8 (Surr)	98	8.935	8.938	-0.003	94	1777930	250.0	215.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.569	11.572	-0.003	85	717948	250.0	236.1	
11 Dichlorodifluoromethane	85	1.616	1.619	-0.003	99	633416	250.0	238.4	
12 Chloromethane	50	1.762	1.771	-0.009	99	703080	250.0	235.1	
13 Vinyl chloride	62	1.908	1.899	0.009	98	709759	250.0	235.2	
14 Butadiene	39	1.939	1.942	-0.003	94	741355	250.0	229.1	
15 Bromomethane	94	2.243	2.258	-0.015	90	316164	250.0	215.4	
16 Chloroethane	64	2.389	2.398	-0.009	100	423350	250.0	233.0	
17 Dichlorofluoromethane	67	2.663	2.672	-0.009	97	920746	250.0	229.0	
18 Trichlorofluoromethane	101	2.711	2.708	0.003	98	760123	250.0	231.6	
20 Ethyl ether	59	3.046	3.049	-0.003	93	537080	250.0	236.7	
21 Acrolein	56	3.222	3.225	-0.003	99	120047	275.0	275.9	
22 1,1-Dichloroethene	96	3.338	3.347	-0.009	96	540491	250.0	242.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.411	3.420	-0.009	95	574450	250.0	243.7	
24 Acetone	43	3.441	3.444	-0.003	99	288844	500.0	442.3	
25 Iodomethane	142	3.533	3.542	-0.009	99	768838	250.0	249.2	
26 Carbon disulfide	76	3.630	3.633	-0.003	100	1362874	250.0	275.8	
28 3-Chloro-1-propene	76	3.916	3.919	-0.003	89	337990	250.0	273.7	
30 Methyl acetate	43	3.940	3.943	-0.003	98	2382208	1250.0	1176.1	
31 Methylene Chloride	84	4.135	4.138	-0.003	97	603105	250.0	258.9	
32 2-Methyl-2-propanol	59	4.421	4.406	0.015	91	308656	2500.0	2372.2	
33 Acrylonitrile	53	4.524	4.521	0.003	98	2346331	2500.0	2390.7	
34 trans-1,2-Dichloroethene	96	4.561	4.564	-0.003	97	574249	250.0	241.9	
35 Methyl tert-butyl ether	73	4.579	4.582	-0.003	98	1517466	250.0	259.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.987	4.990	-0.003	95	945438	250.0	257.5	
37 1,1-Dichloroethane	63	5.200	5.203	-0.002	97	1108115	250.0	244.3	
38 Vinyl acetate	43	5.248	5.251	-0.003	98	1008331	250.0	259.7	
44 2,2-Dichloropropane	77	5.948	5.945	0.003	86	486802	250.0	251.2	
45 cis-1,2-Dichloroethene	96	5.948	5.951	-0.003	83	619117	250.0	246.2	
46 2-Butanone (MEK)	43	5.960	5.963	-0.003	100	476377	500.0	497.2	
49 Chlorobromomethane	128	6.234	6.231	0.003	96	261865	250.0	246.8	
51 Tetrahydrofuran	42	6.252	6.255	-0.003	89	400339	500.0	508.4	
52 Chloroform	83	6.380	6.383	-0.003	95	990455	250.0	237.4	
53 1,1,1-Trichloroethane	97	6.544	6.541	0.003	97	794369	250.0	253.4	
54 Cyclohexane	56	6.611	6.614	-0.003	97	1206014	250.0	257.0	
56 Carbon tetrachloride	117	6.714	6.717	-0.003	94	704165	250.0	258.1	
55 1,1-Dichloropropene	75	6.726	6.729	-0.003	92	861875	250.0	250.5	
57 Isobutyl alcohol	41	6.927	6.930	-0.003	93	431449	6250.0	6565.7	
58 Benzene	78	6.939	6.942	-0.003	98	2308789	250.0	232.4	
59 1,2-Dichloroethane	62	7.018	7.021	-0.003	97	822349	250.0	241.9	
62 n-Heptane	43	7.310	7.307	0.003	93	825317	250.0	254.3	
64 Trichloroethene	130	7.676	7.678	-0.002	97	582600	250.0	248.3	
66 Methylcyclohexane	83	7.913	7.916	-0.003	95	1027848	250.0	262.3	
67 1,2-Dichloropropane	63	7.949	7.952	-0.003	94	611506	250.0	252.6	
68 Dibromomethane	93	8.034	8.037	-0.003	97	327328	250.0	250.0	
70 1,4-Dioxane	88	8.028	8.037	-0.009	41	89366	5000.0	5374.3	
71 Dichlorobromomethane	83	8.229	8.232	-0.003	98	696885	250.0	263.7	
74 cis-1,3-Dichloropropene	75	8.673	8.676	-0.003	92	868238	250.0	283.9	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.828	-0.003	97	1183396	500.0	501.8	
76 Toluene	91	9.002	9.005	-0.003	97	2333889	250.0	218.0	
77 trans-1,3-Dichloropropene	75	9.251	9.248	0.003	98	770190	250.0	267.2	
78 Ethyl methacrylate	69	9.312	9.309	0.003	91	743353	250.0	270.8	
79 1,1,2-Trichloroethane	97	9.446	9.443	0.003	93	469658	250.0	226.1	
80 Tetrachloroethene	164	9.519	9.516	0.003	95	466332	250.0	229.0	
81 1,3-Dichloropropane	76	9.604	9.601	0.003	95	885819	250.0	233.2	
82 2-Hexanone	43	9.659	9.656	0.003	97	760964	500.0	502.2	
84 Chlorodibromomethane	129	9.817	9.814	0.003	92	444869	250.0	262.9	
85 Ethylene Dibromide	107	9.926	9.929	-0.003	99	471517	250.0	242.9	
86 3-Chlorobenzotrifluoride	180	10.389	10.386	0.003	92	759876	250.0	216.6	
87 Chlorobenzene	112	10.413	10.416	-0.003	94	1501256	250.0	224.5	
88 4-Chlorobenzotrifluoride	180	10.474	10.477	-0.003	96	723279	250.0	218.8	
89 1,1,1,2-Tetrachloroethane	131	10.510	10.513	-0.003	92	503057	250.0	243.7	
90 Ethylbenzene	106	10.516	10.513	0.003	98	880883	250.0	239.5	
91 m-Xylene & p-Xylene	106	10.644	10.647	-0.003	0	1067701	250.0	240.5	
92 o-Xylene	106	11.027	11.024	0.003	95	1027331	250.0	241.1	
93 Styrene	104	11.046	11.049	-0.003	92	1688053	250.0	242.5	
94 Bromoform	173	11.228	11.231	-0.003	95	253044	250.0	281.7	
96 2-Chlorobenzotrifluoride	180	11.295	11.298	-0.003	95	731650	250.0	221.3	
97 Isopropylbenzene	105	11.393	11.395	-0.003	98	2423171	250.0	232.1	
99 1,1,2,2-Tetrachloroethane	83	11.709	11.706	0.003	75	610898	250.0	232.5	
100 Bromobenzene	156	11.709	11.712	-0.003	96	586242	250.0	253.8	
102 trans-1,4-Dichloro-2-buten	53	11.739	11.742	-0.003	84	221836	250.0	284.1	
101 1,2,3-Trichloropropane	110	11.758	11.767	-0.009	86	205782	250.0	251.5	
103 N-Propylbenzene	120	11.812	11.809	0.003	97	723043	250.0	265.1	
104 2-Chlorotoluene	126	11.897	11.900	-0.003	95	598001	250.0	253.9	
105 3-Chlorotoluene	126	11.964	11.961	0.003	95	600892	250.0	246.5	

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	11.995	11.992	0.003	94	1960117	250.0	247.0	
107 4-Chlorotoluene	126	12.019	12.022	-0.003	98	641189	250.0	251.3	
108 tert-Butylbenzene	119	12.305	12.308	-0.003	93	1618547	250.0	256.4	
110 1,2,4-Trimethylbenzene	105	12.366	12.369	-0.003	98	1946593	250.0	249.1	
111 1,2-dichloro-4-(trifluorom	214	12.408	12.411	-0.003	98	530743	250.0	232.0	
112 sec-Butylbenzene	105	12.530	12.533	-0.003	96	2251780	250.0	247.4	
113 1,3-Dichlorobenzene	146	12.652	12.649	0.003	96	1022265	250.0	243.5	
114 4-Isopropyltoluene	119	12.688	12.685	0.003	95	1866871	250.0	254.7	
115 1,4-Dichlorobenzene	146	12.755	12.752	0.003	92	1045055	250.0	244.7	
116 2,4-Dichloro-1-(triflourom	214	12.780	12.776	0.004	96	474617	250.0	228.3	
118 2,5-Dichlorobenzotrifluori	214	12.822	12.819	0.003	0	539686	250.0	240.0	
120 n-Butylbenzene	91	13.096	13.099	-0.003	97	1628698	250.0	259.9	
121 1,2-Dichlorobenzene	146	13.108	13.111	-0.003	94	903210	250.0	243.0	
122 1,2-Dibromo-3-Chloropropan	75	13.899	13.896	0.003	78	88331	250.0	276.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.039	14.042	-0.003	0	1629871	750.0	771.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.459	14.462	-0.003	0	1030679	500.0	532.9	
126 1,2,4-Trichlorobenzene	180	14.726	14.723	0.003	95	371041	250.0	279.5	
127 Hexachlorobutadiene	225	14.872	14.869	0.003	97	175617	250.0	238.2	
128 Naphthalene	128	14.988	14.991	-0.003	98	1035925	250.0	301.2	
129 1,2,3-Trichlorobenzene	180	15.213	15.210	0.003	94	299099	250.0	276.7	
131 2,4,5-Trichlorotoluene	159	15.992	15.988	0.004	0	137650	250.0	250.8	
130 2,3,6-Trichlorotoluene	159	16.089	16.086	0.003	95	138350	250.0	350.5	
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		500.0	481.6	
S 134 1,2-Dichloroethene, Total	96				0		500.0	488.1	
S 135 1,3-Dichloropropene, Total	1				0		500.0	551.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOAACRLOEINPR_00001	Amount Added: 11.00	Units: uL	
VOA8260SURR_00038	Amount Added: 10.00	Units: uL	
voaWketmix1Re_00001	Amount Added: 10.00	Units: uL	
voaWEEmix1st_00002	Amount Added: 10.00	Units: uL	
VOA8260VOAPRI_00125	Amount Added: 10.00	Units: uL	
voaWVA2nd Res_00007	Amount Added: 10.00	Units: uL	
VOA8260INT_00038	Amount Added: 2.00	Units: uL	Run Reagent

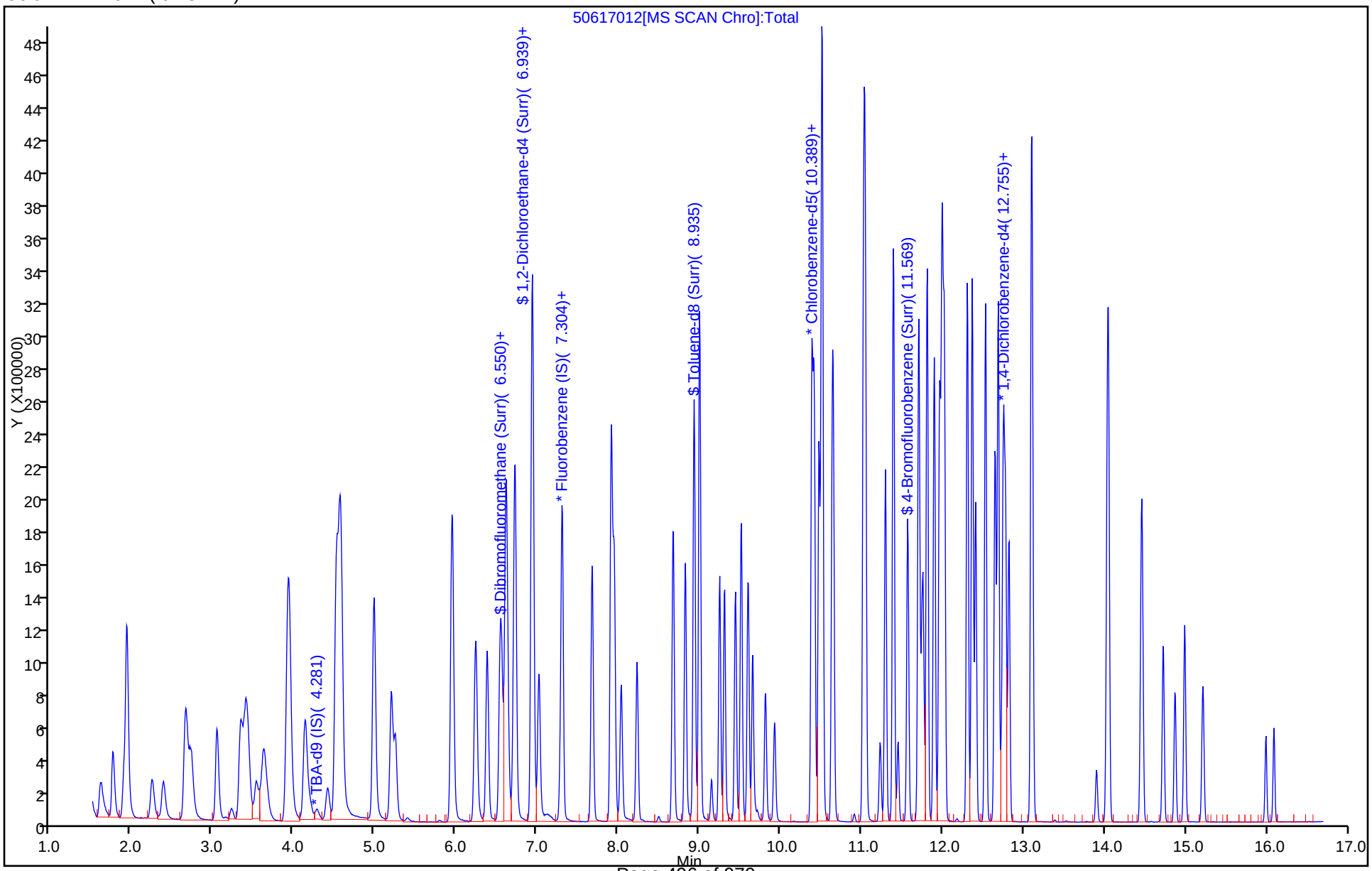
Report Date: 18-Jun-2015 11:19:55 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617012.D

Injection Date:	17-Jun-2015 16:29:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD50			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)



Report Date: 18-Jun-2015 11:19:56 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D
Lims ID: IC VSTD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 17-Jun-2015 18:04:30 ALS Bottle#: 14 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD1
Misc. Info.: 180-0007443-017
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Jun-2015 11:19:55 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: fergusond Date: 18-Jun-2015 09:50:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.277	4.272	0.005	0	95161	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.288	7.289	-0.001	98	369135	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.386	-0.001	89	79662	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.727	12.728	-0.001	97	101439	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.558	6.565	-0.007	90	9682	5.00	5.63	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.936	0.000	0	15123	5.00	6.09	
$ 7 Toluene-d8 (Surr)	98	8.931	8.938	-0.007	94	39633	5.00	5.99	
$ 8 4-Bromofluorobenzene (Surr	95	11.571	11.572	-0.001	83	13828	5.00	5.69	
11 Dichlorodifluoromethane	85	1.637	1.619	0.018	92	13985	5.00	5.62	
12 Chloromethane	50	1.771	1.771	0.000	98	16479	5.00	5.88	
13 Vinyl chloride	62	1.892	1.899	-0.007	97	16468	5.00	5.83	
14 Butadiene	39	1.953	1.942	0.011	97	17534	5.00	5.79	
15 Bromomethane	94	2.251	2.258	-0.007	87	9558	5.00	6.95	
16 Chloroethane	64	2.403	2.398	0.005	73	10069	5.00	5.92	
17 Dichlorofluoromethane	67	2.671	2.672	-0.001	98	22288	5.00	5.92	
18 Trichlorofluoromethane	101	2.665	2.708	-0.043	53	16306	5.00	5.31	
20 Ethyl ether	59	3.054	3.049	0.005	92	12234	5.00	5.76	
21 Acrolein	56	3.231	3.225	0.006	99	40673	100.0	99.8	
22 1,1-Dichloroethene	96	3.346	3.347	-0.001	94	11927	5.00	5.71	
23 1,1,2-Trichloro-1,2,2-trif	101	3.432	3.420	0.012	95	12416	5.00	5.63	
24 Acetone	43	3.450	3.444	0.006	98	21142	25.0	34.6	
25 Iodomethane	142	3.541	3.542	-0.001	99	16174	5.00	5.60	
26 Carbon disulfide	76	3.632	3.633	-0.001	98	24523	5.00	5.30	
28 3-Chloro-1-propene	76	3.924	3.919	0.005	78	5725	5.00	4.95	
30 Methyl acetate	43	3.949	3.943	0.006	99	55670	25.0	29.4	
31 Methylene Chloride	84	4.143	4.138	0.005	99	42380	5.00	5.12	
32 2-Methyl-2-propanol	59	4.405	4.406	-0.001	58	5750	50.0	52.9	
33 Acrylonitrile	53	4.533	4.521	0.012	99	50704	50.0	55.2	
34 trans-1,2-Dichloroethene	96	4.569	4.564	0.005	82	12851	5.00	5.78	
35 Methyl tert-butyl ether	73	4.575	4.582	-0.007	96	30869	5.00	5.63	

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	95	18266	5.00	5.31	
37 1,1-Dichloroethane	63	5.208	5.203	0.006	96	24720	5.00	5.82	
38 Vinyl acetate	43	5.257	5.251	0.006	96	16760	5.00	4.61	
44 2,2-Dichloropropane	77	5.938	5.945	-0.007	54	9285	5.00	5.12	
45 cis-1,2-Dichloroethene	96	5.944	5.951	-0.007	87	13356	5.00	5.67	
46 2-Butanone (MEK)	43	5.968	5.963	0.005	94	25657	25.0	28.6	
49 Chlorobromomethane	128	6.242	6.231	0.011	96	5160	5.00	5.19	
51 Tetrahydrofuran	42	6.260	6.255	0.005	88	8952	10.0	12.1	
52 Chloroform	83	6.388	6.383	0.005	95	23436	5.00	6.00	
53 1,1,1-Trichloroethane	97	6.540	6.541	-0.001	96	15369	5.00	5.23	
54 Cyclohexane	56	6.619	6.614	0.005	96	23411	5.00	5.33	
56 Carbon tetrachloride	117	6.717	6.717	0.000	95	13635	5.00	5.34	
55 1,1-Dichloropropene	75	6.723	6.729	-0.006	90	17095	5.00	5.31	
57 Isobutyl alcohol	41	6.930	6.930	0.000	80	7732	125.0	125.7	M
58 Benzene	78	6.942	6.942	0.000	97	53813	5.00	5.78	
59 1,2-Dichloroethane	62	7.021	7.021	0.000	97	18373	5.00	5.77	
62 n-Heptane	43	7.307	7.307	0.000	93	16224	5.00	5.34	
64 Trichloroethene	130	7.678	7.678	0.000	97	12617	5.00	5.74	
66 Methylcyclohexane	83	7.915	7.916	-0.001	91	17166	5.00	4.68	
67 1,2-Dichloropropane	63	7.958	7.952	0.006	92	12987	5.00	5.73	
68 Dibromomethane	93	8.043	8.037	0.006	92	7021	5.00	5.73	
70 1,4-Dioxane	88	8.025	8.037	-0.012	36	1168	100.0	75.0	
71 Dichlorobromomethane	83	8.231	8.232	-0.001	97	13279	5.00	5.37	
74 cis-1,3-Dichloropropene	75	8.676	8.676	0.000	91	12838	5.00	4.48	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.828	0.000	99	49926	25.0	26.5	
76 Toluene	91	9.004	9.005	-0.001	98	49160	5.00	5.74	
77 trans-1,3-Dichloropropene	75	9.247	9.248	-0.001	98	11320	5.00	4.91	
78 Ethyl methacrylate	69	9.308	9.309	-0.001	90	9383	5.00	4.28	
79 1,1,2-Trichloroethane	97	9.448	9.443	0.005	92	9973	5.00	6.00	
80 Tetrachloroethene	164	9.515	9.516	-0.001	96	9337	5.00	5.73	
81 1,3-Dichloropropane	76	9.600	9.601	-0.001	99	17423	5.00	5.74	
82 2-Hexanone	43	9.655	9.656	-0.001	98	32828	25.0	27.1	
84 Chlorodibromomethane	129	9.813	9.814	-0.001	88	7214	5.00	5.33	
85 Ethylene Dibromide	107	9.929	9.929	0.000	98	8260	5.00	5.32	
86 3-Chlorobenzotrifluoride	180	10.391	10.386	0.005	56	16372	5.00	5.84	
87 Chlorobenzene	112	10.415	10.416	-0.001	92	32854	5.00	6.14	
88 4-Chlorobenzotrifluoride	180	10.476	10.477	-0.001	94	15621	5.00	5.91	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.513	-0.006	42	8556	5.00	5.18	
90 Ethylbenzene	106	10.513	10.513	0.000	99	15088	5.00	5.13	
91 m-Xylene & p-Xylene	106	10.647	10.647	0.000	0	17089	5.00	4.81	
92 o-Xylene	106	11.030	11.024	0.006	98	16524	5.00	4.85	
93 Styrene	104	11.048	11.049	-0.001	93	24775	5.00	4.45	
94 Bromoform	173	11.231	11.231	0.000	94	3484	5.00	4.85	
96 2-Chlorobenzotrifluoride	180	11.297	11.298	-0.001	91	15410	5.00	5.83	
97 Isopropylbenzene	105	11.395	11.395	0.000	97	40468	5.00	4.85	
99 1,1,2,2-Tetrachloroethane	83	11.705	11.706	-0.001	81	12128	5.00	5.77	
100 Bromobenzene	156	11.711	11.712	-0.001	95	10764	5.00	5.45	
102 trans-1,4-Dichloro-2-buten	53	11.748	11.742	0.006	28	3040	5.00	4.55	
101 1,2,3-Trichloropropane	110	11.766	11.767	-0.001	85	4061	5.00	5.81	
103 N-Propylbenzene	120	11.808	11.809	-0.001	99	10453	5.00	4.48	
104 2-Chlorotoluene	126	11.900	11.900	0.000	95	11006	5.00	5.47	
105 3-Chlorotoluene	126	11.967	11.961	0.006	97	10480	5.00	5.03	

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	11.991	11.992	-0.001	96	30672	5.00	4.52	
107 4-Chlorotoluene	126	12.021	12.022	-0.001	99	11822	5.00	5.42	
108 tert-Butylbenzene	119	12.307	12.308	-0.001	94	24739	5.00	4.58	
110 1,2,4-Trimethylbenzene	105	12.368	12.369	-0.001	98	29952	5.00	4.48	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.411	0.000	95	11645	5.00	5.95	
112 sec-Butylbenzene	105	12.532	12.533	-0.001	96	36514	5.00	4.69	
113 1,3-Dichlorobenzene	146	12.648	12.649	-0.001	96	21571	5.00	6.01	
114 4-Isopropyltoluene	119	12.691	12.685	0.006	95	27473	5.00	4.38	
115 1,4-Dichlorobenzene	146	12.751	12.752	-0.001	94	21178	5.00	5.80	
116 2,4-Dichloro-1-(triflourom	214	12.776	12.776	0.000	92	10251	5.00	5.77	
118 2,5-Dichlorobenzotrifluori	214	12.818	12.819	-0.001	0	10978	5.00	5.71	
120 n-Butylbenzene	91	13.098	13.099	-0.001	97	23139	5.00	4.32	
121 1,2-Dichlorobenzene	146	13.110	13.111	-0.001	95	18353	5.00	5.77	
122 1,2-Dibromo-3-Chloropropan	75	13.901	13.896	0.005	69	1764	5.00	6.46	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.041	14.042	-0.001	0	24591	15.0	13.6	
125 2,3- & 3,4- Dichlorotoluen	125	14.455	14.462	-0.007	0	15149	10.0	9.16	
126 1,2,4-Trichlorobenzene	180	14.722	14.723	-0.001	91	5077	5.00	4.47	
127 Hexachlorobutadiene	225	14.868	14.869	-0.001	92	4131	5.00	6.55	
128 Naphthalene	128	14.984	14.991	-0.007	97	12282	5.00	4.18	
129 1,2,3-Trichlorobenzene	180	15.209	15.210	-0.001	94	4594	5.00	4.97	
131 2,4,5-Trichlorotoluene	159	15.994	15.988	0.006	0	1842	5.00	5.70	
130 2,3,6-Trichlorotoluene	159	16.097	16.086	0.011	88	1783	5.00	5.83	
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	9.66	
S 134 1,2-Dichloroethene, Total	96				0		10.0	11.5	
S 135 1,3-Dichloropropene, Total	1				0		10.0	9.40	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00038	Amount Added:	0.20	Units: uL	
voaWVA2nd Res_00007	Amount Added:	0.20	Units: uL	
voaWEEmix1st_00002	Amount Added:	0.20	Units: uL	
VOA8260VOAPRI_00125	Amount Added:	0.20	Units: uL	
voaWketmix1Re_00001	Amount Added:	0.80	Units: uL	
VOAACRLOEINPR_00001	Amount Added:	4.00	Units: uL	
VOA8260INT_00038	Amount Added:	2.00	Units: uL	Run Reagent

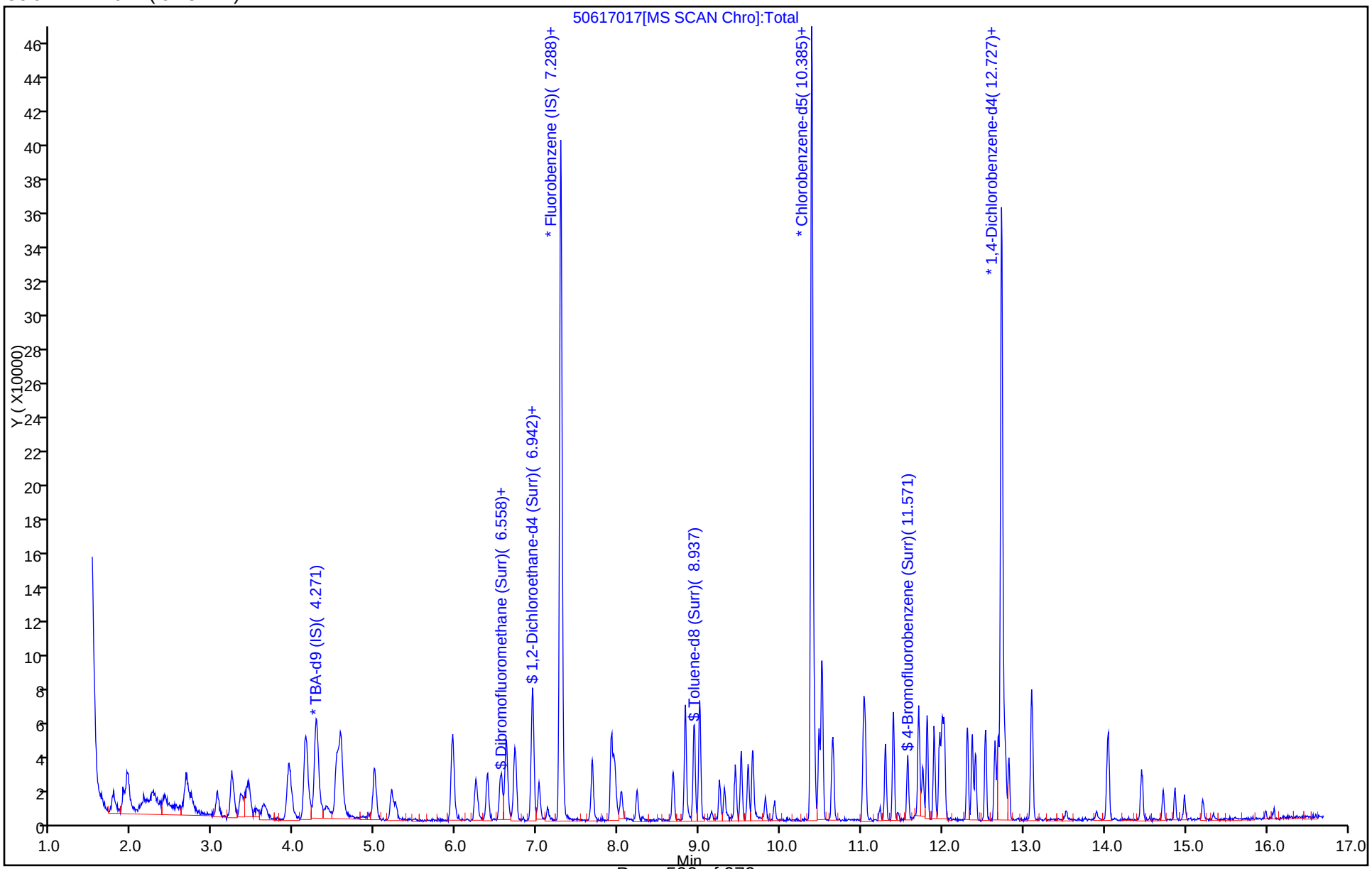
Report Date: 18-Jun-2015 11:19:56 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Injection Date:	17-Jun-2015 18:04:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD1			Worklist Smp#:	17
Client ID:					
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)



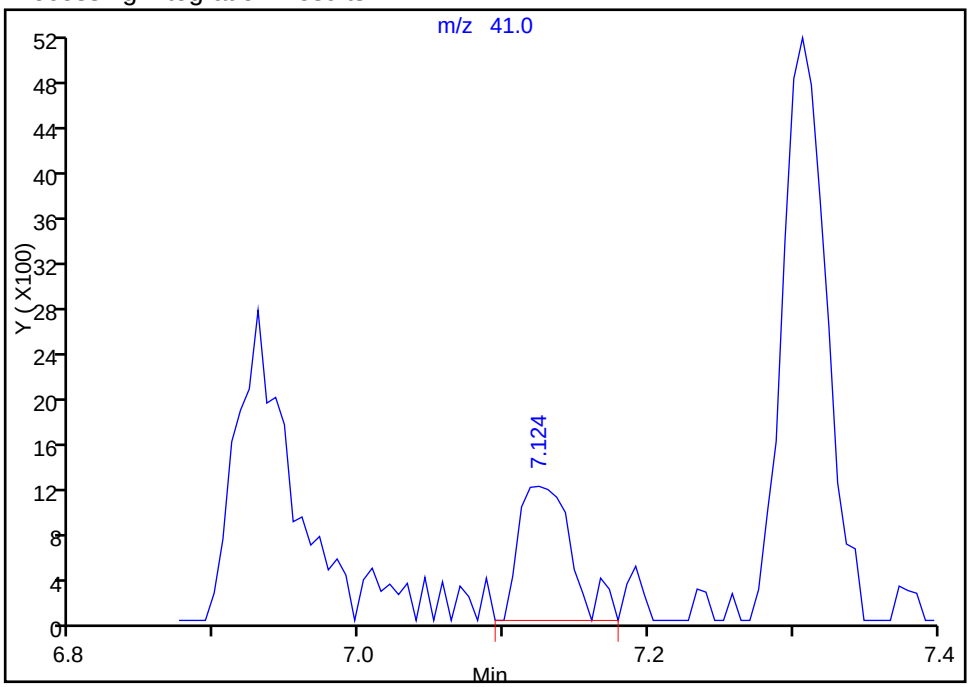
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D				
Injection Date:	17-Jun-2015 18:04:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	14	Worklist Smp#:	17
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		

57 Isobutyl alcohol, CAS: 78-83-1

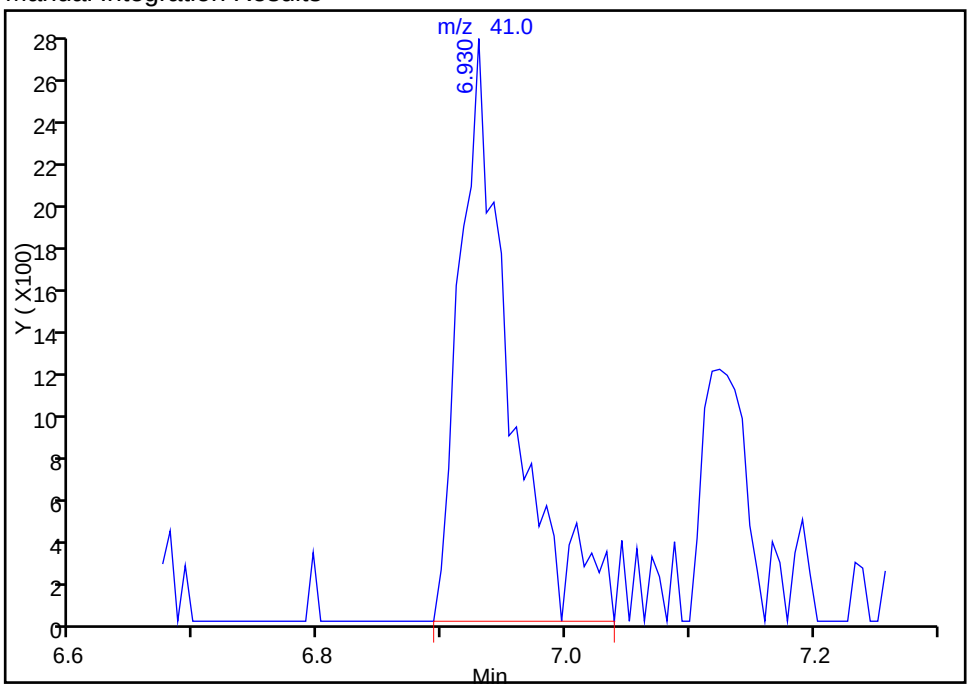
Processing Integration Results

RT: 7.12
Area: 3003
Amount: 47.931992
Amount Units: ng



Manual Integration Results

RT: 6.93
Area: 7732
Amount: 125.6565
Amount Units: ng



Reviewer: fergusond, 18-Jun-2015 09:50:05
Audit Action: Manually Integrated
Audit Reason: Peak Tail

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-143599/17	60602017.D
Level 2	IC 180-143599/7	60602007.D
Level 3	ICIS 180-143599/8	60602008.D
Level 4	IC 180-143599/9	60602009.D
Level 5	IC 180-143599/10	60602010.D
Level 6	IC 180-143599/11	60602011.D
Level 7	IC 180-143599/12	60602012.D
Level 8	IC 180-143599/13	60602013.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2688 0.2634	0.2743 0.2575	0.2943 0.2628	0.2682	0.2902	Ave		0.2724			0.1000	4.9		20.0			
Chloromethane	0.3233 0.2840	0.3072 0.2672	0.2904 0.2739	0.2875	0.2992	Ave		0.2916			0.1000	6.2		20.0			
Vinyl chloride	0.3240 0.3198	0.3402 0.2999	0.3326 0.3096	0.3351	0.3335	Ave		0.3243			0.1000	4.3		20.0			
1,3-Butadiene	0.3902 0.3437	0.3788 0.3154	0.3755 0.3323	0.3698	0.3635	Ave		0.3586			0.0100	7.2		20.0			
Bromomethane	0.1767 0.1271	0.1619 0.1264	0.1517 0.1166	0.1685	0.1648	Ave		0.1492			0.0500	15.2		20.0			
Chloroethane	0.2506 0.2167	0.2334 0.1994	0.2239 0.1922	0.2310	0.2305	Ave		0.2222			0.0500	8.6		20.0			
Dichlorofluoromethane	0.5918 0.5266	0.6015 0.4920	0.5804 0.4967	0.5559	0.5428	Ave		0.5485			0.0100	7.6		20.0			
Trichlorofluoromethane	0.4184 0.3873	0.4539 0.3526	0.4338 0.3613	0.4254	0.4082	Ave		0.4051			0.1000	8.7		20.0			
Ethyl ether	0.3220 0.2933	0.2961 0.2674	0.2887 0.2735	0.2756	0.2879	Ave		0.2881			0.0100	5.9		20.0			
Acrolein	0.0377 0.0431	0.0384 0.0404	0.0393 0.0405	0.0396	0.0414	Ave		0.0400			0.0100	4.3		20.0			
1,1-Dichloroethene	0.2527 0.2541	0.2542 0.2382	0.2586 0.2477	0.2562	0.2601	Ave		0.2527			0.1000	2.8		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2748 0.2590	0.2806 0.2471	0.2830 0.2550	0.2697	0.2704	Ave		0.2675			0.1000	4.7		20.0			
Acetone	0.0847 0.0813	0.0688 0.0789	0.0699 0.0774	0.0713	0.0751	Ave		0.0759			0.0500	7.5		20.0			
Iodomethane	0.4203 0.3817	0.4076 0.3685	0.3924 0.3803	0.3781	0.3944	Ave		0.3904			0.0100	4.4		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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

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	0.5998 0.7292	0.6611 0.6936	0.6845 0.7217	0.7091	0.7166	Ave		0.6895			0.1000	6.2		20.0			
Allyl chloride	0.1385 0.1654	0.1404 0.1603	0.1450 0.1672	0.1530	0.1569	Ave		0.1533			0.0100	7.2		20.0			
Methyl acetate	0.2353 0.2283	0.2093 0.2060	0.2022 0.2077	0.2125	0.2218	Ave		0.2154			0.1000	5.5		20.0			
Methylene Chloride	0.7546 0.3338	0.4230 0.3118	0.3593 0.3119	0.3365	0.3346	Lin2	2.2289	0.3126			0.1000				0.9990		0.9900
tert-Butyl alcohol	1.2659 1.2515	1.2698 1.1897	1.1673 1.1832	1.1446	1.2712	Ave		1.2179			0.0100	4.3		20.0			
Acrylonitrile	0.1166 0.1172	0.1049 0.1085	0.1076 0.1095	0.1100	0.1146	Ave		0.1111			0.0100	4.0		20.0			
trans-1,2-Dichloroethene	0.2983 0.3004	0.3057 0.2869	0.3010 0.2919	0.2987	0.3007	Ave		0.2979			0.1000	2.0		20.0			
Methyl tert-butyl ether	0.8689 0.9190	0.8762 0.8628	0.8564 0.8759	0.8810	0.9002	Ave		0.8801			0.1000	2.3		20.0			
Hexane	0.4491 0.4182	0.3995 0.3886	0.4185 0.3959	0.4095	0.4237	Ave		0.4129			0.0100	4.6		20.0			
1,1-Dichloroethane	0.5475 0.5475	0.5594 0.5176	0.5545 0.5206	0.5280	0.5378	Ave		0.5391			0.2000	2.9		20.0			
Vinyl acetate	0.2941 0.5362	0.3744 0.4820	0.4123 0.4959	0.4360	0.4736	Ave		0.4381			0.0100	17.6		20.0			
2,2-Dichloropropane	0.2482 0.2940	0.2850 0.2882	0.2941 0.3120	0.2927	0.2928	Ave		0.2884			0.0100	6.3		20.0			
cis-1,2-Dichloroethene	0.3258 0.3318	0.3268 0.3084	0.3240 0.3154	0.3171	0.3243	Ave		0.3217			0.1000	2.3		20.0			
2-Butanone (MEK)	0.1091 0.1405	0.1128 0.1264	0.1178 0.1206	0.1206	0.1284	Ave		0.1220			0.0500	8.1		20.0			
Bromochloromethane	0.1661 0.1510	0.1423 0.1388	0.1420 0.1450	0.1446	0.1467	Ave		0.1471			0.0100	5.8		20.0			
Tetrahydrofuran	0.1103 0.0943	0.0862 0.0888	0.0841 0.0868	0.0861	0.0902	Ave		0.0909			0.0100	9.3		20.0			
Chloroform	0.5753 0.5347	0.5516 0.5001	0.5357 0.5079	0.5339	0.5325	Ave		0.5340			0.2000	4.4		20.0			
1,1,1-Trichloroethane	0.3617 0.4059	0.3848 0.3905	0.4025 0.4015	0.4031	0.4139	Ave		0.3955			0.1000	4.1		20.0			
Cyclohexane	0.5419 0.5235	0.5361 0.4918	0.5365 0.5130	0.5252	0.5439	Ave		0.5265			0.1000	3.3		20.0			
Carbon tetrachloride	0.2783 0.3247	0.2927 0.3137	0.3112 0.3251	0.3215	0.3296	Ave		0.3121			0.1000	5.7		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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

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	0.3742 0.4387	0.4344 0.4064	0.4291 0.4088	0.4303	0.4352	Ave		0.4197			0.0100	5.2		20.0			
Isobutyl alcohol	0.0081 0.0093	0.0065 0.0087	0.0076 0.0088	0.0074	0.0085	Ave		0.0081		*	0.0100	11.3		20.0			
Benzene	1.3527 1.2147	1.2861 1.1194	1.2647 1.0953	1.2259	1.2422	Ave		1.2251			0.5000	6.9		20.0			
1,2-Dichloroethane	0.5223 0.4912	0.4755 0.4624	0.4687 0.4550	0.4687	0.4808	Ave		0.4781			0.1000	4.4		20.0			
n-Heptane	0.3328 0.3240	0.2970 0.2976	0.3128 0.2955	0.2989	0.3277	Ave		0.3108			0.0100	5.0		20.0			
Trichloroethene	0.2892 0.2957	0.2956 0.2779	0.2944 0.2845	0.2957	0.3054	Ave		0.2923			0.2000	2.9		20.0			
Methylcyclohexane	0.4640 0.4868	0.4841 0.4614	0.4968 0.4676	0.5006	0.4978	Ave		0.4824			0.1000	3.3		20.0			
1,2-Dichloropropane	0.3203 0.3296	0.2971 0.3098	0.3076 0.3035	0.3134	0.3239	Ave		0.3132			0.1000	3.5		20.0			
1,4-Dioxane	0.0026 0.0034	0.0031 0.0031	0.0028 0.0033	0.0023	0.0028	Ave		0.0029		*	0.0100	12.2		20.0			
Dibromomethane	0.1836 0.1938	0.1702 0.1796	0.1726 0.1787	0.1776	0.1875	Ave		0.1805			0.0100	4.3		20.0			
Bromodichloromethane	0.2778 0.3772	0.3022 0.3557	0.3182 0.3567	0.3359	0.3587	Ave		0.3353			0.2000	10.0		20.0			
cis-1,3-Dichloropropene	0.3300 0.4866	0.3182 0.4619	0.3744 0.4535	0.4060	0.4494	Ave		0.4100			0.2000	15.5		20.0			
4-Methyl-2-pentanone (MIBK)	0.9216 1.2182	1.0208 1.1599	1.1834 1.1041	1.2323	1.2584	Ave		1.1373			0.1000	10.2		20.0			
Toluene	6.4059 4.7766	5.4054 4.5113	5.5815 4.1843	5.4995	5.1405	Ave		5.1881			0.4000	13.5		20.0			
trans-1,3-Dichloropropene	0.9999 1.6684	1.1423 1.6182	1.3262 1.5176	1.4899	1.5203	Ave		1.4104			0.1000	16.7		20.0			
Ethyl methacrylate	1.3614 1.7241	1.2463 1.6383	1.4627 1.5345	1.5929	1.6429	Ave		1.5254			0.0100	10.5		20.0			
1,1,2-Trichloroethane	1.2506 1.0733	1.0678 1.0178	1.0899 0.9380	1.0952	1.0835	Ave		1.0770			0.1000	8.1		20.0			
Tetrachloroethene	1.1745 0.9025	1.0070 0.8735	1.0396 0.8327	1.0061	0.9610	Ave		0.9746			0.2000	11.1		20.0			
1,3-Dichloropropane	2.2518 2.0428	1.9986 1.9589	2.0352 1.7894	2.1089	2.0492	Ave		2.0293			0.0100	6.5		20.0			
2-Hexanone	0.6996 0.9354	0.7432 0.9074	0.8413 0.8124	0.9485	0.9505	Ave		0.8548			0.1000	11.3		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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

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	0.6939 0.9550	0.7239 0.9252	0.8264 0.8662	0.8685	0.8745	Ave		0.8417			0.1000	10.8		20.0			
1,2-Dibromoethane (EDB)	1.0846 1.0609	0.8928 1.0028	1.0112 0.9471	1.0484	1.0175	Ave		1.0082			0.1000	6.2		20.0			
3-Chlorobenzotrifluoride	1.9818 1.5869	1.6949 1.4184	1.9262 1.3609	1.8686	1.7262	Ave		1.6955			0.0100	13.5		20.0			
Chlorobenzene	4.0421 3.1909	3.5701 3.0072	3.5750 2.8143	3.5316	3.3181	Ave		3.3812			0.5000	11.4		20.0			
4-Chlorobenzotrifluoride	1.8893 1.5281	1.5796 1.3387	1.8132 1.3129	1.7280	1.6137	Ave		1.6005			0.0100	13.0		20.0			
1,1,1,2-Tetrachloroethane	0.8883 1.0427	0.9852 1.0221	1.0363 0.9803	1.0553	0.9979	Ave		1.0010			0.0100	5.3		20.0			
Ethylbenzene	1.9990 1.8324	1.9113 1.7670	2.0160 1.6756	1.9943	1.9290	Ave		1.8906			0.1000	6.5		20.0			
m-Xylene & p-Xylene	2.3490 2.2896	2.3627 2.2148	2.4999 2.0955	2.5482	2.3990	Ave		2.3448			0.1000	6.3		20.0			
o-Xylene	2.2320 2.2399	2.4032 2.1635	2.5113 2.0276	2.4208	2.2934	Ave		2.2865			0.3000	6.8		20.0			
Styrene	3.3261 3.6629	3.7196 3.4905	3.9155 3.2705	3.9776	3.7710	Ave		3.6417			0.3000	7.1		20.0			
Bromoform	0.3861 0.5497	0.3834 0.5337	0.4374 0.5279	0.4693	0.4859	Ave		0.4717			0.1000	13.8		20.0			
2-Chlorobenzotrifluoride	1.8317 1.6113	1.6668 1.4586	1.9531 1.4140	1.8871	1.7479	Ave		1.6963			0.0100	11.5		20.0			
Isopropylbenzene	5.7084 5.1190	6.0404 4.8358	6.2581 4.4848	6.0765	5.5531	Ave		5.5095			0.1000	11.6		20.0			
1,1,2,2-Tetrachloroethane	1.3541 1.4102	1.3537 1.3049	1.4956 1.2887	1.5259	1.4103	Ave		1.3929			0.3000	6.1		20.0			
Bromobenzene	0.9310 0.9304	0.8691 0.8758	0.9466 0.8673	0.8975	0.9379	Ave		0.9069			0.0100	3.7		20.0			
trans-1,4-Dichloro-2-butene	0.2270 0.2979	0.2161 0.2797	0.2310 0.2775	0.2666	0.2878	Ave		0.2605			0.0100	12.0		20.0			
1,2,3-Trichloropropane	0.3191 0.3238	0.3167 0.3138	0.3110 0.3096	0.3221	0.3375	Ave		0.3192			0.0100	2.8		20.0			
N-Propylbenzene	0.9065 0.9779	0.9418 0.9457	1.0088 0.9320	1.0001	1.0182	Ave		0.9664			0.0100	4.2		20.0			
2-Chlorotoluene	0.8132 0.8620	0.8369 0.8210	0.8809 0.8228	0.8769	0.8660	Ave		0.8474			0.0100	3.2		20.0			
3-Chlorotoluene	0.8673 0.8720	0.8566 0.7916	0.9295 0.7798	0.8931	0.9011	Ave		0.8614			0.0100	6.0		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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

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	2.8865 2.9351	3.0585 2.7949	3.3088 2.6886	3.1951	3.1671	Ave		3.0043			0.0100	7.1		20.0			
4-Chlorotoluene	0.8968 0.9425	0.9103 0.8831	0.9674 0.8775	0.9469	0.9429	Ave		0.9209			0.0100	3.6		20.0			
tert-Butylbenzene	2.3662 2.3443	2.3295 2.2245	2.4966 2.1680	2.5017	2.4876	Ave		2.3648			0.0100	5.3		20.0			
1,2,4-Trimethylbenzene	2.8854 3.0397	3.1659 2.8522	3.3892 2.7826	3.2440	3.2456	Ave		3.0756			0.0100	7.1		20.0			
3,4-Dichlorobenzotrifluoride	0.9119 0.8078	0.8191 0.7273	0.9247 0.7386	0.8539	0.8754	Ave		0.8323			0.0100	8.8		20.0			
sec-Butylbenzene	3.5796 3.3385	3.6434 3.1637	3.8832 3.0673	3.6652	3.6962	Ave		3.5046			0.0100	8.1		20.0			
1,3-Dichlorobenzene	1.9138 1.6777	1.7500 1.5751	1.7684 1.5529	1.6970	1.7249	Ave		1.7075			0.6000	6.7		20.0			
4-Isopropyltoluene	2.6515 2.8436	2.9938 2.6804	3.1790 2.6067	3.0490	3.0518	Ave		2.8820			0.0100	7.5		20.0			
1,4-Dichlorobenzene	2.0254 1.7414	1.8302 1.6377	1.8390 1.6038	1.7684	1.7593	Ave		1.7756			0.5000	7.4		20.0			
2,4-Dichlorobenzotrifluoride	0.7299 0.8079	0.8322 0.7459	0.8739 0.7629	0.8257	0.8458	Ave		0.8030			0.0100	6.4		20.0			
2,5-Dichlorobenzotrifluoride	0.9083 0.8885	0.8614 0.7898	1.0312 0.7985	0.9790	0.9427	Ave		0.8999			0.0100	9.3		20.0			
n-Butylbenzene	2.4265 2.6355	2.7771 2.4864	2.9270 2.4557	2.8042	2.8226	Ave		2.6669			0.0100	7.2		20.0			
1,2-Dichlorobenzene	1.8229 1.6565	1.7567 1.5498	1.7518 1.5461	1.6598	1.6652	Ave		1.6761			0.4000	5.9		20.0			
1,2-Dibromo-3-Chloropropane	0.1272 0.1722	0.1200 0.1605	0.1348 0.1725	0.1397	0.1568	Ave		0.1480			0.0500	13.7		20.0			
1,2,4-Trichlorobenzene	1.3025 1.2590	1.2133 1.1870	1.3078 1.1807	1.1902	1.2043	Ave		1.2306			0.2000	4.2		20.0			
Hexachlorobutadiene	0.4524 0.4329	0.4060 0.4062	0.4354 0.4070	0.4115	0.3978	Ave		0.4187			0.0100	4.6		20.0			
Naphthalene	2.2497 2.7864	2.4489 2.5956	2.7749 2.5613	2.6246	2.6767	Ave		2.5898			0.0100	6.8		20.0			
1,2,3-Trichlorobenzene	1.0938 1.1647	1.0809 1.0920	1.1715 1.0935	1.0571	1.0447	Ave		1.0998			0.0100	4.2		20.0			
2,4,5-Trichlorotoluene	0.5208 0.7147	0.5223 0.6418	0.6519 0.6633	0.5677	0.5482	Ave		0.6038			0.0100	12.1		20.0			
2,3,6-Trichlorotoluene	0.5233 0.6555	0.5261 0.5993	0.6233 0.6000	0.5368	0.5088	Ave		0.5716			0.0100	9.5		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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

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								
Dibromofluoromethane (Surr)	0.2312 0.2478	0.2423 0.2311	0.2563 0.2229	0.2465	0.2380	Ave		0.2395				4.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3983 0.3836	0.3709 0.3566	0.3882 0.3369	0.3779	0.3801	Ave		0.3740				5.2		20.0			
Toluene-d8 (Surr)	4.3847 3.6981	3.9803 3.4436	4.5905 3.1301	4.3047	3.8740	Ave		3.9257				12.6		20.0			
4-Bromofluorobenzene (Surr)	1.6915 1.6096	1.5983 1.5380	1.8576 1.4223	1.7708	1.6289	Ave		1.6396				8.2		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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-143599/17	60602017.D
Level 2	IC 180-143599/7	60602007.D
Level 3	ICIS 180-143599/8	60602008.D
Level 4	IC 180-143599/9	60602009.D
Level 5	IC 180-143599/10	60602010.D
Level 6	IC 180-143599/11	60602011.D
Level 7	IC 180-143599/12	60602012.D
Level 8	IC 180-143599/13	60602013.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	11609 389412	57682 482975	128688 605119	178483	256901	5.00 175	25.0 200	50.0 250	75.0	100
Chloromethane	FB	Ave	13963 419884	64599 501208	126955 630586	191328	264867	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl chloride	FB	Ave	13994 472803	71540 562585	145427 712757	222998	295157	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Butadiene	FB	Ave	16853 508191	79648 591606	164166 765118	246064	321722	5.00 175	25.0 200	50.0 250	75.0	100
Bromomethane	FB	Ave	7632 187988	34040 237112	66330 268539	112132	145909	5.00 175	25.0 200	50.0 250	75.0	100
Chloroethane	FB	Ave	10822 320402	49085 374018	97895 442569	153734	204015	5.00 175	25.0 200	50.0 250	75.0	100
Dichlorofluoromethane	FB	Ave	25559 778579	126482 922973	253761 1143417	369919	480459	5.00 175	25.0 200	50.0 250	75.0	100
Trichlorofluoromethane	FB	Ave	18067 572570	95441 661390	189661 831776	283097	361323	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl ether	FB	Ave	13904 433678	62275 501649	126212 629741	183415	254820	5.00 175	25.0 200	50.0 250	75.0	100
Acrolein	FB	Ave	32605 81941	40335 94803	51516 102612	61448	73220	100 225	125 250	150 275	175	200
1,1-Dichloroethene	FB	Ave	10915 375628	53450 446907	113059 570197	170523	230261	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	11867 382967	59012 463571	123735 587081	179480	239323	5.00 175	25.0 200	50.0 250	75.0	100
Acetone	FB	Ave	18285 240356	28955 295950	61117 356250	94958	132922	25.0 350	50.0 400	100 500	150	200
Iodomethane	FB	Ave	18152 564405	85713 691306	171575 875406	251606	349085	5.00 175	25.0 200	50.0 250	75.0	100
Carbon disulfide	FB	Ave	25903 1078105	139012 1301175	299300 1661512	471925	634285	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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

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	5980 244614	29528 300657	63385 384828	101829	138879	5.00 175	25.0 200	50.0 250	75.0	100
Methyl acetate	FB	Ave	50813 1687607	220066 1932107	442021 2391263	707212	981743	25.0 875	125 1000	250 1250	375	500
Methylene Chloride	FB	Lin2	32590 493523	88950 584860	157091 718118	223914	296159	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butyl alcohol	TBA	Ave	9424 372385	44732 425370	86346 558581	134521	197206	50.0 1750	250 2000	500 2500	750	1000
Acrylonitrile	FB	Ave	50365 1732908	220526 2034733	470656 2520748	731739	1014503	50.0 1750	250 2000	500 2500	750	1000
trans-1,2-Dichloroethene	FB	Ave	12883 444174	64277 538169	131616 671912	198777	266140	5.00 175	25.0 200	50.0 250	75.0	100
Methyl tert-butyl ether	FB	Ave	37525 1358783	184247 1618437	374452 2016575	586282	796793	5.00 175	25.0 200	50.0 250	75.0	100
Hexane	FB	Ave	19396 618324	84000 728918	182964 911338	272491	375015	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloroethane	FB	Ave	23646 809553	117641 970843	242428 1198527	351365	476030	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl acetate	FB	Ave	12702 792734	78740 904203	180273 1141601	290120	419160	5.00 175	25.0 200	50.0 250	75.0	100
2,2-Dichloropropane	FB	Ave	10719 434669	59932 540527	128599 718383	194809	259124	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,2-Dichloroethene	FB	Ave	14070 490556	68730 578498	141644 726211	211030	287048	5.00 175	25.0 200	50.0 250	75.0	100
2-Butanone (MEK)	FB	Ave	23555 415594	47449 474394	103038 555151	160496	227321	25.0 350	50.0 400	100 500	150	200
Bromochloromethane	FB	Ave	7173 223323	29926 260282	62082 333806	96230	129843	5.00 175	25.0 200	50.0 250	75.0	100
Tetrahydrofuran	FB	Ave	9528 278794	36271 333084	73547 399870	114555	159720	10.0 350	50.0 400	100 500	150	200
Chloroform	FB	Ave	24843 790626	115986 938131	234211 1169250	355299	471311	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1-Trichloroethane	FB	Ave	15621 600178	80914 732437	175997 924324	268240	366332	5.00 175	25.0 200	50.0 250	75.0	100
Cyclohexane	FB	Ave	23401 773954	112738 922446	234591 1181126	349521	481463	5.00 175	25.0 200	50.0 250	75.0	100
Carbon tetrachloride	FB	Ave	12019 480138	61554 588436	136052 748477	213971	291701	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloropropene	FB	Ave	16161 648690	91356 762355	187626 941075	286377	385169	5.00 175	25.0 200	50.0 250	75.0	100
Isobutyl alcohol	FB	Ave	8705 342399	33925 406628	82592 507961	123108	189145	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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

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	58419 1795893	270437 2099886	552953 2521609	815796	1099478	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane	FB	Ave	22557 726180	99995 867478	204935 1047382	311894	425578	5.00 175	25.0 200	50.0 250	75.0	100
n-Heptane	FB	Ave	14374 479054	62456 558248	136754 680203	198896	290061	5.00 175	25.0 200	50.0 250	75.0	100
Trichloroethene	FB	Ave	12488 437177	62164 521290	128724 654862	196810	270312	5.00 175	25.0 200	50.0 250	75.0	100
Methylcyclohexane	FB	Ave	20040 719808	101805 865585	217221 1076468	333126	440589	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloropropane	FB	Ave	13831 487371	62473 581224	134510 698602	208541	286716	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dioxane	FB	Ave	2255 99203	12840 116012	24340 152674	30887	49025	100 3500	500 4000	1000 5000	1500	2000
Dibromomethane	FB	Ave	7930 286555	35789 336857	75482 411405	118188	165946	5.00 175	25.0 200	50.0 250	75.0	100
Bromodichloromethane	FB	Ave	11995 557747	63546 667166	139143 821160	223544	317491	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,3-Dichloropropene	FB	Ave	14253 719515	66918 866431	163717 1043978	270207	397748	5.00 175	25.0 200	50.0 250	75.0	100
4-Methyl-2-pentanone (MIBK)	CBZ	Ave	44694 944307	100758 1097641	237685 1336014	382067	567593	25.0 350	50.0 400	100 500	150	200
Toluene	CBZ	Ave	62135 1851302	266780 2134560	560498 2531558	852524	1159328	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,3-Dichloropropene	CBZ	Ave	9699 646638	56376 765684	133176 918179	230963	342869	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl methacrylate	CBZ	Ave	13205 668212	61511 775184	146888 928414	246932	370528	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloroethane	CBZ	Ave	12130 415968	52701 481605	109447 567505	169772	244368	5.00 175	25.0 200	50.0 250	75.0	100
Tetrachloroethene	CBZ	Ave	11392 349769	49698 413312	104393 503777	155971	216742	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichloropropane	CBZ	Ave	21842 791746	98637 926856	204372 1082576	326912	462148	5.00 175	25.0 200	50.0 250	75.0	100
2-Hexanone	CBZ	Ave	33929 725114	73364 858660	168968 983046	294085	428721	25.0 350	50.0 400	100 500	150	200
Dibromochloromethane	CBZ	Ave	6731 370139	35726 437749	82986 524072	134632	197216	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromoethane (EDB)	CBZ	Ave	10520 411188	44063 474462	101550 573012	162523	229467	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorobenzotrifluoride	CBZ	Ave	19223 615025	83648 671147	193435 823347	289668	389311	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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

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	39207 1236712	176200 1422898	359006 1702694	547462	748328	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorobenzotrifluoride	CBZ	Ave	18326 592273	77960 633425	182085 794333	267875	363940	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1,2-Tetrachloroethane	CBZ	Ave	8616 404111	48625 483615	104069 593106	163592	225060	5.00 175	25.0 200	50.0 250	75.0	100
Ethylbenzene	CBZ	Ave	19390 710186	94328 836069	202444 1013761	309153	435041	5.00 175	25.0 200	50.0 250	75.0	100
m-Xylene & p-Xylene	CBZ	Ave	22785 887397	116607 1047977	251047 1267781	395025	541035	5.00 175	25.0 200	50.0 250	75.0	100
o-Xylene	CBZ	Ave	21650 868113	118609 1023674	252185 1226725	375275	517233	5.00 175	25.0 200	50.0 250	75.0	100
Styrene	CBZ	Ave	32262 1419636	183578 1651549	393201 1978663	616606	850455	5.00 175	25.0 200	50.0 250	75.0	100
Bromoform	CBZ	Ave	3745 213045	18922 252535	43923 319392	72745	109582	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorobenzotrifluoride	CBZ	Ave	17767 624496	82265 690171	196137 855502	292530	394208	5.00 175	25.0 200	50.0 250	75.0	100
Isopropylbenzene	CBZ	Ave	55370 1983997	298117 2288109	628440 2713344	941968	1252377	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2,2-Tetrachloroethane	CBZ	Ave	13134 546556	66812 617417	150190 779657	236536	318065	5.00 175	25.0 200	50.0 250	75.0	100
Bromobenzene	DCB	Ave	15157 541780	71883 632300	156947 775401	229658	318335	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,4-Dichloro-2-butene	DCB	Ave	3695 173489	17877 201966	38292 248080	68227	97683	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichloropropane	DCB	Ave	5195 188578	26191 226541	51558 276755	82428	114563	5.00 175	25.0 200	50.0 250	75.0	100
N-Propylbenzene	DCB	Ave	14758 569469	77899 682816	167258 833233	255917	345611	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorotoluene	DCB	Ave	13240 501945	69221 592726	146050 735605	224390	293933	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorotoluene	DCB	Ave	14120 507762	70850 571499	154114 697185	228533	305836	5.00 175	25.0 200	50.0 250	75.0	100
1,3,5-Trimethylbenzene	DCB	Ave	46993 1709190	252973 2017878	548606 2403720	817631	1074980	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorotoluene	DCB	Ave	14601 548826	75294 637618	160389 784490	242303	320035	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butylbenzene	DCB	Ave	38523 1365158	192677 1606064	413941 1938245	640182	844351	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trimethylbenzene	DCB	Ave	46976 1770108	261852 2059251	561935 2487778	830145	1101608	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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

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	14846 470394	67749 525135	153320 660319	218501	297124	5.00 175	25.0 200	50.0 250	75.0	100
sec-Butylbenzene	DCB	Ave	58277 1944072	301348 2284193	643828 2742271	937916	1254563	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichlorobenzene	DCB	Ave	31158 976967	144744 1137208	293199 1388399	434270	585461	5.00 175	25.0 200	50.0 250	75.0	100
4-Isopropyltoluene	DCB	Ave	43168 1655882	247617 1935231	527074 2330490	780227	1035829	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dichlorobenzene	DCB	Ave	32974 1014071	151378 1182402	304898 1433894	452525	597130	5.00 175	25.0 200	50.0 250	75.0	100
2,4-Dichlorobenzotrifluoride	DCB	Ave	11883 470455	68829 538540	144886 682083	211293	287092	5.00 175	25.0 200	50.0 250	75.0	100
2,5-Dichlorobenzotrifluoride	DCB	Ave	14787 517417	71247 570204	170976 713859	250525	319955	5.00 175	25.0 200	50.0 250	75.0	100
n-Butylbenzene	DCB	Ave	39504 1534726	229693 1795142	485293 2195506	717591	958044	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichlorobenzene	DCB	Ave	29677 964637	145302 1118982	290447 1382309	424749	565207	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromo-3-Chloropropane	DCB	Ave	2071 100251	9926 115911	22342 154200	35754	53224	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trichlorobenzene	DCB	Ave	21205 733126	100352 857001	216841 1055560	304574	408775	5.00 175	25.0 200	50.0 250	75.0	100
Hexachlorobutadiene	DCB	Ave	7366 252080	33582 293292	72190 363903	105315	135018	5.00 175	25.0 200	50.0 250	75.0	100
Naphthalene	DCB	Ave	36627 1622616	202555 1874020	460084 2289880	671630	908504	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichlorobenzene	DCB	Ave	17808 678224	89401 788418	194232 977618	270509	354579	5.00 175	25.0 200	50.0 250	75.0	100
2,4,5-Trichlorotoluene	DCB	Ave	8479 416192	43197 463413	108091 593017	145278	186073	5.00 175	25.0 200	50.0 250	75.0	100
2,3,6-Trichlorotoluene	DCB	Ave	8520 381721	43516 432678	103350 536424	137361	172710	5.00 175	25.0 200	50.0 250	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	9985 366426	50947 433543	112048 513060	164014	210624	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	17199 567110	77984 668907	169735 775602	251467	336422	5.00 175	25.0 200	50.0 250	75.0	100
Toluene-d8 (Surr)	CBZ	Ave	42530 1433286	196443 1629369	460980 1893763	667309	873702	5.00 175	25.0 200	50.0 250	75.0	100
4-Bromofluorobenzene (Surr)	CBZ	Ave	16407 623850	78882 727743	186543 860486	274514	367360	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.: 180-45946-1 Analy Batch No.: 143599

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/02/2015 16:07 Calibration End Date: 06/02/2015 20:05 Calibration ID: 24020

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602007.D
Lims ID: IC VSTD5
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 02-Jun-2015 16:07:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD5
Misc. Info.: 180-0007230-007
Operator ID: 001562 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub5

Method: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 03-Jun-2015 10:40:19 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK037

First Level Reviewer: fergusond Date: 03-Jun-2015 09:33:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.226	4.229	-0.003	94	140910	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.283	0.003	98	420567	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.395	10.398	-0.003	89	98708	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.743	12.746	-0.003	97	165422	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.550	6.547	0.003	91	50947	25.0	25.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.927	6.930	-0.003	69	77984	25.0	24.8	
$ 7 Toluene-d8 (Surr)	98	8.941	8.938	0.003	93	196443	25.0	25.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.581	11.584	-0.003	85	78882	25.0	24.4	
11 Dichlorodifluoromethane	85	1.604	1.607	-0.003	99	57682	25.0	25.2	
12 Chloromethane	50	1.756	1.753	0.003	99	64599	25.0	26.3	
13 Vinyl chloride	62	1.884	1.893	-0.009	98	71540	25.0	26.2	
14 Butadiene	39	1.926	1.930	-0.004	94	79648	25.0	26.4	
15 Bromomethane	94	2.237	2.228	0.009	93	34040	25.0	27.1	
16 Chloroethane	64	2.377	2.374	0.003	99	49085	25.0	26.3	
17 Dichlorofluoromethane	67	2.650	2.648	0.002	97	126482	25.0	27.4	
18 Trichlorofluoromethane	101	2.650	2.660	-0.010	82	95441	25.0	28.0	
20 Ethyl ether	59	3.040	3.037	0.003	92	62275	25.0	25.7	
21 Acrolein	56	3.222	3.226	-0.004	98	40335	125.0	119.7	
22 1,1-Dichloroethene	96	3.338	3.341	-0.003	95	53450	25.0	25.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.399	3.396	0.003	94	59012	25.0	26.2	
24 Acetone	43	3.435	3.426	0.009	94	28955	50.0	45.3	
25 Iodomethane	142	3.533	3.530	0.003	98	85713	25.0	26.1	
26 Carbon disulfide	76	3.630	3.633	-0.003	99	139012	25.0	24.0	
30 Methyl acetate	43	3.922	3.919	0.003	98	220066	125.0	121.5	
29 3-Chloro-1-propene	76	3.898	3.919	-0.021	92	29528	25.0	22.9	
31 Methylene Chloride	84	4.135	4.126	0.009	92	88950	25.0	26.7	
32 2-Methyl-2-propanol	59	4.372	4.363	0.009	92	44732	250.0	260.7	
33 Acrylonitrile	53	4.500	4.497	0.003	98	220526	250.0	236.0	
34 trans-1,2-Dichloroethene	96	4.561	4.564	-0.003	66	64277	25.0	25.6	
35 Methyl tert-butyl ether	73	4.567	4.570	-0.003	98	184247	25.0	24.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.980	4.984	-0.004	94	84000	25.0	24.2	
37 1,1-Dichloroethane	63	5.193	5.191	0.003	97	117641	25.0	25.9	
38 Vinyl acetate	43	5.236	5.233	0.003	98	78740	25.0	21.4	
43 cis-1,2-Dichloroethene	96	5.942	5.939	0.003	84	68730	25.0	25.4	
44 2-Butanone (MEK)	43	5.942	5.945	-0.003	48	47449	50.0	46.2	
42 2,2-Dichloropropane	77	5.935	5.945	-0.010	63	59932	25.0	24.7	
48 Chlorobromomethane	128	6.227	6.231	-0.004	97	29926	25.0	24.2	
49 Tetrahydrofuran	42	6.240	6.243	-0.003	88	36271	50.0	47.5	
50 Chloroform	83	6.374	6.371	0.003	94	115986	25.0	25.8	
51 1,1,1-Trichloroethane	97	6.544	6.535	0.009	97	80914	25.0	24.3	
52 Cyclohexane	56	6.617	6.614	0.003	93	112738	25.0	25.5	
53 Carbon tetrachloride	117	6.708	6.711	-0.003	88	61554	25.0	23.4	
54 1,1-Dichloropropene	75	6.726	6.724	0.002	93	91356	25.0	25.9	
55 Isobutyl alcohol	41	6.897	6.894	0.003	91	33925	625.0	498.1	
56 Benzene	78	6.939	6.943	-0.004	98	270437	25.0	26.2	
57 1,2-Dichloroethane	62	7.012	7.016	-0.004	99	99995	25.0	24.9	
59 n-Heptane	43	7.310	7.308	0.002	88	62456	25.0	23.9	
61 Trichloroethene	130	7.675	7.679	-0.004	96	62164	25.0	25.3	
63 Methylcyclohexane	83	7.925	7.922	0.003	91	101805	25.0	25.1	
64 1,2-Dichloropropane	63	7.949	7.952	-0.003	93	62473	25.0	23.7	
65 1,4-Dioxane	88	8.028	8.025	0.003	40	12840	500.0	524.1	
67 Dibromomethane	93	8.034	8.031	0.003	95	35789	25.0	23.6	
68 Dichlorobromomethane	83	8.229	8.226	0.003	99	63546	25.0	22.5	
71 cis-1,3-Dichloropropene	75	8.673	8.676	-0.003	91	66918	25.0	19.4	
72 4-Methyl-2-pentanone (MIBK	43	8.819	8.822	-0.003	97	100758	50.0	44.9	
73 Toluene	91	9.008	9.011	-0.003	99	266780	25.0	26.0	
74 trans-1,3-Dichloropropene	75	9.251	9.254	-0.003	95	56376	25.0	20.2	
75 Ethyl methacrylate	69	9.312	9.315	-0.003	90	61511	25.0	20.4	
76 1,1,2-Trichloroethane	97	9.446	9.449	-0.003	93	52701	25.0	24.8	
77 Tetrachloroethene	164	9.525	9.528	-0.003	96	49698	25.0	25.8	
78 1,3-Dichloropropane	76	9.604	9.607	-0.003	92	98637	25.0	24.6	
79 2-Hexanone	43	9.659	9.656	0.003	98	73364	50.0	43.5	
81 Chlorodibromomethane	129	9.823	9.820	0.003	90	35726	25.0	21.5	
82 Ethylene Dibromide	107	9.938	9.936	0.002	99	44063	25.0	22.1	
83 3-Chlorobenzotrifluoride	180	10.395	10.392	0.003	90	83648	25.0	25.0	
84 Chlorobenzene	112	10.425	10.422	0.003	94	176200	25.0	26.4	
85 4-Chlorobenzotrifluoride	180	10.486	10.483	0.003	97	77960	25.0	24.7	
86 1,1,1,2-Tetrachloroethane	131	10.522	10.520	0.002	86	48625	25.0	24.6	
87 Ethylbenzene	106	10.522	10.526	-0.004	98	94328	25.0	25.3	
88 m-Xylene & p-Xylene	106	10.656	10.660	-0.004	99	116607	25.0	25.2	
89 o-Xylene	106	11.040	11.043	-0.003	97	118609	25.0	26.3	
90 Styrene	104	11.058	11.061	-0.003	94	183578	25.0	25.5	
91 Bromoform	173	11.240	11.244	-0.004	87	18922	25.0	20.3	
92 2-Chlorobenzotrifluoride	180	11.301	11.304	-0.003	95	82265	25.0	24.6	
93 Isopropylbenzene	105	11.405	11.408	-0.003	97	298117	25.0	27.4	
96 1,1,2,2-Tetrachloroethane	83	11.715	11.712	0.003	95	66812	25.0	24.3	
95 Bromobenzene	156	11.721	11.724	-0.003	96	71883	25.0	24.0	
97 trans-1,4-Dichloro-2-buten	53	11.751	11.755	-0.004	71	17877	25.0	20.7	
98 1,2,3-Trichloropropane	110	11.770	11.773	-0.003	85	26191	25.0	24.8	
99 N-Propylbenzene	120	11.824	11.828	-0.004	99	77899	25.0	24.4	
100 2-Chlorotoluene	126	11.909	11.913	-0.004	94	69221	25.0	24.7	
101 3-Chlorotoluene	126	11.976	11.980	-0.004	96	70850	25.0	24.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
102 1,3,5-Trimethylbenzene	105	12.007	12.010	-0.003	93	252973	25.0	25.5	
103 4-Chlorotoluene	126	12.037	12.034	0.003	98	75294	25.0	24.7	
104 tert-Butylbenzene	119	12.323	12.320	0.003	90	192677	25.0	24.6	
106 1,2,4-Trimethylbenzene	105	12.378	12.381	-0.003	98	261852	25.0	25.7	
107 1,2-dichloro-4-(trifluorom	214	12.414	12.418	-0.004	97	67749	25.0	24.6	
108 sec-Butylbenzene	105	12.548	12.545	0.003	95	301348	25.0	26.0	
109 1,3-Dichlorobenzene	146	12.664	12.661	0.003	95	144744	25.0	25.6	
110 4-Isopropyltoluene	119	12.700	12.704	-0.004	96	247617	25.0	26.0	
111 1,4-Dichlorobenzene	146	12.767	12.771	-0.004	91	151378	25.0	25.8	
113 2,4-Dichloro-1-(triflourom	214	12.792	12.789	0.003	95	68829	25.0	25.9	
114 2,5-Dichlorobenzotrifluori	214	12.828	12.825	0.003	97	71247	25.0	23.9	
116 n-Butylbenzene	91	13.114	13.111	0.003	98	229693	25.0	26.0	
117 1,2-Dichlorobenzene	146	13.126	13.123	0.003	93	145302	25.0	26.2	
118 1,2-Dibromo-3-Chloropropan	75	13.917	13.914	0.003	66	9926	25.0	20.3	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.057	14.060	-0.003	99	311121	75.0	74.5	
121 2,3- & 3,4- Dichlorotoluen	125	14.477	14.474	0.003	99	226514	50.0	48.7	
122 1,2,4-Trichlorobenzene	180	14.738	14.742	-0.004	92	100352	25.0	24.6	
123 Hexachlorobutadiene	225	14.890	14.881	0.009	97	33582	25.0	24.2	
124 Naphthalene	128	15.006	15.003	0.003	98	202555	25.0	23.6	
125 1,2,3-Trichlorobenzene	180	15.225	15.222	0.003	94	89401	25.0	24.6	
126 2,4,5-Trichlorotoluene	159	16.004	16.007	-0.003	0	43197	25.0	21.6	
127 2,3,6-Trichlorotoluene	159	16.101	16.104	-0.003	94	43516	25.0	23.0	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		50.0	51.0	
S 131 Xylenes, Total	106				0		50.0	51.5	
S 132 1,3-Dichloropropene, Total	1				0		50.0	39.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260SURR_00037	Amount Added:	1.00	Units: uL	
VOA8260VOAPRI_00121	Amount Added:	1.00	Units: uL	
voaWEEmix1st_00001	Amount Added:	1.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	1.00	Units: uL	
voaWVA1st Res_00001	Amount Added:	1.00	Units: uL	
VOAACRLOEINPR_00001	Amount Added:	5.00	Units: uL	
VOA8260INT_00037	Amount Added:	2.00	Units: uL	Run Reagent

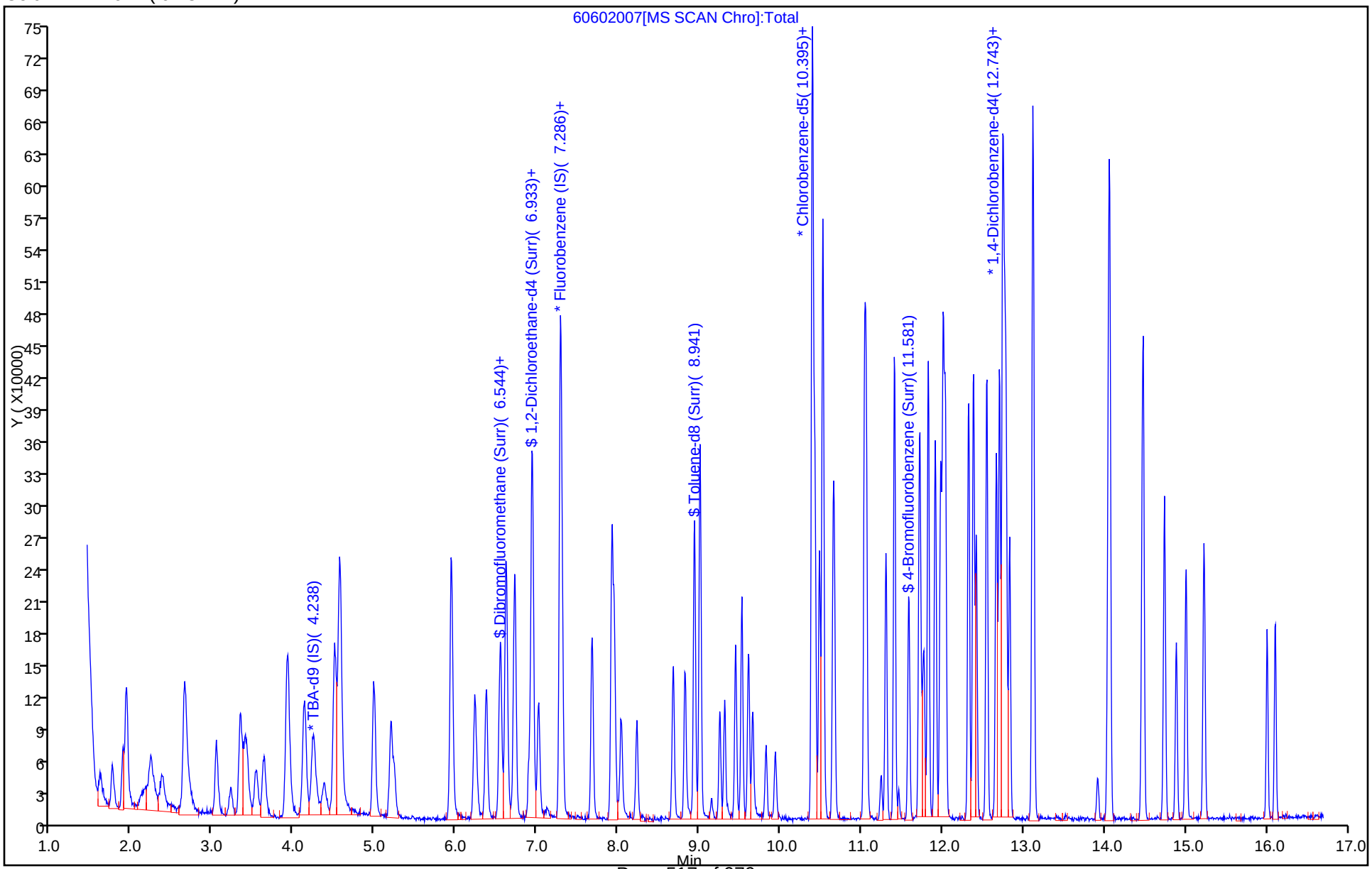
Report Date: 03-Jun-2015 10:40:20 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602007.D

Injection Date:	02-Jun-2015 16:07:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	IC VSTD5			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602008.D
Lims ID: ICIS VSTD10
Client ID:
Sample Type: ICIS Calib Level: 3
Inject. Date: 02-Jun-2015 16:31:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS VSTD10
Misc. Info.: 180-0007230-008
Operator ID: 001562 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub5

Method: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 03-Jun-2015 12:01:08 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK037

First Level Reviewer: fergusond Date: 03-Jun-2015 11:58:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.236	4.236	0.000	92	147943	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.284	7.284	0.000	98	437230	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.393	10.393	0.000	90	100421	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.747	12.747	0.000	95	165800	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.554	6.554	0.000	93	112048	50.0	53.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.931	6.931	0.000	71	169735	50.0	51.9	
$ 7 Toluene-d8 (Surr)	98	8.939	8.939	0.000	94	460980	50.0	58.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.585	11.585	0.000	86	186543	50.0	56.6	
11 Dichlorodifluoromethane	85	1.602	1.602	0.000	100	128688	50.0	54.0	
12 Chloromethane	50	1.760	1.760	0.000	100	126955	50.0	49.8	
13 Vinyl chloride	62	1.888	1.888	0.000	98	145427	50.0	51.3	
14 Butadiene	39	1.931	1.931	0.000	94	164166	50.0	52.3	
15 Bromomethane	94	2.229	2.229	0.000	92	66330	50.0	50.8	
16 Chloroethane	64	2.375	2.375	0.000	98	97895	50.0	50.4	
17 Dichlorofluoromethane	67	2.642	2.642	0.000	97	253761	50.0	52.9	
18 Trichlorofluoromethane	101	2.667	2.667	0.000	89	189661	50.0	53.5	
20 Ethyl ether	59	3.038	3.038	0.000	90	126212	50.0	50.1	
21 Acrolein	56	3.214	3.214	0.000	94	51516	150.0	147.1	
22 1,1-Dichloroethene	96	3.336	3.336	0.000	96	113059	50.0	51.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.397	3.397	0.000	95	123735	50.0	52.9	
24 Acetone	43	3.415	3.415	0.000	73	61117	100.0	92.1	
25 Iodomethane	142	3.530	3.530	0.000	100	171575	50.0	50.3	
26 Carbon disulfide	76	3.628	3.628	0.000	100	299300	50.0	49.6	
29 3-Chloro-1-propene	76	3.908	3.908	0.000	74	63385	50.0	47.3	
30 Methyl acetate	43	3.920	3.920	0.000	96	442021	250.0	234.7	
31 Methylene Chloride	84	4.127	4.127	0.000	95	157091	50.0	50.3	
32 2-Methyl-2-propanol	59	4.376	4.376	0.000	93	86346	500.0	479.2	
33 Acrylonitrile	53	4.498	4.498	0.000	99	470656	500.0	484.4	
34 trans-1,2-Dichloroethene	96	4.559	4.559	0.000	73	131616	50.0	50.5	
35 Methyl tert-butyl ether	73	4.565	4.565	0.000	98	374452	50.0	48.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.978	4.978	0.000	92	182964	50.0	50.7	
37 1,1-Dichloroethane	63	5.191	5.191	0.000	97	242428	50.0	51.4	
38 Vinyl acetate	43	5.240	5.240	0.000	98	180273	50.0	47.1	
42 2,2-Dichloropropane	77	5.933	5.933	0.000	63	128599	50.0	51.0	
43 cis-1,2-Dichloroethene	96	5.940	5.940	0.000	87	141644	50.0	50.4	
44 2-Butanone (MEK)	43	5.946	5.946	0.000	58	103038	100.0	96.6	
48 Chlorobromomethane	128	6.232	6.232	0.000	97	62082	50.0	48.3	
49 Tetrahydrofuran	42	6.244	6.244	0.000	85	73547	100.0	92.6	
50 Chloroform	83	6.371	6.371	0.000	95	234211	50.0	50.2	
51 1,1,1-Trichloroethane	97	6.536	6.536	0.000	97	175997	50.0	50.9	
52 Cyclohexane	56	6.615	6.615	0.000	92	234591	50.0	51.0	
53 Carbon tetrachloride	117	6.718	6.718	0.000	96	136052	50.0	49.8	
54 1,1-Dichloropropene	75	6.724	6.724	0.000	95	187626	50.0	51.1	
55 Isobutyl alcohol	41	6.901	6.901	0.000	90	82592	1250.0	1166.4	
56 Benzene	78	6.943	6.943	0.000	97	552953	50.0	51.6	
57 1,2-Dichloroethane	62	7.016	7.016	0.000	98	204935	50.0	49.0	
59 n-Heptane	43	7.308	7.308	0.000	89	136754	50.0	50.3	
61 Trichloroethene	130	7.679	7.679	0.000	97	128724	50.0	50.4	
63 Methylcyclohexane	83	7.923	7.923	0.000	92	217221	50.0	51.5	
64 1,2-Dichloropropane	63	7.947	7.947	0.000	94	134510	50.0	49.1	
65 1,4-Dioxane	88	8.032	8.032	0.000	40	24340	1000.0	955.7	M
67 Dibromomethane	93	8.032	8.032	0.000	93	75482	50.0	47.8	
68 Dichlorobromomethane	83	8.227	8.227	0.000	98	139143	50.0	47.5	
71 cis-1,3-Dichloropropene	75	8.677	8.677	0.000	92	163717	50.0	45.7	
72 4-Methyl-2-pentanone (MIBK	43	8.823	8.823	0.000	96	237685	100.0	104.1	
73 Toluene	91	9.012	9.012	0.000	98	560498	50.0	53.8	
74 trans-1,3-Dichloropropene	75	9.249	9.249	0.000	96	133176	50.0	47.0	
75 Ethyl methacrylate	69	9.310	9.310	0.000	88	146888	50.0	47.9	
76 1,1,2-Trichloroethane	97	9.450	9.450	0.000	93	109447	50.0	50.6	
77 Tetrachloroethene	164	9.523	9.523	0.000	95	104393	50.0	53.3	
78 1,3-Dichloropropane	76	9.608	9.608	0.000	92	204372	50.0	50.1	
79 2-Hexanone	43	9.657	9.657	0.000	96	168968	100.0	98.4	
81 Chlorodibromomethane	129	9.821	9.821	0.000	88	82986	50.0	49.1	
82 Ethylene Dibromide	107	9.936	9.936	0.000	98	101550	50.0	50.2	
83 3-Chlorobenzotrifluoride	180	10.393	10.393	0.000	89	193435	50.0	56.8	
84 Chlorobenzene	112	10.429	10.429	0.000	92	359006	50.0	52.9	
85 4-Chlorobenzotrifluoride	180	10.484	10.484	0.000	96	182085	50.0	56.6	
86 1,1,1,2-Tetrachloroethane	131	10.520	10.520	0.000	88	104069	50.0	51.8	
87 Ethylbenzene	106	10.526	10.526	0.000	99	202444	50.0	53.3	
88 m-Xylene & p-Xylene	106	10.654	10.654	0.000	100	251047	50.0	53.3	
89 o-Xylene	106	11.037	11.037	0.000	96	252185	50.0	54.9	
90 Styrene	104	11.056	11.056	0.000	94	393201	50.0	53.8	
91 Bromoform	173	11.244	11.244	0.000	92	43923	50.0	46.4	
92 2-Chlorobenzotrifluoride	180	11.299	11.299	0.000	96	196137	50.0	57.6	
93 Isopropylbenzene	105	11.409	11.409	0.000	97	628440	50.0	56.8	
96 1,1,2,2-Tetrachloroethane	83	11.713	11.713	0.000	97	150190	50.0	53.7	
95 Bromobenzene	156	11.725	11.725	0.000	97	156947	50.0	52.2	
97 trans-1,4-Dichloro-2-buten	53	11.749	11.749	0.000	65	38292	50.0	44.3	
98 1,2,3-Trichloropropane	110	11.768	11.768	0.000	85	51558	50.0	48.7	
99 N-Propylbenzene	120	11.828	11.828	0.000	99	167258	50.0	52.2	
100 2-Chlorotoluene	126	11.914	11.914	0.000	94	146050	50.0	52.0	
101 3-Chlorotoluene	126	11.974	11.974	0.000	96	154114	50.0	54.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
102 1,3,5-Trimethylbenzene	105	12.011	12.011	0.000	94	548606	50.0	55.1	
103 4-Chlorotoluene	126	12.035	12.035	0.000	99	160389	50.0	52.5	
104 tert-Butylbenzene	119	12.321	12.321	0.000	92	413941	50.0	52.8	
106 1,2,4-Trimethylbenzene	105	12.382	12.382	0.000	98	561935	50.0	55.1	
107 1,2-dichloro-4-(trifluorom	214	12.418	12.418	0.000	97	153320	50.0	55.6	
108 sec-Butylbenzene	105	12.546	12.546	0.000	95	643828	50.0	55.4	
109 1,3-Dichlorobenzene	146	12.662	12.662	0.000	96	293199	50.0	51.8	
110 4-Isopropyltoluene	119	12.704	12.704	0.000	96	527074	50.0	55.2	
111 1,4-Dichlorobenzene	146	12.771	12.771	0.000	91	304898	50.0	51.8	
113 2,4-Dichloro-1-(triflourom	214	12.790	12.790	0.000	96	144886	50.0	54.4	
114 2,5-Dichlorobenzotrifluori	214	12.826	12.826	0.000	98	170976	50.0	57.3	
116 n-Butylbenzene	91	13.112	13.112	0.000	98	485293	50.0	54.9	
117 1,2-Dichlorobenzene	146	13.124	13.124	0.000	93	290447	50.0	52.3	
118 1,2-Dibromo-3-Chloropropan	75	13.915	13.915	0.000	72	22342	50.0	45.5	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.055	14.055	0.000	99	713822	150.0	170.5	
121 2,3- & 3,4- Dichlorotoluen	125	14.475	14.475	0.000	99	515191	100.0	110.5	
122 1,2,4-Trichlorobenzene	180	14.736	14.736	0.000	93	216841	50.0	53.1	
123 Hexachlorobutadiene	225	14.888	14.888	0.000	97	72190	50.0	52.0	
124 Naphthalene	128	15.004	15.004	0.000	98	460084	50.0	53.6	
125 1,2,3-Trichlorobenzene	180	15.229	15.229	0.000	94	194232	50.0	53.3	
126 2,4,5-Trichlorotoluene	159	16.002	16.002	0.000	0	108091	50.0	54.0	
127 2,3,6-Trichlorotoluene	159	16.105	16.105	0.000	95	103350	50.0	54.5	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		100.0	100.9	
S 131 Xylenes, Total	106				0		100.0	108.2	
S 132 1,3-Dichloropropene, Total	1				0		100.0	92.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRLOEINPR_00001	Amount Added:	6.00	Units: uL	
VOA8260SURR_00037	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00121	Amount Added:	2.00	Units: uL	
voaWEEmix1st_00001	Amount Added:	2.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	2.00	Units: uL	
voaWVA1st Res_00001	Amount Added:	2.00	Units: uL	
VOA8260INT_00037	Amount Added:	2.00	Units: uL	Run Reagent

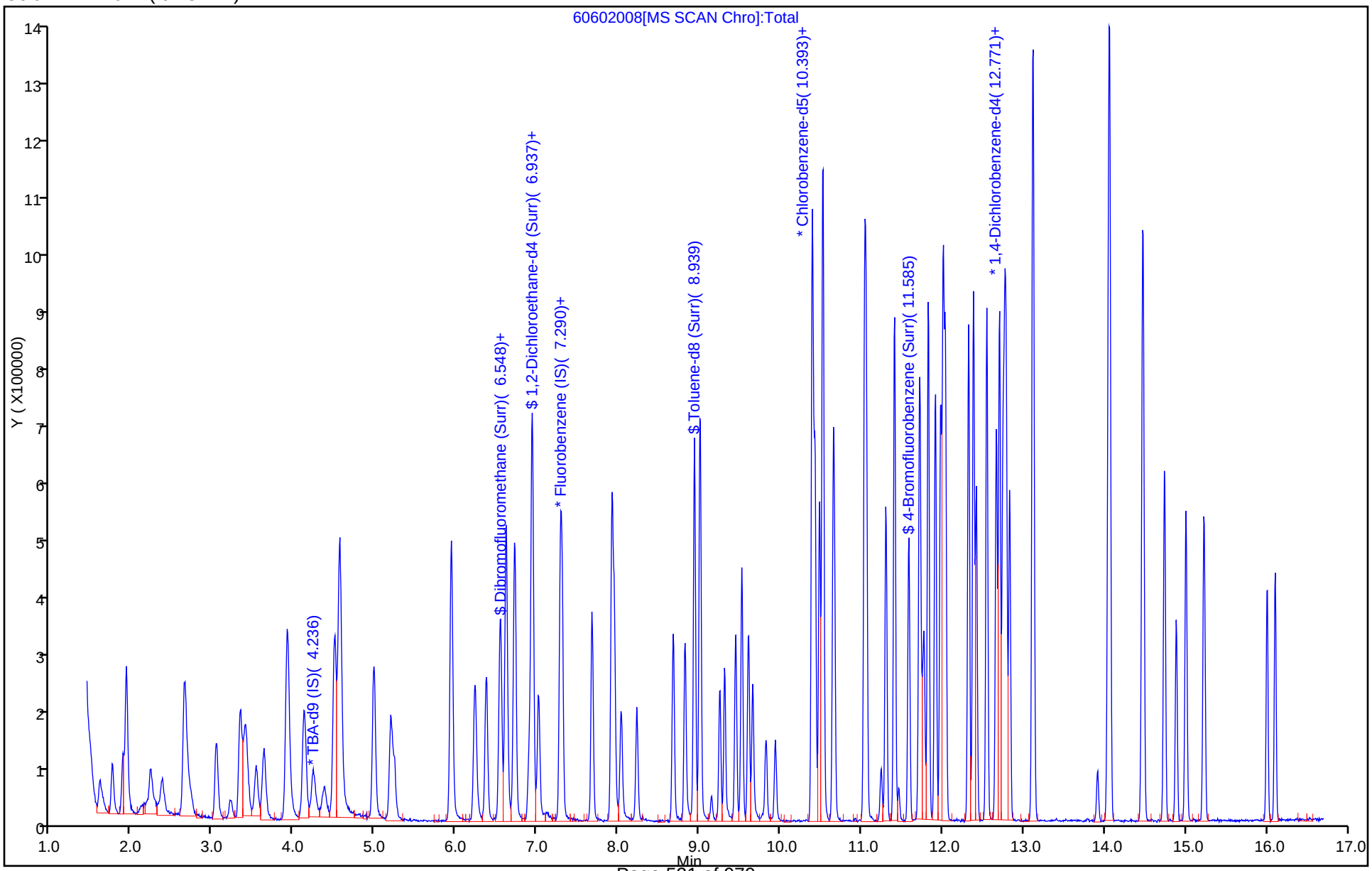
Report Date: 03-Jun-2015 12:01:09 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602008.D

Injection Date:	02-Jun-2015 16:31:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	ICIS VSTD10			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



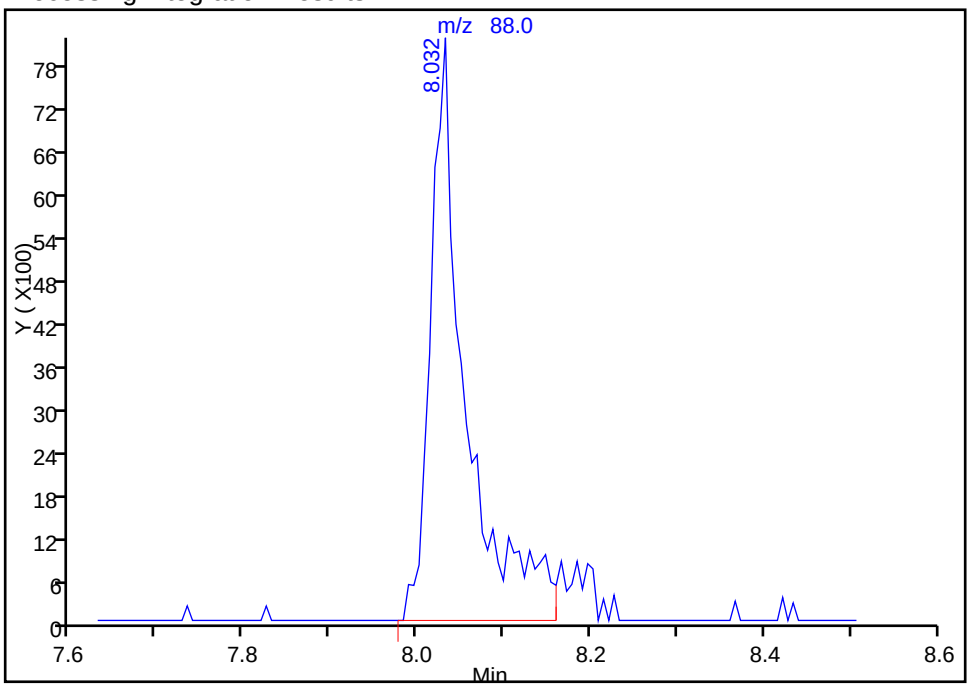
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602008.D
Injection Date: 02-Jun-2015 16:31:30 Instrument ID: CHHP6
Lims ID: ICIS VSTD10
Client ID:
Operator ID: 001562 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

65 1,4-Dioxane, CAS: 123-91-1

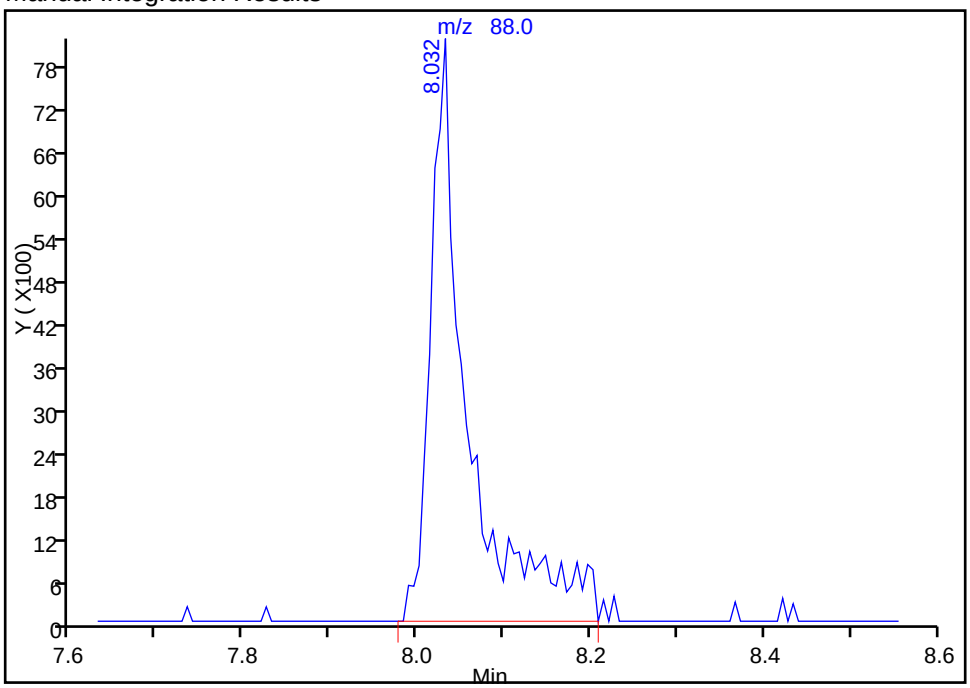
Processing Integration Results

RT: 8.03
Area: 22702
Amount: 1037.7271
Amount Units: ng



Manual Integration Results

RT: 8.03
Area: 24340
Amount: 955.6749
Amount Units: ng



Reviewer: fergusond, 03-Jun-2015 09:10:44
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602009.D
Lims ID: IC VSTD15
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 02-Jun-2015 16:55:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD15
Misc. Info.: 180-0007230-009
Operator ID: 001562 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub5

Method: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 03-Jun-2015 10:40:22 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK037

First Level Reviewer: fergusond Date: 03-Jun-2015 09:26:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.229	4.229	0.000	93	156699	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.283	7.283	0.000	98	443656	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.398	10.398	0.000	89	103346	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.746	12.746	0.000	94	170599	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.547	6.547	0.000	93	164014	75.0	77.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.930	0.000	72	251467	75.0	75.8	
$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	94	667309	75.0	82.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.584	11.584	0.000	84	274514	75.0	81.0	
11 Dichlorodifluoromethane	85	1.607	1.607	0.000	99	178483	75.0	73.8	
12 Chloromethane	50	1.753	1.753	0.000	100	191328	75.0	73.9	
13 Vinyl chloride	62	1.893	1.893	0.000	99	222998	75.0	77.5	
14 Butadiene	39	1.930	1.930	0.000	94	246064	75.0	77.3	
15 Bromomethane	94	2.228	2.228	0.000	90	112132	75.0	84.7	
16 Chloroethane	64	2.374	2.374	0.000	99	153734	75.0	78.0	
17 Dichlorofluoromethane	67	2.648	2.648	0.000	96	369919	75.0	76.0	
18 Trichlorofluoromethane	101	2.660	2.660	0.000	77	283097	75.0	78.8	
20 Ethyl ether	59	3.037	3.037	0.000	91	183415	75.0	71.8	
21 Acrolein	56	3.226	3.226	0.000	99	61448	175.0	172.9	
22 1,1-Dichloroethene	96	3.341	3.341	0.000	96	170523	75.0	76.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.396	3.396	0.000	94	179480	75.0	75.6	
24 Acetone	43	3.426	3.426	0.000	95	94958	150.0	141.0	
25 Iodomethane	142	3.530	3.530	0.000	99	251606	75.0	72.6	
26 Carbon disulfide	76	3.633	3.633	0.000	100	471925	75.0	77.1	
30 Methyl acetate	43	3.919	3.919	0.000	97	707212	375.0	370.0	
29 3-Chloro-1-propene	76	3.919	3.919	0.000	63	101829	75.0	74.8	
31 Methylene Chloride	84	4.126	4.126	0.000	94	223914	75.0	73.6	
32 2-Methyl-2-propanol	59	4.363	4.363	0.000	93	134521	750.0	704.9	
33 Acrylonitrile	53	4.497	4.497	0.000	98	731739	750.0	742.2	
34 trans-1,2-Dichloroethene	96	4.564	4.564	0.000	94	198777	75.0	75.2	
35 Methyl tert-butyl ether	73	4.570	4.570	0.000	97	586282	75.0	75.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.984	4.984	0.000	93	272491	75.0	74.4	
37 1,1-Dichloroethane	63	5.191	5.191	0.000	97	351365	75.0	73.5	
38 Vinyl acetate	43	5.233	5.233	0.000	97	290120	75.0	74.6	
43 cis-1,2-Dichloroethene	96	5.939	5.939	0.000	86	211030	75.0	73.9	
44 2-Butanone (MEK)	43	5.945	5.945	0.000	56	160496	150.0	148.2	
42 2,2-Dichloropropane	77	5.945	5.945	0.000	63	194809	75.0	76.1	
48 Chlorobromomethane	128	6.231	6.231	0.000	97	96230	75.0	73.7	
49 Tetrahydrofuran	42	6.243	6.243	0.000	85	114555	150.0	142.1	
50 Chloroform	83	6.371	6.371	0.000	94	355299	75.0	75.0	
51 1,1,1-Trichloroethane	97	6.535	6.535	0.000	97	268240	75.0	76.4	
52 Cyclohexane	56	6.614	6.614	0.000	93	349521	75.0	74.8	
53 Carbon tetrachloride	117	6.711	6.711	0.000	98	213971	75.0	77.3	
54 1,1-Dichloropropene	75	6.724	6.724	0.000	94	286377	75.0	76.9	
55 Isobutyl alcohol	41	6.894	6.894	0.000	90	123108	1875.0	1713.4	
56 Benzene	78	6.943	6.943	0.000	97	815796	75.0	75.0	
57 1,2-Dichloroethane	62	7.016	7.016	0.000	98	311894	75.0	73.5	
59 n-Heptane	43	7.308	7.308	0.000	87	198896	75.0	72.1	
61 Trichloroethene	130	7.679	7.679	0.000	96	196810	75.0	75.9	
63 Methylcyclohexane	83	7.922	7.922	0.000	92	333126	75.0	77.8	
64 1,2-Dichloropropane	63	7.952	7.952	0.000	86	208541	75.0	75.1	
65 1,4-Dioxane	88	8.025	8.025	0.000	43	30887	1500.0	1195.2	M
67 Dibromomethane	93	8.031	8.031	0.000	96	118188	75.0	73.8	
68 Dichlorobromomethane	83	8.226	8.226	0.000	98	223544	75.0	75.1	
71 cis-1,3-Dichloropropene	75	8.676	8.676	0.000	92	270207	75.0	74.3	
72 4-Methyl-2-pentanone (MIBK	43	8.822	8.822	0.000	96	382067	150.0	162.5	
73 Toluene	91	9.011	9.011	0.000	98	852524	75.0	79.5	
74 trans-1,3-Dichloropropene	75	9.254	9.254	0.000	96	230963	75.0	79.2	
75 Ethyl methacrylate	69	9.315	9.315	0.000	89	246932	75.0	78.3	
76 1,1,2-Trichloroethane	97	9.449	9.449	0.000	94	169772	75.0	76.3	
77 Tetrachloroethene	164	9.528	9.528	0.000	96	155971	75.0	77.4	
78 1,3-Dichloropropane	76	9.607	9.607	0.000	93	326912	75.0	77.9	
79 2-Hexanone	43	9.656	9.656	0.000	97	294085	150.0	166.5	
81 Chlorodibromomethane	129	9.820	9.820	0.000	90	134632	75.0	77.4	
82 Ethylene Dibromide	107	9.936	9.936	0.000	97	162523	75.0	78.0	
83 3-Chlorobenzotrifluoride	180	10.392	10.392	0.000	93	289668	75.0	82.7	
84 Chlorobenzene	112	10.422	10.422	0.000	92	547462	75.0	78.3	
85 4-Chlorobenzotrifluoride	180	10.483	10.483	0.000	96	267875	75.0	81.0	
86 1,1,1,2-Tetrachloroethane	131	10.520	10.520	0.000	90	163592	75.0	79.1	
87 Ethylbenzene	106	10.526	10.526	0.000	99	309153	75.0	79.1	
88 m-Xylene & p-Xylene	106	10.660	10.660	0.000	99	395025	75.0	81.5	
89 o-Xylene	106	11.043	11.043	0.000	96	375275	75.0	79.4	
90 Styrene	104	11.061	11.061	0.000	94	616606	75.0	81.9	
91 Bromoform	173	11.244	11.244	0.000	93	72745	75.0	74.6	
92 2-Chlorobenzotrifluoride	180	11.304	11.304	0.000	96	292530	75.0	83.4	
93 Isopropylbenzene	105	11.408	11.408	0.000	97	941968	75.0	82.7	
96 1,1,2,2-Tetrachloroethane	83	11.712	11.712	0.000	97	236536	75.0	82.2	
95 Bromobenzene	156	11.724	11.724	0.000	97	229658	75.0	74.2	
97 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	74	68227	75.0	76.8	
98 1,2,3-Trichloropropane	110	11.773	11.773	0.000	86	82428	75.0	75.7	
99 N-Propylbenzene	120	11.828	11.828	0.000	98	255917	75.0	77.6	
100 2-Chlorotoluene	126	11.913	11.913	0.000	95	224390	75.0	77.6	
101 3-Chlorotoluene	126	11.980	11.980	0.000	96	228533	75.0	77.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
102 1,3,5-Trimethylbenzene	105	12.010	12.010	0.000	94	817631	75.0	79.8	
103 4-Chlorotoluene	126	12.034	12.034	0.000	99	242303	75.0	77.1	
104 tert-Butylbenzene	119	12.320	12.320	0.000	92	640182	75.0	79.3	
106 1,2,4-Trimethylbenzene	105	12.381	12.381	0.000	99	830145	75.0	79.1	
107 1,2-dichloro-4-(trifluorom	214	12.418	12.418	0.000	96	218501	75.0	76.9	
108 sec-Butylbenzene	105	12.545	12.545	0.000	96	937916	75.0	78.4	
109 1,3-Dichlorobenzene	146	12.661	12.661	0.000	95	434270	75.0	74.5	
110 4-Isopropyltoluene	119	12.704	12.704	0.000	96	780227	75.0	79.3	
111 1,4-Dichlorobenzene	146	12.771	12.771	0.000	92	452525	75.0	74.7	
113 2,4-Dichloro-1-(triflourom	214	12.789	12.789	0.000	93	211293	75.0	77.1	
114 2,5-Dichlorobenzotrifluori	214	12.825	12.825	0.000	99	250525	75.0	81.6	
116 n-Butylbenzene	91	13.111	13.111	0.000	98	717591	75.0	78.9	
117 1,2-Dichlorobenzene	146	13.123	13.123	0.000	92	424749	75.0	74.3	
118 1,2-Dibromo-3-Chloropropan	75	13.914	13.914	0.000	73	35754	75.0	70.8	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.060	14.060	0.000	98	1012397	225.0	235.0	
121 2,3- & 3,4- Dichlorotoluen	125	14.474	14.474	0.000	98	746332	150.0	155.6	
122 1,2,4-Trichlorobenzene	180	14.742	14.742	0.000	94	304574	75.0	72.5	
123 Hexachlorobutadiene	225	14.881	14.881	0.000	95	105315	75.0	73.7	
124 Naphthalene	128	15.003	15.003	0.000	98	671630	75.0	76.0	
125 1,2,3-Trichlorobenzene	180	15.222	15.222	0.000	94	270509	75.0	72.1	
126 2,4,5-Trichlorotoluene	159	16.007	16.007	0.000	0	145278	75.0	70.5	
127 2,3,6-Trichlorotoluene	159	16.104	16.104	0.000	95	137361	75.0	70.4	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		150.0	149.1	
S 131 Xylenes, Total	106				0		150.0	160.9	
S 132 1,3-Dichloropropene, Total	1				0		150.0	153.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

voaWVA1st Res_00001	Amount Added:	3.00	Units: uL	
VOA8260SURR_00037	Amount Added:	3.00	Units: uL	
VOA8260VOAPRI_00121	Amount Added:	3.00	Units: uL	
voaWEEmix1st_00001	Amount Added:	3.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	3.00	Units: uL	
VOAACRLOEINPR_00001	Amount Added:	7.00	Units: uL	
VOA8260INT_00037	Amount Added:	2.00	Units: uL	Run Reagent

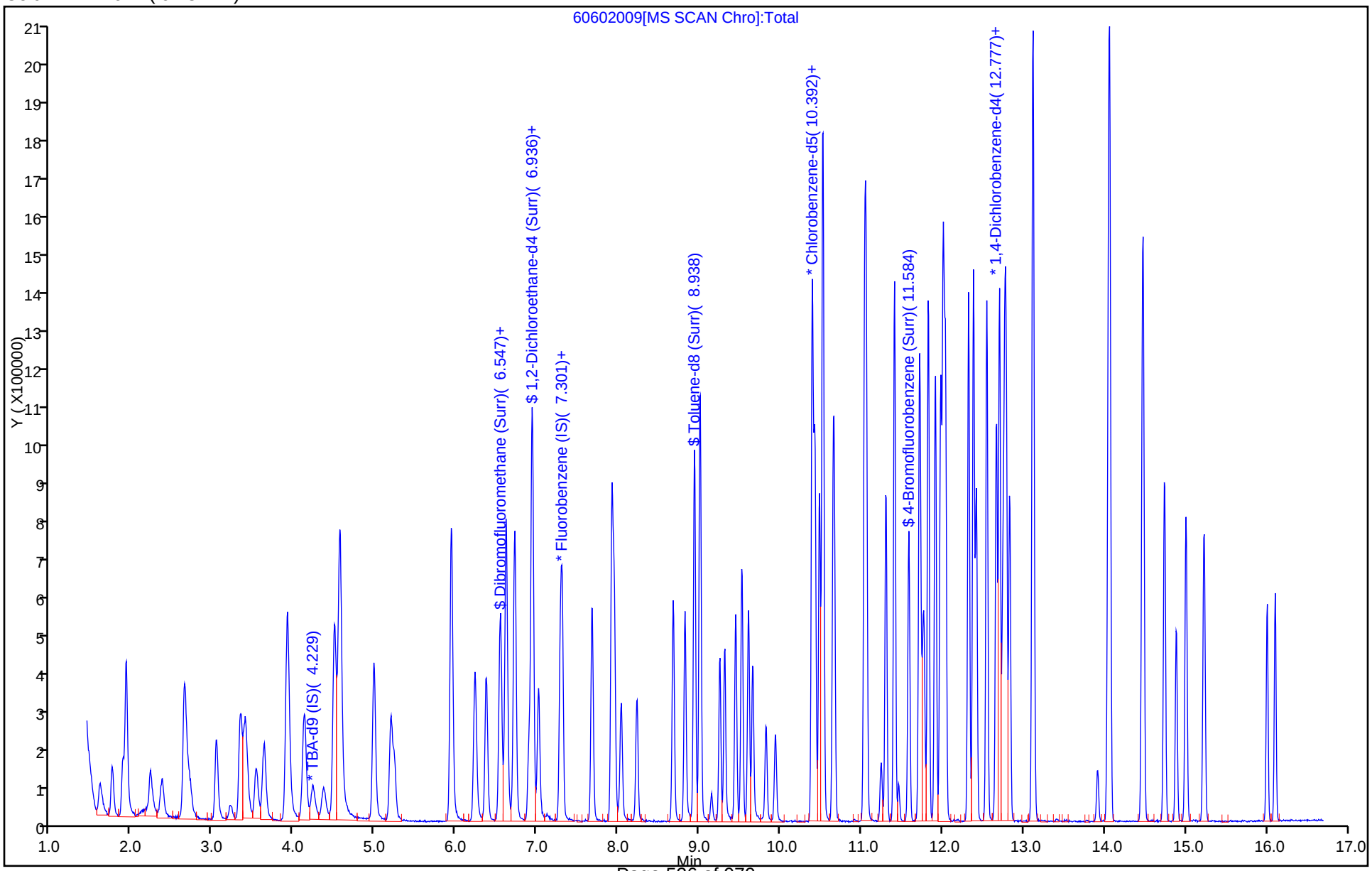
Report Date: 03-Jun-2015 10:40:23 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602009.D

Injection Date:	02-Jun-2015 16:55:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	IC VSTD15			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



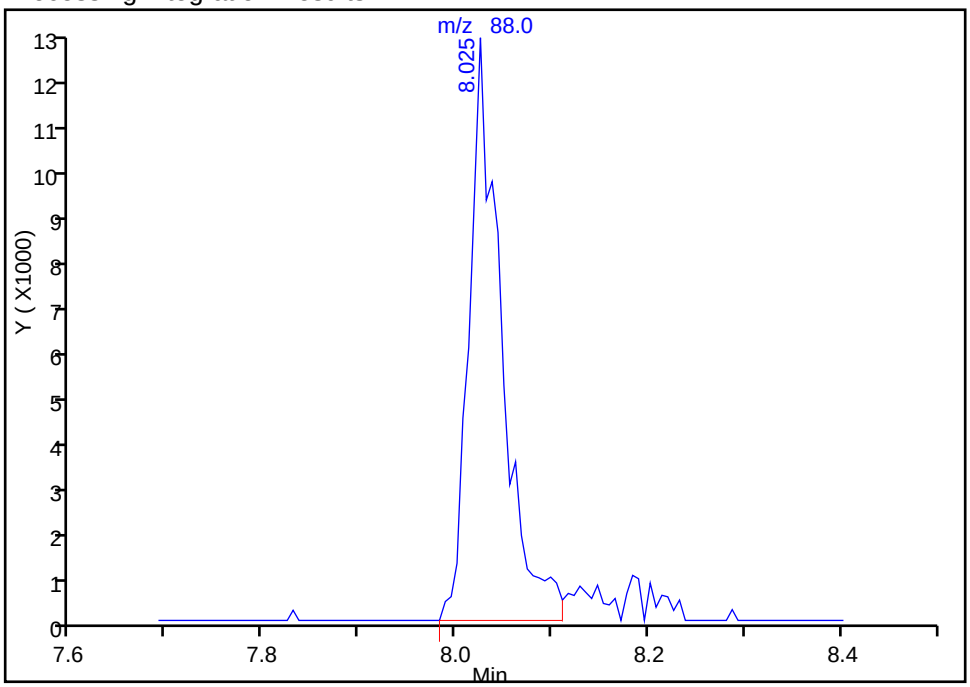
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602009.D
Injection Date: 02-Jun-2015 16:55:30 Instrument ID: CHHP6
Lims ID: IC VSTD15
Client ID:
Operator ID: 001562 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

65 1,4-Dioxane, CAS: 123-91-1

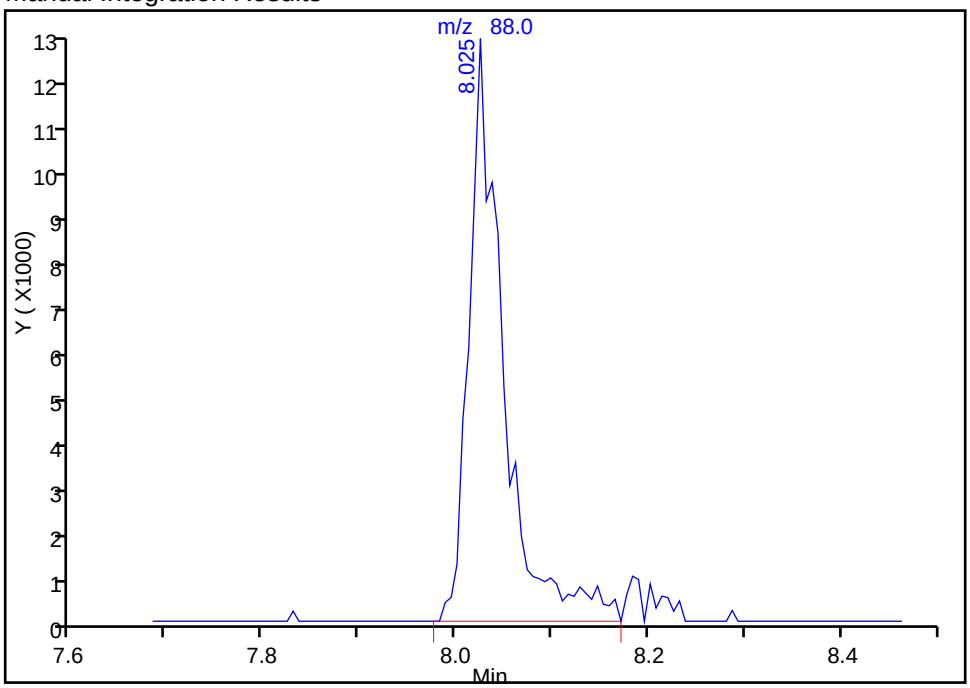
Processing Integration Results

RT: 8.03
Area: 29123
Amount: 1126.7810
Amount Units: ng



Manual Integration Results

RT: 8.03
Area: 30887
Amount: 1195.1680
Amount Units: ng



Reviewer: fergusond, 03-Jun-2015 09:36:25
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602010.D
Lims ID: IC VSTD20
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 02-Jun-2015 17:19:30 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD20
Misc. Info.: 180-0007230-010
Operator ID: 001562 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub5

Method: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 03-Jun-2015 10:40:24 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK037

First Level Reviewer: fergusond Date: 03-Jun-2015 09:38:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.224	4.229	-0.005	95	155131	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.284	7.283	0.001	98	442563	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.393	10.398	-0.005	90	112764	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.747	12.746	0.001	95	169709	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.554	6.547	0.007	92	210624	100.0	99.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.925	6.930	-0.005	70	336422	100.0	101.6	
$ 7 Toluene-d8 (Surr)	98	8.939	8.938	0.001	94	873702	100.0	98.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.585	11.584	0.001	84	367360	100.0	99.3	
11 Dichlorodifluoromethane	85	1.608	1.607	0.001	99	256901	100.0	106.5	
12 Chloromethane	50	1.754	1.753	0.001	99	264867	100.0	102.6	
13 Vinyl chloride	62	1.888	1.893	-0.005	99	295157	100.0	102.8	
14 Butadiene	39	1.925	1.930	-0.005	92	321722	100.0	101.3	
15 Bromomethane	94	2.223	2.228	-0.005	92	145909	100.0	110.5	
16 Chloroethane	64	2.375	2.374	0.001	100	204015	100.0	103.7	
17 Dichlorofluoromethane	67	2.642	2.648	-0.006	97	480459	100.0	99.0	
18 Trichlorofluoromethane	101	2.673	2.660	0.013	97	361323	100.0	100.8	
20 Ethyl ether	59	3.044	3.037	0.007	93	254820	100.0	99.9	
21 Acrolein	56	3.220	3.226	-0.006	99	73220	200.0	206.6	
22 1,1-Dichloroethene	96	3.336	3.341	-0.005	96	230261	100.0	102.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.397	3.396	0.001	94	239323	100.0	101.1	
24 Acetone	43	3.421	3.426	-0.005	100	132922	200.0	197.8	
25 Iodomethane	142	3.531	3.530	0.001	100	349085	100.0	101.0	
26 Carbon disulfide	76	3.628	3.633	-0.005	100	634285	100.0	103.9	
29 3-Chloro-1-propene	76	3.914	3.919	-0.005	87	138879	100.0	102.3	
30 Methyl acetate	43	3.920	3.919	0.001	98	981743	500.0	514.9	
31 Methylene Chloride	84	4.127	4.126	0.001	92	296159	100.0	99.9	
32 2-Methyl-2-propanol	59	4.358	4.363	-0.005	94	197206	1000.0	1043.8	
33 Acrylonitrile	53	4.498	4.497	0.001	98	1014503	1000.0	1031.6	
34 trans-1,2-Dichloroethene	96	4.565	4.564	0.001	96	266140	100.0	100.9	
35 Methyl tert-butyl ether	73	4.565	4.570	-0.005	97	796793	100.0	102.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.985	4.984	0.001	93	375015	100.0	102.6	
37 1,1-Dichloroethane	63	5.197	5.191	0.007	97	476030	100.0	99.8	
38 Vinyl acetate	43	5.234	5.233	0.001	98	419160	100.0	108.1	
42 2,2-Dichloropropane	77	5.940	5.945	-0.005	63	259124	100.0	101.5	
43 cis-1,2-Dichloroethene	96	5.940	5.939	0.001	86	287048	100.0	100.8	
44 2-Butanone (MEK)	43	5.940	5.945	-0.005	62	227321	200.0	210.4	
48 Chlorobromomethane	128	6.232	6.231	0.001	97	129843	100.0	99.8	
49 Tetrahydrofuran	42	6.244	6.243	0.001	85	159720	200.0	198.6	
50 Chloroform	83	6.372	6.371	0.001	95	471311	100.0	99.7	
51 1,1,1-Trichloroethane	97	6.536	6.535	0.001	97	366332	100.0	104.7	
52 Cyclohexane	56	6.615	6.614	0.001	92	481463	100.0	103.3	
53 Carbon tetrachloride	117	6.712	6.711	0.001	94	291701	100.0	105.6	
54 1,1-Dichloropropene	75	6.724	6.724	0.000	95	385169	100.0	103.7	
55 Isobutyl alcohol	41	6.901	6.894	0.007	88	189145	2500.0	2639.0	
56 Benzene	78	6.937	6.943	-0.006	97	1099478	100.0	101.4	
57 1,2-Dichloroethane	62	7.016	7.016	0.000	99	425578	100.0	100.6	
59 n-Heptane	43	7.308	7.308	0.000	92	290061	100.0	105.4	
61 Trichloroethene	130	7.673	7.679	-0.006	97	270312	100.0	104.5	
63 Methylcyclohexane	83	7.923	7.922	0.001	92	440589	100.0	103.2	
64 1,2-Dichloropropane	63	7.947	7.952	-0.005	95	286716	100.0	103.4	
65 1,4-Dioxane	88	8.026	8.025	0.001	46	49025	2000.0	1901.7	M
67 Dibromomethane	93	8.032	8.031	0.001	94	165946	100.0	103.9	
68 Dichlorobromomethane	83	8.227	8.226	0.001	99	317491	100.0	107.0	
71 cis-1,3-Dichloropropene	75	8.677	8.676	0.001	93	397748	100.0	109.6	
72 4-Methyl-2-pentanone (MIBK	43	8.823	8.822	0.001	95	567593	200.0	221.3	
73 Toluene	91	9.006	9.011	-0.005	98	1159328	100.0	99.1	
74 trans-1,3-Dichloropropene	75	9.249	9.254	-0.005	96	342869	100.0	107.8	
75 Ethyl methacrylate	69	9.310	9.315	-0.005	88	370528	100.0	107.7	
76 1,1,2-Trichloroethane	97	9.444	9.449	-0.005	93	244368	100.0	100.6	
77 Tetrachloroethene	164	9.529	9.528	0.001	96	216742	100.0	98.6	
78 1,3-Dichloropropane	76	9.608	9.607	0.001	92	462148	100.0	101.0	
79 2-Hexanone	43	9.657	9.656	0.001	96	428721	200.0	222.4	
81 Chlorodibromomethane	129	9.821	9.820	0.001	91	197216	100.0	103.9	
82 Ethylene Dibromide	107	9.936	9.936	0.000	99	229467	100.0	100.9	
83 3-Chlorobenzotrifluoride	180	10.393	10.392	0.001	94	389311	100.0	101.8	
84 Chlorobenzene	112	10.423	10.422	0.001	92	748328	100.0	98.1	
85 4-Chlorobenzotrifluoride	180	10.484	10.483	0.001	97	363940	100.0	100.8	
86 1,1,1,2-Tetrachloroethane	131	10.520	10.520	0.000	90	225060	100.0	99.7	
87 Ethylbenzene	106	10.527	10.526	0.001	98	435041	100.0	102.0	
88 m-Xylene & p-Xylene	106	10.660	10.660	0.000	99	541035	100.0	102.3	
89 o-Xylene	106	11.038	11.043	-0.005	96	517233	100.0	100.3	
90 Styrene	104	11.056	11.061	-0.005	94	850455	100.0	103.5	
91 Bromoform	173	11.244	11.244	0.000	94	109582	100.0	103.0	
92 2-Chlorobenzotrifluoride	180	11.299	11.304	-0.005	96	394208	100.0	103.0	
93 Isopropylbenzene	105	11.409	11.408	0.001	97	1252377	100.0	100.8	
96 1,1,2,2-Tetrachloroethane	83	11.713	11.712	0.001	96	318065	100.0	101.2	
95 Bromobenzene	156	11.725	11.724	0.001	97	318335	100.0	103.4	
97 trans-1,4-Dichloro-2-buten	53	11.749	11.755	-0.006	75	97683	100.0	110.5	
98 1,2,3-Trichloropropane	110	11.774	11.773	0.001	83	114563	100.0	105.7	
99 N-Propylbenzene	120	11.822	11.828	-0.006	98	345611	100.0	105.4	
100 2-Chlorotoluene	126	11.914	11.913	0.001	95	293933	100.0	102.2	
101 3-Chlorotoluene	126	11.981	11.980	0.001	96	305836	100.0	104.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
102 1,3,5-Trimethylbenzene	105	12.011	12.010	0.001	93	1074980	100.0	105.4	
103 4-Chlorotoluene	126	12.035	12.034	0.001	99	320035	100.0	102.4	
104 tert-Butylbenzene	119	12.321	12.320	0.001	91	844351	100.0	105.2	
106 1,2,4-Trimethylbenzene	105	12.382	12.381	0.001	98	1101608	100.0	105.5	
107 1,2-dichloro-4-(trifluorom	214	12.419	12.418	0.001	96	297124	100.0	105.2	
108 sec-Butylbenzene	105	12.546	12.545	0.001	96	1254563	100.0	105.5	
109 1,3-Dichlorobenzene	146	12.662	12.661	0.001	95	585461	100.0	101.0	
110 4-Isopropyltoluene	119	12.704	12.704	0.000	95	1035829	100.0	105.9	
111 1,4-Dichlorobenzene	146	12.771	12.771	0.000	91	597130	100.0	99.1	
113 2,4-Dichloro-1-(triflourom	214	12.790	12.789	0.001	95	287092	100.0	105.3	
114 2,5-Dichlorobenzotrifluori	214	12.832	12.825	0.007	97	319955	100.0	104.7	
116 n-Butylbenzene	91	13.112	13.111	0.001	98	958044	100.0	105.8	
117 1,2-Dichlorobenzene	146	13.124	13.123	0.001	93	565207	100.0	99.3	
118 1,2-Dibromo-3-Chloropropan	75	13.915	13.914	0.001	76	53224	100.0	106.0	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.055	14.060	-0.005	98	1354868	300.0	316.2	
121 2,3- & 3,4- Dichlorotoluen	125	14.475	14.474	0.001	98	983203	200.0	206.0	
122 1,2,4-Trichlorobenzene	180	14.742	14.742	0.000	93	408775	100.0	97.9	
123 Hexachlorobutadiene	225	14.882	14.881	0.001	97	135018	100.0	95.0	
124 Naphthalene	128	15.004	15.003	0.001	98	908504	100.0	103.4	
125 1,2,3-Trichlorobenzene	180	15.223	15.222	0.001	94	354579	100.0	95.0	
126 2,4,5-Trichlorotoluene	159	16.002	16.007	-0.005	0	186073	100.0	90.8	
127 2,3,6-Trichlorotoluene	159	16.105	16.104	0.001	95	172710	100.0	89.0	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		200.0	201.7	
S 131 Xylenes, Total	106				0		200.0	202.6	
S 132 1,3-Dichloropropene, Total	1				0		200.0	217.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

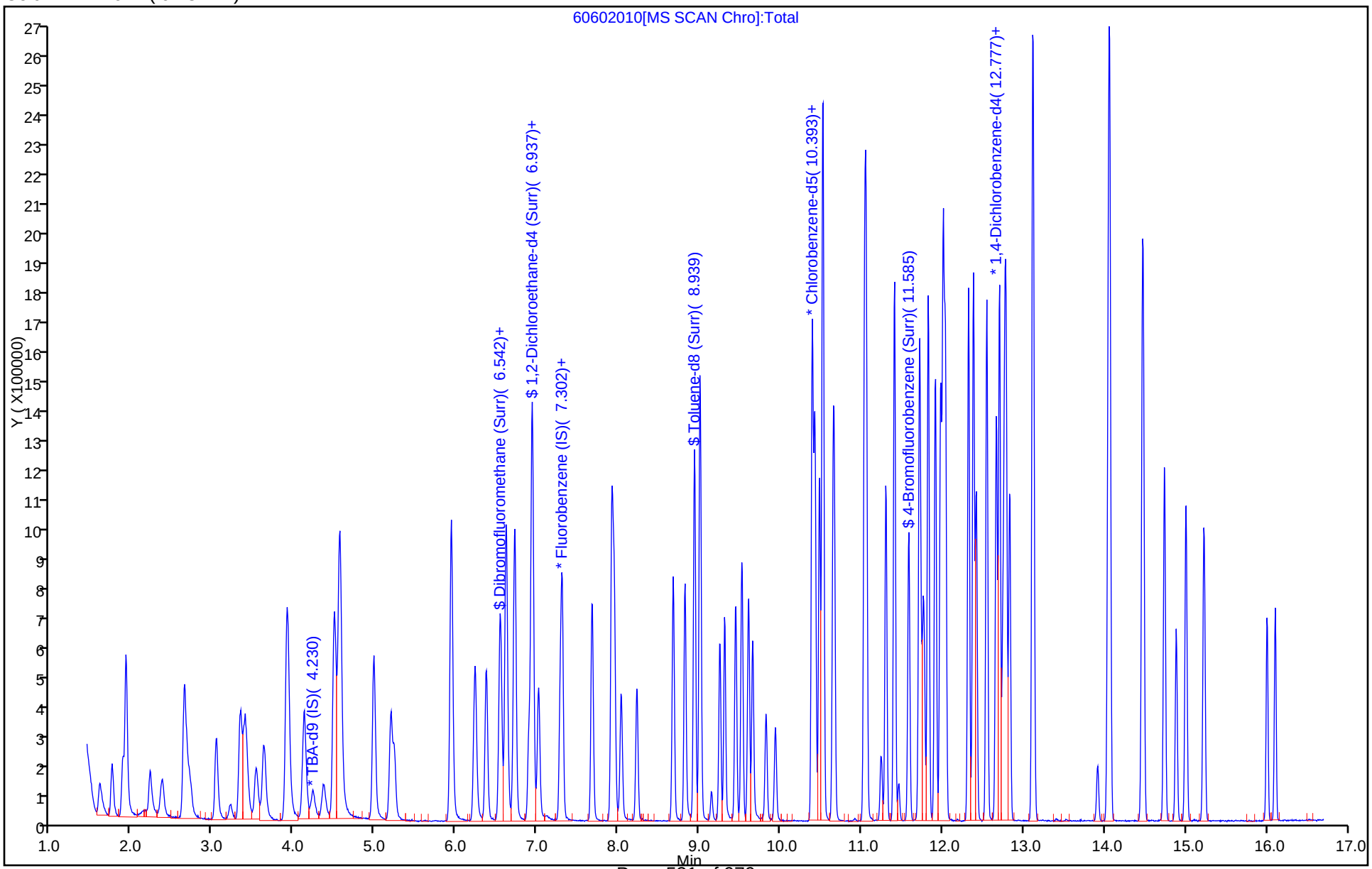
VOAACRLOEINPR_00001	Amount Added:	8.00	Units: uL	
VOA8260SURR_00037	Amount Added:	4.00	Units: uL	
VOA8260VOAPRI_00121	Amount Added:	4.00	Units: uL	
voaWEEmix1st_00001	Amount Added:	4.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	4.00	Units: uL	
voaWVA1st Res_00001	Amount Added:	4.00	Units: uL	
VOA8260INT_00037	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 03-Jun-2015 10:40:24 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602010.D				
Injection Date:	02-Jun-2015 17:19:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	IC VSTD20			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

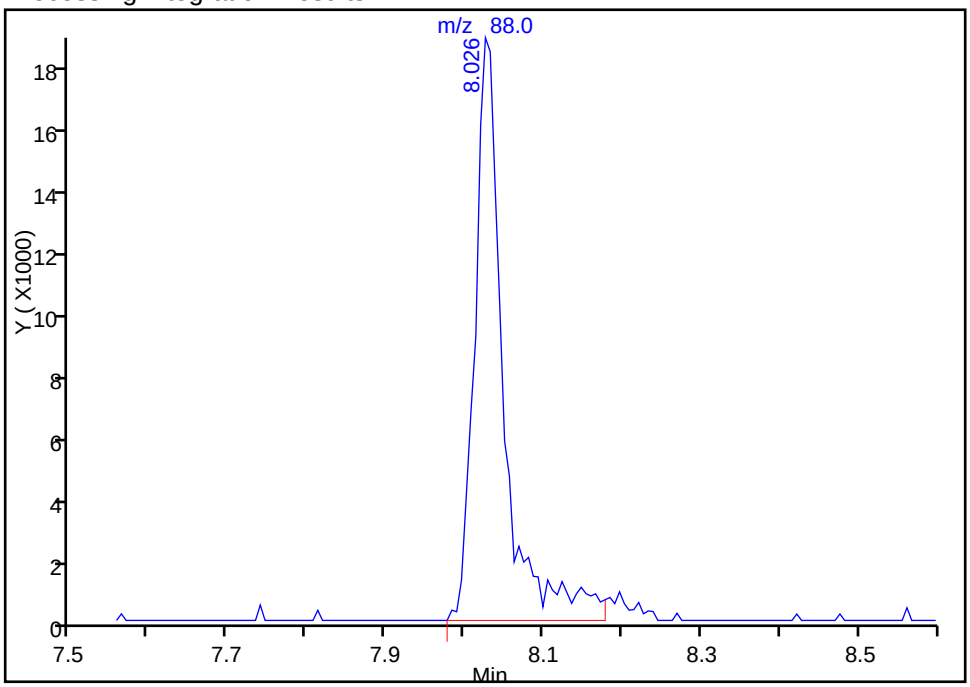
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602010.D				
Injection Date:	02-Jun-2015 17:19:30	Instrument ID:	CHHP6		
Lims ID:	IC VSTD20				
Client ID:					
Operator ID:	001562	ALS Bottle#:	10	Worklist Smp#:	10
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

65 1,4-Dioxane, CAS: 123-91-1

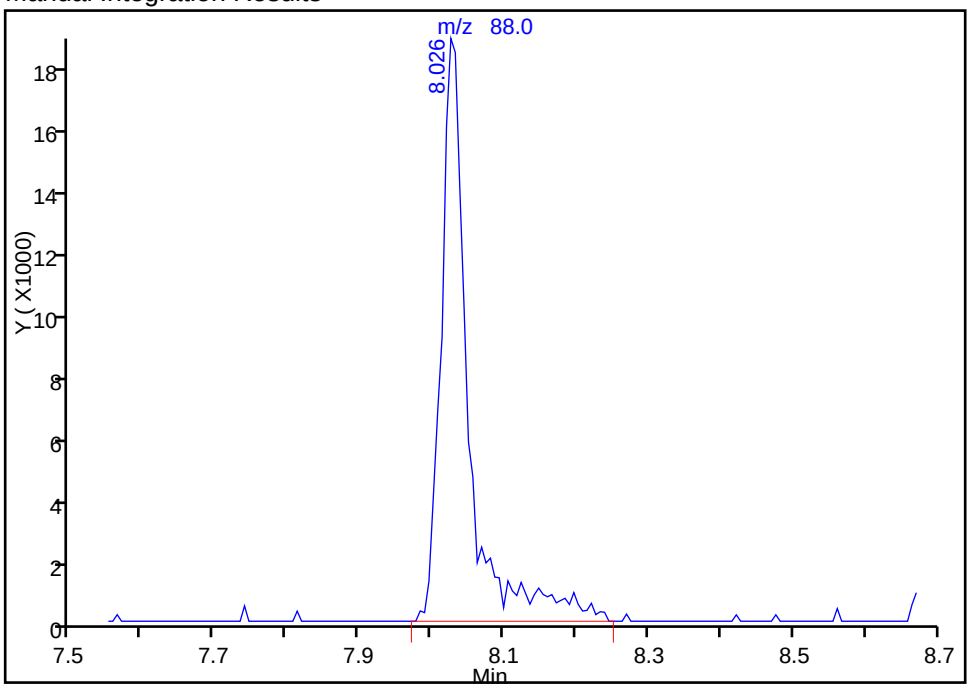
Processing Integration Results

RT: 8.03
Area: 47308
Amount: 1824.5098
Amount Units: ng



Manual Integration Results

RT: 8.03
Area: 49025
Amount: 1901.7003
Amount Units: ng



Reviewer: fergusond, 03-Jun-2015 09:38:48
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602011.D
Lims ID: IC VSTD35
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 02-Jun-2015 17:43:30 ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD35
Misc. Info.: 180-0007230-011
Operator ID: 001562 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub5

Method: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 03-Jun-2015 10:40:26 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK037

First Level Reviewer: fergusond Date: 03-Jun-2015 09:46:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.243	4.229	0.014	93	170033	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.284	7.283	0.001	98	422434	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.399	10.398	0.001	87	110736	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.747	12.746	0.001	94	166379	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.554	6.547	0.007	93	366426	175.0	181.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.932	6.930	0.002	70	567110	175.0	179.5	
$ 7 Toluene-d8 (Surr)	98	8.939	8.938	0.001	94	1433286	175.0	164.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.585	11.584	0.001	89	623850	175.0	171.8	
11 Dichlorodifluoromethane	85	1.609	1.607	0.001	100	389412	175.0	169.2	
12 Chloromethane	50	1.761	1.753	0.008	99	419884	175.0	170.4	
13 Vinyl chloride	62	1.894	1.893	0.001	99	472803	175.0	172.5	
14 Butadiene	39	1.931	1.930	0.001	91	508191	175.0	167.7	
15 Bromomethane	94	2.223	2.228	-0.005	93	187988	175.0	149.1	
16 Chloroethane	64	2.375	2.374	0.001	100	320402	175.0	170.7	
17 Dichlorofluoromethane	67	2.643	2.648	-0.005	98	778579	175.0	168.0	
18 Trichlorofluoromethane	101	2.667	2.660	0.007	97	572570	175.0	167.3	
20 Ethyl ether	59	3.044	3.037	0.007	91	433678	175.0	178.2	
21 Acrolein	56	3.221	3.226	-0.005	99	81941	225.0	242.2	
22 1,1-Dichloroethene	96	3.330	3.341	-0.011	96	375628	175.0	175.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.397	3.396	0.001	94	382967	175.0	169.5	
24 Acetone	43	3.427	3.426	0.001	94	240356	350.0	374.7	
25 Iodomethane	142	3.531	3.530	0.001	99	564405	175.0	171.1	
26 Carbon disulfide	76	3.628	3.633	-0.005	100	1078105	175.0	185.1	
29 3-Chloro-1-propene	76	3.908	3.919	-0.011	90	244614	175.0	188.8	
30 Methyl acetate	43	3.926	3.919	0.007	97	1687607	875.0	927.3	
31 Methylene Chloride	84	4.127	4.126	0.001	93	493523	175.0	179.7	
32 2-Methyl-2-propanol	59	4.376	4.363	0.013	93	372385	1750.0	1798.2	
33 Acrylonitrile	53	4.498	4.497	0.001	99	1732908	1750.0	1846.0	
34 trans-1,2-Dichloroethene	96	4.559	4.564	-0.005	95	444174	175.0	176.5	
35 Methyl tert-butyl ether	73	4.571	4.570	0.001	97	1358783	175.0	182.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.985	4.984	0.001	94	618324	175.0	177.3	
37 1,1-Dichloroethane	63	5.198	5.191	0.008	96	809553	175.0	177.7	
38 Vinyl acetate	43	5.234	5.233	0.001	98	792734	175.0	214.2	
43 cis-1,2-Dichloroethene	96	5.940	5.939	0.001	85	490556	175.0	180.5	
42 2,2-Dichloropropane	77	5.940	5.945	-0.005	63	434669	175.0	178.4	
44 2-Butanone (MEK)	43	5.946	5.945	0.001	99	415594	350.0	403.1	
48 Chlorobromomethane	128	6.232	6.231	0.001	98	223323	175.0	179.7	
49 Tetrahydrofuran	42	6.244	6.243	0.001	89	278794	350.0	363.2	
50 Chloroform	83	6.372	6.371	0.001	96	790626	175.0	175.3	
51 1,1,1-Trichloroethane	97	6.536	6.535	0.001	97	600178	175.0	179.6	
52 Cyclohexane	56	6.615	6.614	0.001	91	773954	175.0	174.0	
53 Carbon tetrachloride	117	6.713	6.711	0.002	97	480138	175.0	182.1	
54 1,1-Dichloropropene	75	6.725	6.724	0.001	94	648690	175.0	183.0	
55 Isobutyl alcohol	41	6.901	6.894	0.007	91	342399	4375.0	5004.9	
56 Benzene	78	6.944	6.943	0.001	98	1795893	175.0	173.5	
57 1,2-Dichloroethane	62	7.017	7.016	0.001	98	726180	175.0	179.8	
59 n-Heptane	43	7.309	7.308	0.001	91	479054	175.0	182.4	
61 Trichloroethene	130	7.674	7.679	-0.005	97	437177	175.0	177.0	
63 Methylcyclohexane	83	7.923	7.922	0.001	91	719808	175.0	176.6	
64 1,2-Dichloropropane	63	7.947	7.952	-0.005	94	487371	175.0	184.2	
65 1,4-Dioxane	88	8.033	8.025	0.008	43	99203	3500.0	4031.5	M
67 Dibromomethane	93	8.033	8.031	0.002	94	286555	175.0	188.0	
68 Dichlorobromomethane	83	8.227	8.226	0.001	98	557747	175.0	196.9	
71 cis-1,3-Dichloropropene	75	8.678	8.676	0.002	93	719515	175.0	207.7	
72 4-Methyl-2-pentanone (MIBK	43	8.824	8.822	0.002	94	944307	350.0	374.9	
73 Toluene	91	9.006	9.011	-0.005	97	1851302	175.0	161.1	
74 trans-1,3-Dichloropropene	75	9.255	9.254	0.001	96	646638	175.0	207.0	
75 Ethyl methacrylate	69	9.310	9.315	-0.005	89	668212	175.0	197.8	
76 1,1,2-Trichloroethane	97	9.450	9.449	0.001	94	415968	175.0	174.4	
77 Tetrachloroethene	164	9.523	9.528	-0.005	95	349769	175.0	162.0	
78 1,3-Dichloropropane	76	9.608	9.607	0.001	94	791746	175.0	176.2	
79 2-Hexanone	43	9.657	9.656	0.001	95	725114	350.0	383.0	
81 Chlorodibromomethane	129	9.821	9.820	0.001	91	370139	175.0	198.6	
82 Ethylene Dibromide	107	9.937	9.936	0.001	100	411188	175.0	184.2	
83 3-Chlorobenzotrifluoride	180	10.393	10.392	0.001	94	615025	175.0	163.8	
84 Chlorobenzene	112	10.430	10.422	0.008	91	1236712	175.0	165.2	
85 4-Chlorobenzotrifluoride	180	10.484	10.483	0.001	97	592273	175.0	167.1	
86 1,1,1,2-Tetrachloroethane	131	10.521	10.520	0.001	92	404111	175.0	182.3	
87 Ethylbenzene	106	10.527	10.526	0.001	98	710186	175.0	169.6	
88 m-Xylene & p-Xylene	106	10.655	10.660	-0.005	97	887397	175.0	170.9	
89 o-Xylene	106	11.038	11.043	-0.005	95	868113	175.0	171.4	
90 Styrene	104	11.062	11.061	0.001	93	1419636	175.0	176.0	
91 Bromoform	173	11.245	11.244	0.001	94	213045	175.0	203.9	
92 2-Chlorobenzotrifluoride	180	11.299	11.304	-0.005	96	624496	175.0	166.2	
93 Isopropylbenzene	105	11.409	11.408	0.001	98	1983997	175.0	162.6	
96 1,1,2,2-Tetrachloroethane	83	11.713	11.712	0.001	97	546556	175.0	177.2	
95 Bromobenzene	156	11.719	11.724	-0.005	97	541780	175.0	179.5	
97 trans-1,4-Dichloro-2-buten	53	11.750	11.755	-0.005	90	173489	175.0	200.2	
98 1,2,3-Trichloropropane	110	11.774	11.773	0.001	83	188578	175.0	177.5	
99 N-Propylbenzene	120	11.823	11.828	-0.005	97	569469	175.0	177.1	
100 2-Chlorotoluene	126	11.914	11.913	0.001	95	501945	175.0	178.0	
101 3-Chlorotoluene	126	11.975	11.980	-0.005	95	507762	175.0	177.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
102 1,3,5-Trimethylbenzene	105	12.005	12.010	-0.005	95	1709190	175.0	171.0	
103 4-Chlorotoluene	126	12.036	12.034	0.002	99	548826	175.0	179.1	
104 tert-Butylbenzene	119	12.322	12.320	0.002	91	1365158	175.0	173.5	
106 1,2,4-Trimethylbenzene	105	12.382	12.381	0.001	98	1770108	175.0	173.0	
107 1,2-dichloro-4-(trifluorom	214	12.419	12.418	0.001	97	470394	175.0	169.8	
108 sec-Butylbenzene	105	12.547	12.545	0.002	96	1944072	175.0	166.7	
109 1,3-Dichlorobenzene	146	12.662	12.661	0.001	95	976967	175.0	171.9	
110 4-Isopropyltoluene	119	12.705	12.704	0.001	94	1655882	175.0	172.7	
111 1,4-Dichlorobenzene	146	12.772	12.771	0.001	88	1014071	175.0	171.6	
113 2,4-Dichloro-1-(triflourom	214	12.790	12.789	0.001	94	470455	175.0	176.1	
114 2,5-Dichlorobenzotrifluori	214	12.826	12.825	0.001	97	517417	175.0	172.8	
116 n-Butylbenzene	91	13.112	13.111	0.001	96	1534726	175.0	172.9	
117 1,2-Dichlorobenzene	146	13.125	13.123	0.002	94	964637	175.0	173.0	
118 1,2-Dibromo-3-Chloropropan	75	13.915	13.914	0.001	75	100251	175.0	203.6	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.055	14.060	-0.005	96	2162784	525.0	514.8	
121 2,3- & 3,4- Dichlorotoluen	125	14.469	14.474	-0.005	97	1665491	350.0	356.0	
122 1,2,4-Trichlorobenzene	180	14.737	14.742	-0.005	94	733126	175.0	179.0	
123 Hexachlorobutadiene	225	14.883	14.881	0.002	96	252080	175.0	180.9	
124 Naphthalene	128	15.004	15.003	0.001	99	1622616	175.0	188.3	
125 1,2,3-Trichlorobenzene	180	15.223	15.222	0.001	93	678224	175.0	185.3	
126 2,4,5-Trichlorotoluene	159	16.002	16.007	-0.005	0	416192	175.0	207.1	
127 2,3,6-Trichlorotoluene	159	16.105	16.104	0.001	95	381721	175.0	200.7	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		350.0	356.9	
S 131 Xylenes, Total	106				0		350.0	342.3	
S 132 1,3-Dichloropropene, Total	1				0		350.0	414.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

voaWVA1st Res_00001	Amount Added:	7.00	Units: uL	
VOA8260SURR_00037	Amount Added:	7.00	Units: uL	
VOA8260VOAPRI_00121	Amount Added:	7.00	Units: uL	
voaWEEmix1st_00001	Amount Added:	7.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	7.00	Units: uL	
VOAACRLOEINPR_00001	Amount Added:	9.00	Units: uL	
VOA8260INT_00037	Amount Added:	2.00	Units: uL	Run Reagent

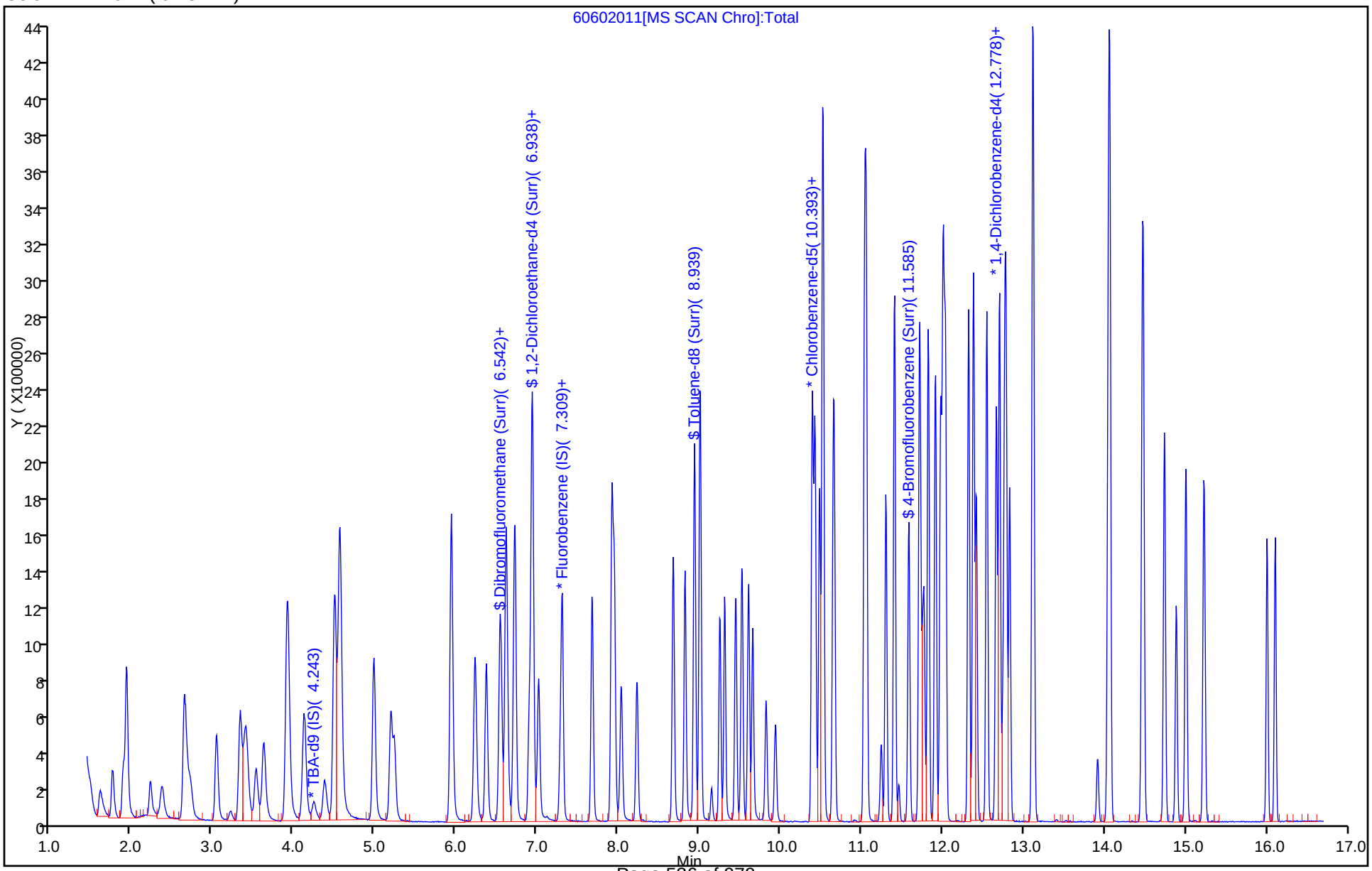
Report Date: 03-Jun-2015 10:40:26 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602011.D

Injection Date:	02-Jun-2015 17:43:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	IC VSTD35			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

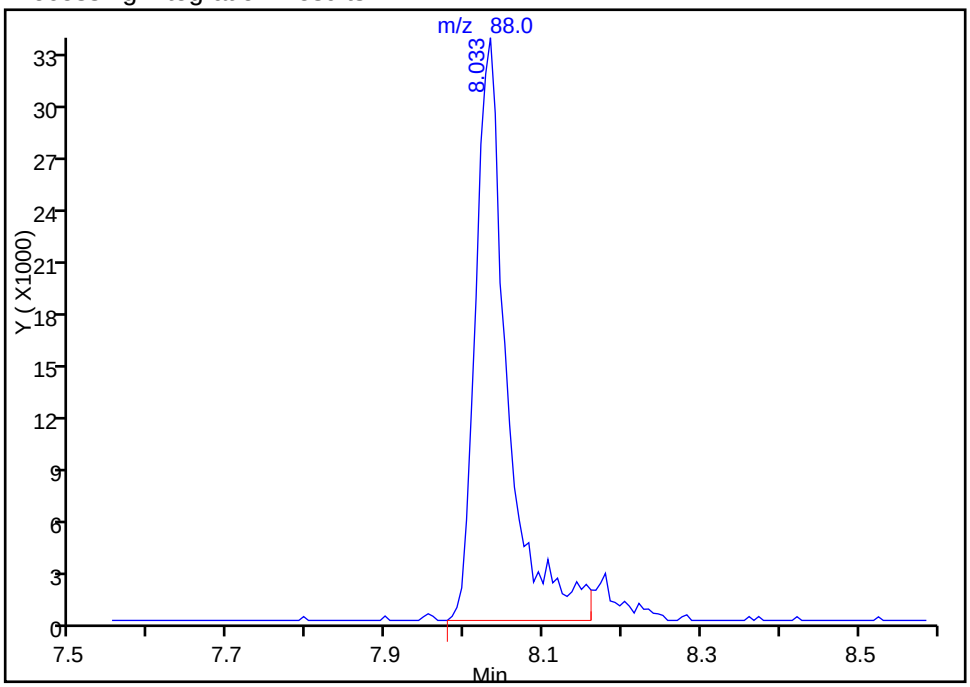
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602011.D
Injection Date: 02-Jun-2015 17:43:30 Instrument ID: CHHP6
Lims ID: IC VSTD35
Client ID:
Operator ID: 001562 ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

65 1,4-Dioxane, CAS: 123-91-1

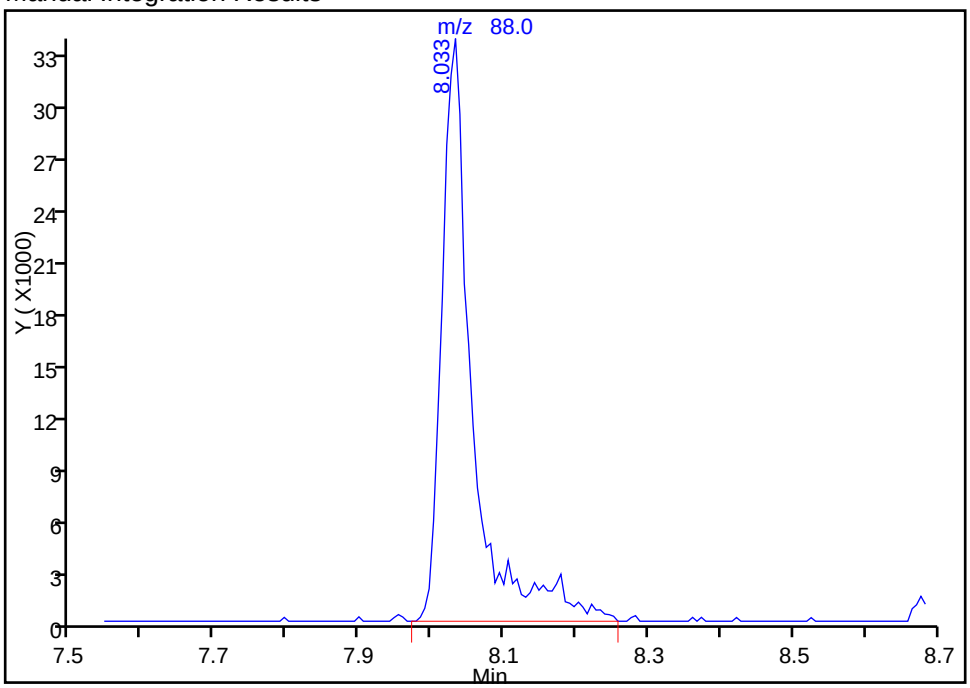
Processing Integration Results

RT: 8.03
Area: 93638
Amount: 3767.7864
Amount Units: ng



Manual Integration Results

RT: 8.03
Area: 99203
Amount: 4031.4894
Amount Units: ng



Reviewer: fergusond, 03-Jun-2015 09:46:30
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602012.D
Lims ID: IC VSTD40
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 02-Jun-2015 18:07:30 ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD40
Misc. Info.: 180-0007230-012
Operator ID: 001562 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub5

Method: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 03-Jun-2015 10:40:27 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK037

First Level Reviewer: fergusond Date: 03-Jun-2015 09:27:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.250	4.229	0.021	94	178765	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.283	0.003	97	468960	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.401	10.398	0.003	87	118290	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.743	12.746	-0.003	93	180499	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.550	6.547	0.003	93	433543	200.0	193.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.927	6.930	-0.003	74	668907	200.0	190.7	
$ 7 Toluene-d8 (Surr)	98	8.941	8.938	0.003	94	1629369	200.0	175.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.581	11.584	-0.003	84	727743	200.0	187.6	
11 Dichlorodifluoromethane	85	1.604	1.607	-0.003	99	482975	200.0	189.0	
12 Chloromethane	50	1.756	1.753	0.003	99	501208	200.0	183.3	
13 Vinyl chloride	62	1.890	1.893	-0.003	97	562585	200.0	184.9	
14 Butadiene	39	1.927	1.930	-0.003	90	591606	200.0	175.9	
15 Bromomethane	94	2.219	2.228	-0.009	92	237112	200.0	169.4	
16 Chloroethane	64	2.358	2.374	-0.016	99	374018	200.0	179.5	
17 Dichlorofluoromethane	67	2.638	2.648	-0.010	98	922973	200.0	179.4	
18 Trichlorofluoromethane	101	2.663	2.660	0.003	95	661390	200.0	174.1	
20 Ethyl ether	59	3.046	3.037	0.009	91	501649	200.0	185.7	
21 Acrolein	56	3.222	3.226	-0.004	98	94803	250.0	252.4	
22 1,1-Dichloroethene	96	3.332	3.341	-0.009	96	446907	200.0	188.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.393	3.396	-0.003	95	463571	200.0	184.8	
24 Acetone	43	3.423	3.426	-0.003	99	295950	400.0	415.6	
25 Iodomethane	142	3.533	3.530	0.003	100	691306	200.0	188.8	
26 Carbon disulfide	76	3.624	3.633	-0.009	100	1301175	200.0	201.2	
29 3-Chloro-1-propene	76	3.904	3.919	-0.015	89	300657	200.0	209.1	
30 Methyl acetate	43	3.922	3.919	0.003	97	1932107	1000.0	956.3	
31 Methylene Chloride	84	4.123	4.126	-0.003	94	584860	200.0	192.3	
32 2-Methyl-2-propanol	59	4.384	4.363	0.021	94	425370	2000.0	1953.7	
33 Acrylonitrile	53	4.500	4.497	0.003	97	2034733	2000.0	1952.5	
34 trans-1,2-Dichloroethene	96	4.555	4.564	-0.009	96	538169	200.0	192.6	
35 Methyl tert-butyl ether	73	4.573	4.570	0.003	98	1618437	200.0	196.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.987	4.984	0.002	94	728918	200.0	188.2	
37 1,1-Dichloroethane	63	5.193	5.191	0.003	96	970843	200.0	192.0	
38 Vinyl acetate	43	5.236	5.233	0.003	97	904203	200.0	220.1	
43 cis-1,2-Dichloroethene	96	5.942	5.939	0.003	84	578498	200.0	191.7	
42 2,2-Dichloropropane	77	5.942	5.945	-0.003	63	540527	200.0	199.8	
44 2-Butanone (MEK)	43	5.948	5.945	0.003	99	474394	400.0	414.5	
48 Chlorobromomethane	128	6.234	6.231	0.003	97	260282	200.0	188.7	
49 Tetrahydrofuran	42	6.246	6.243	0.003	85	333084	400.0	390.9	
50 Chloroform	83	6.374	6.371	0.003	96	938131	200.0	187.3	
51 1,1,1-Trichloroethane	97	6.538	6.535	0.003	98	732437	200.0	197.5	
52 Cyclohexane	56	6.617	6.614	0.003	93	922446	200.0	186.8	
53 Carbon tetrachloride	117	6.714	6.711	0.003	97	588436	200.0	201.0	
54 1,1-Dichloropropene	75	6.726	6.724	0.002	94	762355	200.0	193.7	
55 Isobutyl alcohol	41	6.903	6.894	0.009	90	406628	5000.0	5354.1	M
56 Benzene	78	6.939	6.943	-0.004	98	2099886	200.0	182.7	
57 1,2-Dichloroethane	62	7.018	7.016	0.002	98	867478	200.0	193.5	
59 n-Heptane	43	7.310	7.308	0.002	90	558248	200.0	191.5	
61 Trichloroethene	130	7.681	7.679	0.002	97	521290	200.0	190.1	
63 Methylcyclohexane	83	7.919	7.922	-0.003	90	865585	200.0	191.3	
64 1,2-Dichloropropane	63	7.949	7.952	-0.003	85	581224	200.0	197.9	
65 1,4-Dioxane	88	8.028	8.025	0.003	44	116012	4000.0	4246.8	
67 Dibromomethane	93	8.034	8.031	0.003	95	336857	200.0	199.0	
68 Dichlorobromomethane	83	8.229	8.226	0.003	98	667166	200.0	212.1	
71 cis-1,3-Dichloropropene	75	8.679	8.676	0.003	93	866431	200.0	225.3	
72 4-Methyl-2-pentanone (MIBK	43	8.825	8.822	0.003	94	1097641	400.0	407.9	
73 Toluene	91	9.008	9.011	-0.003	96	2134560	200.0	173.9	
74 trans-1,3-Dichloropropene	75	9.251	9.254	-0.003	96	765684	200.0	229.5	
75 Ethyl methacrylate	69	9.312	9.315	-0.003	89	775184	200.0	214.8	
76 1,1,2-Trichloroethane	97	9.452	9.449	0.003	95	481605	200.0	189.0	
77 Tetrachloroethene	164	9.525	9.528	-0.003	95	413312	200.0	179.3	
78 1,3-Dichloropropane	76	9.604	9.607	-0.003	93	926856	200.0	193.1	
79 2-Hexanone	43	9.659	9.656	0.003	95	858660	400.0	424.6	
81 Chlorodibromomethane	129	9.823	9.820	0.003	90	437749	200.0	219.8	
82 Ethylene Dibromide	107	9.938	9.936	0.002	98	474462	200.0	198.9	
83 3-Chlorobenzotrifluoride	180	10.395	10.392	0.003	94	671147	200.0	167.3	
84 Chlorobenzene	112	10.425	10.422	0.003	89	1422898	200.0	177.9	
85 4-Chlorobenzotrifluoride	180	10.486	10.483	0.003	96	633425	200.0	167.3	
86 1,1,1,2-Tetrachloroethane	131	10.522	10.520	0.002	92	483615	200.0	204.2	
87 Ethylbenzene	106	10.529	10.526	0.003	97	836069	200.0	186.9	
88 m-Xylene & p-Xylene	106	10.656	10.660	-0.004	97	1047977	200.0	188.9	
89 o-Xylene	106	11.040	11.043	-0.003	96	1023674	200.0	189.2	
90 Styrene	104	11.058	11.061	-0.003	94	1651549	200.0	191.7	
91 Bromoform	173	11.240	11.244	-0.004	94	252535	200.0	226.3	
92 2-Chlorobenzotrifluoride	180	11.301	11.304	-0.003	96	690171	200.0	172.0	
93 Isopropylbenzene	105	11.405	11.408	-0.003	98	2288109	200.0	175.5	
96 1,1,2,2-Tetrachloroethane	83	11.715	11.712	0.003	98	617417	200.0	187.4	
95 Bromobenzene	156	11.721	11.724	-0.003	97	632300	200.0	193.1	
97 trans-1,4-Dichloro-2-buten	53	11.751	11.755	-0.004	84	201966	200.0	214.8	
98 1,2,3-Trichloropropane	110	11.770	11.773	-0.003	85	226541	200.0	196.6	
99 N-Propylbenzene	120	11.824	11.828	-0.004	96	682816	200.0	195.7	
100 2-Chlorotoluene	126	11.910	11.913	-0.003	94	592726	200.0	193.7	
101 3-Chlorotoluene	126	11.976	11.980	-0.004	97	571499	200.0	183.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
102 1,3,5-Trimethylbenzene	105	12.007	12.010	-0.003	94	2017878	200.0	186.1	
103 4-Chlorotoluene	126	12.037	12.034	0.003	98	637618	200.0	191.8	
104 tert-Butylbenzene	119	12.323	12.320	0.003	91	1606064	200.0	188.1	
106 1,2,4-Trimethylbenzene	105	12.384	12.381	0.003	98	2059251	200.0	185.5	
107 1,2-dichloro-4-(trifluorom	214	12.421	12.418	0.002	96	525135	200.0	174.8	
108 sec-Butylbenzene	105	12.548	12.545	0.003	96	2284193	200.0	180.5	
109 1,3-Dichlorobenzene	146	12.664	12.661	0.003	94	1137208	200.0	184.5	
110 4-Isopropyltoluene	119	12.700	12.704	-0.004	94	1935231	200.0	186.0	
111 1,4-Dichlorobenzene	146	12.767	12.771	-0.004	93	1182402	200.0	184.5	
113 2,4-Dichloro-1-(triflourom	214	12.786	12.789	-0.003	94	538540	200.0	185.8	
114 2,5-Dichlorobenzotrifluori	214	12.828	12.825	0.003	98	570204	200.0	175.5	
116 n-Butylbenzene	91	13.114	13.111	0.003	95	1795142	200.0	186.5	
117 1,2-Dichlorobenzene	146	13.126	13.123	0.003	92	1118982	200.0	184.9	
118 1,2-Dibromo-3-Chloropropan	75	13.911	13.914	-0.003	87	115911	200.0	217.0	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.057	14.060	-0.003	95	2408780	600.0	528.5	
121 2,3- & 3,4- Dichlorotoluen	125	14.471	14.474	-0.003	96	1862269	400.0	366.9	
122 1,2,4-Trichlorobenzene	180	14.738	14.742	-0.004	94	857001	200.0	192.9	
123 Hexachlorobutadiene	225	14.884	14.881	0.003	97	293292	200.0	194.1	
124 Naphthalene	128	15.006	15.003	0.003	99	1874020	200.0	200.5	
125 1,2,3-Trichlorobenzene	180	15.225	15.222	0.003	93	788418	200.0	198.6	
126 2,4,5-Trichlorotoluene	159	16.004	16.007	-0.003	0	463413	200.0	212.6	
127 2,3,6-Trichlorotoluene	159	16.107	16.104	0.003	94	432678	200.0	209.7	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		400.0	384.3	
S 131 Xylenes, Total	106				0		400.0	378.2	
S 132 1,3-Dichloropropene, Total	1				0		400.0	454.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRLOEINPR_00001	Amount Added:	10.00	Units: uL	
VOA8260SURR_00037	Amount Added:	8.00	Units: uL	
VOA8260VOAPRI_00121	Amount Added:	8.00	Units: uL	
voaWEEmix1st_00001	Amount Added:	8.00	Units: uL	
voaWketmix1Re_00001	Amount Added:	8.00	Units: uL	
voaWVA1st Res_00001	Amount Added:	8.00	Units: uL	
VOA8260INT_00037	Amount Added:	2.00	Units: uL	Run Reagent

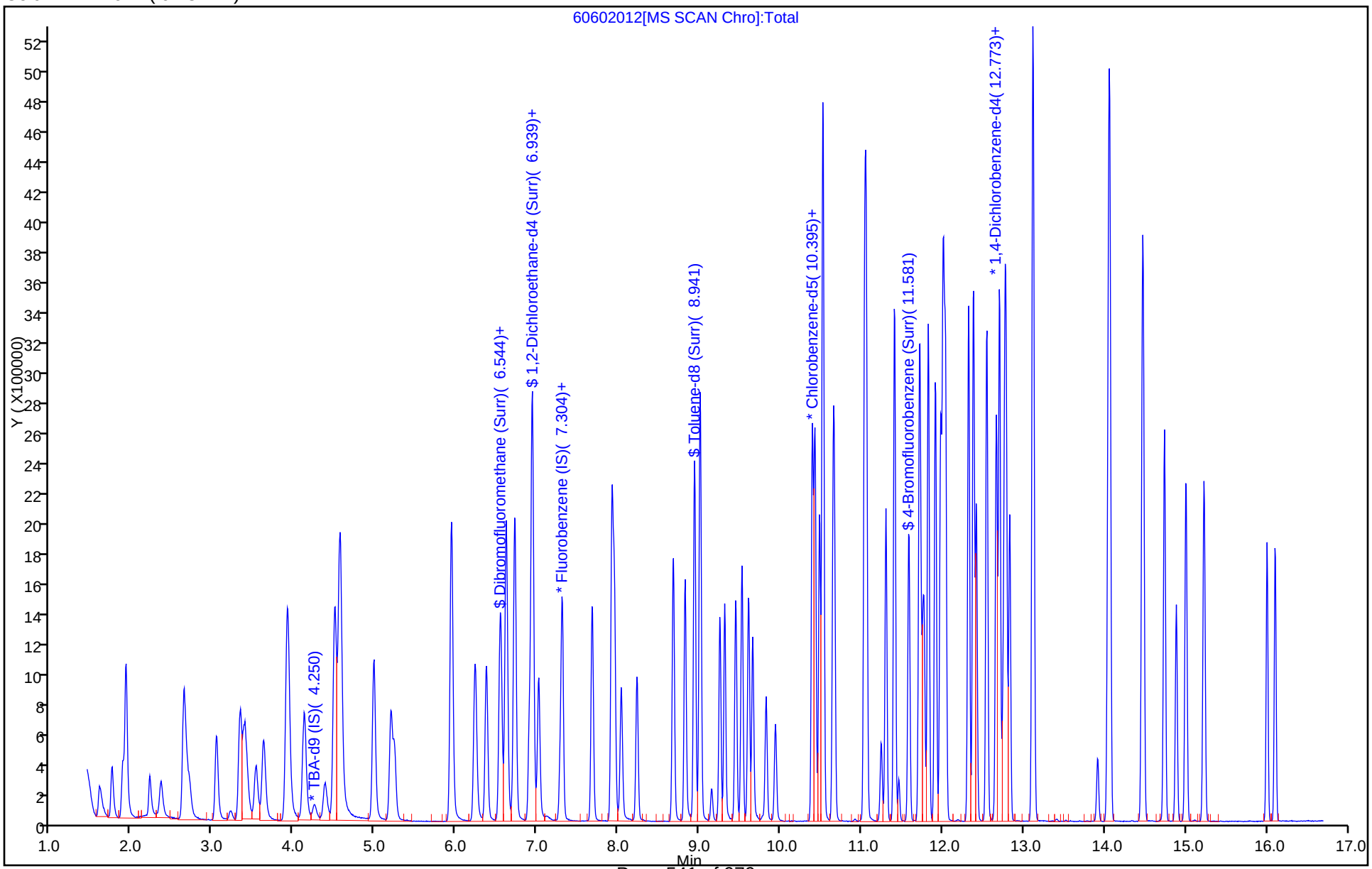
Report Date: 03-Jun-2015 10:40:27 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602012.D

Injection Date:	02-Jun-2015 18:07:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	IC VSTD40			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

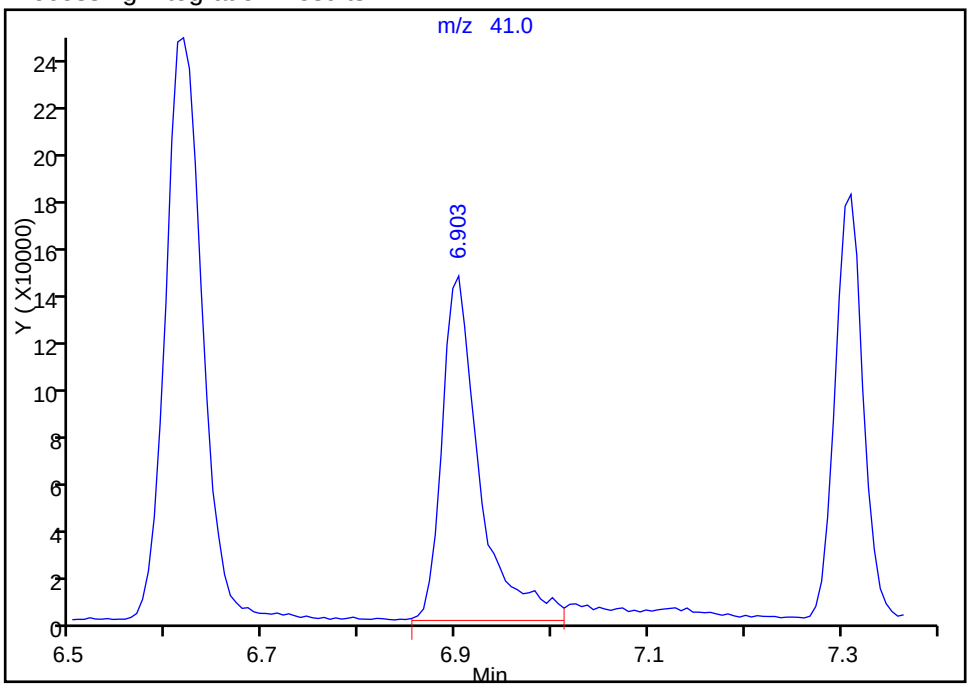
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602012.D				
Injection Date:	02-Jun-2015 18:07:30	Instrument ID:	CHHP6		
Lims ID:	IC VSTD40				
Client ID:					
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

55 Isobutyl alcohol, CAS: 78-83-1

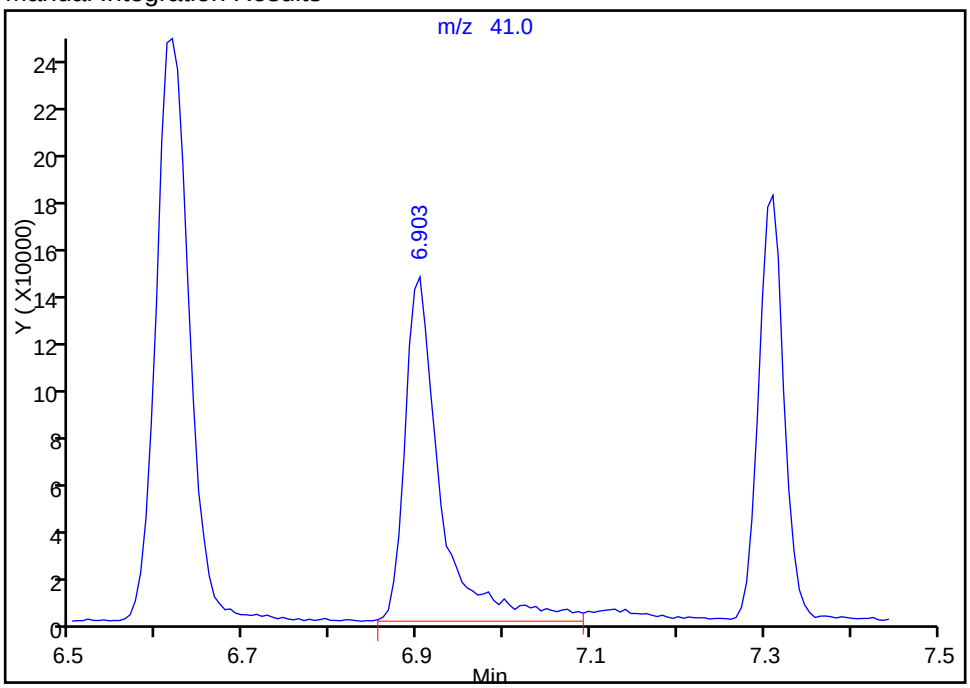
Processing Integration Results

RT: 6.90
Area: 386101
Amount: 5114.4775
Amount Units: ng



Manual Integration Results

RT: 6.90
Area: 406628
Amount: 5354.0915
Amount Units: ng



Reviewer: fergusond, 03-Jun-2015 09:48:44
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602013.D
Lims ID: IC VSTD50
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 02-Jun-2015 18:31:30 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD50
Misc. Info.: 180-0007230-013
Operator ID: 001562 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub5

Method: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 03-Jun-2015 10:40:28 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK037

First Level Reviewer: fergusond Date: 03-Jun-2015 09:27:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.263	4.229	0.034	96	188833	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.283	0.003	98	460435	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.395	10.398	-0.003	89	121002	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.743	12.746	-0.003	93	178808	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.550	6.547	0.003	93	513060	250.0	232.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.927	6.930	-0.003	79	775602	250.0	225.2	
$ 7 Toluene-d8 (Surr)	98	8.941	8.938	0.003	94	1893763	250.0	199.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.581	11.584	-0.003	84	860486	250.0	216.9	
11 Dichlorodifluoromethane	85	1.610	1.607	0.003	99	605119	250.0	241.2	
12 Chloromethane	50	1.756	1.753	0.003	98	630586	250.0	234.8	
13 Vinyl chloride	62	1.890	1.893	-0.003	98	712757	250.0	238.6	
14 Butadiene	39	1.933	1.930	0.003	92	765118	250.0	231.7	
15 Bromomethane	94	2.225	2.228	-0.003	91	268539	250.0	195.4	
16 Chloroethane	64	2.358	2.374	-0.016	99	442569	250.0	216.3	
17 Dichlorofluoromethane	67	2.638	2.648	-0.010	97	1143417	250.0	226.4	
18 Trichlorofluoromethane	101	2.644	2.660	-0.016	67	831776	250.0	223.0	
20 Ethyl ether	59	3.040	3.037	0.003	91	629741	250.0	237.4	
21 Acrolein	56	3.216	3.226	-0.010	99	102612	275.0	278.2	
22 1,1-Dichloroethene	96	3.326	3.341	-0.015	97	570197	250.0	245.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.393	3.396	-0.003	94	587081	250.0	238.4	
24 Acetone	43	3.429	3.426	0.003	99	356250	500.0	509.5	
25 Iodomethane	142	3.526	3.530	-0.004	100	875406	250.0	243.5	
26 Carbon disulfide	76	3.618	3.633	-0.015	100	1661512	250.0	261.7	
29 3-Chloro-1-propene	76	3.904	3.919	-0.015	89	384828	250.0	272.5	
30 Methyl acetate	43	3.922	3.919	0.003	96	2391263	1250.0	1205.5	
31 Methylene Chloride	84	4.123	4.126	-0.003	91	718118	250.0	242.3	
32 2-Methyl-2-propanol	59	4.396	4.363	0.033	93	558581	2500.0	2428.8	
33 Acrylonitrile	53	4.500	4.497	0.003	97	2520748	2500.0	2463.6	
34 trans-1,2-Dichloroethene	96	4.561	4.564	-0.003	96	671912	250.0	244.9	
35 Methyl tert-butyl ether	73	4.573	4.570	0.003	98	2016575	250.0	248.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.980	4.984	-0.004	92	911338	250.0	239.7	
37 1,1-Dichloroethane	63	5.193	5.191	0.003	96	1198527	250.0	241.4	
38 Vinyl acetate	43	5.236	5.233	0.003	97	1141601	250.0	283.0	
43 cis-1,2-Dichloroethene	96	5.936	5.939	-0.003	83	726211	250.0	245.1	
42 2,2-Dichloropropane	77	5.942	5.945	-0.003	65	718383	250.0	270.5	
44 2-Butanone (MEK)	43	5.942	5.945	-0.003	63	555151	500.0	494.0	
48 Chlorobromomethane	128	6.228	6.231	-0.003	98	333806	250.0	246.5	
49 Tetrahydrofuran	42	6.246	6.243	0.003	86	399870	500.0	477.9	
50 Chloroform	83	6.367	6.371	-0.004	96	1169250	250.0	237.8	
51 1,1,1-Trichloroethane	97	6.538	6.535	0.003	97	924324	250.0	253.8	
52 Cyclohexane	56	6.617	6.614	0.003	92	1181126	250.0	243.6	
53 Carbon tetrachloride	117	6.714	6.711	0.003	98	748477	250.0	260.4	
54 1,1-Dichloropropene	75	6.726	6.724	0.002	94	941075	250.0	243.5	
55 Isobutyl alcohol	41	6.903	6.894	0.009	93	507961	6250.0	6812.2	
56 Benzene	78	6.939	6.943	-0.004	98	2521609	250.0	223.5	
57 1,2-Dichloroethane	62	7.018	7.016	0.002	98	1047382	250.0	237.9	
59 n-Heptane	43	7.310	7.308	0.002	90	680203	250.0	237.7	
61 Trichloroethene	130	7.675	7.679	-0.004	97	654862	250.0	243.3	
63 Methylcyclohexane	83	7.919	7.922	-0.003	90	1076468	250.0	242.3	
64 1,2-Dichloropropane	63	7.949	7.952	-0.003	86	698602	250.0	242.3	
65 1,4-Dioxane	88	8.034	8.025	0.009	42	152674	5000.0	5692.4	
67 Dibromomethane	93	8.034	8.031	0.003	94	411405	250.0	247.6	
68 Dichlorobromomethane	83	8.229	8.226	0.003	99	821160	250.0	265.9	
71 cis-1,3-Dichloropropene	75	8.673	8.676	-0.003	93	1043978	250.0	276.5	
72 4-Methyl-2-pentanone (MIBK	43	8.825	8.822	0.003	94	1336014	500.0	485.4	
73 Toluene	91	9.008	9.011	-0.003	96	2531558	250.0	201.6	
74 trans-1,3-Dichloropropene	75	9.251	9.254	-0.003	96	918179	250.0	269.0	
75 Ethyl methacrylate	69	9.312	9.315	-0.003	90	928414	250.0	251.5	
76 1,1,2-Trichloroethane	97	9.446	9.449	-0.003	95	567505	250.0	217.7	
77 Tetrachloroethene	164	9.525	9.528	-0.003	95	503777	250.0	213.6	
78 1,3-Dichloropropane	76	9.604	9.607	-0.003	94	1082576	250.0	220.4	
79 2-Hexanone	43	9.659	9.656	0.003	94	983046	500.0	475.2	
81 Chlorodibromomethane	129	9.823	9.820	0.003	90	524072	250.0	257.3	
82 Ethylene Dibromide	107	9.938	9.936	0.002	98	573012	250.0	234.9	
83 3-Chlorobenzotrifluoride	180	10.395	10.392	0.003	91	823347	250.0	200.7	
84 Chlorobenzene	112	10.425	10.422	0.003	90	1702694	250.0	208.1	
85 4-Chlorobenzotrifluoride	180	10.480	10.483	-0.003	96	794333	250.0	205.1	
86 1,1,1,2-Tetrachloroethane	131	10.522	10.520	0.002	91	593106	250.0	244.8	
87 Ethylbenzene	106	10.522	10.526	-0.004	97	1013761	250.0	221.6	
88 m-Xylene & p-Xylene	106	10.656	10.660	-0.004	97	1267781	250.0	223.4	
89 o-Xylene	106	11.040	11.043	-0.003	96	1226725	250.0	221.7	
90 Styrene	104	11.058	11.061	-0.003	93	1978663	250.0	224.5	
91 Bromoform	173	11.240	11.244	-0.004	95	319392	250.0	279.8	
92 2-Chlorobenzotrifluoride	180	11.301	11.304	-0.003	95	855502	250.0	208.4	
93 Isopropylbenzene	105	11.405	11.408	-0.003	98	2713344	250.0	203.5	
96 1,1,2,2-Tetrachloroethane	83	11.709	11.712	-0.003	97	779657	250.0	231.3	
95 Bromobenzene	156	11.721	11.724	-0.003	97	775401	250.0	239.1	
97 trans-1,4-Dichloro-2-buten	53	11.751	11.755	-0.004	85	248080	250.0	266.3	
98 1,2,3-Trichloropropane	110	11.770	11.773	-0.003	84	276755	250.0	242.5	
99 N-Propylbenzene	120	11.824	11.828	-0.004	96	833233	250.0	241.1	
100 2-Chlorotoluene	126	11.909	11.913	-0.004	95	735605	250.0	242.7	
101 3-Chlorotoluene	126	11.976	11.980	-0.004	95	697185	250.0	226.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
102 1,3,5-Trimethylbenzene	105	12.007	12.010	-0.003	96	2403720	250.0	223.7	
103 4-Chlorotoluene	126	12.037	12.034	0.003	98	784490	250.0	238.2	
104 tert-Butylbenzene	119	12.323	12.320	0.003	91	1938245	250.0	229.2	
106 1,2,4-Trimethylbenzene	105	12.384	12.381	0.003	98	2487778	250.0	226.2	
107 1,2-dichloro-4-(trifluorom	214	12.420	12.418	0.002	96	660319	250.0	221.8	
108 sec-Butylbenzene	105	12.548	12.545	0.003	96	2742271	250.0	218.8	
109 1,3-Dichlorobenzene	146	12.664	12.661	0.003	93	1388399	250.0	227.4	
110 4-Isopropyltoluene	119	12.700	12.704	-0.004	93	2330490	250.0	226.1	
111 1,4-Dichlorobenzene	146	12.767	12.771	-0.004	93	1433894	250.0	225.8	
113 2,4-Dichloro-1-(triflourom	214	12.786	12.789	-0.003	95	682083	250.0	237.5	
114 2,5-Dichlorobenzotrifluori	214	12.828	12.825	0.003	98	713859	250.0	221.8	
116 n-Butylbenzene	91	13.108	13.111	-0.003	94	2195506	250.0	230.2	
117 1,2-Dichlorobenzene	146	13.120	13.123	-0.003	94	1382309	250.0	230.6	
118 1,2-Dibromo-3-Chloropropan	75	13.911	13.914	-0.003	75	154200	250.0	291.4	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.057	14.060	-0.003	94	2933986	750.0	649.8	
121 2,3- & 3,4- Dichlorotoluen	125	14.471	14.474	-0.003	95	2275767	500.0	452.6	
122 1,2,4-Trichlorobenzene	180	14.738	14.742	-0.004	94	1055560	250.0	239.9	
123 Hexachlorobutadiene	225	14.884	14.881	0.003	97	363903	250.0	243.1	
124 Naphthalene	128	15.000	15.003	-0.003	99	2289880	250.0	247.2	
125 1,2,3-Trichlorobenzene	180	15.225	15.222	0.003	94	977618	250.0	248.6	
126 2,4,5-Trichlorotoluene	159	16.004	16.007	-0.003	0	593017	250.0	274.6	
127 2,3,6-Trichlorotoluene	159	16.101	16.104	-0.003	94	536424	250.0	262.4	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		500.0	490.0	
S 131 Xylenes, Total	106				0		500.0	445.1	
S 132 1,3-Dichloropropene, Total	1				0		500.0	545.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

voaWVA1st Res_00001	Amount Added: 10.00	Units: uL	
VOA8260SURR_00037	Amount Added: 10.00	Units: uL	
VOA8260VOAPRI_00121	Amount Added: 10.00	Units: uL	
voaWEEmix1st_00001	Amount Added: 10.00	Units: uL	
voaWketmix1Re_00001	Amount Added: 10.00	Units: uL	
VOAACRLOEINPR_00001	Amount Added: 11.00	Units: uL	
VOA8260INT_00037	Amount Added: 2.00	Units: uL	Run Reagent

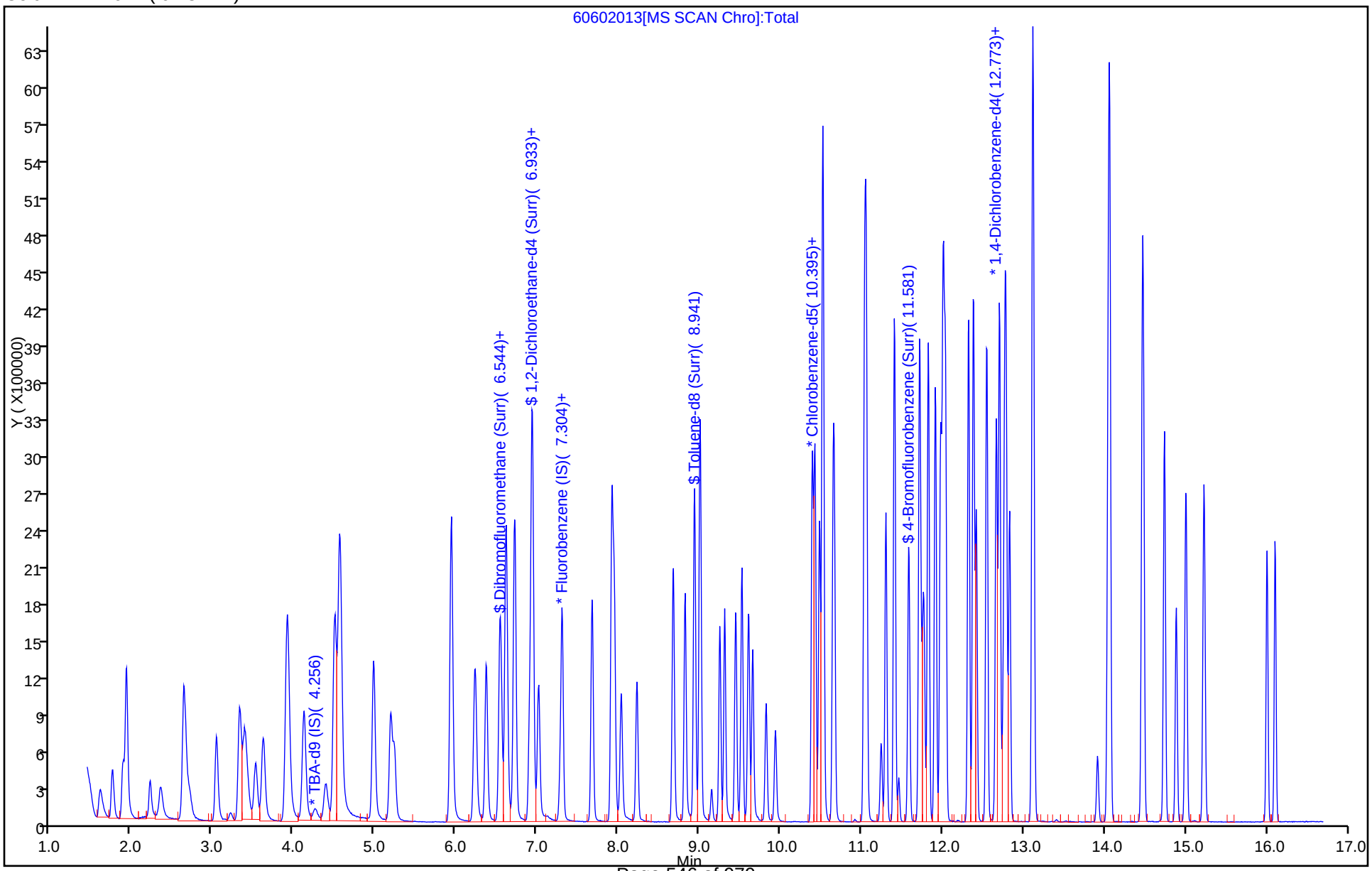
Report Date: 03-Jun-2015 10:40:29 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602013.D

Injection Date:	02-Jun-2015 18:31:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	IC VSTD50			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D
Lims ID: IC VSTD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 02-Jun-2015 20:05:30 ALS Bottle#: 17 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD1
Misc. Info.: 180-0007230-017
Operator ID: 001562 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub5

Method: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 03-Jun-2015 10:40:30 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK037

First Level Reviewer: fergusond Date: 03-Jun-2015 10:24:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.236	4.229	0.007	90	148888	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.284	7.283	0.001	98	431856	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.398	10.398	0.000	89	96997	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.747	12.746	0.001	97	162805	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.554	6.547	0.007	90	9985	5.00	4.83	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.931	6.930	0.001	70	17199	5.00	5.32	
$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	93	42530	5.00	5.58	
$ 8 4-Bromofluorobenzene (Surr	95	11.579	11.584	-0.005	85	16407	5.00	5.16	
11 Dichlorodifluoromethane	85	1.626	1.607	0.019	14	11609	5.00	4.93	
12 Chloromethane	50	1.760	1.753	0.007	99	13963	5.00	5.54	
13 Vinyl chloride	62	1.882	1.893	-0.011	95	13994	5.00	5.00	
14 Butadiene	39	1.924	1.930	-0.006	97	16853	5.00	5.44	
15 Bromomethane	94	2.247	2.228	0.019	89	7632	5.00	5.92	
16 Chloroethane	64	2.374	2.374	0.000	86	10822	5.00	5.64	
17 Dichlorofluoromethane	67	2.654	2.648	0.006	97	25559	5.00	5.40	
18 Trichlorofluoromethane	101	2.648	2.660	-0.012	73	18067	5.00	5.16	
20 Ethyl ether	59	3.044	3.037	0.007	92	13904	5.00	5.59	
21 Acrolein	56	3.220	3.226	-0.006	99	32605	100.0	94.3	
22 1,1-Dichloroethene	96	3.348	3.341	0.007	94	10915	5.00	5.00	
23 1,1,2-Trichloro-1,2,2-trif	101	3.409	3.396	0.013	69	11867	5.00	5.14	M
24 Acetone	43	3.427	3.426	0.001	98	18285	25.0	27.9	
25 Iodomethane	142	3.536	3.530	0.006	99	18152	5.00	5.38	
26 Carbon disulfide	76	3.640	3.633	0.007	99	25903	5.00	4.35	
29 3-Chloro-1-propene	76	3.913	3.919	-0.006	96	5980	5.00	4.52	
30 Methyl acetate	43	3.932	3.919	0.013	97	50813	25.0	27.3	
31 Methylene Chloride	84	4.132	4.126	0.006	94	32590	5.00	4.94	
32 2-Methyl-2-propanol	59	4.364	4.363	0.001	80	9424	50.0	52.0	M
33 Acrylonitrile	53	4.516	4.497	0.019	99	50365	50.0	52.5	
34 trans-1,2-Dichloroethene	96	4.571	4.564	0.006	66	12883	5.00	5.01	
35 Methyl tert-butyl ether	73	4.564	4.570	-0.006	97	37525	5.00	4.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.984	4.984	0.000	93	19396	5.00	5.44	
37 1,1-Dichloroethane	63	5.191	5.191	0.001	59	23646	5.00	5.08	
38 Vinyl acetate	43	5.240	5.233	0.007	97	12702	5.00	3.36	
43 cis-1,2-Dichloroethene	96	5.945	5.939	0.006	87	14070	5.00	5.06	
42 2,2-Dichloropropane	77	5.933	5.945	-0.012	55	10719	5.00	4.30	
44 2-Butanone (MEK)	43	5.945	5.945	0.000	94	23555	25.0	22.3	
48 Chlorobromomethane	128	6.231	6.231	0.000	97	7173	5.00	5.65	
49 Tetrahydrofuran	42	6.256	6.243	0.013	90	9528	10.0	12.1	
50 Chloroform	83	6.371	6.371	0.000	95	24843	5.00	5.39	
51 1,1,1-Trichloroethane	97	6.542	6.535	0.007	96	15621	5.00	4.57	
52 Cyclohexane	56	6.615	6.614	0.001	89	23401	5.00	5.15	
53 Carbon tetrachloride	117	6.718	6.711	0.007	79	12019	5.00	4.46	
54 1,1-Dichloropropene	75	6.724	6.724	0.000	89	16161	5.00	4.46	
55 Isobutyl alcohol	41	6.907	6.894	0.013	82	8705	125.0	124.5	
56 Benzene	78	6.943	6.943	0.000	97	58419	5.00	5.52	
57 1,2-Dichloroethane	62	7.016	7.016	0.000	95	22557	5.00	5.46	
59 n-Heptane	43	7.308	7.308	0.000	90	14374	5.00	5.35	
61 Trichloroethene	130	7.679	7.679	0.000	93	12488	5.00	4.95	
63 Methylcyclohexane	83	7.922	7.922	0.000	88	20040	5.00	4.81	
64 1,2-Dichloropropane	63	7.953	7.952	0.001	90	13831	5.00	5.11	
65 1,4-Dioxane	88	8.038	8.025	0.013	43	2255	100.0	89.6	
67 Dibromomethane	93	8.032	8.031	0.001	90	7930	5.00	5.09	
68 Dichlorobromomethane	83	8.233	8.226	0.007	96	11995	5.00	4.14	
71 cis-1,3-Dichloropropene	75	8.677	8.676	0.001	94	14253	5.00	4.02	
72 4-Methyl-2-pentanone (MIBK	43	8.823	8.822	0.001	96	44694	25.0	20.3	
73 Toluene	91	9.005	9.011	-0.006	97	62135	5.00	6.17	
74 trans-1,3-Dichloropropene	75	9.249	9.254	-0.005	98	9699	5.00	3.54	
75 Ethyl methacrylate	69	9.310	9.315	-0.005	87	13205	5.00	4.46	
76 1,1,2-Trichloroethane	97	9.449	9.449	0.000	89	12130	5.00	5.81	
77 Tetrachloroethene	164	9.529	9.528	0.001	93	11392	5.00	6.03	
78 1,3-Dichloropropane	76	9.608	9.607	0.001	92	21842	5.00	5.55	
79 2-Hexanone	43	9.662	9.656	0.006	93	33929	25.0	20.5	
81 Chlorodibromomethane	129	9.821	9.820	0.001	90	6731	5.00	4.12	
82 Ethylene Dibromide	107	9.942	9.936	0.006	98	10520	5.00	5.38	
83 3-Chlorobenzotrifluoride	180	10.398	10.392	0.006	56	19223	5.00	5.84	
84 Chlorobenzene	112	10.423	10.422	0.001	90	39207	5.00	5.98	
85 4-Chlorobenzotrifluoride	180	10.490	10.483	0.007	95	18326	5.00	5.90	
86 1,1,1,2-Tetrachloroethane	131	10.514	10.520	-0.006	40	8616	5.00	4.44	
87 Ethylbenzene	106	10.526	10.526	0.000	98	19390	5.00	5.29	
88 m-Xylene & p-Xylene	106	10.666	10.660	0.006	96	22785	5.00	5.01	
89 o-Xylene	106	11.037	11.043	-0.006	98	21650	5.00	4.88	
90 Styrene	104	11.055	11.061	-0.006	92	32262	5.00	4.57	
91 Bromoform	173	11.244	11.244	0.000	87	3745	5.00	4.09	
92 2-Chlorobenzotrifluoride	180	11.299	11.304	-0.005	93	17767	5.00	5.40	
93 Isopropylbenzene	105	11.408	11.408	0.000	97	55370	5.00	5.18	
96 1,1,2,2-Tetrachloroethane	83	11.712	11.712	0.000	73	13134	5.00	4.86	
95 Bromobenzene	156	11.725	11.724	0.001	95	15157	5.00	5.13	
97 trans-1,4-Dichloro-2-buten	53	11.755	11.755	0.000	66	3695	5.00	4.36	M
98 1,2,3-Trichloropropane	110	11.767	11.773	-0.006	88	5195	5.00	5.00	
99 N-Propylbenzene	120	11.828	11.828	0.000	99	14758	5.00	4.69	
100 2-Chlorotoluene	126	11.913	11.913	0.000	94	13240	5.00	4.80	
101 3-Chlorotoluene	126	11.980	11.980	0.000	98	14120	5.00	5.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
102 1,3,5-Trimethylbenzene	105	12.011	12.010	0.001	93	46993	5.00	4.80	
103 4-Chlorotoluene	126	12.035	12.034	0.001	98	14601	5.00	4.87	
104 tert-Butylbenzene	119	12.321	12.320	0.001	93	38523	5.00	5.00	
106 1,2,4-Trimethylbenzene	105	12.382	12.381	0.001	98	46976	5.00	4.69	
107 1,2-dichloro-4-(trifluorom	214	12.412	12.418	-0.006	95	14846	5.00	5.48	
108 sec-Butylbenzene	105	12.546	12.545	0.001	95	58277	5.00	5.11	
109 1,3-Dichlorobenzene	146	12.662	12.661	0.001	95	31158	5.00	5.60	
110 4-Isopropyltoluene	119	12.704	12.704	0.000	96	43168	5.00	4.60	
111 1,4-Dichlorobenzene	146	12.771	12.771	0.000	93	32974	5.00	5.70	
113 2,4-Dichloro-1-(triflourom	214	12.789	12.789	0.000	92	11883	5.00	4.54	
114 2,5-Dichlorobenzotrifluori	214	12.826	12.825	0.001	98	14787	5.00	5.05	
116 n-Butylbenzene	91	13.112	13.111	0.001	98	39504	5.00	4.55	
117 1,2-Dichlorobenzene	146	13.124	13.123	0.001	93	29677	5.00	5.44	
118 1,2-Dibromo-3-Chloropropan	75	13.915	13.914	0.001	59	2071	5.00	4.30	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.061	14.060	0.001	99	64359	15.0	15.7	
121 2,3- & 3,4- Dichlorotoluen	125	14.474	14.474	0.000	98	46414	10.0	10.1	
122 1,2,4-Trichlorobenzene	180	14.742	14.742	0.000	93	21205	5.00	5.29	
123 Hexachlorobutadiene	225	14.882	14.881	0.001	95	7366	5.00	5.40	
124 Naphthalene	128	15.004	15.003	0.001	97	36627	5.00	4.34	
125 1,2,3-Trichlorobenzene	180	15.223	15.222	0.001	93	17808	5.00	4.97	
126 2,4,5-Trichlorotoluene	159	16.007	16.007	0.000	0	8479	5.00	4.31	
127 2,3,6-Trichlorotoluene	159	16.105	16.104	0.001	92	8520	5.00	4.58	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		10.0	10.1	
S 131 Xylenes, Total	106				0		10.0	9.89	
S 132 1,3-Dichloropropene, Total	1				0		10.0	7.57	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRLOEINPR_00001	Amount Added:	4.00	Units: uL	
VOA8260SURR_00037	Amount Added:	0.20	Units: uL	
VOA8260VOAPRI_00121	Amount Added:	0.20	Units: uL	
voaWEEmix1st_00001	Amount Added:	0.20	Units: uL	
voaWVA1st Res_00001	Amount Added:	0.20	Units: uL	
voaWketmix1Re_00001	Amount Added:	0.80	Units: uL	
VOA8260INT_00037	Amount Added:	2.00	Units: uL	Run Reagent

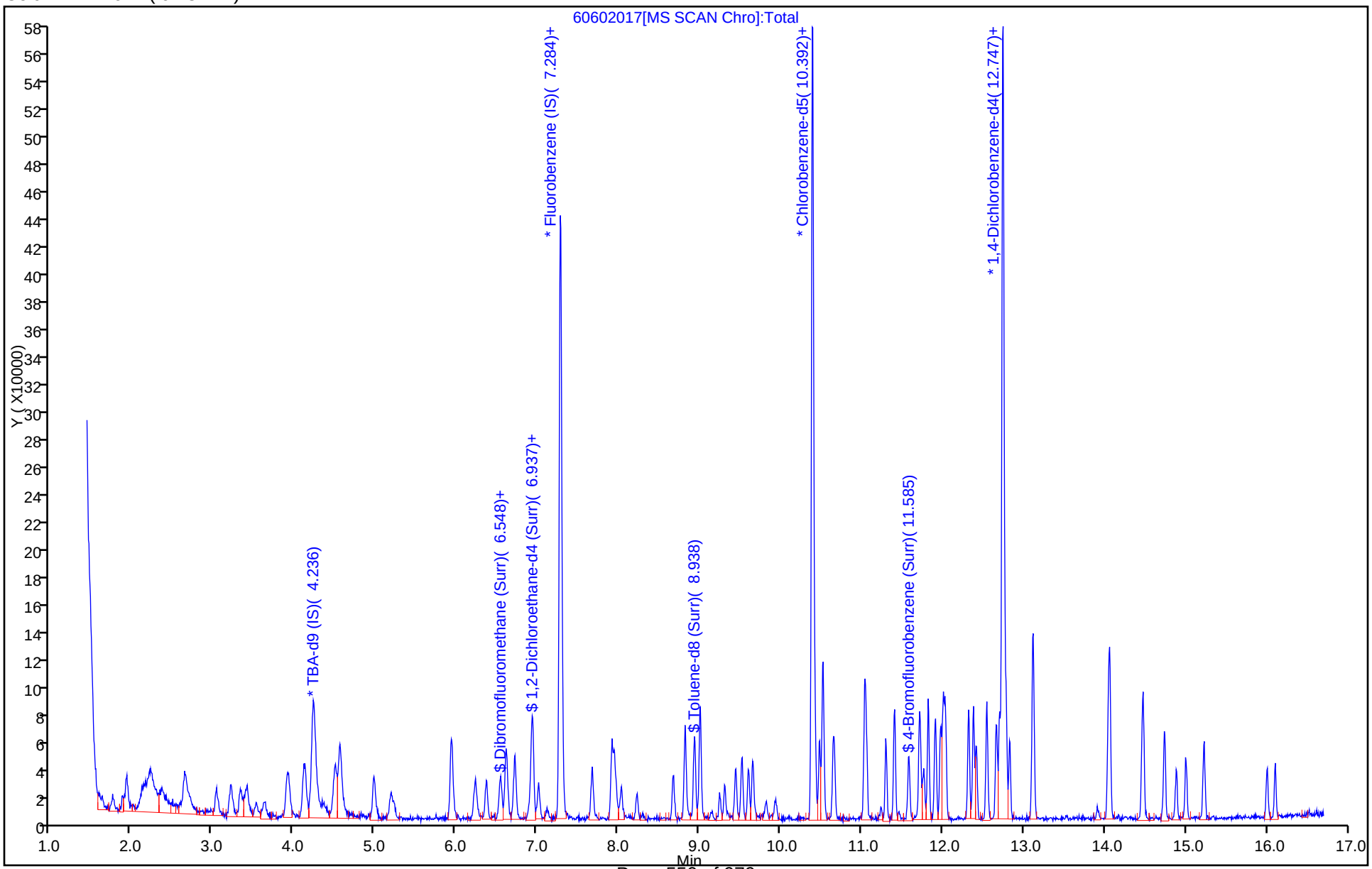
Report Date: 03-Jun-2015 10:40:30 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Injection Date:	02-Jun-2015 20:05:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	IC VSTD1			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

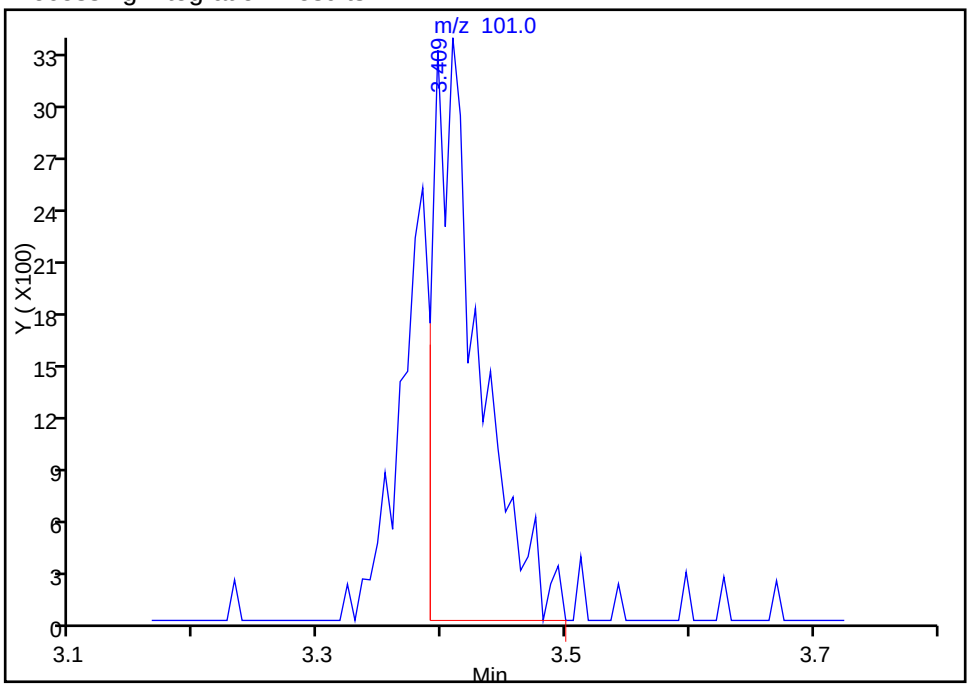
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D				
Injection Date:	02-Jun-2015 20:05:30	Instrument ID:	CHHP6		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	17	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

23 1,1,2-Trichloro-1,2,2-trifluoroethane, CAS: 76-13-1

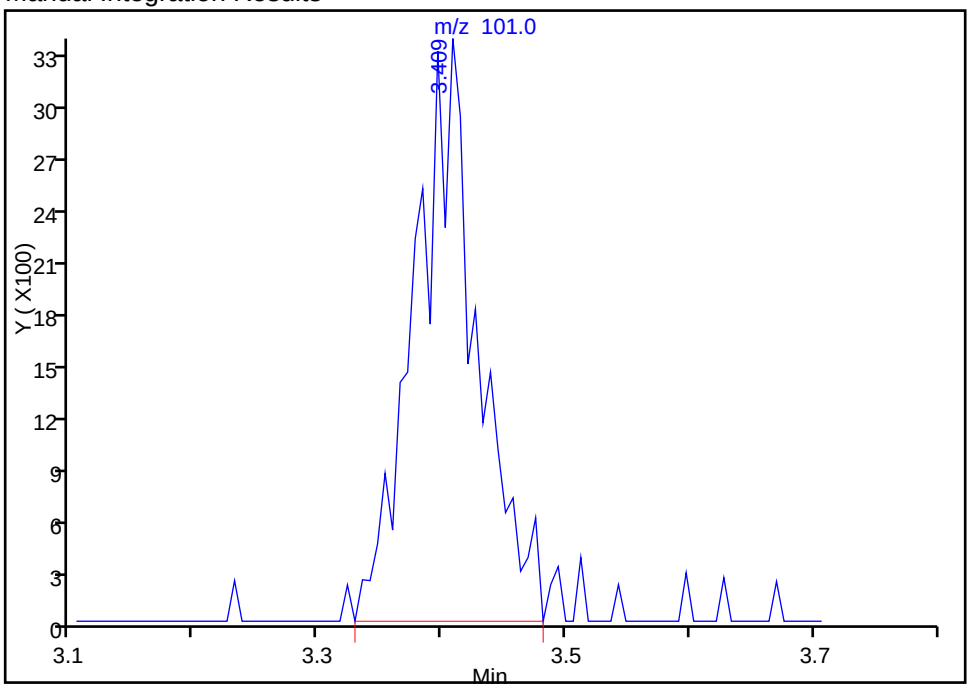
Processing Integration Results

RT: 3.41
Area: 8508
Amount: 3.821953
Amount Units: ng



Manual Integration Results

RT: 3.41
Area: 11867
Amount: 5.137091
Amount Units: ng



Reviewer: fergusond, 03-Jun-2015 10:24:34
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

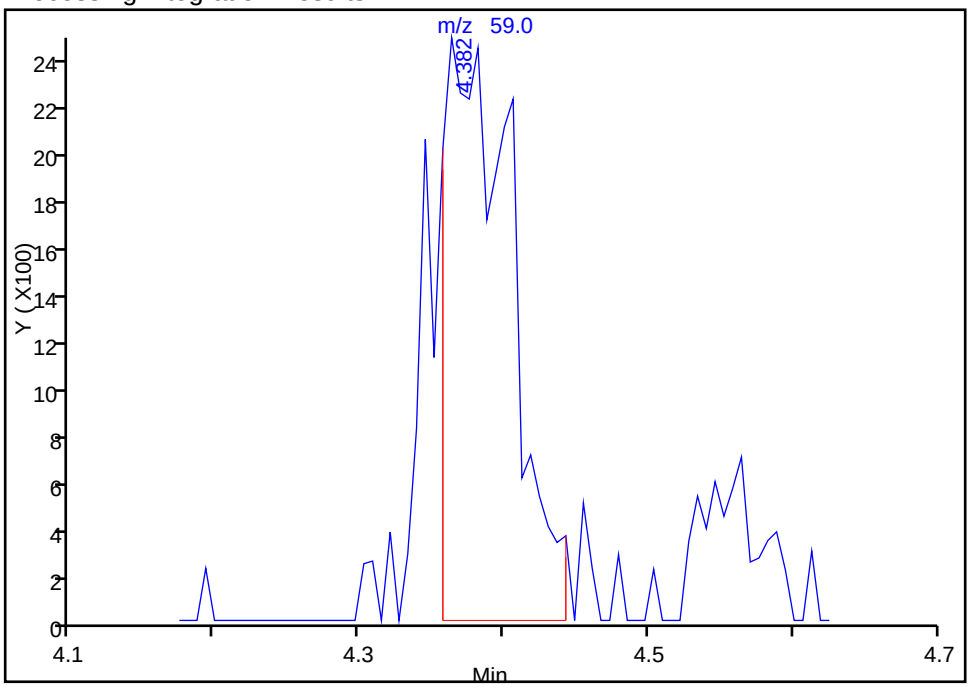
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D
Injection Date: 02-Jun-2015 20:05:30 Instrument ID: CHHP6
Lims ID: IC VSTD1
Client ID:
Operator ID: 001562 ALS Bottle#: 17 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

32 2-Methyl-2-propanol, CAS: 75-65-0

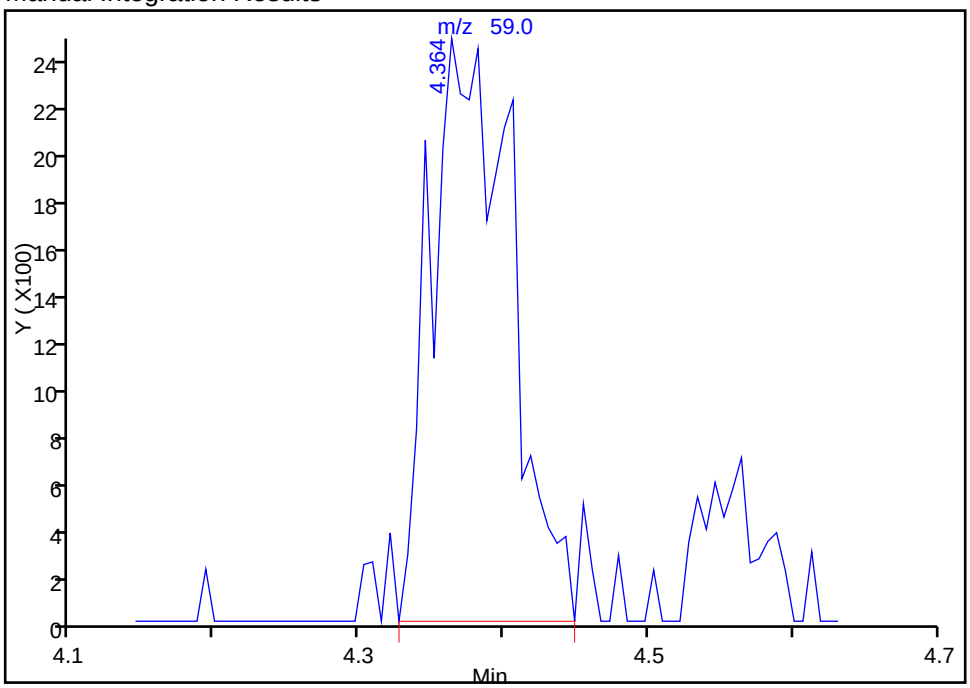
Processing Integration Results

RT: 4.38
Area: 7907
Amount: 44.536430
Amount Units: ng



Manual Integration Results

RT: 4.36
Area: 9424
Amount: 51.970812
Amount Units: ng



Reviewer: fergusond, 03-Jun-2015 10:24:34
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

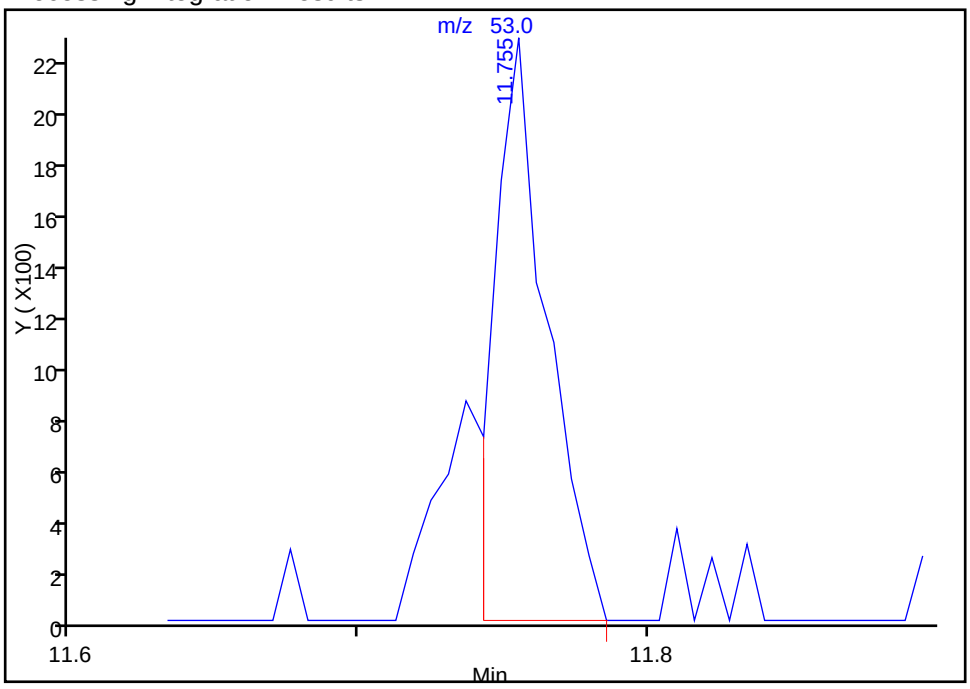
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D
Injection Date: 02-Jun-2015 20:05:30 Instrument ID: CHHP6
Lims ID: IC VSTD1
Client ID:
Operator ID: 001562 ALS Bottle#: 17 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

97 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

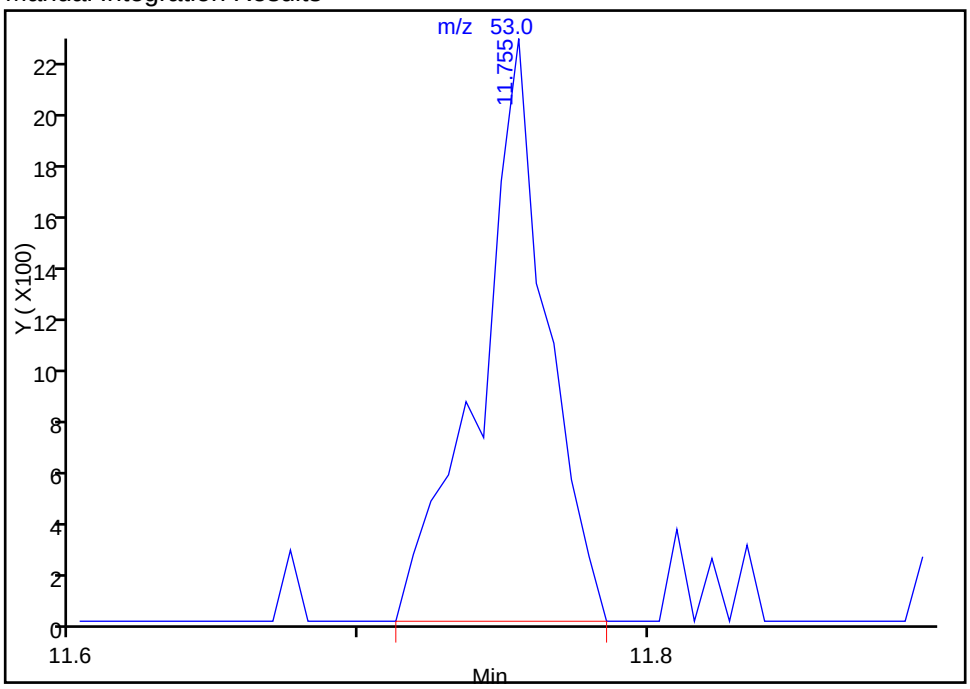
Processing Integration Results

RT: 11.76
Area: 2904
Amount: 5.156057
Amount Units: ng



Manual Integration Results

RT: 11.76
Area: 3695
Amount: 4.357045
Amount Units: ng



Reviewer: fergusond, 03-Jun-2015 10:28:29
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCVIS 180-148055/2 Calibration Date: 07/17/2015 12:02

Instrument ID: CHHP5 Calib Start Date: 03/18/2015 13:31

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/18/2015 16:19

Lab File ID: 50717002.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
2-Chloroethyl vinyl ether	Ave	0.1652	0.1442	0.0100	17.5	20.0	-12.7	20.0
1,3,5-Trichlorobenzene	Ave	0.9577	0.7770	0.0100	8.11	10.0	-18.9	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 17-Jul-2015 12:02:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0007815-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub11

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Jul-2015 14:27:36 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 17-Jul-2015 12:34:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.272	4.272	0.000	0	125664	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.289	0.000	98	408475	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.385	0.000	89	90179	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.728	0.000	94	120723	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.559	6.559	0.000	93	84209	50.0	44.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.930	0.000	0	122831	50.0	44.7	
$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	94	354714	50.0	47.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.572	0.000	84	124176	50.0	45.1	
11 Dichlorodifluoromethane	85	1.607	1.607	0.000	99	162308	50.0	59.0	
12 Chloromethane	50	1.777	1.777	0.000	99	166948	50.0	53.9	
13 Vinyl chloride	62	1.911	1.911	0.000	97	162768	50.0	52.1	
14 Butadiene	39	1.948	1.948	0.000	94	185360	50.0	55.3	
15 Bromomethane	94	2.264	2.264	0.000	90	79606	50.0	52.3	
16 Chloroethane	64	2.410	2.410	0.000	99	98570	50.0	52.3	
17 Dichlorofluoromethane	67	2.678	2.678	0.000	97	213009	50.0	51.1	
18 Trichlorofluoromethane	101	2.714	2.714	0.000	97	146594	50.0	43.1	
20 Ethyl ether	59	3.049	3.049	0.000	93	103492	50.0	44.0	
21 Acrolein	56	3.231	3.231	0.000	98	47606	150.0	105.6	
22 1,1-Dichloroethene	96	3.341	3.341	0.000	95	101978	50.0	44.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.432	3.432	0.000	94	112678	50.0	46.1	
24 Acetone	43	3.450	3.450	0.000	98	72891	100.0	107.7	
25 Iodomethane	142	3.542	3.542	0.000	99	142828	50.0	44.7	
26 Carbon disulfide	76	3.627	3.627	0.000	100	209148	50.0	40.8	
28 3-Chloro-1-propene	76	3.919	3.919	0.000	87	55090	50.0	43.1	
30 Methyl acetate	43	3.943	3.943	0.000	98	507334	250.0	241.7	
31 Methylene Chloride	84	4.138	4.138	0.000	97	127248	50.0	40.4	
32 2-Methyl-2-propanol	59	4.411	4.411	0.000	87	73580	500.0	512.7	
33 Acrylonitrile	53	4.521	4.521	0.000	97	501652	500.0	493.3	
34 trans-1,2-Dichloroethene	96	4.564	4.564	0.000	95	112570	50.0	45.8	
35 Methyl tert-butyl ether	73	4.582	4.582	0.000	96	260506	50.0	42.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.989	4.989	0.000	95	181419	50.0	47.7	
37 1,1-Dichloroethane	63	5.202	5.202	0.000	97	213515	50.0	45.4	
38 Vinyl acetate	43	5.245	5.245	0.000	98	160801	50.0	40.0	
44 2,2-Dichloropropane	77	5.945	5.945	0.000	57	85104	50.0	42.4	
45 cis-1,2-Dichloroethene	96	5.957	5.957	0.000	84	117273	50.0	45.0	
46 2-Butanone (MEK)	43	5.957	5.957	0.000	61	101318	100.0	102.1	
49 Chlorobromomethane	128	6.237	6.237	0.000	96	50590	50.0	46.0	
51 Tetrahydrofuran	42	6.249	6.249	0.000	88	73019	100.0	89.5	
52 Chloroform	83	6.376	6.376	0.000	95	199398	50.0	46.1	
53 1,1,1-Trichloroethane	97	6.541	6.541	0.000	95	152757	50.0	47.0	
54 Cyclohexane	56	6.614	6.614	0.000	95	220151	50.0	45.3	
56 Carbon tetrachloride	117	6.717	6.717	0.000	95	127060	50.0	45.0	
55 1,1-Dichloropropene	75	6.729	6.729	0.000	91	165496	50.0	46.4	
57 Isobutyl alcohol	41	6.924	6.924	0.000	77	91836	1250.0	1348.7	
58 Benzene	78	6.942	6.942	0.000	97	493851	50.0	48.0	
59 1,2-Dichloroethane	62	7.015	7.015	0.000	97	169448	50.0	48.1	
62 n-Heptane	43	7.307	7.307	0.000	91	162866	50.0	48.4	
64 Trichloroethene	130	7.678	7.678	0.000	96	112388	50.0	46.2	
66 Methylcyclohexane	83	7.916	7.916	0.000	94	189483	50.0	46.7	
67 1,2-Dichloropropane	63	7.946	7.946	0.000	95	120895	50.0	48.2	
68 Dibromomethane	93	8.031	8.031	0.000	96	63188	50.0	46.6	
70 1,4-Dioxane	88	8.037	8.037	0.000	39	20594	1000.0	1195.2	
71 Dichlorobromomethane	83	8.232	8.232	0.000	98	126813	50.0	46.3	
73 2-Chloroethyl vinyl ether	63	8.530	8.530	0.000	94	117793	100.0	87.3	
74 cis-1,3-Dichloropropene	75	8.670	8.670	0.000	90	145303	50.0	45.9	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.828	0.000	98	171898	100.0	80.5	
76 Toluene	91	9.005	9.005	0.000	98	505108	50.0	52.1	
77 trans-1,3-Dichloropropene	75	9.248	9.248	0.000	98	117777	50.0	45.1	
78 Ethyl methacrylate	69	9.309	9.309	0.000	91	119778	50.0	48.2	
79 1,1,2-Trichloroethane	97	9.443	9.443	0.000	94	99111	50.0	52.7	
80 Tetrachloroethene	164	9.516	9.516	0.000	95	95722	50.0	51.9	
81 1,3-Dichloropropane	76	9.601	9.601	0.000	96	178940	50.0	52.0	
82 2-Hexanone	43	9.655	9.655	0.000	98	128207	100.0	93.5	
84 Chlorodibromomethane	129	9.814	9.814	0.000	90	75549	50.0	49.3	
85 Ethylene Dibromide	107	9.923	9.923	0.000	96	90520	50.0	51.5	
86 3-Chlorobenzotrifluoride	180	10.385	10.385	0.000	85	147126	50.0	46.3	
87 Chlorobenzene	112	10.416	10.416	0.000	92	316091	50.0	52.2	
88 4-Chlorobenzotrifluoride	180	10.477	10.477	0.000	96	140022	50.0	46.8	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.507	0.000	92	94520	50.0	50.6	
90 Ethylbenzene	106	10.513	10.513	0.000	99	171901	50.0	51.6	
91 m-Xylene & p-Xylene	106	10.647	10.647	0.000	0	215048	50.0	53.5	
92 o-Xylene	106	11.030	11.030	0.000	97	195113	50.0	50.6	
93 Styrene	104	11.049	11.049	0.000	95	333282	50.0	52.9	
94 Bromoform	173	11.231	11.231	0.000	92	41683	50.0	51.3	
96 2-Chlorobenzotrifluoride	180	11.298	11.298	0.000	96	140225	50.0	46.9	
97 Isopropylbenzene	105	11.395	11.395	0.000	97	499952	50.0	52.9	
99 1,1,2,2-Tetrachloroethane	83	11.706	11.706	0.000	78	132899	50.0	55.9	
100 Bromobenzene	156	11.706	11.706	0.000	96	113132	50.0	48.1	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	77	31727	50.0	39.9	
101 1,2,3-Trichloropropane	110	11.760	11.760	0.000	87	43553	50.0	52.3	
103 N-Propylbenzene	120	11.809	11.809	0.000	99	138366	50.0	49.9	
104 2-Chlorotoluene	126	11.900	11.900	0.000	95	116343	50.0	48.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.967	11.967	0.000	96	110940	50.0	44.7	
106 1,3,5-Trimethylbenzene	105	11.991	11.991	0.000	94	425539	50.0	52.7	
107 4-Chlorotoluene	126	12.022	12.022	0.000	99	127193	50.0	49.0	
108 tert-Butylbenzene	119	12.308	12.308	0.000	93	318237	50.0	49.5	
110 1,2,4-Trimethylbenzene	105	12.369	12.369	0.000	98	409342	50.0	51.5	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.411	0.000	98	103480	50.0	44.4	
112 sec-Butylbenzene	105	12.533	12.533	0.000	96	471507	50.0	50.9	
113 1,3-Dichlorobenzene	146	12.648	12.648	0.000	96	208221	50.0	48.7	
114 4-Isopropyltoluene	119	12.685	12.685	0.000	96	382825	50.0	51.3	
115 1,4-Dichlorobenzene	146	12.752	12.752	0.000	92	215246	50.0	49.5	
116 2,4-Dichloro-1-(triflourom	214	12.776	12.776	0.000	96	95876	50.0	45.3	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.819	0.000	0	101451	50.0	44.3	
120 n-Butylbenzene	91	13.099	13.099	0.000	98	315665	50.0	49.5	
121 1,2-Dichlorobenzene	146	13.111	13.111	0.000	95	190920	50.0	50.5	
122 1,2-Dibromo-3-Chloropropan	75	13.902	13.902	0.000	70	16848	50.0	51.9	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.042	14.042	0.000	0	279766	150.0	130.1	
124 1,3,5-Trichlorobenzene	180	14.090	14.090	0.000	96	93800	50.0	40.6	
125 2,3- & 3,4- Dichlorotoluen	125	14.455	14.455	0.000	0	170530	100.0	86.6	
126 1,2,4-Trichlorobenzene	180	14.723	14.723	0.000	94	62595	50.0	46.3	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	96	36905	50.0	49.2	
128 Naphthalene	128	14.991	14.991	0.000	98	159449	50.0	45.6	
129 1,2,3-Trichlorobenzene	180	15.210	15.210	0.000	94	50132	50.0	45.6	
131 2,4,5-Trichlorotoluene	159	15.988	15.988	0.000	0	11926	50.0	36.7	
130 2,3,6-Trichlorotoluene	159	16.092	16.092	0.000	94	11332	50.0	34.7	
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		100.0	104.1	
S 134 1,2-Dichloroethene, Total	96				0		100.0	90.8	
S 135 1,3-Dichloropropene, Total	1				0		100.0	91.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

voaWket1Reste_00001	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00130	Amount Added:	2.00	Units: uL	
voaWVA1st Res_00002	Amount Added:	2.00	Units: uL	
VOAACRLOEINPR_00002	Amount Added:	6.00	Units: uL	
voaW 135tcb A_00003	Amount Added:	2.00	Units: uL	
voaW2clev1stR_00001	Amount Added:	2.00	Units: uL	
voaWEE2nd Res_00003	Amount Added:	2.00	Units: uL	
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

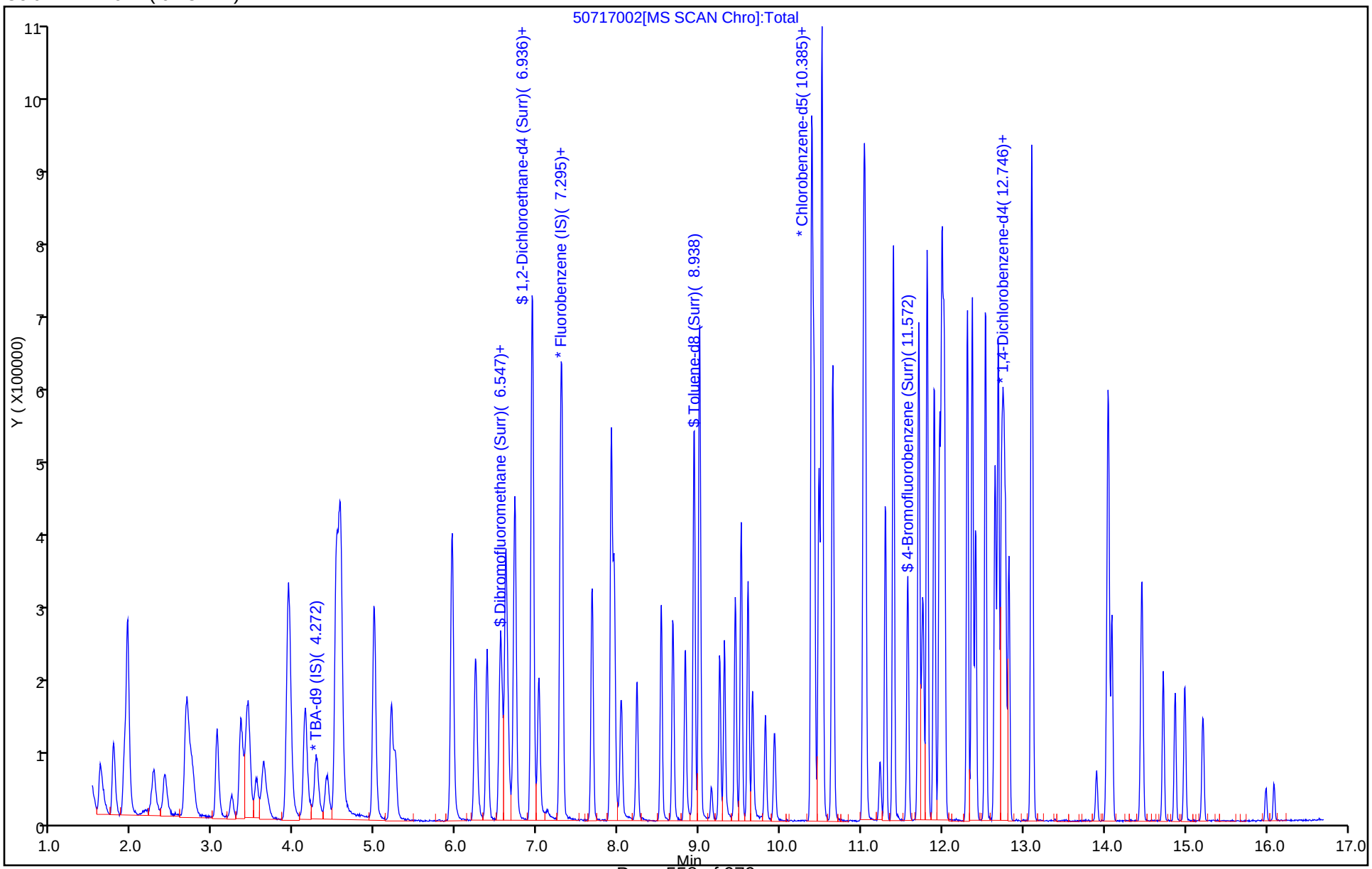
Report Date: 17-Jul-2015 14:27:37 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717002.D

Injection Date:	17-Jul-2015 12:02:30	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.: 180-45946-1

SDG No.:

Lab Sample ID: CCVIS 180-148055/2 Calibration Date: 07/17/2015 12:02

Instrument ID: CHHP5 Calib Start Date: 06/17/2015 14:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/17/2015 18:04

Lab File ID: 50717002.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	0.3369	0.3974	0.1000	11.8	10.0	17.9	20.0
Chloromethane	Ave	0.3794	0.4087	0.1000	10.8	10.0	7.7	20.0
Vinyl chloride	Ave	0.3828	0.3985	0.1000	10.4	10.0	4.1	20.0
Bromomethane	Ave	0.1862	0.1949	0.0500	10.5	10.0	4.7	20.0
Chloroethane	Ave	0.2305	0.2413	0.0500	10.5	10.0	4.7	20.0
Dichlorofluoromethane	Ave	0.5100	0.5215	0.0100	10.2	10.0	2.2	20.0
Trichlorofluoromethane	Ave	0.4163	0.3589	0.1000	8.62	10.0	-13.8	20.0
Ethyl ether	Ave	0.2878	0.2534	0.0100	8.80	10.0	-12.0	20.0
Acrolein	Ave	0.0552	0.0389	0.0100	21.1	30.0	-29.6*	20.0
1,1-Dichloroethene	Ave	0.2832	0.2497	0.1000	8.82	10.0	-11.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2989	0.2759	0.1000	9.23	10.0	-7.7	20.0
Acetone	Ave	0.0828	0.0892	0.0500	21.5	20.0	7.7	20.0
Iodomethane	Ave	0.3913	0.3497	0.0100	8.94	10.0	-10.6	20.0
Carbon disulfide	Ave	0.6268	0.5120	0.1000	8.17	10.0	-18.3	20.0
Allyl chloride	Ave	0.1566	0.1349	0.0100	8.61	10.0	-13.9	20.0
Methyl acetate	Ave	0.2569	0.2484	0.1000	48.3	50.0	-3.3	20.0
Methylene Chloride	Lin2		0.3115	0.1000	8.08	10.0	-19.2	20.0
tert-Butyl alcohol	Ave	1.142	1.171	0.0100	103	100	2.5	20.0
Acrylonitrile	Ave	0.1245	0.1228	0.0100	98.7	100	-1.3	20.0
trans-1,2-Dichloroethene	Ave	0.3011	0.2756	0.1000	9.15	10.0	-8.5	20.0
Methyl tert-butyl ether	Ave	0.7427	0.6378	0.1000	8.59	10.0	-14.1	20.0
Hexane	Ave	0.4658	0.4441	0.0100	9.54	10.0	-4.6	20.0
1,1-Dichloroethane	Ave	0.5753	0.5227	0.2000	9.09	10.0	-9.1	20.0
Vinyl acetate	Ave	0.4924	0.3937	0.0100	7.99	10.0	-20.1*	20.0
2,2-Dichloropropane	Ave	0.2458	0.2084	0.0100	8.48	10.0	-15.2	20.0
2-Butanone (MEK)	Ave	0.1215	0.1240	0.0500	20.4	20.0	2.1	20.0
cis-1,2-Dichloroethene	Ave	0.3190	0.2871	0.1000	9.00	10.0	-10.0	20.0
Bromochloromethane	Ave	0.1346	0.1239	0.0100	9.20	10.0	-8.0	20.0
Tetrahydrofuran	Ave	0.0999	0.0894	0.0100	17.9	20.0	-10.5	20.0
Chloroform	Ave	0.5292	0.4882	0.2000	9.22	10.0	-7.8	20.0
1,1,1-Trichloroethane	Ave	0.3977	0.3740	0.1000	9.40	10.0	-6.0	20.0
Cyclohexane	Ave	0.5953	0.5390	0.1000	9.05	10.0	-9.5	20.0
Carbon tetrachloride	Ave	0.3460	0.3111	0.1000	8.99	10.0	-10.1	20.0
1,1-Dichloropropene	Ave	0.4364	0.4052	0.0100	9.28	10.0	-7.2	20.0
Isobutyl alcohol	Ave	0.0083	0.0090*	0.0100	270	250	7.9	20.0
Benzene	Ave	1.260	1.209	0.5000	9.59	10.0	-4.1	20.0
1,2-Dichloroethane	Ave	0.4311	0.4148	0.1000	9.62	10.0	-3.8	20.0
n-Heptane	Ave	0.4117	0.3987	0.0100	9.68	10.0	-3.2	20.0
Trichloroethene	Ave	0.2975	0.2751	0.2000	9.25	10.0	-7.5	20.0
Methylcyclohexane	Ave	0.4971	0.4639	0.1000	9.33	10.0	-6.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCVIS 180-148055/2 Calibration Date: 07/17/2015 12:02

Instrument ID: CHHP5 Calib Start Date: 06/17/2015 14:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/17/2015 18:04

Lab File ID: 50717002.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	0.3070	0.2960	0.1000	9.64	10.0	-3.6	20.0
Dibromomethane	Ave	0.1661	0.1547	0.0100	9.31	10.0	-6.9	20.0
1,4-Dioxane	Ave	0.0021	0.0025*	0.0100	239	200	19.5	20.0
Bromodichloromethane	Ave	0.3352	0.3105	0.2000	9.26	10.0	-7.4	20.0
cis-1,3-Dichloropropene	Ave	0.3878	0.3557	0.2000	9.17	10.0	-8.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.184	0.9531	0.1000	16.1	20.0	-19.5	20.0
Toluene	Ave	5.374	5.601	0.4000	10.4	10.0	4.2	20.0
trans-1,3-Dichloropropene	Ave	1.447	1.306	0.1000	9.03	10.0	-9.7	20.0
Ethyl methacrylate	Ave	1.378	1.328	0.0100	9.64	10.0	-3.6	20.0
1,1,2-Trichloroethane	Ave	1.043	1.099	0.1000	10.5	10.0	5.4	20.0
Tetrachloroethene	Ave	1.022	1.061	0.2000	10.4	10.0	3.8	20.0
1,3-Dichloropropane	Ave	1.907	1.984	0.0100	10.4	10.0	4.1	20.0
2-Hexanone	Ave	0.7604	0.7109	0.1000	18.7	20.0	-6.5	20.0
Dibromochloromethane	Ave	0.8492	0.8378	0.1000	9.87	10.0	-1.3	20.0
1,2-Dibromoethane (EDB)	Ave	0.9743	1.004	0.1000	10.3	10.0	3.0	20.0
3-Chlorobenzotrifluoride	Ave	1.760	1.631	0.0100	9.27	10.0	-7.3	20.0
Chlorobenzene	Ave	3.356	3.505	0.5000	10.4	10.0	4.4	20.0
4-Chlorobenzotrifluoride	Ave	1.659	1.553	0.0100	9.36	10.0	-6.4	20.0
1,1,1,2-Tetrachloroethane	Ave	1.036	1.048	0.0100	10.1	10.0	1.2	20.0
Ethylbenzene	Ave	1.846	1.906	0.1000	10.3	10.0	3.3	20.0
m-Xylene & p-Xylene	Ave	2.228	2.385	0.1000	10.7	10.0	7.0	20.0
o-Xylene	Ave	2.139	2.164	0.3000	10.1	10.0	1.2	20.0
Styrene	Ave	3.494	3.696	0.3000	10.6	10.0	5.8	20.0
Bromoform	Ave	0.4508	0.4622	0.1000	10.3	10.0	2.5	20.0
2-Chlorobenzotrifluoride	Ave	1.660	1.555	0.0100	9.37	10.0	-6.3	20.0
Isopropylbenzene	Ave	5.239	5.544	0.1000	10.6	10.0	5.8	20.0
1,1,2,2-Tetrachloroethane	Ave	1.319	1.474	0.3000	11.2	10.0	11.8	20.0
Bromobenzene	Ave	0.9734	0.9371	0.0100	9.63	10.0	-3.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.3290	0.2628	0.0100	7.99	10.0	-20.1*	20.0
1,2,3-Trichloropropane	Ave	0.3448	0.3608	0.0100	10.5	10.0	4.6	20.0
N-Propylbenzene	Ave	1.150	1.146	0.0100	9.97	10.0	-0.3	20.0
2-Chlorotoluene	Ave	0.9924	0.9637	0.0100	9.71	10.0	-2.9	20.0
3-Chlorotoluene	Ave	1.027	0.9190	0.0100	8.95	10.0	-10.5	20.0
1,3,5-Trimethylbenzene	Ave	3.344	3.525	0.0100	10.5	10.0	5.4	20.0
4-Chlorotoluene	Ave	1.075	1.054	0.0100	9.80	10.0	-2.0	20.0
tert-Butylbenzene	Ave	2.660	2.636	0.0100	9.91	10.0	-0.9	20.0
1,2,4-Trimethylbenzene	Ave	3.293	3.391	0.0100	10.3	10.0	3.0	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.9643	0.8572	0.0100	8.89	10.0	-11.1	20.0
sec-Butylbenzene	Ave	3.836	3.906	0.0100	10.2	10.0	1.8	20.0
1,3-Dichlorobenzene	Ave	1.769	1.725	0.6000	9.75	10.0	-2.5	20.0
4-Isopropyltoluene	Ave	3.089	3.171	0.0100	10.3	10.0	2.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCVIS 180-148055/2 Calibration Date: 07/17/2015 12:02

Instrument ID: CHHP5 Calib Start Date: 06/17/2015 14:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/17/2015 18:04

Lab File ID: 50717002.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	1.800	1.783	0.5000	9.91	10.0	-0.9	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.8761	0.7942	0.0100	9.07	10.0	-9.3	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.9476	0.8404	0.0100	8.87	10.0	-11.3	20.0
n-Butylbenzene	Ave	2.641	2.615	0.0100	9.90	10.0	-1.0	20.0
1,2-Dichlorobenzene	Ave	1.567	1.581	0.4000	10.1	10.0	0.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1345	0.1396	0.0500	10.4	10.0	3.7	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.8903	0.7725	0.0100	26.0	30.0	-13.2	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.8151	0.7063	0.0100	17.3	20.0	-13.4	20.0
1,2,4-Trichlorobenzene	Ave	0.5596	0.5185	0.2000	9.27	10.0	-7.3	20.0
Hexachlorobutadiene	Ave	0.3107	0.3057	0.0100	9.84	10.0	-1.6	20.0
Naphthalene	Ave	1.449	1.321	0.0100	9.11	10.0	-8.9	20.0
1,2,3-Trichlorobenzene	Ave	0.4556	0.4153	0.0100	9.12	10.0	-8.8	20.0
2,4,5-Trichlorotoluene	Qua		0.0988	0.0100	7.33	10.0	-26.7*	20.0
2,3,6-Trichlorotoluene	Qua		0.0939	0.0100	6.95	10.0	-30.5*	20.0
Dibromofluoromethane (Surr)	Ave	0.2331	0.2062		8.84	10.0	-11.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3365	0.3007		8.94	10.0	-10.6	20.0
Toluene-d8 (Surr)	Ave	4.150	3.933		9.48	10.0	-5.2	20.0
4-Bromofluorobenzene (Surr)	Ave	1.526	1.377		9.02	10.0	-9.8	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 17-Jul-2015 12:02:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0007815-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub11

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Jul-2015 14:27:36 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 17-Jul-2015 12:34:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.272	4.272	0.000	0	125664	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.289	0.000	98	408475	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.385	0.000	89	90179	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.728	0.000	94	120723	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.559	6.559	0.000	93	84209	50.0	44.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.930	0.000	0	122831	50.0	44.7	
$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	94	354714	50.0	47.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.572	0.000	84	124176	50.0	45.1	
11 Dichlorodifluoromethane	85	1.607	1.607	0.000	99	162308	50.0	59.0	
12 Chloromethane	50	1.777	1.777	0.000	99	166948	50.0	53.9	
13 Vinyl chloride	62	1.911	1.911	0.000	97	162768	50.0	52.1	
14 Butadiene	39	1.948	1.948	0.000	94	185360	50.0	55.3	
15 Bromomethane	94	2.264	2.264	0.000	90	79606	50.0	52.3	
16 Chloroethane	64	2.410	2.410	0.000	99	98570	50.0	52.3	
17 Dichlorofluoromethane	67	2.678	2.678	0.000	97	213009	50.0	51.1	
18 Trichlorofluoromethane	101	2.714	2.714	0.000	97	146594	50.0	43.1	
20 Ethyl ether	59	3.049	3.049	0.000	93	103492	50.0	44.0	
21 Acrolein	56	3.231	3.231	0.000	98	47606	150.0	105.6	
22 1,1-Dichloroethene	96	3.341	3.341	0.000	95	101978	50.0	44.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.432	3.432	0.000	94	112678	50.0	46.1	
24 Acetone	43	3.450	3.450	0.000	98	72891	100.0	107.7	
25 Iodomethane	142	3.542	3.542	0.000	99	142828	50.0	44.7	
26 Carbon disulfide	76	3.627	3.627	0.000	100	209148	50.0	40.8	
28 3-Chloro-1-propene	76	3.919	3.919	0.000	87	55090	50.0	43.1	
30 Methyl acetate	43	3.943	3.943	0.000	98	507334	250.0	241.7	
31 Methylene Chloride	84	4.138	4.138	0.000	97	127248	50.0	40.4	
32 2-Methyl-2-propanol	59	4.411	4.411	0.000	87	73580	500.0	512.7	
33 Acrylonitrile	53	4.521	4.521	0.000	97	501652	500.0	493.3	
34 trans-1,2-Dichloroethene	96	4.564	4.564	0.000	95	112570	50.0	45.8	
35 Methyl tert-butyl ether	73	4.582	4.582	0.000	96	260506	50.0	42.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.989	4.989	0.000	95	181419	50.0	47.7	
37 1,1-Dichloroethane	63	5.202	5.202	0.000	97	213515	50.0	45.4	
38 Vinyl acetate	43	5.245	5.245	0.000	98	160801	50.0	40.0	
44 2,2-Dichloropropane	77	5.945	5.945	0.000	57	85104	50.0	42.4	
45 cis-1,2-Dichloroethene	96	5.957	5.957	0.000	84	117273	50.0	45.0	
46 2-Butanone (MEK)	43	5.957	5.957	0.000	61	101318	100.0	102.1	
49 Chlorobromomethane	128	6.237	6.237	0.000	96	50590	50.0	46.0	
51 Tetrahydrofuran	42	6.249	6.249	0.000	88	73019	100.0	89.5	
52 Chloroform	83	6.376	6.376	0.000	95	199398	50.0	46.1	
53 1,1,1-Trichloroethane	97	6.541	6.541	0.000	95	152757	50.0	47.0	
54 Cyclohexane	56	6.614	6.614	0.000	95	220151	50.0	45.3	
56 Carbon tetrachloride	117	6.717	6.717	0.000	95	127060	50.0	45.0	
55 1,1-Dichloropropene	75	6.729	6.729	0.000	91	165496	50.0	46.4	
57 Isobutyl alcohol	41	6.924	6.924	0.000	77	91836	1250.0	1348.7	
58 Benzene	78	6.942	6.942	0.000	97	493851	50.0	48.0	
59 1,2-Dichloroethane	62	7.015	7.015	0.000	97	169448	50.0	48.1	
62 n-Heptane	43	7.307	7.307	0.000	91	162866	50.0	48.4	
64 Trichloroethene	130	7.678	7.678	0.000	96	112388	50.0	46.2	
66 Methylcyclohexane	83	7.916	7.916	0.000	94	189483	50.0	46.7	
67 1,2-Dichloropropane	63	7.946	7.946	0.000	95	120895	50.0	48.2	
68 Dibromomethane	93	8.031	8.031	0.000	96	63188	50.0	46.6	
70 1,4-Dioxane	88	8.037	8.037	0.000	39	20594	1000.0	1195.2	
71 Dichlorobromomethane	83	8.232	8.232	0.000	98	126813	50.0	46.3	
73 2-Chloroethyl vinyl ether	63	8.530	8.530	0.000	94	117793	100.0	87.3	
74 cis-1,3-Dichloropropene	75	8.670	8.670	0.000	90	145303	50.0	45.9	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.828	0.000	98	171898	100.0	80.5	
76 Toluene	91	9.005	9.005	0.000	98	505108	50.0	52.1	
77 trans-1,3-Dichloropropene	75	9.248	9.248	0.000	98	117777	50.0	45.1	
78 Ethyl methacrylate	69	9.309	9.309	0.000	91	119778	50.0	48.2	
79 1,1,2-Trichloroethane	97	9.443	9.443	0.000	94	99111	50.0	52.7	
80 Tetrachloroethene	164	9.516	9.516	0.000	95	95722	50.0	51.9	
81 1,3-Dichloropropane	76	9.601	9.601	0.000	96	178940	50.0	52.0	
82 2-Hexanone	43	9.655	9.655	0.000	98	128207	100.0	93.5	
84 Chlorodibromomethane	129	9.814	9.814	0.000	90	75549	50.0	49.3	
85 Ethylene Dibromide	107	9.923	9.923	0.000	96	90520	50.0	51.5	
86 3-Chlorobenzotrifluoride	180	10.385	10.385	0.000	85	147126	50.0	46.3	
87 Chlorobenzene	112	10.416	10.416	0.000	92	316091	50.0	52.2	
88 4-Chlorobenzotrifluoride	180	10.477	10.477	0.000	96	140022	50.0	46.8	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.507	0.000	92	94520	50.0	50.6	
90 Ethylbenzene	106	10.513	10.513	0.000	99	171901	50.0	51.6	
91 m-Xylene & p-Xylene	106	10.647	10.647	0.000	0	215048	50.0	53.5	
92 o-Xylene	106	11.030	11.030	0.000	97	195113	50.0	50.6	
93 Styrene	104	11.049	11.049	0.000	95	333282	50.0	52.9	
94 Bromoform	173	11.231	11.231	0.000	92	41683	50.0	51.3	
96 2-Chlorobenzotrifluoride	180	11.298	11.298	0.000	96	140225	50.0	46.9	
97 Isopropylbenzene	105	11.395	11.395	0.000	97	499952	50.0	52.9	
99 1,1,2,2-Tetrachloroethane	83	11.706	11.706	0.000	78	132899	50.0	55.9	
100 Bromobenzene	156	11.706	11.706	0.000	96	113132	50.0	48.1	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	77	31727	50.0	39.9	
101 1,2,3-Trichloropropane	110	11.760	11.760	0.000	87	43553	50.0	52.3	
103 N-Propylbenzene	120	11.809	11.809	0.000	99	138366	50.0	49.9	
104 2-Chlorotoluene	126	11.900	11.900	0.000	95	116343	50.0	48.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.967	11.967	0.000	96	110940	50.0	44.7	
106 1,3,5-Trimethylbenzene	105	11.991	11.991	0.000	94	425539	50.0	52.7	
107 4-Chlorotoluene	126	12.022	12.022	0.000	99	127193	50.0	49.0	
108 tert-Butylbenzene	119	12.308	12.308	0.000	93	318237	50.0	49.5	
110 1,2,4-Trimethylbenzene	105	12.369	12.369	0.000	98	409342	50.0	51.5	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.411	0.000	98	103480	50.0	44.4	
112 sec-Butylbenzene	105	12.533	12.533	0.000	96	471507	50.0	50.9	
113 1,3-Dichlorobenzene	146	12.648	12.648	0.000	96	208221	50.0	48.7	
114 4-Isopropyltoluene	119	12.685	12.685	0.000	96	382825	50.0	51.3	
115 1,4-Dichlorobenzene	146	12.752	12.752	0.000	92	215246	50.0	49.5	
116 2,4-Dichloro-1-(triflourom	214	12.776	12.776	0.000	96	95876	50.0	45.3	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.819	0.000	0	101451	50.0	44.3	
120 n-Butylbenzene	91	13.099	13.099	0.000	98	315665	50.0	49.5	
121 1,2-Dichlorobenzene	146	13.111	13.111	0.000	95	190920	50.0	50.5	
122 1,2-Dibromo-3-Chloropropan	75	13.902	13.902	0.000	70	16848	50.0	51.9	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.042	14.042	0.000	0	279766	150.0	130.1	
124 1,3,5-Trichlorobenzene	180	14.090	14.090	0.000	96	93800	50.0	40.6	
125 2,3- & 3,4- Dichlorotoluen	125	14.455	14.455	0.000	0	170530	100.0	86.6	
126 1,2,4-Trichlorobenzene	180	14.723	14.723	0.000	94	62595	50.0	46.3	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	96	36905	50.0	49.2	
128 Naphthalene	128	14.991	14.991	0.000	98	159449	50.0	45.6	
129 1,2,3-Trichlorobenzene	180	15.210	15.210	0.000	94	50132	50.0	45.6	
131 2,4,5-Trichlorotoluene	159	15.988	15.988	0.000	0	11926	50.0	36.7	
130 2,3,6-Trichlorotoluene	159	16.092	16.092	0.000	94	11332	50.0	34.7	
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		100.0	104.1	
S 134 1,2-Dichloroethene, Total	96				0		100.0	90.8	
S 135 1,3-Dichloropropene, Total	1				0		100.0	91.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

voaWket1Reste_00001	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00130	Amount Added:	2.00	Units: uL	
voaWVA1st Res_00002	Amount Added:	2.00	Units: uL	
VOAACRLOEINPR_00002	Amount Added:	6.00	Units: uL	
voaW 135tcb A_00003	Amount Added:	2.00	Units: uL	
voaW2clev1stR_00001	Amount Added:	2.00	Units: uL	
voaWEE2nd Res_00003	Amount Added:	2.00	Units: uL	
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

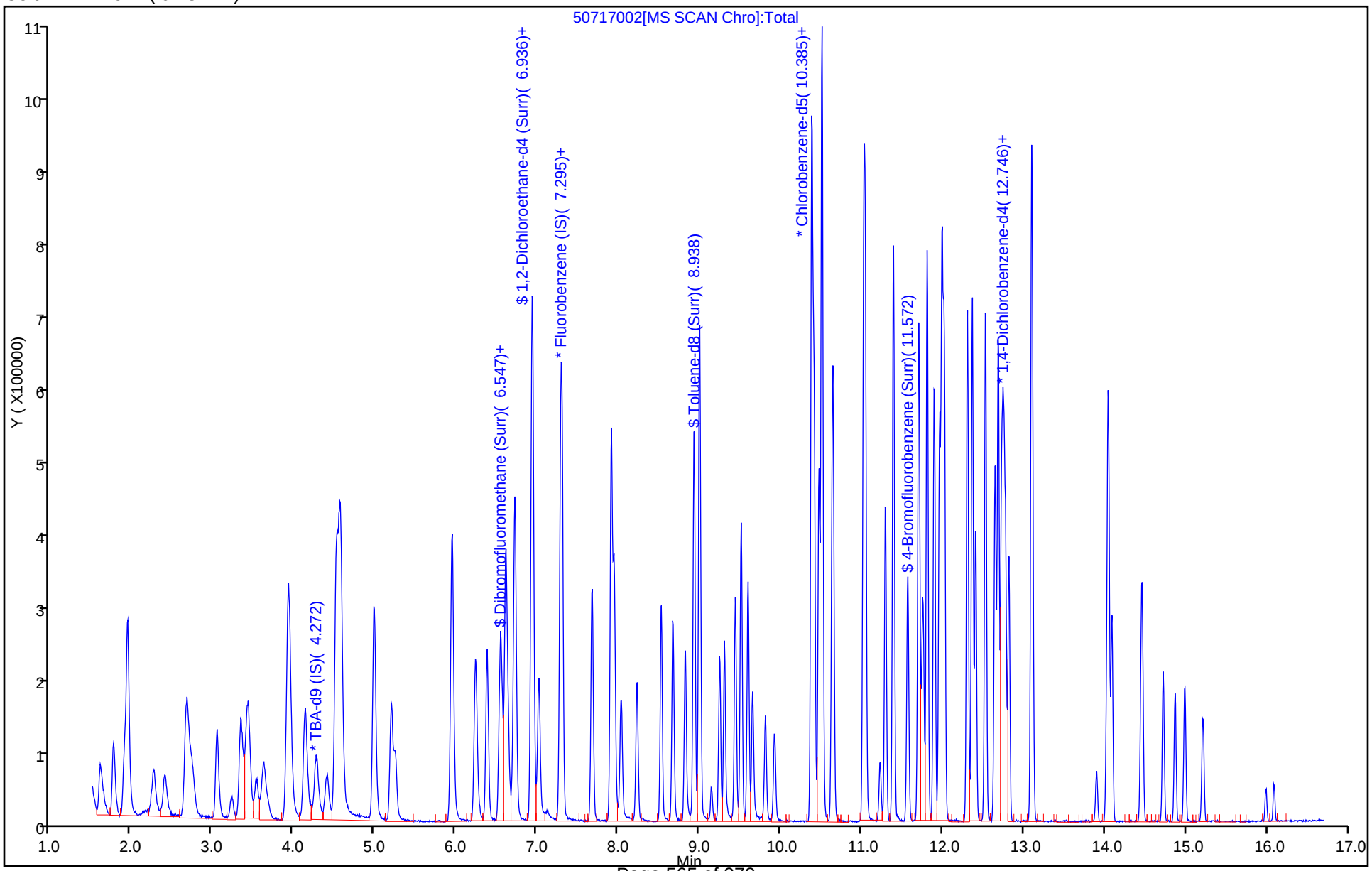
Report Date: 17-Jul-2015 14:27:37 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717002.D

Injection Date:	17-Jul-2015 12:02:30	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.: 180-45946-1

SDG No.:

Lab Sample ID: CCVIS 180-148334/3 Calibration Date: 07/21/2015 11:45

Instrument ID: CHHP6 Calib Start Date: 06/02/2015 16:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/02/2015 20:05

Lab File ID: 60721003.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	0.2724	0.1795	0.1000	6.59	10.0	-34.1*	20.0
Chloromethane	Ave	0.2916	0.2021	0.1000	6.93	10.0	-30.7*	20.0
Vinyl chloride	Ave	0.3243	0.2437	0.1000	7.51	10.0	-24.9*	20.0
Bromomethane	Ave	0.1492	0.1326	0.0500	8.89	10.0	-11.1	20.0
Chloroethane	Ave	0.2222	0.1587	0.0500	7.14	10.0	-28.6*	20.0
Dichlorofluoromethane	Ave	0.5485	0.4475	0.0100	8.16	10.0	-18.4	20.0
Trichlorofluoromethane	Ave	0.4051	0.3921	0.1000	9.68	10.0	-3.2	20.0
Ethyl ether	Ave	0.2881	0.2675	0.0100	9.29	10.0	-7.1	20.0
Acrolein	Ave	0.0400	0.0363	0.0100	27.2	30.0	-9.4	20.0
1,1-Dichloroethene	Ave	0.2527	0.2773	0.1000	11.0	10.0	9.7	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2675	0.2838	0.1000	10.6	10.0	6.1	20.0
Acetone	Ave	0.0759	0.0617	0.0500	16.2	20.0	-18.8	20.0
Iodomethane	Ave	0.3904	0.3957	0.0100	10.1	10.0	1.3	20.0
Carbon disulfide	Ave	0.6895	0.7206	0.1000	10.5	10.0	4.5	20.0
Allyl chloride	Ave	0.1533	0.1631	0.0100	10.6	10.0	6.3	20.0
Methyl acetate	Ave	0.2154	0.1931	0.1000	44.8	50.0	-10.3	20.0
Methylene Chloride	Lin2		0.3431	0.1000	9.55	10.0	-4.5	20.0
tert-Butyl alcohol	Ave	1.218	1.193	0.0100	98.0	100	-2.0	20.0
Acrylonitrile	Ave	0.1111	0.1035	0.0100	93.2	100	-6.8	20.0
trans-1,2-Dichloroethene	Ave	0.2979	0.3105	0.1000	10.4	10.0	4.2	20.0
Methyl tert-butyl ether	Ave	0.8801	0.8503	0.1000	9.66	10.0	-3.4	20.0
Hexane	Ave	0.4129	0.4151	0.0100	10.1	10.0	0.6	20.0
1,1-Dichloroethane	Ave	0.5391	0.5482	0.2000	10.2	10.0	1.7	20.0
Vinyl acetate	Ave	0.4381	0.4398	0.0100	10.0	10.0	0.4	20.0
2,2-Dichloropropane	Ave	0.2884	0.2814	0.0100	9.76	10.0	-2.4	20.0
cis-1,2-Dichloroethene	Ave	0.3217	0.3335	0.1000	10.4	10.0	3.7	20.0
2-Butanone (MEK)	Ave	0.1220	0.0888	0.0500	14.5	20.0	-27.3*	20.0
Bromochloromethane	Ave	0.1471	0.1468	0.0100	9.98	10.0	-0.2	20.0
Tetrahydrofuran	Ave	0.0909	0.0720	0.0100	15.8	20.0	-20.8*	20.0
Chloroform	Ave	0.5340	0.5535	0.2000	10.4	10.0	3.7	20.0
1,1,1-Trichloroethane	Ave	0.3955	0.3994	0.1000	10.1	10.0	1.0	20.0
Cyclohexane	Ave	0.5265	0.5221	0.1000	9.92	10.0	-0.8	20.0
Carbon tetrachloride	Ave	0.3121	0.3191	0.1000	10.2	10.0	2.2	20.0
1,1-Dichloropropene	Ave	0.4197	0.4518	0.0100	10.8	10.0	7.7	20.0
Isobutyl alcohol	Ave	0.0081	0.0065*	0.0100	201	250	-19.6	20.0
Benzene	Ave	1.225	1.272	0.5000	10.4	10.0	3.8	20.0
1,2-Dichloroethane	Ave	0.4781	0.4419	0.1000	9.24	10.0	-7.6	20.0
n-Heptane	Ave	0.3108	0.3588	0.0100	11.5	10.0	15.5	20.0
Trichloroethene	Ave	0.2923	0.2942	0.2000	10.1	10.0	0.6	20.0
Methylcyclohexane	Ave	0.4824	0.5510	0.1000	11.4	10.0	14.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCVIS 180-148334/3 Calibration Date: 07/21/2015 11:45

Instrument ID: CHHP6 Calib Start Date: 06/02/2015 16:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/02/2015 20:05

Lab File ID: 60721003.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	0.3132	0.3017	0.1000	9.63	10.0	-3.7	20.0
1,4-Dioxane	Ave	0.0029	0.0026*	0.0100	180	200	-10.2	20.0
Dibromomethane	Ave	0.1805	0.1724	0.0100	9.56	10.0	-4.4	20.0
Bromodichloromethane	Ave	0.3353	0.3438	0.2000	10.3	10.0	2.5	20.0
cis-1,3-Dichloropropene	Ave	0.4100	0.3728	0.2000	9.09	10.0	-9.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.137	0.9891	0.1000	17.4	20.0	-13.0	20.0
Toluene	Ave	5.188	5.644	0.4000	10.9	10.0	8.8	20.0
trans-1,3-Dichloropropene	Ave	1.410	1.373	0.1000	9.74	10.0	-2.6	20.0
Ethyl methacrylate	Ave	1.525	1.395	0.0100	9.15	10.0	-8.5	20.0
1,1,2-Trichloroethane	Ave	1.077	1.094	0.1000	10.2	10.0	1.6	20.0
Tetrachloroethene	Ave	0.9746	0.9768	0.2000	10.0	10.0	0.2	20.0
1,3-Dichloropropane	Ave	2.029	2.063	0.0100	10.2	10.0	1.6	20.0
2-Hexanone	Ave	0.8548	0.5157	0.1000	12.1	20.0	-39.7*	20.0
Dibromochloromethane	Ave	0.8417	0.8453	0.1000	10.0	10.0	0.4	20.0
1,2-Dibromoethane (EDB)	Ave	1.008	1.050	0.1000	10.4	10.0	4.1	20.0
3-Chlorobenzotrifluoride	Ave	1.695	1.775	0.0100	10.5	10.0	4.7	20.0
Chlorobenzene	Ave	3.381	3.481	0.5000	10.3	10.0	3.0	20.0
4-Chlorobenzotrifluoride	Ave	1.600	1.651	0.0100	10.3	10.0	3.2	20.0
1,1,1,2-Tetrachloroethane	Ave	1.001	1.037	0.0100	10.4	10.0	3.6	20.0
Ethylbenzene	Ave	1.891	2.012	0.1000	10.6	10.0	6.4	20.0
m-Xylene & p-Xylene	Ave	2.345	2.480	0.1000	10.6	10.0	5.8	20.0
o-Xylene	Ave	2.286	2.502	0.3000	10.9	10.0	9.4	20.0
Styrene	Ave	3.642	3.839	0.3000	10.5	10.0	5.4	20.0
Bromoform	Ave	0.4717	0.4627	0.1000	9.81	10.0	-1.9	20.0
2-Chlorobenzotrifluoride	Ave	1.696	1.792	0.0100	10.6	10.0	5.6	20.0
Isopropylbenzene	Ave	5.510	6.327	0.1000	11.5	10.0	14.8	20.0
1,1,2,2-Tetrachloroethane	Ave	1.393	1.516	0.3000	10.9	10.0	8.9	20.0
Bromobenzene	Ave	0.9069	0.8723	0.0100	9.62	10.0	-3.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2605	0.2335	0.0100	8.97	10.0	-10.3	20.0
1,2,3-Trichloropropane	Ave	0.3192	0.3255	0.0100	10.2	10.0	2.0	20.0
N-Propylbenzene	Ave	0.9664	1.092	0.0100	11.3	10.0	13.0	20.0
2-Chlorotoluene	Ave	0.8474	0.8887	0.0100	10.5	10.0	4.9	20.0
3-Chlorotoluene	Ave	0.8614	0.9194	0.0100	10.7	10.0	6.7	20.0
1,3,5-Trimethylbenzene	Ave	3.004	3.334	0.0100	11.1	10.0	11.0	20.0
4-Chlorotoluene	Ave	0.9209	0.9401	0.0100	10.2	10.0	2.1	20.0
tert-Butylbenzene	Ave	2.365	2.685	0.0100	11.4	10.0	13.6	20.0
1,2,4-Trimethylbenzene	Ave	3.076	3.413	0.0100	11.1	10.0	11.0	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.8323	0.8610	0.0100	10.3	10.0	3.4	20.0
sec-Butylbenzene	Ave	3.505	4.131	0.0100	11.8	10.0	17.9	20.0
1,3-Dichlorobenzene	Ave	1.707	1.719	0.6000	10.1	10.0	0.7	20.0
4-Isopropyltoluene	Ave	2.882	3.505	0.0100	12.2	10.0	21.6*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCVIS 180-148334/3 Calibration Date: 07/21/2015 11:45

Instrument ID: CHHP6 Calib Start Date: 06/02/2015 16:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/02/2015 20:05

Lab File ID: 60721003.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	1.776	1.738	0.5000	9.79	10.0	-2.1	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.8030	0.8572	0.0100	10.7	10.0	6.7	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.8999	0.8923	0.0100	9.92	10.0	-0.8	20.0
n-Butylbenzene	Ave	2.667	3.150	0.0100	11.8	10.0	18.1	20.0
1,2-Dichlorobenzene	Ave	1.676	1.695	0.4000	10.1	10.0	1.1	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1480	0.1357	0.0500	9.17	10.0	-8.3	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	1.263	1.419	0.0100	33.7	30.0	12.4	20.0
2,3- & 3,4- Dichlorotoluene	Ave	1.406	1.509	0.0100	21.5	20.0	7.3	20.0
1,2,4-Trichlorobenzene	Ave	1.231	1.213	0.2000	9.85	10.0	-1.5	20.0
Hexachlorobutadiene	Ave	0.4187	0.4478	0.0100	10.7	10.0	7.0	20.0
Naphthalene	Ave	2.590	2.522	0.0100	9.74	10.0	-2.6	20.0
1,2,3-Trichlorobenzene	Ave	1.100	0.9891	0.0100	8.99	10.0	-10.1	20.0
2,4,5-Trichlorotoluene	Ave	0.6038	0.5507	0.0100	9.12	10.0	-8.8	20.0
2,3,6-Trichlorotoluene	Ave	0.5716	0.5465	0.0100	9.56	10.0	-4.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2395	0.2276		9.50	10.0	-5.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3740	0.3448		9.22	10.0	-7.8	20.0
Toluene-d8 (Surr)	Ave	3.926	4.297		10.9	10.0	9.4	20.0
4-Bromofluorobenzene (Surr)	Ave	1.640	1.689		10.3	10.0	3.0	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721003.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 21-Jul-2015 11:45:30 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0007861-003
Operator ID: 001562 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 21-Jul-2015 13:47:28 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: fergusond Date: 21-Jul-2015 12:28:44

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
*	1 TBA-d9 (IS)	65	4.243	4.243	0.000	94	137060	1000.0	1000.0	
*	2 Fluorobenzene (IS)	96	7.285	7.285	0.000	98	428579	50.0	50.0	
*	3 Chlorobenzene-d5	119	10.399	10.399	0.000	89	91576	50.0	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.747	12.747	0.000	94	149007	50.0	50.0	
$	5 Dibromofluoromethane (Surr	113	6.548	6.548	0.000	93	97527	50.0	47.5	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.932	6.932	0.000	54	147767	50.0	46.1	
$	7 Toluene-d8 (Surr)	98	8.939	8.939	0.000	94	393459	50.0	54.7	
$	8 4-Bromofluorobenzene (Surr	95	11.586	11.586	0.000	80	154632	50.0	51.5	
	11 Dichlorodifluoromethane	85	1.603	1.603	0.000	98	76910	50.0	32.9	
	12 Chloromethane	50	1.761	1.761	0.000	100	86607	50.0	34.7	
	13 Vinyl chloride	62	1.889	1.889	0.000	99	104455	50.0	37.6	
	14 Butadiene	39	1.931	1.931	0.000	92	109160	50.0	35.5	
	15 Bromomethane	94	2.254	2.254	0.000	92	56848	50.0	44.4	
	16 Chloroethane	64	2.387	2.387	0.000	100	68010	50.0	35.7	
	17 Dichlorofluoromethane	67	2.649	2.649	0.000	97	191795	50.0	40.8	
	18 Trichlorofluoromethane	101	2.679	2.679	0.000	97	168054	50.0	48.4	
	20 Ethyl ether	59	3.044	3.044	0.000	88	114635	50.0	46.4	
	21 Acrolein	56	3.221	3.221	0.000	98	46671	150.0	136.0	
	22 1,1-Dichloroethene	96	3.336	3.336	0.000	98	118837	50.0	54.9	
	23 1,1,2-Trichloro-1,2,2-trif	101	3.409	3.409	0.000	96	121630	50.0	53.1	
	24 Acetone	43	3.428	3.428	0.000	87	52861	100.0	81.2	
	25 Iodomethane	142	3.531	3.531	0.000	99	169568	50.0	50.7	
	26 Carbon disulfide	76	3.634	3.634	0.000	99	308835	50.0	52.3	
	29 3-Chloro-1-propene	76	3.908	3.908	0.000	73	69886	50.0	53.2	
	30 Methyl acetate	43	3.926	3.926	0.000	96	413876	250.0	224.2	
	31 Methylene Chloride	84	4.127	4.127	0.000	91	147059	50.0	47.7	
	32 2-Methyl-2-propanol	59	4.364	4.364	0.000	95	81763	500.0	489.8	
	33 Acrylonitrile	53	4.498	4.498	0.000	99	443716	500.0	465.9	
	34 trans-1,2-Dichloroethene	96	4.565	4.565	0.000	95	133092	50.0	52.1	
	35 Methyl tert-butyl ether	73	4.571	4.571	0.000	97	364398	50.0	48.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.985	4.985	0.000	92	177921	50.0	50.3	
37 1,1-Dichloroethane	63	5.198	5.198	0.000	97	234960	50.0	50.8	
38 Vinyl acetate	43	5.234	5.234	0.000	97	188488	50.0	50.2	
42 2,2-Dichloropropane	77	5.934	5.934	0.000	62	120593	50.0	48.8	
43 cis-1,2-Dichloroethene	96	5.940	5.940	0.000	85	142933	50.0	51.8	
44 2-Butanone (MEK)	43	5.946	5.946	0.000	55	76079	100.0	72.7	
48 Chlorobromomethane	128	6.226	6.226	0.000	97	62892	50.0	49.9	
49 Tetrahydrofuran	42	6.244	6.244	0.000	85	61710	100.0	79.2	
50 Chloroform	83	6.372	6.372	0.000	95	237230	50.0	51.8	
51 1,1,1-Trichloroethane	97	6.542	6.542	0.000	97	171155	50.0	50.5	
52 Cyclohexane	56	6.615	6.615	0.000	91	223758	50.0	49.6	
53 Carbon tetrachloride	117	6.713	6.713	0.000	96	136745	50.0	51.1	
54 1,1-Dichloropropene	75	6.725	6.725	0.000	96	193638	50.0	53.8	
55 Isobutyl alcohol	41	6.895	6.895	0.000	89	69781	1250.0	1005.4	
56 Benzene	78	6.944	6.944	0.000	97	545231	50.0	51.9	
57 1,2-Dichloroethane	62	7.017	7.017	0.000	98	189383	50.0	46.2	
59 n-Heptane	43	7.309	7.309	0.000	89	153791	50.0	57.7	
61 Trichloroethene	130	7.674	7.674	0.000	96	126067	50.0	50.3	
63 Methylcyclohexane	83	7.923	7.923	0.000	91	236164	50.0	57.1	
64 1,2-Dichloropropane	63	7.948	7.948	0.000	85	129294	50.0	48.2	
65 1,4-Dioxane	88	8.033	8.033	0.000	40	22423	1000.0	898.2	M
67 Dibromomethane	93	8.039	8.039	0.000	91	73904	50.0	47.8	
68 Dichlorobromomethane	83	8.227	8.227	0.000	99	147364	50.0	51.3	
71 cis-1,3-Dichloropropene	75	8.678	8.678	0.000	93	159758	50.0	45.5	
72 4-Methyl-2-pentanone (MIBK	43	8.824	8.824	0.000	95	181157	100.0	87.0	
73 Toluene	91	9.012	9.012	0.000	98	516816	50.0	54.4	
74 trans-1,3-Dichloropropene	75	9.256	9.256	0.000	95	125734	50.0	48.7	
75 Ethyl methacrylate	69	9.310	9.310	0.000	87	127787	50.0	45.7	
76 1,1,2-Trichloroethane	97	9.444	9.444	0.000	94	100164	50.0	50.8	
77 Tetrachloroethene	164	9.529	9.529	0.000	93	89450	50.0	50.1	
78 1,3-Dichloropropane	76	9.608	9.608	0.000	91	188879	50.0	50.8	
79 2-Hexanone	43	9.657	9.657	0.000	96	94451	100.0	60.3	
81 Chlorodibromomethane	129	9.821	9.821	0.000	92	77412	50.0	50.2	
82 Ethylene Dibromide	107	9.937	9.937	0.000	99	96115	50.0	52.1	
83 3-Chlorobenzotrifluoride	180	10.393	10.393	0.000	92	162503	50.0	52.3	
84 Chlorobenzene	112	10.430	10.430	0.000	93	318786	50.0	51.5	
85 4-Chlorobenzotrifluoride	180	10.484	10.484	0.000	97	151201	50.0	51.6	
86 1,1,1,2-Tetrachloroethane	131	10.521	10.521	0.000	91	94951	50.0	51.8	
87 Ethylbenzene	106	10.527	10.527	0.000	99	184274	50.0	53.2	
88 m-Xylene & p-Xylene	106	10.661	10.661	0.000	99	227131	50.0	52.9	
89 o-Xylene	106	11.044	11.044	0.000	97	229156	50.0	54.7	
90 Styrene	104	11.062	11.062	0.000	94	351541	50.0	52.7	
91 Bromoform	173	11.245	11.245	0.000	92	42373	50.0	49.1	
92 2-Chlorobenzotrifluoride	180	11.306	11.306	0.000	96	164061	50.0	52.8	
93 Isopropylbenzene	105	11.409	11.409	0.000	97	579367	50.0	57.4	
96 1,1,2,2-Tetrachloroethane	83	11.713	11.713	0.000	96	138870	50.0	54.4	
95 Bromobenzene	156	11.719	11.719	0.000	96	129977	50.0	48.1	
97 trans-1,4-Dichloro-2-buten	53	11.750	11.750	0.000	76	34796	50.0	44.8	
98 1,2,3-Trichloropropane	110	11.774	11.774	0.000	86	48505	50.0	51.0	
99 N-Propylbenzene	120	11.829	11.829	0.000	98	162662	50.0	56.5	
100 2-Chlorotoluene	126	11.914	11.914	0.000	95	132425	50.0	52.4	
101 3-Chlorotoluene	126	11.981	11.981	0.000	96	136999	50.0	53.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
102 1,3,5-Trimethylbenzene	105	12.011	12.011	0.000	94	496820	50.0	55.5	
103 4-Chlorotoluene	126	12.036	12.036	0.000	99	140075	50.0	51.0	
104 tert-Butylbenzene	119	12.322	12.322	0.000	92	400133	50.0	56.8	
106 1,2,4-Trimethylbenzene	105	12.382	12.382	0.000	98	508578	50.0	55.5	
107 1,2-dichloro-4-(trifluorom	214	12.419	12.419	0.000	97	128291	50.0	51.7	
108 sec-Butylbenzene	105	12.547	12.547	0.000	95	615615	50.0	58.9	
109 1,3-Dichlorobenzene	146	12.668	12.668	0.000	95	256136	50.0	50.3	
110 4-Isopropyltoluene	119	12.705	12.705	0.000	96	522312	50.0	60.8	
111 1,4-Dichlorobenzene	146	12.772	12.772	0.000	90	258931	50.0	48.9	
113 2,4-Dichloro-1-(triflourom	214	12.790	12.790	0.000	92	127731	50.0	53.4	
114 2,5-Dichlorobenzotrifluori	214	12.833	12.833	0.000	99	132962	50.0	49.6	
116 n-Butylbenzene	91	13.112	13.112	0.000	98	469318	50.0	59.1	
117 1,2-Dichlorobenzene	146	13.125	13.125	0.000	93	252604	50.0	50.6	
118 1,2-Dibromo-3-Chloropropan	75	13.916	13.916	0.000	73	20225	50.0	45.9	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.062	14.062	0.000	100	634499	150.0	168.6	
121 2,3- & 3,4- Dichlorotoluen	125	14.475	14.475	0.000	99	449597	100.0	107.3	
122 1,2,4-Trichlorobenzene	180	14.743	14.743	0.000	93	180673	50.0	49.3	
123 Hexachlorobutadiene	225	14.889	14.889	0.000	96	66730	50.0	53.5	
124 Naphthalene	128	15.011	15.011	0.000	98	375795	50.0	48.7	
125 1,2,3-Trichlorobenzene	180	15.230	15.230	0.000	91	147380	50.0	45.0	
126 2,4,5-Trichlorotoluene	159	16.008	16.008	0.000	0	82059	50.0	45.6	
127 2,3,6-Trichlorotoluene	159	16.112	16.112	0.000	95	81426	50.0	47.8	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 131 Xylenes, Total	106				0		100.0	107.6	
S 130 1,2-Dichloroethene, Total	96				0		100.0	103.9	
S 132 1,3-Dichloropropene, Total	1				0		100.0	94.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

voaWket1Reste_00001	Amount Added:	2.00	Units: uL	
voaWeemix1Res_00001	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00132	Amount Added:	2.00	Units: uL	
voaWVA2nd Res_00008	Amount Added:	2.00	Units: uL	
voaWAcro2nd R_00006	Amount Added:	6.00	Units: uL	
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

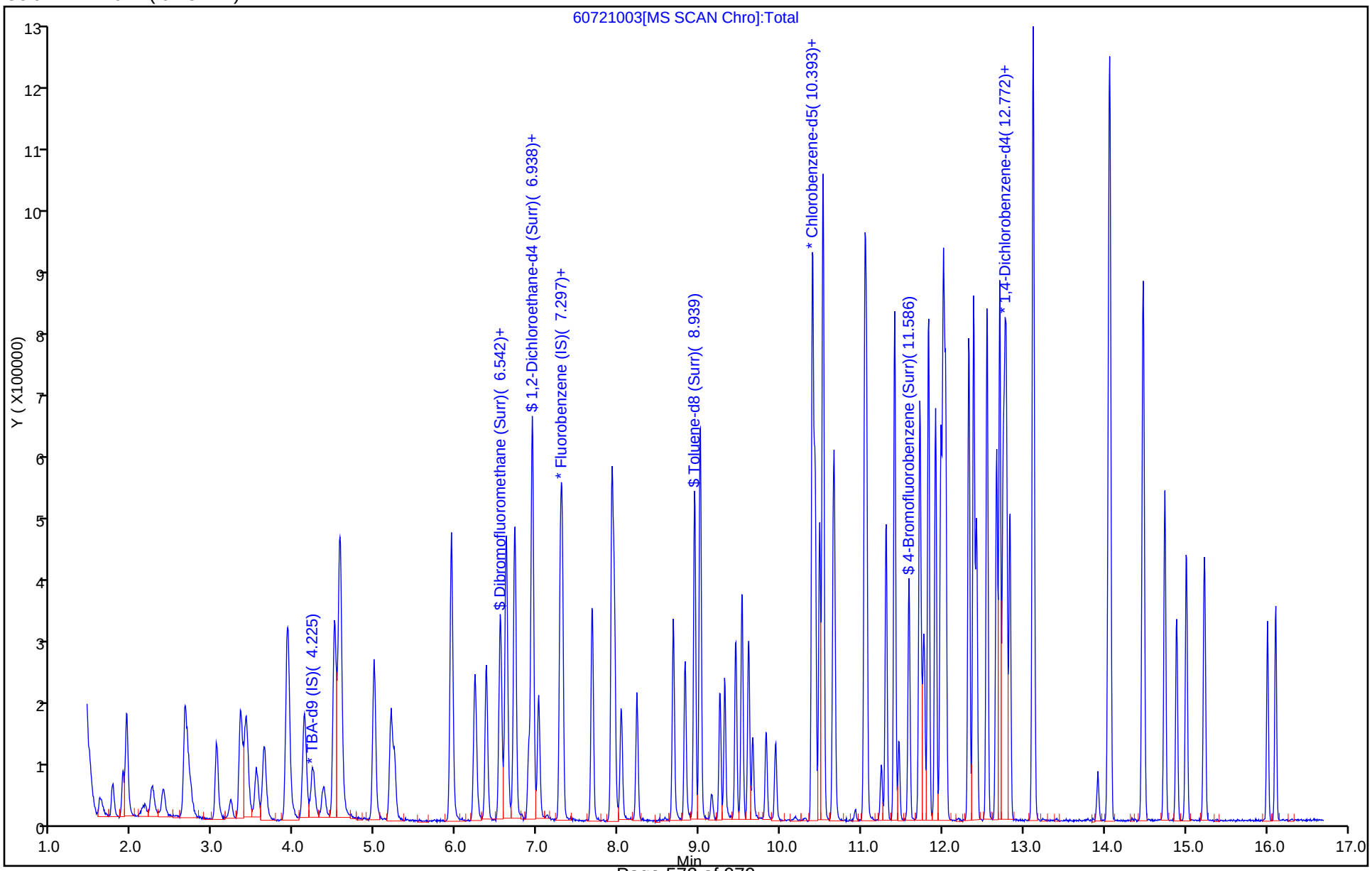
Report Date: 21-Jul-2015 13:47:30 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721003.D

Injection Date:	21-Jul-2015 11:45:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

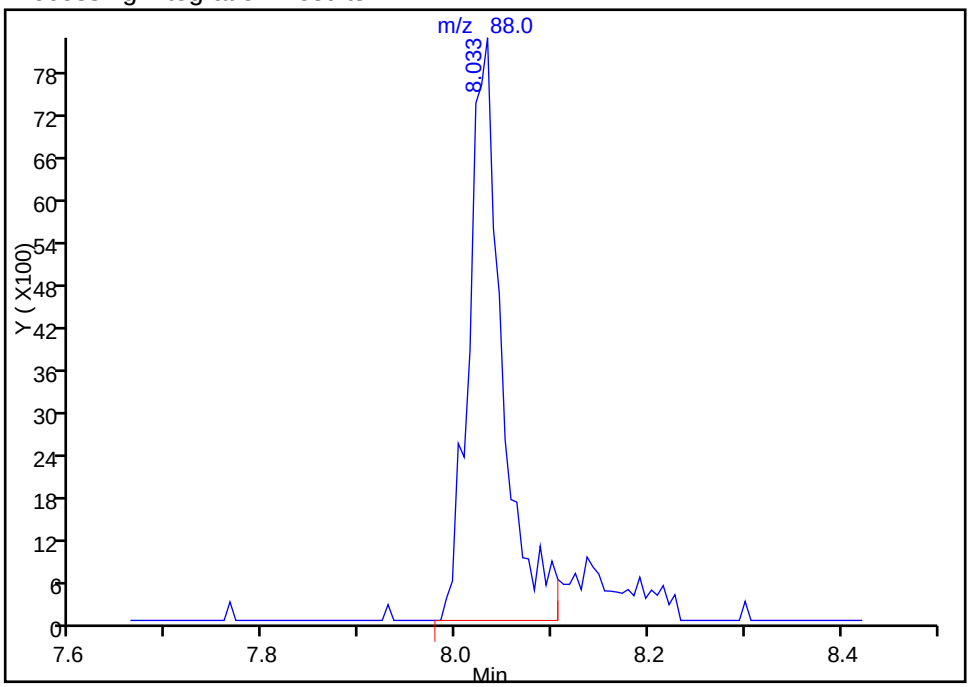
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721003.D
Injection Date: 21-Jul-2015 11:45:30 Instrument ID: CHHP6
Lims ID: CCVIS
Client ID:
Operator ID: 001562 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

65 1,4-Dioxane, CAS: 123-91-1

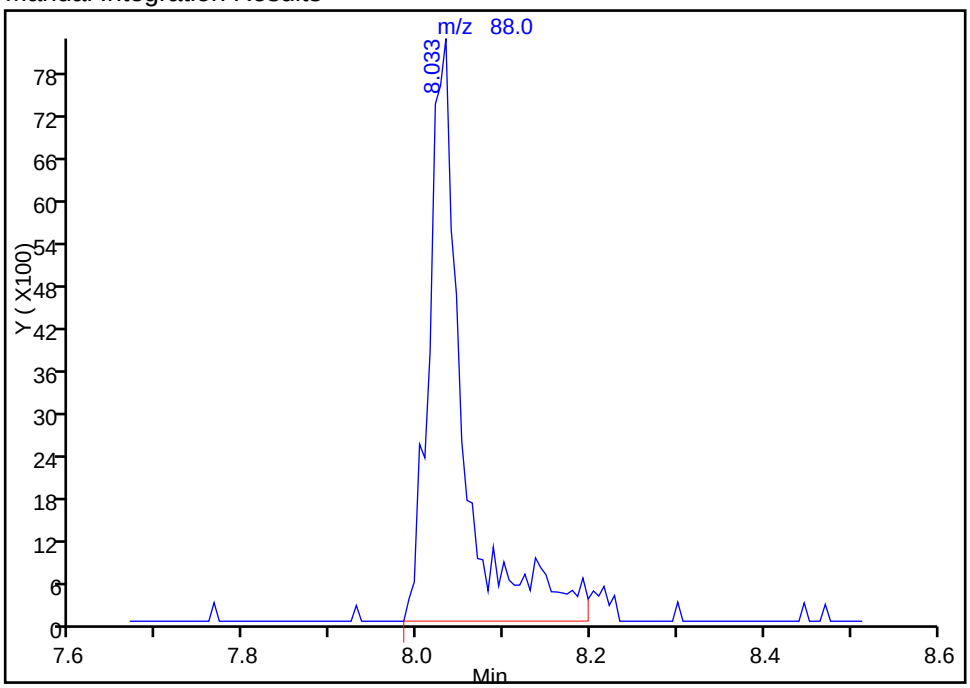
Processing Integration Results

RT: 8.03
Area: 19624
Amount: 786.0610
Amount Units: ng



Manual Integration Results

RT: 8.03
Area: 22423
Amount: 898.1780
Amount Units: ng



Reviewer: fergusond, 21-Jul-2015 12:28:44
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617016.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 17-Jun-2015 11:58:30 ALS Bottle#: 1 Worklist Smp#: 16
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0007443-016
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Jun-2015 11:19:44 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: fergusond Date: 17-Jun-2015 12:09:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.361	8.361	0.000	0	64329	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

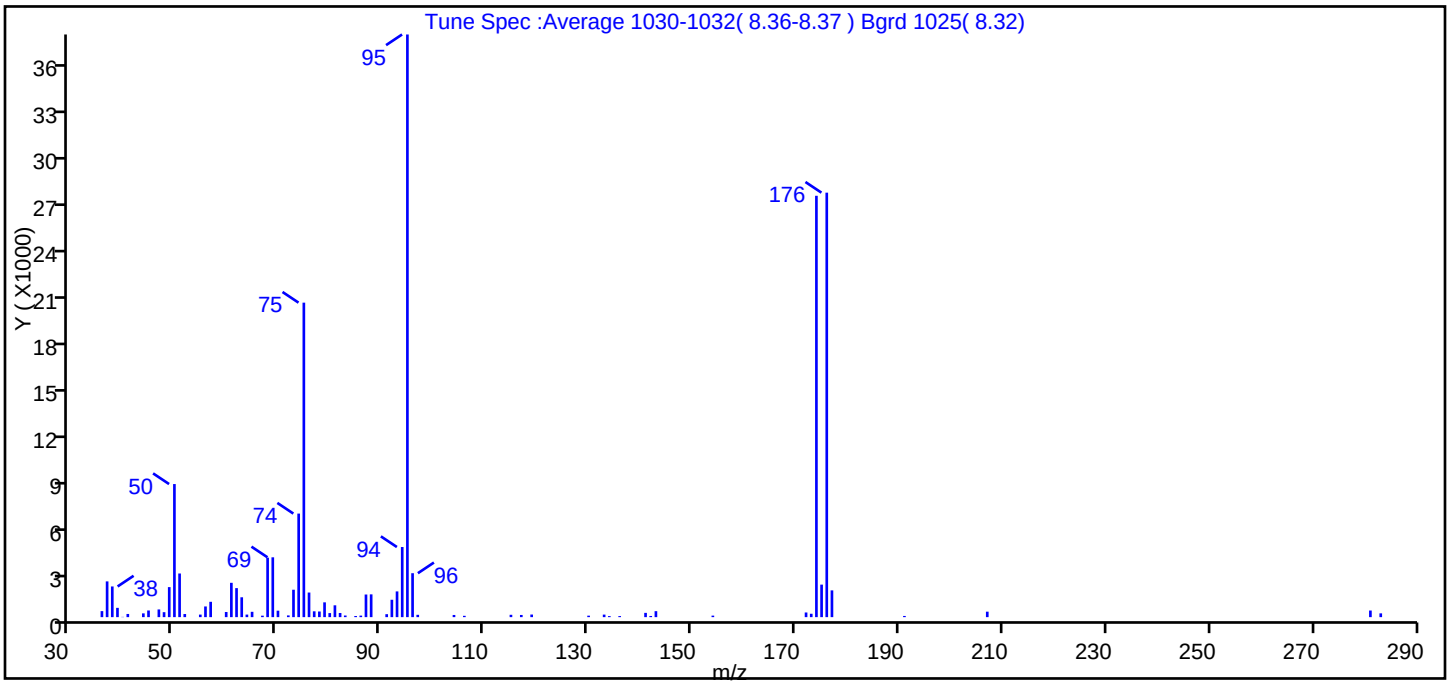
VOABFB25_00063 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617016.D
Injection Date: 17-Jun-2015 11:58:30 Instrument ID: CHHP5
Lims ID: BFB
Client ID:
Operator ID: 001562 ALS Bottle#: 1 Worklist Smp#: 16
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	22.8
75	30 to 60% of m/z 95	54.0
96	5 to 9% of m/z 95	7.5
173	Less than 2% of m/z 174	0.6 (0.8)
174	50 to 120% of m/z 95	72.3
175	5 to 9% of m/z 174	5.6 (7.7)
176	Greater than 95% but less than 101% of m/z 174	72.9 (100.7)
177	5 to 9% of m/z 176	4.6 (6.3)

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617016.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 17-Jun-2015 11:58:30
Spectrum: Tune Spec :Average 1030-1032(8.36-8.37) Bgrd 1025(8.32)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 73

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	386	62.00	1860	83.00	104	134.00	66
37.00	2291	63.00	1273	85.00	73	136.00	68
38.00	1966	64.00	164	86.00	98	141.00	274
39.00	595	65.00	342	87.00	1450	142.00	75
40.00	16	67.00	94	88.00	1460	143.00	383
41.00	204	68.00	3811	91.00	190	154.00	97
44.00	242	69.00	3834	92.00	1114	172.00	299
45.00	426	70.00	414	93.00	1649	173.00	217
47.00	493	72.00	111	94.00	4493	174.00	27000
48.00	318	73.00	1757	95.00	37336	175.00	2084
49.00	1924	74.00	6636	96.00	2815	176.00	27200
50.00	8528	75.00	20152	97.00	149	177.00	1715
51.00	2797	76.00	1577	104.00	139	191.00	76
52.00	200	77.00	374	106.00	85	207.00	350
55.00	163	78.00	362	115.00	151	281.00	424
56.00	685	79.00	948	117.00	140	283.00	243
57.00	983	80.00	260	119.00	167		
60.00	330	81.00	758	130.00	95		
61.00	2200	82.00	266	133.00	163		

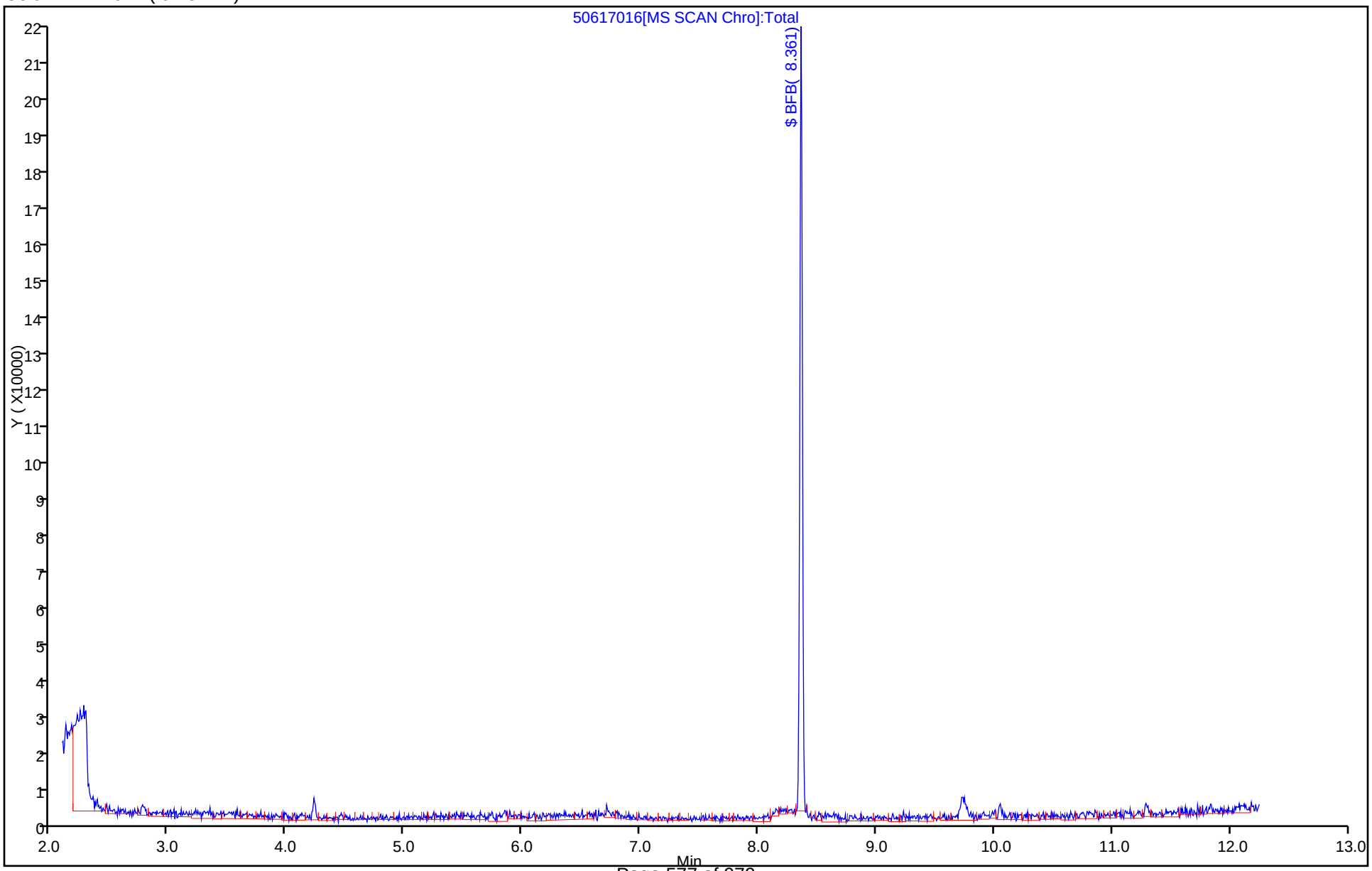
Report Date: 18-Jun-2015 11:19:44 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150617-7443.b\50617016.D

Injection Date:	17-Jun-2015 11:58:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	BFB			Worklist Smp#:	16
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: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717004.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 17-Jul-2015 11:22:30 ALS Bottle#: 1 Worklist Smp#: 4
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0007815-004
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Jul-2015 14:27:35 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 17-Jul-2015 11:31:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.365	8.365	0.000	0	122906	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

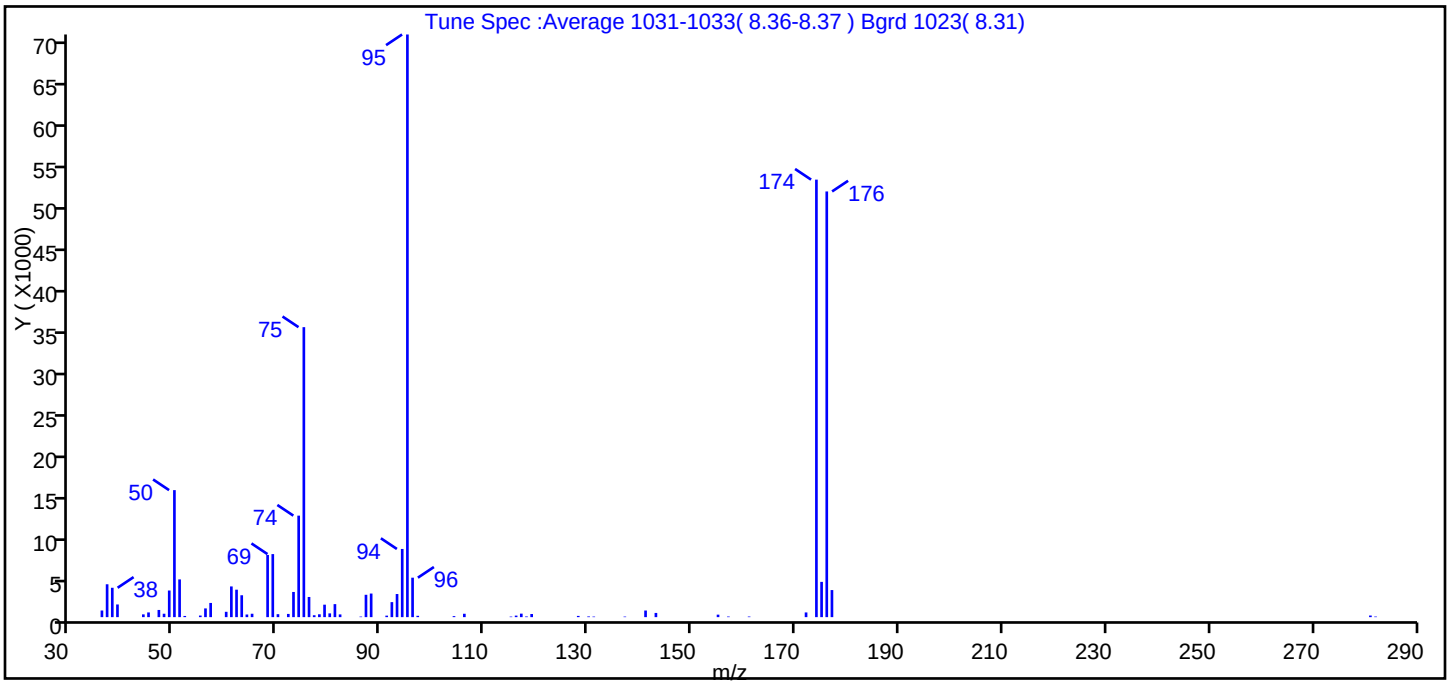
VOABFB25_00064 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717004.D
Injection Date: 17-Jul-2015 11:22:30 Instrument ID: CHHP5
Lims ID: BFB
Client ID:
Operator ID: 001562 ALS Bottle#: 1 Worklist Smp#: 4
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	21.8
75	30 to 60% of m/z 95	49.8
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	75.1
175	5 to 9% of m/z 174	6.1 (8.1)
176	Greater than 95% but less than 101% of m/z 174	73.1 (97.3)
177	5 to 9% of m/z 176	4.6 (6.4)

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717004.D\MSVOA_LL_CHHP5.rslt\spectra
Injection Date: 17-Jul-2015 11:22:30
Spectrum: Tune Spec :Average 1031-1033(8.36-8.37) Bgrd 1023(8.31)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	809	62.00	3346	82.00	333	119.00	383
37.00	4006	63.00	2668	86.00	69	128.00	151
38.00	3579	64.00	322	87.00	2724	130.00	85
39.00	1546	65.00	415	88.00	2876	131.00	69
44.00	338	68.00	7577	91.00	183	137.00	68
45.00	574	69.00	7682	92.00	1830	141.00	806
47.00	876	70.00	361	93.00	2817	143.00	513
48.00	416	72.00	393	94.00	8308	155.00	304
49.00	3245	73.00	3068	95.00	71000	157.00	74
50.00	15477	74.00	12369	96.00	4808	161.00	74
51.00	4599	75.00	35336	97.00	163	172.00	574
52.00	145	76.00	2457	104.00	123	174.00	53312
55.00	193	77.00	232	106.00	412	175.00	4297
56.00	1064	78.00	348	115.00	68	176.00	51872
57.00	1730	79.00	1519	116.00	187	177.00	3299
60.00	651	80.00	459	117.00	427	281.00	196
61.00	3742	81.00	1586	118.00	82	282.00	72

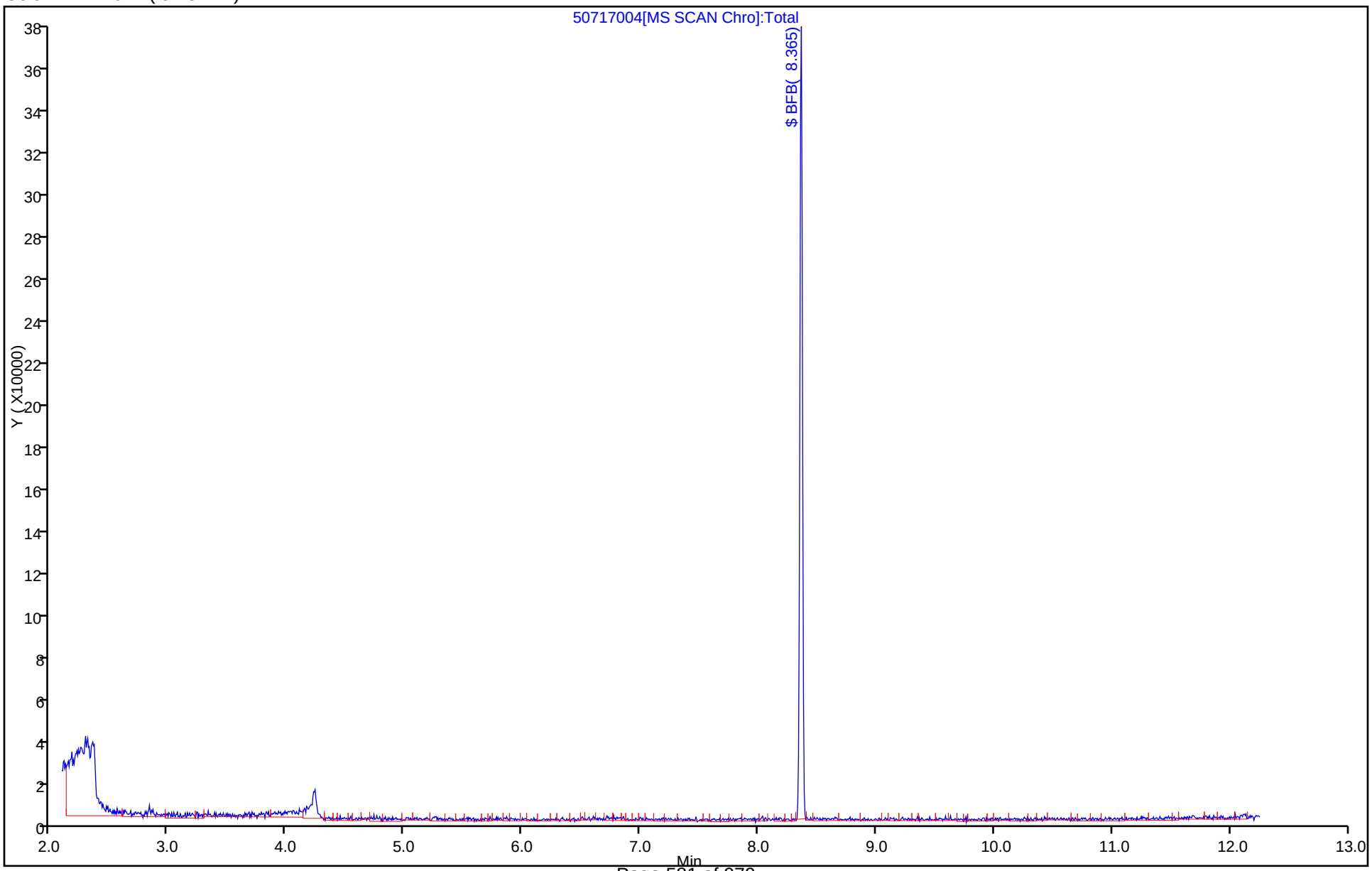
Report Date: 17-Jul-2015 14:27:36 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717004.D

Injection Date:	17-Jul-2015 11:22:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	BFB			Worklist Smp#:	4
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\CHHP6\20150602-7230.b\60602004.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 02-Jun-2015 14:36:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0007230-004
Operator ID: 001562 Instrument ID: CHHP6

Method: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 03-Jun-2015 10:40:34 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK037

First Level Reviewer: fergusond Date: 02-Jun-2015 14:54:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.376	8.376	0.000	0	115848	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

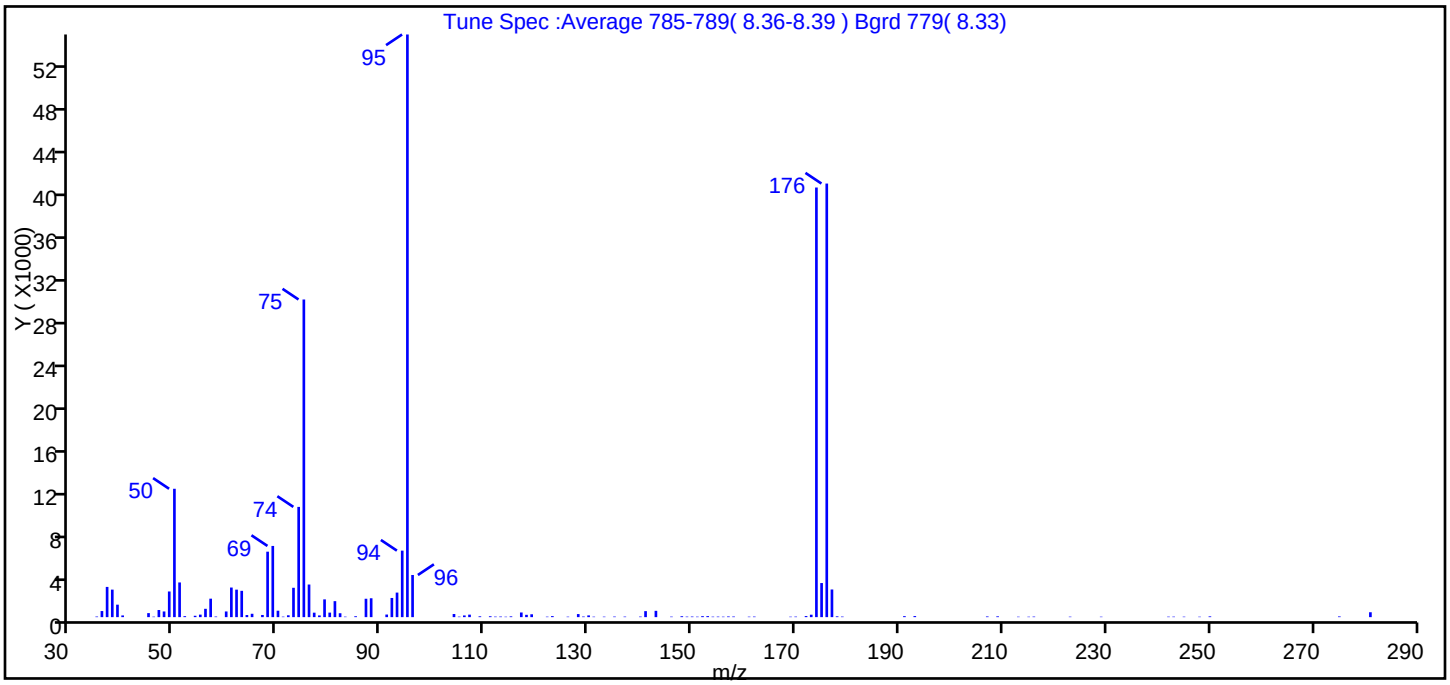
voabfb25_00062 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602004.D
Injection Date: 02-Jun-2015 14:36:30 Instrument ID: CHHP6
Lims ID: BFB
Client ID:
Operator ID: 001562 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 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	22.0
75	30 to 60% of m/z 95	54.5
96	5 to 9% of m/z 95	7.2
173	Less than 2% of m/z 174	0.4 (0.6)
174	50 to 120% of m/z 95	73.7
175	5 to 9% of m/z 174	5.9 (7.9)
176	Greater than 95% but less than 101% of m/z 174	74.4 (100.9)
177	5 to 9% of m/z 176	4.7 (6.4)

Data File: \\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602004.D\MSVOA_LL_CHHP6.rslt\spectra.d
Injection Date: 02-Jun-2015 14:36:30
Spectrum: Tune Spec :Average 785-789(8.36-8.39) Bgrd 779(8.33)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 117

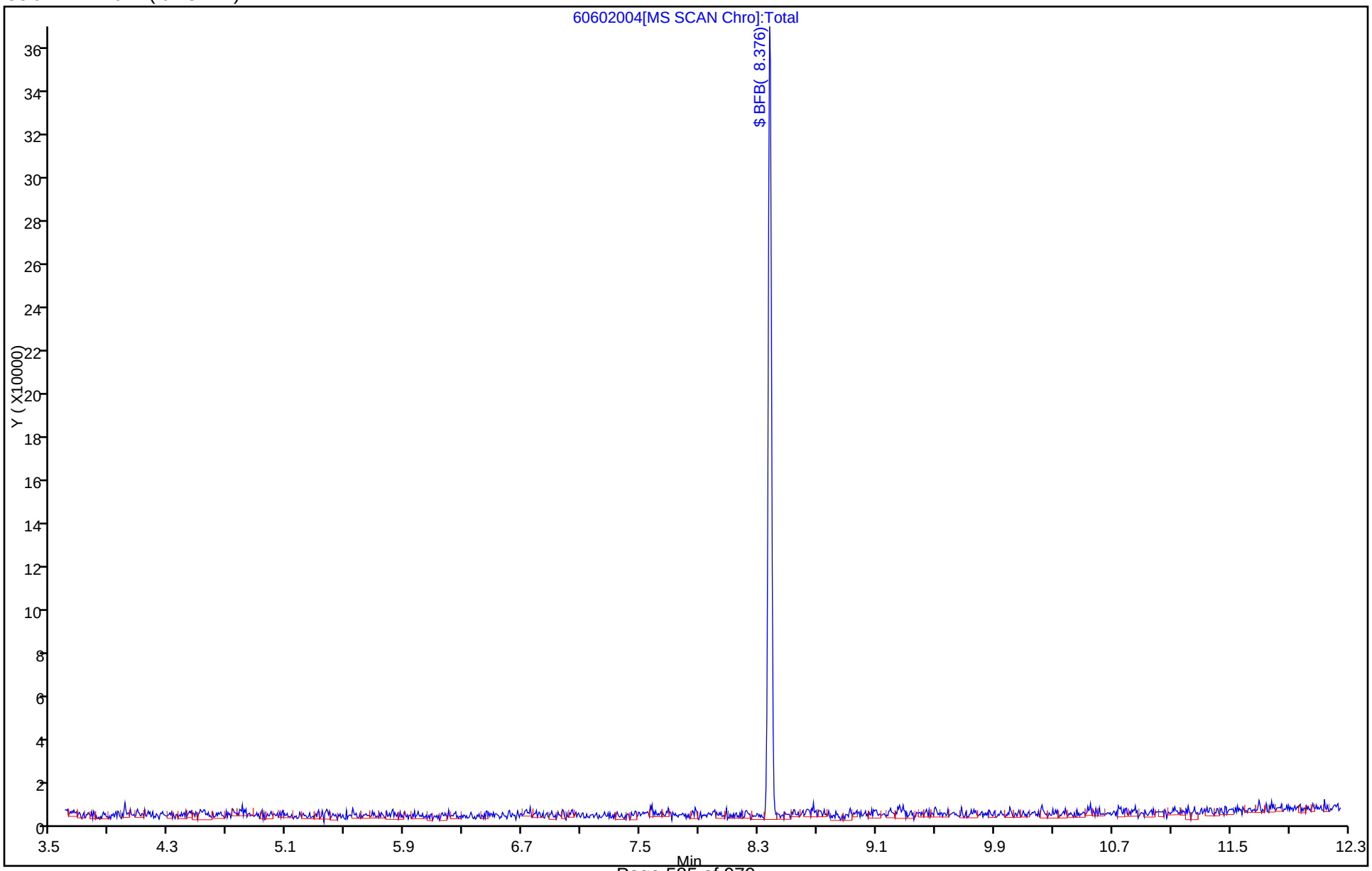
m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	56	72.00	173	115.00	72	162.00	52
36.00	568	73.00	2735	117.00	434	169.00	42
37.00	2816	74.00	10271	118.00	216	170.00	50
38.00	2564	75.00	29592	119.00	268	172.00	102
39.00	1162	76.00	3039	122.00	45	173.00	227
40.00	159	77.00	416	123.00	96	174.00	40024
45.00	375	78.00	159	126.00	44	175.00	3177
46.00	44	79.00	1655	128.00	286	176.00	40392
47.00	664	80.00	422	129.00	56	177.00	2577
48.00	530	81.00	1489	130.00	162	178.00	75
49.00	2391	82.00	364	131.00	44	179.00	52
50.00	11959	83.00	45	133.00	45	191.00	91
51.00	3232	85.00	84	135.00	53	193.00	99
52.00	91	87.00	1713	137.00	50	207.00	64
54.00	128	88.00	1759	140.00	52	209.00	74
55.00	234	91.00	242	141.00	559	213.00	40
56.00	777	92.00	1787	143.00	588	215.00	40
57.00	1721	93.00	2287	146.00	47	216.00	51
58.00	56	94.00	6196	148.00	84	223.00	44
60.00	530	95.00	54280	149.00	49	229.00	41
61.00	2759	96.00	3927	150.00	55	242.00	45
62.00	2562	104.00	292	151.00	44	243.00	46
63.00	2451	105.00	47	152.00	90	245.00	43
64.00	196	106.00	158	153.00	94	248.00	41
65.00	314	107.00	233	154.00	45	250.00	71
67.00	202	109.00	76	155.00	50	275.00	67
68.00	6098	111.00	82	156.00	43	281.00	457
69.00	6633	112.00	49	157.00	63		
70.00	599	113.00	56	158.00	57		
71.00	46	114.00	40	161.00	44		

Report Date: 03-Jun-2015 10:40:35 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP6\20150602-7230.b\60602004.D				
Injection Date:	02-Jun-2015 14:36:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	BFB			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721001.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	21-Jul-2015 10:05:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Misc. Info.:	180-0007861-001				
Operator ID:	001562	Instrument ID:	CHHP6		
Method:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m				
Limit Group:	VOA 8260C ICAL				
Last Update:	21-Jul-2015 13:47:22	Calib Date:	02-Jun-2015 20:05:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK053				
First Level Reviewer: fergusond		Date:	21-Jul-2015 10:16:41		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.381	8.381	0.000	0	94350	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

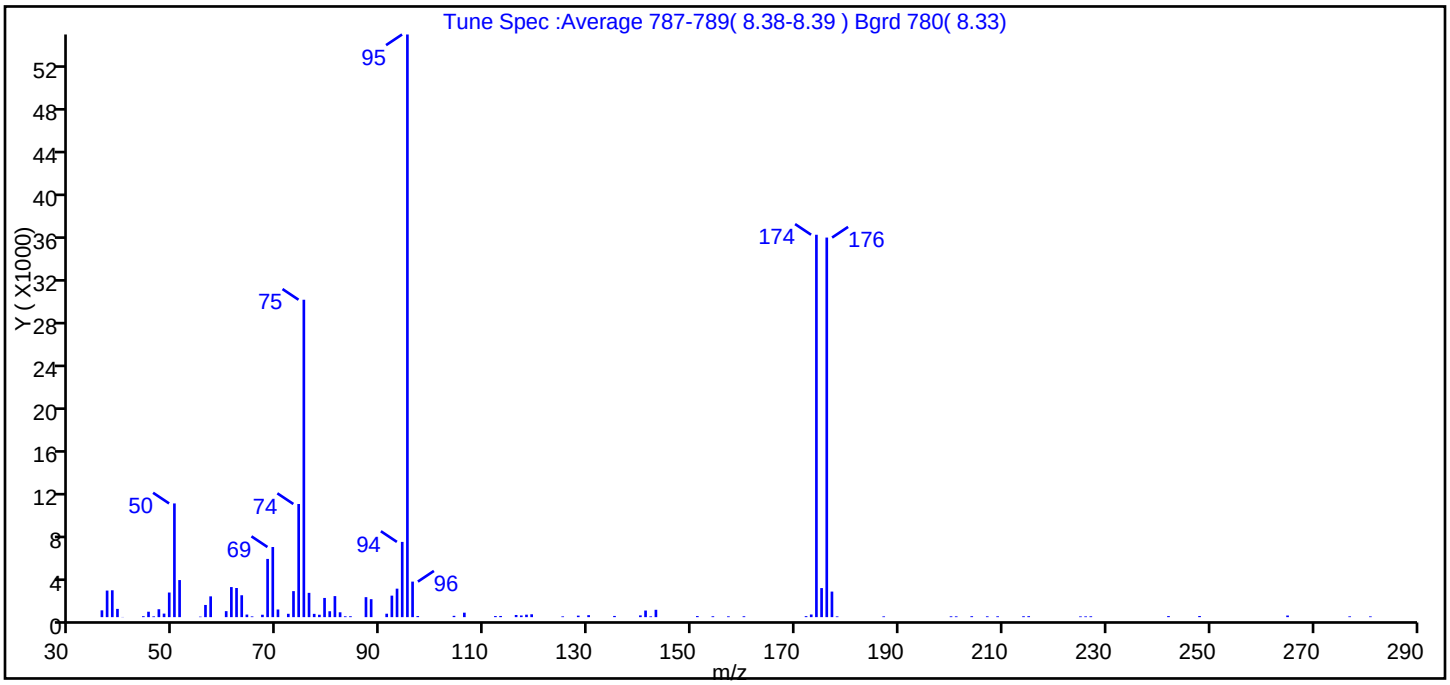
VOABFB25_00064 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721001.D
Injection Date: 21-Jul-2015 10:05:30 Instrument ID: CHHP6
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_CHHP6 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	19.5
75	30 to 60% of m/z 95	54.5
96	5 to 9% of m/z 95	6.1
173	Less than 2% of m/z 174	0.5 (0.7)
174	50 to 120% of m/z 95	65.6
175	5 to 9% of m/z 174	5.0 (7.6)
176	Greater than 95% but less than 101% of m/z 174	65.1 (99.3)
177	5 to 9% of m/z 176	4.4 (6.7)

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721001.D\MSVOA_LL_CHHP6.rslt\spectra
Injection Date: 21-Jul-2015 10:05:30
Spectrum: Tune Spec :Average 787-789(8.38-8.39) Bgrd 780(8.33)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 91

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	637	68.00	5447	96.00	3325	173.00	247
37.00	2487	69.00	6561	97.00	99	174.00	35776
38.00	2513	70.00	716	104.00	123	175.00	2719
39.00	772	72.00	314	106.00	418	176.00	35512
40.00	16	73.00	2434	112.00	103	177.00	2391
44.00	87	74.00	10586	113.00	110	178.00	70
45.00	507	75.00	29696	116.00	202	187.00	72
46.00	73	76.00	2273	117.00	155	200.00	78
47.00	739	77.00	308	118.00	230	201.00	75
48.00	331	78.00	224	119.00	269	204.00	87
49.00	2303	79.00	1796	125.00	72	207.00	78
50.00	10638	80.00	553	128.00	141	209.00	80
51.00	3469	81.00	1969	130.00	184	214.00	82
55.00	47	82.00	454	135.00	112	215.00	90
56.00	1140	83.00	80	140.00	162	225.00	70
57.00	1945	84.00	83	141.00	617	226.00	72
60.00	562	87.00	1870	142.00	75	227.00	80
61.00	2813	88.00	1681	143.00	688	242.00	98
62.00	2727	91.00	322	151.00	100	248.00	105
63.00	2049	92.00	2012	154.00	82	265.00	151
64.00	242	93.00	2665	157.00	76	277.00	74
65.00	69	94.00	7040	160.00	83	281.00	70
67.00	225	95.00	54512	172.00	94		

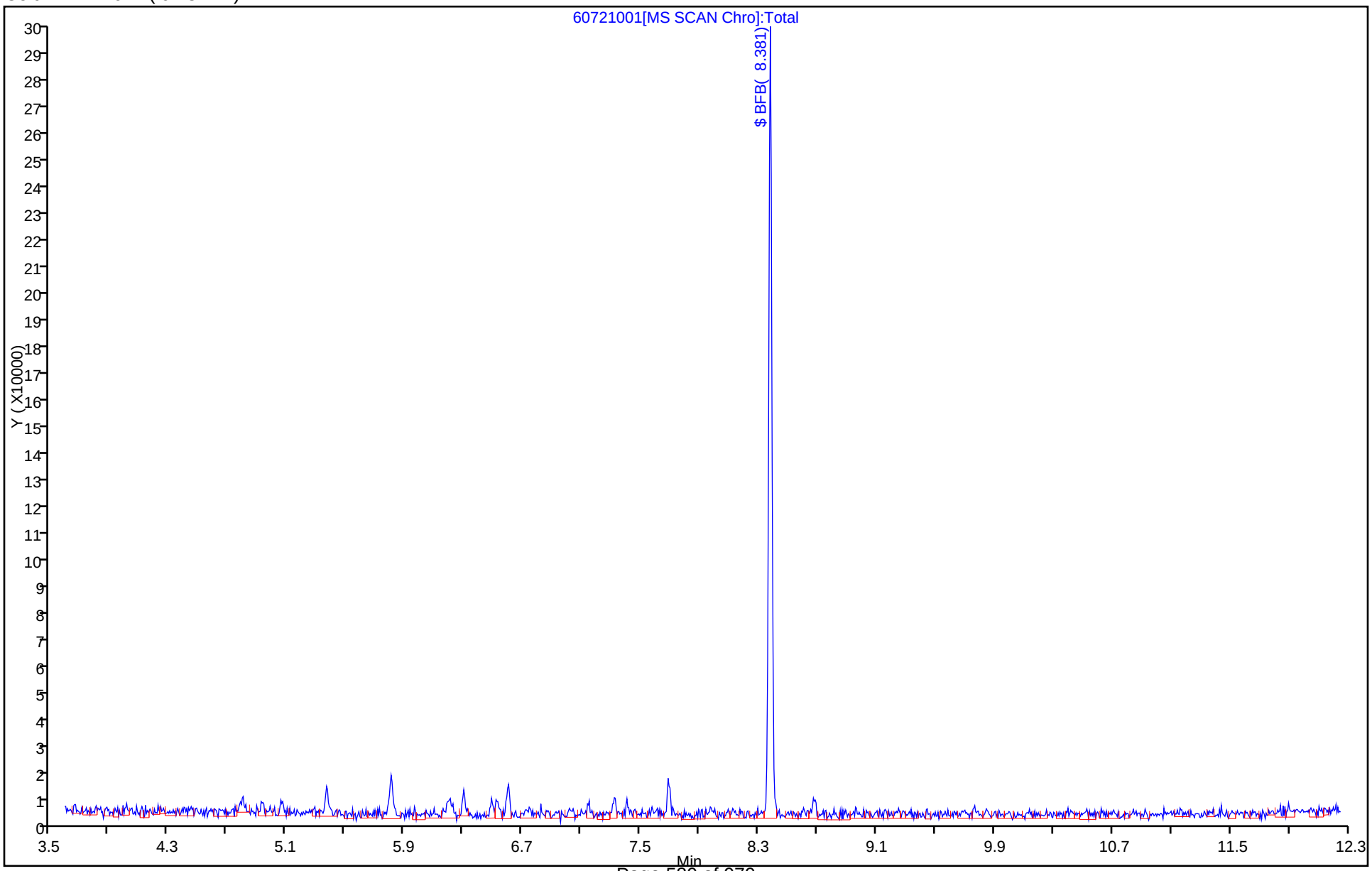
Report Date: 21-Jul-2015 13:47:23 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721001.D

Injection Date:	21-Jul-2015 10:05:30	Instrument ID:	CHHP6	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_CHHP6	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.: 180-45946-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-148055/6

Matrix: Water | Lab File ID: 50717006.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 13:13

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.: 148055 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-148055/6

Matrix: Water | Lab File ID: 50717006.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 13:13

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.: 148055 | Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	92		70-118
1868-53-7	Dibromofluoromethane (Surr)	109		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717006.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 17-Jul-2015 13:13:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0007815-006
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Jul-2015 15:28:40 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 17-Jul-2015 15:29:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.271	4.263	0.008	0	160153	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.292	-0.003	98	394283	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.389	-0.004	89	93318	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.727	12.725	0.002	98	119566	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.571	6.559	0.012	93	100495	50.0	54.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.930	0.006	0	153187	50.0	57.7	
$ 7 Toluene-d8 (Surr)	98	8.937	8.938	-0.001	95	388666	50.0	50.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.572	0.000	85	131257	50.0	46.1	
11 Dichlorodifluoromethane	85		1.607					ND	
12 Chloromethane	50		1.777					ND	
13 Vinyl chloride	62		1.911					ND	
14 Butadiene	39		1.948					ND	
15 Bromomethane	94		2.264					ND	
16 Chloroethane	64		2.410					ND	
17 Dichlorofluoromethane	67		2.678					ND	
18 Trichlorofluoromethane	101		2.714					ND	
19 Ethanol	45		2.955					ND	
20 Ethyl ether	59		3.049					ND	
21 Acrolein	56		3.231					ND	
22 1,1-Dichloroethene	96		3.341					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.432					ND	
24 Acetone	43		3.450					ND	
25 Iodomethane	142		3.542					ND	
26 Carbon disulfide	76		3.627					ND	
27 Isopropyl alcohol	45		3.715					ND	
29 Acetonitrile	40		3.873					ND	
28 3-Chloro-1-propene	76		3.919					ND	
30 Methyl acetate	43		3.943					ND	
31 Methylene Chloride	84		4.138					ND	
32 2-Methyl-2-propanol	59		4.411					ND	
33 Acrylonitrile	53		4.521					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		4.564					ND	
35 Methyl tert-butyl ether	73		4.582					ND	
36 Hexane	57		4.989					ND	
37 1,1-Dichloroethane	63		5.202					ND	
38 Vinyl acetate	43		5.245					ND	
39 2-Chloro-1,3-butadiene	53		5.303					ND	
41 Isopropyl ether	45		5.303					ND	
40 Isopropyl ether TIC	45		5.409					ND	
42 Tert-butyl ethyl ether	59		5.771					ND	
44 2,2-Dichloropropane	77		5.945					ND	
45 cis-1,2-Dichloroethene	96		5.957					ND	
46 2-Butanone (MEK)	43		5.957					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
47 Propionitrile	54		6.033					ND	
48 Ethyl acetate	43		6.039					ND	
50 Methacrylonitrile	41		6.210					ND	
49 Chlorobromomethane	128		6.237					ND	
51 Tetrahydrofuran	42		6.249					ND	
52 Chloroform	83	6.388	6.376	0.012	86	2846		0.6819	M
53 1,1,1-Trichloroethane	97		6.541					ND	
54 Cyclohexane	56		6.614					ND	
56 Carbon tetrachloride	117		6.717					ND	
55 1,1-Dichloropropene	75		6.729					ND	
57 Isobutyl alcohol	41		6.924					ND	
58 Benzene	78		6.942					ND	
59 1,2-Dichloroethane	62		7.015					ND	
61 Tert-amyl methyl ether	73		7.122					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.307					ND	
63 n-Butanol	56		7.627					ND	
64 Trichloroethene	130		7.678					ND	
65 Ethyl acrylate	55		7.797					ND	
66 Methylcyclohexane	83		7.916					ND	
67 1,2-Dichloropropane	63		7.946					ND	
69 Methyl methacrylate	69		8.028					ND	
68 Dibromomethane	93		8.031					ND	
70 1,4-Dioxane	88		8.037					ND	
71 Dichlorobromomethane	83		8.232					ND	
72 2-Nitropropane	41		8.454					ND	
73 2-Chloroethyl vinyl ether	63		8.530					ND	
74 cis-1,3-Dichloropropene	75		8.670					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828					ND	
76 Toluene	91	9.010	9.005	0.006	58	3450		0.3440	
77 trans-1,3-Dichloropropene	75		9.248					ND	
78 Ethyl methacrylate	69		9.309					ND	
79 1,1,2-Trichloroethane	97		9.443					ND	
80 Tetrachloroethene	164		9.516					ND	
81 1,3-Dichloropropane	76		9.601					ND	
82 2-Hexanone	43		9.655					ND	
83 n-Butyl acetate	43		9.780					ND	
84 Chlorodibromomethane	129		9.814					ND	
85 Ethylene Dibromide	107		9.923					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.385					ND	
87 Chlorobenzene	112		10.416					ND	
88 4-Chlorobenzotrifluoride	180		10.477					ND	
89 1,1,1,2-Tetrachloroethane	131		10.507					ND	
90 Ethylbenzene	106		10.513					ND	
91 m-Xylene & p-Xylene	106		10.647					ND	
92 o-Xylene	106		11.030					ND	
93 Styrene	104		11.049					ND	
94 Bromoform	173		11.231					ND	
95 Cyclohexanol	57		11.246					ND	
96 2-Chlorobenzotrifluoride	180		11.298					ND	
97 Isopropylbenzene	105		11.395					ND	
98 Cyclohexanone	55		11.484					ND	
99 1,1,2,2-Tetrachloroethane	83		11.706					ND	
100 Bromobenzene	156		11.706					ND	
102 trans-1,4-Dichloro-2-buten	53		11.742					ND	
101 1,2,3-Trichloropropane	110		11.760					ND	
103 N-Propylbenzene	120		11.809					ND	
104 2-Chlorotoluene	126		11.900					ND	
105 3-Chlorotoluene	126		11.967					ND	
106 1,3,5-Trimethylbenzene	105		11.991					ND	
107 4-Chlorotoluene	126		12.022					ND	
108 tert-Butylbenzene	119		12.308					ND	
109 Pentachloroethane	167		12.336					ND	
110 1,2,4-Trimethylbenzene	105		12.369					ND	
111 1,2-dichloro-4-(trifluorom	214		12.411					ND	
112 sec-Butylbenzene	105		12.533					ND	
113 1,3-Dichlorobenzene	146		12.648					ND	
114 4-Isopropyltoluene	119		12.685					ND	
115 1,4-Dichlorobenzene	146		12.752					ND	
116 2,4-Dichloro-1-(triflourom	214		12.776					ND	
117 1,2,3-Trimethylbenzene	105		12.780					ND	
118 2,5-Dichlorobenzotrifluori	214		12.819					ND	
119 Benzyl chloride	91		12.865					ND	
120 n-Butylbenzene	91		13.099					ND	
121 1,2-Dichlorobenzene	146		13.111					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.902					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.042					ND	
124 1,3,5-Trichlorobenzene	180		14.088					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.455					ND	
126 1,2,4-Trichlorobenzene	180		14.723					ND	
127 Hexachlorobutadiene	225		14.869					ND	
128 Naphthalene	128		14.991					ND	
129 1,2,3-Trichlorobenzene	180		15.210					ND	
131 2,4,5-Trichlorotoluene	159		15.988					ND	
130 2,3,6-Trichlorotoluene	159		16.092					ND	
132 2-Methylnaphthalene	142		16.132					ND	
146 2,5-Dichlorotoluene	1		0.000					ND	
150 2,6-Dichlorotoluene	1		0.000					ND	
151 Isooctane	57		0.000					ND	
149 3,4-Dichlorotoluene	1		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
148 2,3-Dichlorotoluene	1		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

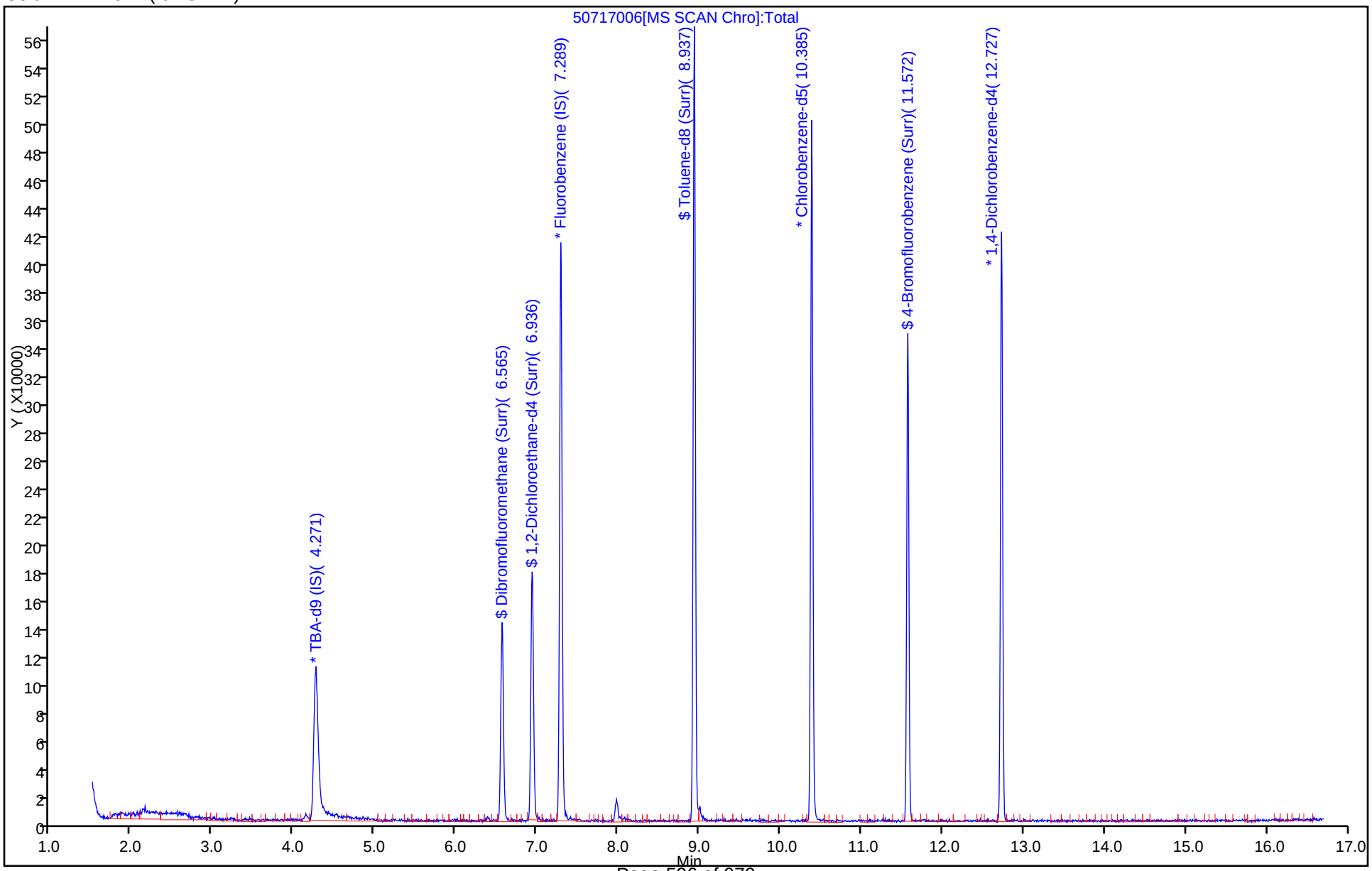
Report Date: 17-Jul-2015 15:29:09 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717006.D

Injection Date:	17-Jul-2015 13:13:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	MB			Worklist Smp#:	6
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)



Manual Integration/User Assign Peak Report

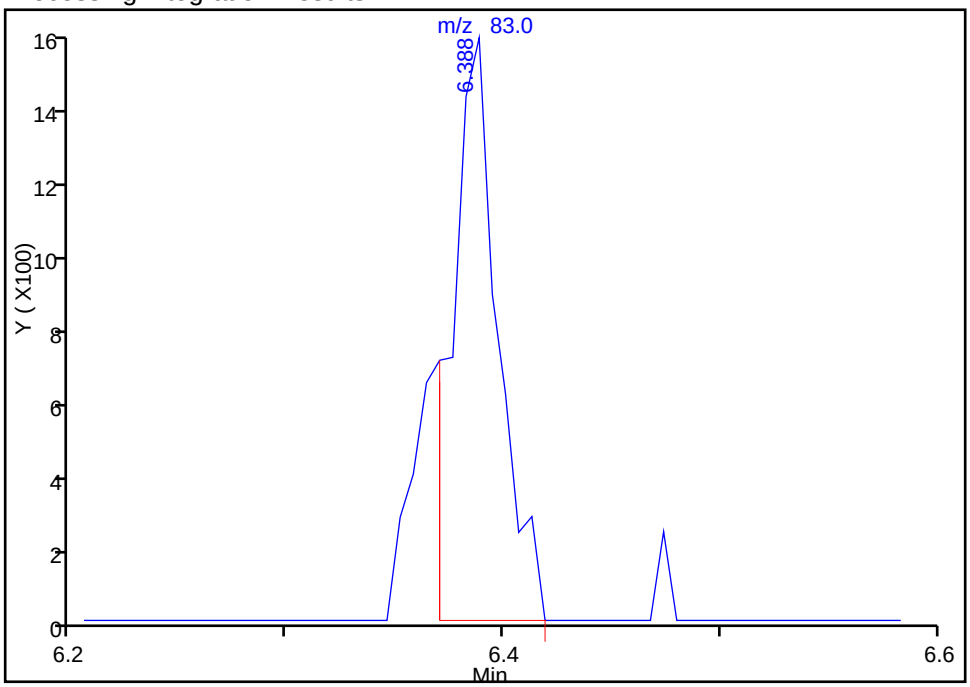
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717006.D
Injection Date: 17-Jul-2015 13:13:30 Instrument ID: CHHP5
Lims ID: MB
Client ID:
Operator ID: 001562 ALS Bottle#: 5 Worklist Smp#: 6
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

52 Chloroform, CAS: 67-66-3

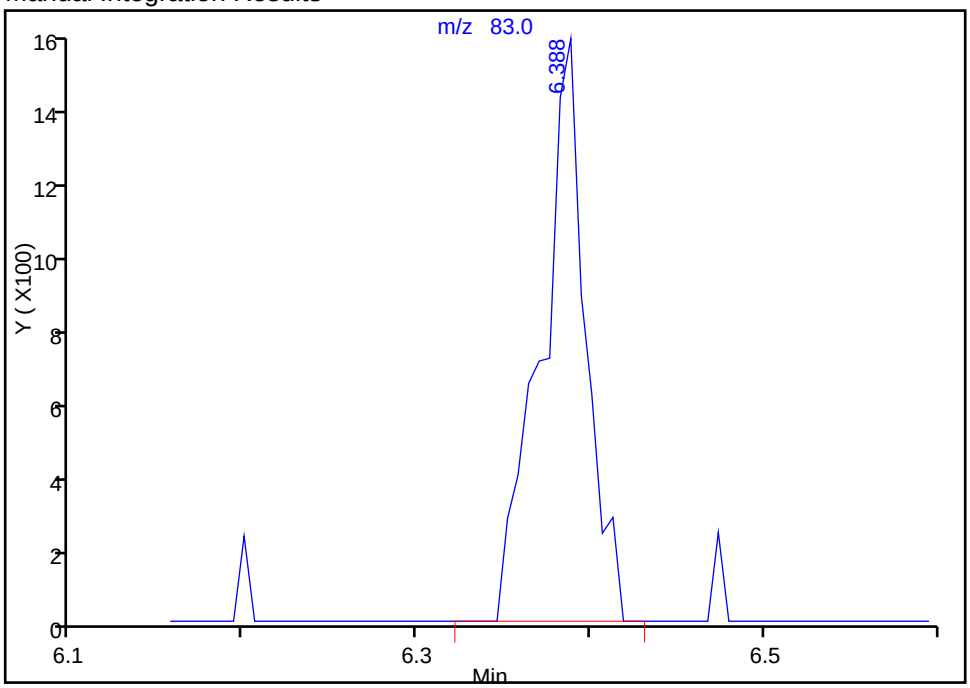
Processing Integration Results

RT: 6.39
Area: 2361
Amount: 0.565722
Amount Units: ng



Manual Integration Results

RT: 6.39
Area: 2846
Amount: 0.681933
Amount Units: ng



Reviewer: fergusond, 17-Jul-2015 13:48:05
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-148334/5

Matrix: Water | Lab File ID: 60721005.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 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.: 148334 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-148334/5

Matrix: Water Lab File ID: 60721005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 07/21/2015 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.: 148334 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		64-135
2037-26-5	Toluene-d8 (Surr)	111		71-118
460-00-4	4-Bromofluorobenzene (Surr)	104		70-118
1868-53-7	Dibromofluoromethane (Surr)	93		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721005.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 21-Jul-2015 12:44:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0007861-005
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 21-Jul-2015 13:50:07 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: fergusond Date: 21-Jul-2015 13:50:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.223	4.243	-0.020	92	121643	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.285	0.004	98	499627	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.397	10.399	-0.002	89	105145	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.746	12.747	-0.001	98	162409	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.553	6.548	0.005	92	111800	50.0	46.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.932	0.004	70	168665	50.0	45.1	
$ 7 Toluene-d8 (Surr)	98	8.943	8.939	0.004	94	459593	50.0	55.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.584	11.586	-0.002	81	179575	50.0	52.1	
11 Dichlorodifluoromethane	85		1.603					ND	
12 Chloromethane	50		1.761					ND	
13 Vinyl chloride	62		1.889					ND	
14 Butadiene	39		1.931					ND	
15 Bromomethane	94		2.254					ND	
16 Chloroethane	64		2.387					ND	
17 Dichlorofluoromethane	67		2.649					ND	
18 Trichlorofluoromethane	101		2.679					ND	
19 Ethanol	45		2.922					ND	
20 Ethyl ether	59		3.044					ND	
21 Acrolein	56		3.221					ND	
22 1,1-Dichloroethene	96		3.336					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.409					ND	
24 Acetone	43		3.428					ND	
25 Iodomethane	142		3.531					ND	
26 Carbon disulfide	76		3.634					ND	
27 Isopropyl alcohol	45		3.676					ND	
28 Acetonitrile	40		3.834					ND	
29 3-Chloro-1-propene	76		3.908					ND	
30 Methyl acetate	43		3.926					ND	
31 Methylene Chloride	84		4.127					ND	
32 2-Methyl-2-propanol	59		4.364					ND	
33 Acrylonitrile	53		4.498					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		4.565					ND	
35 Methyl tert-butyl ether	73		4.571					ND	
36 Hexane	57		4.985					ND	
37 1,1-Dichloroethane	63		5.198					ND	
38 Vinyl acetate	43		5.234					ND	
40 Isopropyl ether	45		5.294					ND	
39 2-Chloro-1,3-butadiene	53		5.294					ND	
41 Tert-butyl ethyl ether	59		5.769					ND	
42 2,2-Dichloropropane	77		5.934					ND	
43 cis-1,2-Dichloroethene	96		5.940					ND	
44 2-Butanone (MEK)	43		5.946					ND	
45 Propionitrile	54		6.012					ND	
46 Ethyl acetate	43		6.018					ND	
47 Methacrylonitrile	41		6.195					ND	
48 Chlorobromomethane	128		6.226					ND	
49 Tetrahydrofuran	42		6.244					ND	
50 Chloroform	83	6.382	6.372	0.010	31	1917		0.3593	
51 1,1,1-Trichloroethane	97		6.542					ND	
52 Cyclohexane	56		6.615					ND	
53 Carbon tetrachloride	117		6.713					ND	
54 1,1-Dichloropropene	75		6.725					ND	
55 Isobutyl alcohol	41		6.895					ND	
56 Benzene	78		6.944					ND	
57 1,2-Dichloroethane	62		7.017					ND	
148 Isooctane	57		7.101					ND	
58 Tert-amyl methyl ether	73		7.120					ND	
59 n-Heptane	43		7.309					ND	
60 n-Butanol	56		7.612					ND	
61 Trichloroethene	130		7.674					ND	
62 Ethyl acrylate	55		7.789					ND	
63 Methylcyclohexane	83	7.927	7.923	0.004	44	2871		0.5956	
64 1,2-Dichloropropane	63		7.948					ND	
66 Methyl methacrylate	69	7.927	8.032	-0.105	23	614		0.2712	
65 1,4-Dioxane	88		8.033					ND	
67 Dibromomethane	93		8.039					ND	
68 Dichlorobromomethane	83		8.227					ND	
69 2-Nitropropane	41		8.440					ND	
70 2-Chloroethyl vinyl ether	63		8.527					ND	
71 cis-1,3-Dichloropropene	75		8.678					ND	
72 4-Methyl-2-pentanone (MIBK	43		8.824					ND	
73 Toluene	91	9.010	9.012	-0.002	90	4450		0.4079	
74 trans-1,3-Dichloropropene	75		9.256					ND	
75 Ethyl methacrylate	69		9.310					ND	
76 1,1,2-Trichloroethane	97		9.444					ND	
77 Tetrachloroethene	164		9.529					ND	
78 1,3-Dichloropropane	76		9.608					ND	
79 2-Hexanone	43		9.657					ND	
80 n-Butyl acetate	43		9.784					ND	
81 Chlorodibromomethane	129		9.821					ND	
82 Ethylene Dibromide	107		9.937					ND	
83 3-Chlorobenzotrifluoride	180		10.393					ND	
84 Chlorobenzene	112		10.430					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
85 4-Chlorobenzotrifluoride	180		10.484					ND	
86 1,1,1,2-Tetrachloroethane	131		10.521					ND	
87 Ethylbenzene	106		10.527					ND	
88 m-Xylene & p-Xylene	106		10.661					ND	
89 o-Xylene	106		11.044					ND	
90 Styrene	104		11.062					ND	
91 Bromoform	173		11.245					ND	
129 Cyclohexanol	57		11.289					ND	
92 2-Chlorobenzotrifluoride	180		11.306					ND	
93 Isopropylbenzene	105		11.409					ND	
94 Cyclohexanone	55		11.487					ND	
96 1,1,2,2-Tetrachloroethane	83		11.713					ND	
95 Bromobenzene	156		11.719					ND	
97 trans-1,4-Dichloro-2-buten	53		11.750					ND	
98 1,2,3-Trichloropropane	110		11.774					ND	
99 N-Propylbenzene	120		11.829					ND	
100 2-Chlorotoluene	126		11.914					ND	
101 3-Chlorotoluene	126		11.981					ND	
102 1,3,5-Trimethylbenzene	105		12.011					ND	
103 4-Chlorotoluene	126		12.036					ND	
104 tert-Butylbenzene	119		12.322					ND	
105 Pentachloroethane	167		12.351					ND	
106 1,2,4-Trimethylbenzene	105		12.382					ND	
107 1,2-dichloro-4-(trifluorom	214		12.419					ND	
108 sec-Butylbenzene	105		12.547					ND	
109 1,3-Dichlorobenzene	146		12.668					ND	
110 4-Isopropyltoluene	119		12.705					ND	
111 1,4-Dichlorobenzene	146		12.772					ND	
112 1,2,3-Trimethylbenzene	105		12.789					ND	
113 2,4-Dichloro-1-(triflourom	214		12.790					ND	
114 2,5-Dichlorobenzotrifluori	214		12.833					ND	
115 Benzyl chloride	91		12.881					ND	
116 n-Butylbenzene	91		13.112					ND	
117 1,2-Dichlorobenzene	146		13.125					ND	
118 1,2-Dibromo-3-Chloropropan	75		13.916					ND	
119 2,4- & 2,5- & 2,6- Dichlor	125		14.062					ND	
120 1,3,5-Trichlorobenzene	180		14.105					ND	
121 2,3- & 3,4- Dichlorotoluen	125		14.475					ND	
122 1,2,4-Trichlorobenzene	180		14.743					ND	
123 Hexachlorobutadiene	225		14.889					ND	
124 Naphthalene	128		15.011					ND	
125 1,2,3-Trichlorobenzene	180		15.230					ND	
126 2,4,5-Trichlorotoluene	159		16.008					ND	
127 2,3,6-Trichlorotoluene	159		16.112					ND	
128 2-Methylnaphthalene	142		16.147					ND	
152 Formaldehyde TIC	1		0.000					ND	
146 3,4-Dichlorotoluene	1		0.000					ND	
147 2,6-Dichlorotoluene	1		0.000					ND	
150 Tert-butyl ethyl ether (TI	1		0.000					ND	
143 2,5-Dichlorotoluene	1		0.000					ND	
149 Isopropyl ether TIC	1		0.000					ND	
151 Tert-amyl methyl ether (TI	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
153 1,2 Epoxybutane TIC	1		0.000					ND	
145 2,3-Dichlorotoluene	1		0.000					ND	
144 2,4-Dichlorotoluene	1		0.000					ND	
S 130 1,2-Dichloroethene, Total	96		1.000					ND	
S 131 Xylenes, Total	106		1.000					ND	
S 132 1,3-Dichloropropene, Total	1		0.000					ND	
T 133 Tetrahydrofuran TIC	42		0.000					ND	
T 134 Methyl n-amyl ketone TIC	43		0.000					ND	
T 135 Mesityl oxide TIC	83		0.000					ND	

Reagents:

VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

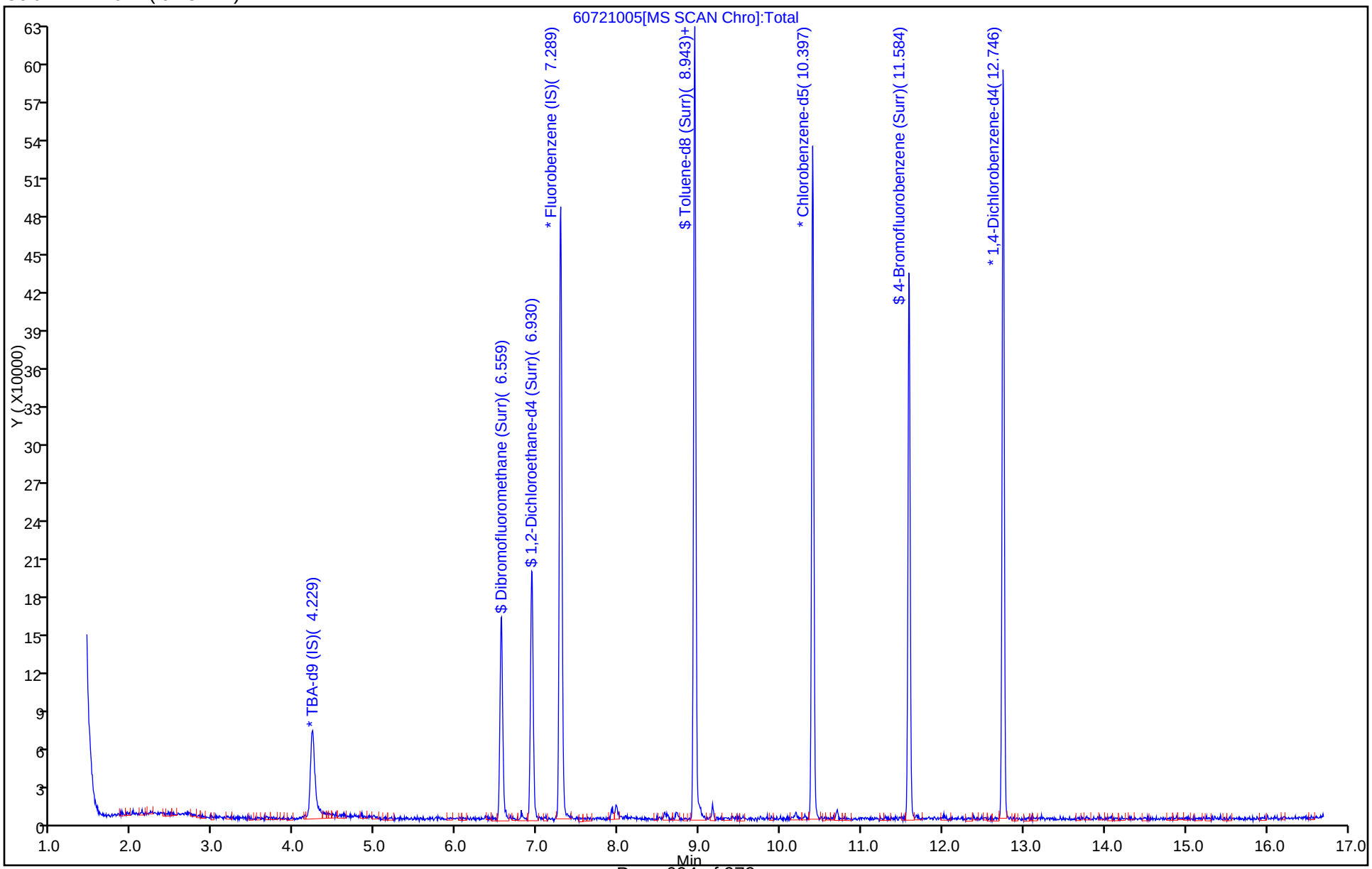
Report Date: 21-Jul-2015 13:50:25 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721005.D

Injection Date:	21-Jul-2015 12:44:30	Instrument ID:	CHHP6	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_CHHP6	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.: 180-45946-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-148055/7

Matrix: Water | Lab File ID: 50717007.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 13:48

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.: 148055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	10.7		1.0	0.28
75-01-4	Vinyl chloride	10.4		1.0	0.23
74-83-9	Bromomethane	10.4		1.0	0.31
75-00-3	Chloroethane	10.5		1.0	0.21
75-35-4	1,1-Dichloroethene	8.92		1.0	0.30
67-64-1	Acetone	23.4		5.0	2.5
75-15-0	Carbon disulfide	8.40		1.0	0.21
75-09-2	Methylene Chloride	7.98		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	9.20		1.0	0.17
1634-04-4	Methyl tert-butyl ether	8.69		1.0	0.18
75-34-3	1,1-Dichloroethane	9.20		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.17		1.0	0.24
74-97-5	Bromochloromethane	9.28		1.0	0.18
78-93-3	2-Butanone (MEK)	20.7		5.0	0.55
67-66-3	Chloroform	9.73		1.0	0.17
71-55-6	1,1,1-Trichloroethane	9.25		1.0	0.29
56-23-5	Carbon tetrachloride	9.27		1.0	0.14
71-43-2	Benzene	9.62		1.0	0.11
107-06-2	1,2-Dichloroethane	9.77		1.0	0.21
79-01-6	Trichloroethene	9.45		1.0	0.14
78-87-5	1,2-Dichloropropane	10.0		1.0	0.095
75-27-4	Bromodichloromethane	9.59		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.74		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.6		5.0	0.53
108-88-3	Toluene	10.7		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	9.66		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.6		1.0	0.20
127-18-4	Tetrachloroethene	10.2		1.0	0.15
591-78-6	2-Hexanone	23.2		5.0	0.16
124-48-1	Dibromochloromethane	10.2		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.7		1.0	0.18
108-90-7	Chlorobenzene	10.5		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.3		1.0	0.28
100-41-4	Ethylbenzene	10.5		1.0	0.23
1330-20-7	Xylenes, Total	21.1		3.0	0.49
100-42-5	Styrene	11.0		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-148055/7

Matrix: Water | Lab File ID: 50717007.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 13:48

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.: 148055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	10.5		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	11.7		1.0	0.20
107-13-1	Acrylonitrile	104		20	0.55
123-91-1	1,4-Dioxane	240		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	93		70-118
1868-53-7	Dibromofluoromethane (Surr)	89		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717007.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 17-Jul-2015 13:48:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0007815-007
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Jul-2015 15:28:40 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 17-Jul-2015 15:29:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.273	4.263	0.010	0	123890	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.285	7.292	-0.007	98	426705	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.387	10.389	-0.002	88	95105	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.729	12.725	0.004	95	123303	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.561	6.559	0.002	93	88850	50.0	44.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.932	6.930	0.002	0	131183	50.0	45.7	
$ 7 Toluene-d8 (Surr)	98	8.933	8.938	-0.005	94	383933	50.0	48.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.574	11.572	0.002	84	134612	50.0	46.4	
11 Dichlorodifluoromethane	85	1.615	1.607	0.008	99	167847	50.0	58.4	
12 Chloromethane	50	1.767	1.777	-0.010	99	172480	50.0	53.3	
13 Vinyl chloride	62	1.907	1.911	-0.004	97	170230	50.0	52.1	
14 Butadiene	39	1.943	1.948	-0.005	94	185119	50.0	52.9	
15 Bromomethane	94	2.272	2.264	0.008	90	82251	50.0	51.8	
16 Chloroethane	64	2.406	2.410	-0.004	99	103748	50.0	52.7	
17 Dichlorofluoromethane	67	2.673	2.678	-0.005	97	228763	50.0	52.6	
18 Trichlorofluoromethane	101	2.704	2.714	-0.010	96	157178	50.0	44.2	
20 Ethyl ether	59	3.051	3.049	0.002	95	113953	50.0	46.4	
21 Acrolein	56	3.227	3.231	-0.004	98	48050	150.0	102.0	
22 1,1-Dichloroethene	96	3.343	3.341	0.002	95	107786	50.0	44.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.428	3.432	-0.004	94	121149	50.0	47.5	
24 Acetone	43	3.440	3.450	-0.010	81	82807	100.0	117.1	
25 Iodomethane	142	3.537	3.542	-0.005	99	149601	50.0	44.8	
26 Carbon disulfide	76	3.641	3.627	0.014	100	224720	50.0	42.0	
28 3-Chloro-1-propene	76	3.921	3.919	0.002	87	59620	50.0	44.6	
30 Methyl acetate	43	3.945	3.943	0.002	98	556297	250.0	253.7	
31 Methylene Chloride	84	4.140	4.138	0.002	97	131785	50.0	39.9	
32 2-Methyl-2-propanol	59	4.413	4.411	0.002	86	76217	500.0	538.7	
33 Acrylonitrile	53	4.523	4.521	0.002	99	554547	500.0	522.0	
34 trans-1,2-Dichloroethene	96	4.565	4.564	0.001	96	118151	50.0	46.0	
35 Methyl tert-butyl ether	73	4.578	4.582	-0.004	96	275261	50.0	43.4	
36 Hexane	57	4.985	4.989	-0.004	95	186610	50.0	46.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.198	5.202	-0.004	97	225803	50.0	46.0	
38 Vinyl acetate	43	5.247	5.245	0.002	98	165308	50.0	39.3	
44 2,2-Dichloropropane	77	5.940	5.945	-0.004	57	89024	50.0	42.4	
45 cis-1,2-Dichloroethene	96	5.946	5.957	-0.011	84	124856	50.0	45.9	
46 2-Butanone (MEK)	43	5.959	5.957	0.002	67	107270	100.0	103.4	
49 Chlorobromomethane	128	6.238	6.237	0.001	93	53312	50.0	46.4	
51 Tetrahydrofuran	42	6.251	6.249	0.002	86	79416	100.0	93.2	
52 Chloroform	83	6.384	6.376	0.008	96	219791	50.0	48.7	
53 1,1,1-Trichloroethane	97	6.543	6.541	0.002	93	156989	50.0	46.3	
54 Cyclohexane	56	6.610	6.614	-0.004	95	231487	50.0	45.6	
56 Carbon tetrachloride	117	6.713	6.717	-0.004	86	136813	50.0	46.3	
55 1,1-Dichloropropene	75	6.725	6.729	-0.004	92	173198	50.0	46.5	
57 Isobutyl alcohol	41	6.920	6.924	-0.004	78	102026	1250.0	1434.4	
58 Benzene	78	6.944	6.942	0.002	98	517409	50.0	48.1	
59 1,2-Dichloroethane	62	7.017	7.015	0.002	97	179643	50.0	48.8	
62 n-Heptane	43	7.303	7.307	-0.004	92	166220	50.0	47.3	
64 Trichloroethene	130	7.674	7.678	-0.004	97	119931	50.0	47.2	
66 Methylcyclohexane	83	7.911	7.916	-0.005	93	198777	50.0	46.9	
67 1,2-Dichloropropane	63	7.948	7.946	0.002	95	131591	50.0	50.2	
68 Dibromomethane	93	8.039	8.031	0.008	97	67609	50.0	47.7	
70 1,4-Dioxane	88	8.033	8.037	-0.004	37	21599	1000.0	1200.0	
71 Dichlorobromomethane	83	8.228	8.232	-0.004	98	137188	50.0	48.0	
73 2-Chloroethyl vinyl ether	63	8.526	8.530	-0.004	94	132245	100.0	93.8	
74 cis-1,3-Dichloropropene	75	8.672	8.670	0.002	91	161264	50.0	48.7	
75 4-Methyl-2-pentanone (MIBK	43	8.824	8.828	-0.004	98	198540	100.0	88.2	
76 Toluene	91	9.000	9.005	-0.004	98	545031	50.0	53.3	
77 trans-1,3-Dichloropropene	75	9.250	9.248	0.002	98	132881	50.0	48.3	
78 Ethyl methacrylate	69	9.311	9.309	0.002	92	133323	50.0	50.9	
79 1,1,2-Trichloroethane	97	9.444	9.443	0.002	95	104963	50.0	52.9	
80 Tetrachloroethene	164	9.511	9.516	-0.005	93	98888	50.0	50.9	
81 1,3-Dichloropropane	76	9.603	9.601	0.002	95	193731	50.0	53.4	
82 2-Hexanone	43	9.657	9.655	0.002	97	167451	100.0	115.8	
84 Chlorodibromomethane	129	9.815	9.814	0.001	91	82768	50.0	51.2	
85 Ethylene Dibromide	107	9.925	9.923	0.002	99	99316	50.0	53.6	
86 3-Chlorobenzotrifluoride	180	10.387	10.385	0.002	86	163643	50.0	48.9	
87 Chlorobenzene	112	10.412	10.416	-0.004	92	334125	50.0	52.3	
88 4-Chlorobenzotrifluoride	180	10.472	10.477	-0.005	96	151713	50.0	48.1	
89 1,1,1,2-Tetrachloroethane	131	10.509	10.507	0.002	90	101507	50.0	51.5	
90 Ethylbenzene	106	10.515	10.513	0.002	99	184777	50.0	52.6	
91 m-Xylene & p-Xylene	106	10.649	10.647	0.002	0	227758	50.0	53.7	
92 o-Xylene	106	11.026	11.030	-0.004	98	211464	50.0	52.0	
93 Styrene	104	11.044	11.049	-0.005	95	366575	50.0	55.2	
94 Bromoform	173	11.233	11.231	0.002	94	45188	50.0	52.7	
96 2-Chlorobenzotrifluoride	180	11.294	11.298	-0.004	95	154677	50.0	49.0	
97 Isopropylbenzene	105	11.397	11.395	0.002	97	539417	50.0	54.1	
99 1,1,2,2-Tetrachloroethane	83	11.707	11.706	0.001	78	147019	50.0	58.6	
100 Bromobenzene	156	11.707	11.706	0.001	96	121878	50.0	50.8	
102 trans-1,4-Dichloro-2-buten	53	11.744	11.742	0.002	67	33324	50.0	41.1	
101 1,2,3-Trichloropropane	110	11.762	11.760	0.002	86	48859	50.0	57.5	
103 N-Propylbenzene	120	11.811	11.809	0.002	99	148221	50.0	52.3	
104 2-Chlorotoluene	126	11.896	11.900	-0.004	95	131903	50.0	53.9	
105 3-Chlorotoluene	126	11.963	11.967	-0.004	96	123910	50.0	48.9	

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	11.993	11.991	0.002	93	452690	50.0	54.9	
107 4-Chlorotoluene	126	12.024	12.022	0.002	98	137763	50.0	52.0	
108 tert-Butylbenzene	119	12.310	12.308	0.002	94	346248	50.0	52.8	
110 1,2,4-Trimethylbenzene	105	12.364	12.369	-0.005	98	443871	50.0	54.7	
111 1,2-dichloro-4-(trifluorom	214	12.407	12.411	-0.004	97	107850	50.0	45.4	
112 sec-Butylbenzene	105	12.529	12.533	-0.004	95	509151	50.0	53.8	
113 1,3-Dichlorobenzene	146	12.644	12.648	-0.004	96	225293	50.0	51.6	
114 4-Isopropyltoluene	119	12.687	12.685	0.002	96	404668	50.0	53.1	
115 1,4-Dichlorobenzene	146	12.754	12.752	0.002	93	232184	50.0	52.3	
116 2,4-Dichloro-1-(triflourom	214	12.778	12.776	0.002	95	96731	50.0	44.8	
118 2,5-Dichlorobenzotrifluori	214	12.821	12.819	0.002	0	112931	50.0	48.3	
120 n-Butylbenzene	91	13.094	13.099	-0.005	98	333414	50.0	51.2	
121 1,2-Dichlorobenzene	146	13.107	13.111	-0.004	94	211304	50.0	54.7	
122 1,2-Dibromo-3-Chloropropan	75	13.897	13.902	-0.005	77	20341	50.0	61.3	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.043	14.042	0.001	0	303069	150.0	138.0	
124 1,3,5-Trichlorobenzene	180	14.086	14.088	-0.002	96	96495	50.0	40.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.457	14.455	0.002	0	186120	100.0	92.6	
126 1,2,4-Trichlorobenzene	180	14.719	14.723	-0.004	94	69208	50.0	50.2	
127 Hexachlorobutadiene	225	14.871	14.869	0.002	96	38380	50.0	50.1	
128 Naphthalene	128	14.986	14.991	-0.005	98	192323	50.0	53.8	
129 1,2,3-Trichlorobenzene	180	15.212	15.210	0.002	92	55880	50.0	49.7	
131 2,4,5-Trichlorotoluene	159	15.984	15.988	-0.004	0	13275	50.0	39.7	
130 2,3,6-Trichlorotoluene	159	16.088	16.092	-0.004	94	12977	50.0	38.6	
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		100.0	105.7	
S 134 1,2-Dichloroethene, Total	96				0		100.0	91.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	97.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOA2ND_00132	Amount Added:	2.00	Units: uL		
voaWVA2nd Res_00008	Amount Added:	2.00	Units: uL		
voaWket1Reste_00001	Amount Added:	2.00	Units: uL		
voaW 135tcb A_00003	Amount Added:	2.00	Units: uL		
voaW2clev1stR_00001	Amount Added:	2.00	Units: uL		
voaWAcro2nd R_00006	Amount Added:	6.00	Units: uL		
voaWEE2nd Res_00003	Amount Added:	2.00	Units: uL		
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent	
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent	

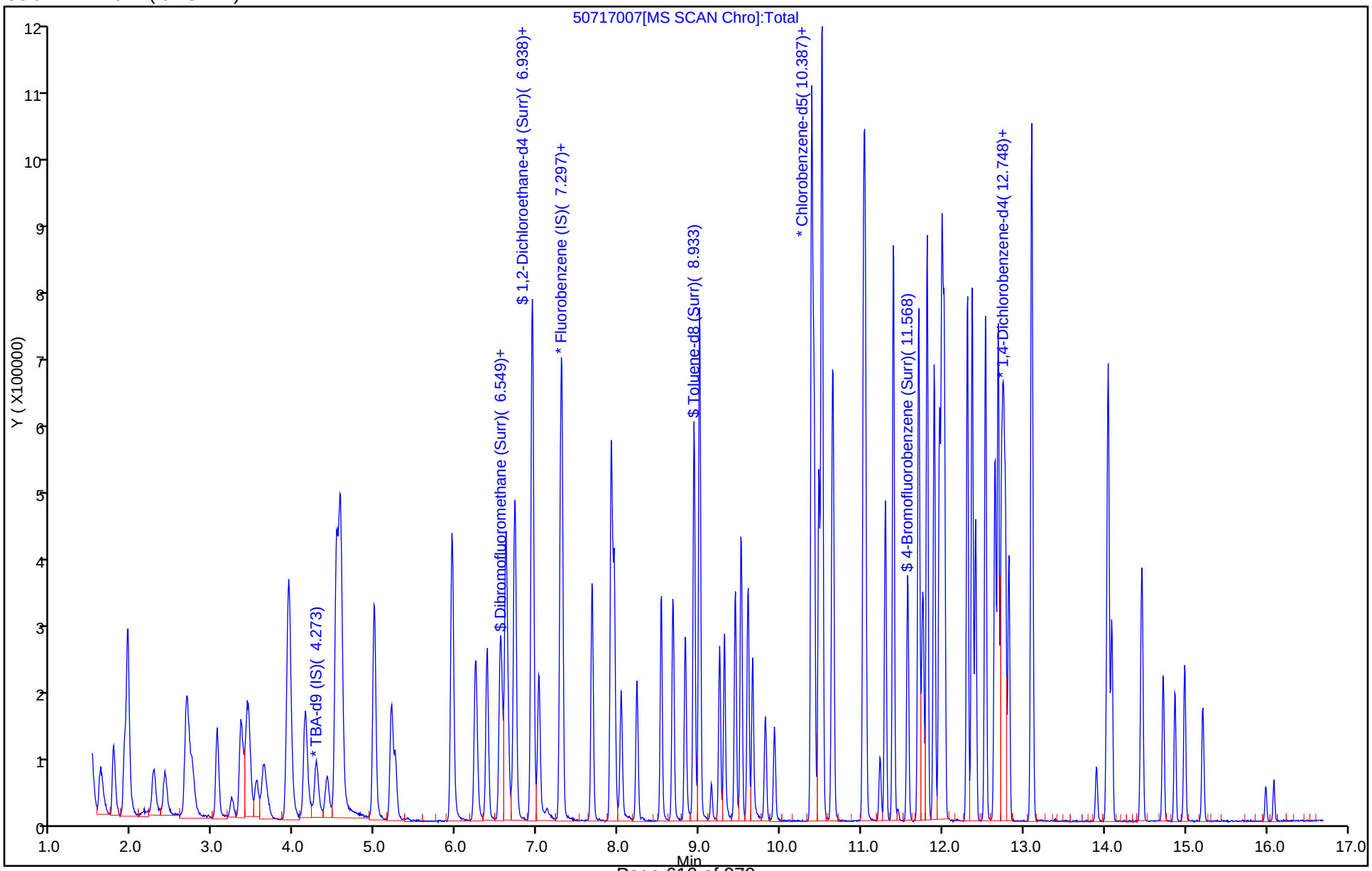
Report Date: 17-Jul-2015 15:29:16 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717007.D

Injection Date:	17-Jul-2015 13:48:30	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#:	6
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.: 180-45946-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-148334/6

Matrix: Water | Lab File ID: 60721006.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 13:31

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	7.01		1.0	0.28
75-01-4	Vinyl chloride	7.52		1.0	0.23
74-83-9	Bromomethane	8.72		1.0	0.31
75-00-3	Chloroethane	7.38		1.0	0.21
75-35-4	1,1-Dichloroethene	10.7		1.0	0.30
67-64-1	Acetone	16.9		5.0	2.5
75-15-0	Carbon disulfide	9.99		1.0	0.21
75-09-2	Methylene Chloride	10.1		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	11.0		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.69		1.0	0.18
75-34-3	1,1-Dichloroethane	9.89		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	10.3		1.0	0.24
74-97-5	Bromochloromethane	9.79		1.0	0.18
78-93-3	2-Butanone (MEK)	15.7		5.0	0.55
67-66-3	Chloroform	10.5		1.0	0.17
71-55-6	1,1,1-Trichloroethane	9.99		1.0	0.29
56-23-5	Carbon tetrachloride	9.39		1.0	0.14
71-43-2	Benzene	10.6		1.0	0.11
107-06-2	1,2-Dichloroethane	9.47		1.0	0.21
79-01-6	Trichloroethene	10.2		1.0	0.14
78-87-5	1,2-Dichloropropane	9.96		1.0	0.095
75-27-4	Bromodichloromethane	10.0		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.31		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.9		5.0	0.53
108-88-3	Toluene	11.1		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	9.57		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.5		1.0	0.20
127-18-4	Tetrachloroethene	10.1		1.0	0.15
591-78-6	2-Hexanone	13.6		5.0	0.16
124-48-1	Dibromochloromethane	9.65		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.5		1.0	0.18
108-90-7	Chlorobenzene	10.4		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.3		1.0	0.28
100-41-4	Ethylbenzene	10.6		1.0	0.23
1330-20-7	Xylenes, Total	21.1		3.0	0.49
100-42-5	Styrene	10.8		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-148334/6

Matrix: Water Lab File ID: 60721006.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 07/21/2015 13:31

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.: 148334 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.08		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	10.6		1.0	0.20
107-13-1	Acrylonitrile	95.6		20	0.55
123-91-1	1,4-Dioxane	172	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		64-135
2037-26-5	Toluene-d8 (Surr)	112		71-118
460-00-4	4-Bromofluorobenzene (Surr)	106		70-118
1868-53-7	Dibromofluoromethane (Surr)	98		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721006.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 21-Jul-2015 13:31:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0007861-006
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 21-Jul-2015 13:50:07 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: fergusond Date: 21-Jul-2015 13:50:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.232	4.243	-0.011	93	142329	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.285	0.001	99	411802	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.401	10.399	0.002	88	90836	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.749	12.747	0.002	95	143836	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.550	6.548	0.002	91	96317	50.0	48.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.934	6.932	0.002	51	140146	50.0	45.5	
$ 7 Toluene-d8 (Surr)	98	8.941	8.939	0.002	94	401101	50.0	56.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.587	11.586	0.001	82	158337	50.0	53.2	
11 Dichlorodifluoromethane	85	1.610	1.603	0.007	99	68218	50.0	30.4	
12 Chloromethane	50	1.769	1.761	0.008	99	84181	50.0	35.1	
13 Vinyl chloride	62	1.890	1.889	0.002	98	100421	50.0	37.6	
14 Butadiene	39	1.933	1.931	0.002	96	104815	50.0	35.5	
15 Bromomethane	94	2.243	2.254	-0.011	95	53596	50.0	43.6	
16 Chloroethane	64	2.389	2.387	0.002	99	67521	50.0	36.9	
17 Dichlorofluoromethane	67	2.657	2.649	0.008	97	181556	50.0	40.2	
18 Trichlorofluoromethane	101	2.681	2.679	0.002	90	158076	50.0	47.4	
20 Ethyl ether	59	3.046	3.044	0.002	90	107850	50.0	45.5	
21 Acrolein	56	3.217	3.221	-0.004	100	45950	150.0	139.3	
22 1,1-Dichloroethene	96	3.338	3.336	0.002	96	111047	50.0	53.3	
23 1,1,2-Trichloro-1,2,2-trif	101	3.417	3.409	0.008	95	116292	50.0	52.8	
24 Acetone	43	3.429	3.428	0.001	100	52918	100.0	84.6	
25 Iodomethane	142	3.545	3.531	0.014	98	156251	50.0	48.6	
26 Carbon disulfide	76	3.636	3.634	0.002	99	283756	50.0	50.0	
29 3-Chloro-1-propene	76	3.922	3.908	0.014	90	63206	50.0	50.1	
30 Methyl acetate	43	3.928	3.926	0.002	97	402845	250.0	227.1	
31 Methylene Chloride	84	4.129	4.127	0.002	92	148566	50.0	50.6	
32 2-Methyl-2-propanol	59	4.366	4.364	0.002	91	81712	500.0	471.4	
33 Acrylonitrile	53	4.500	4.498	0.002	99	437468	500.0	478.0	
34 trans-1,2-Dichloroethene	96	4.561	4.565	-0.004	73	135152	50.0	55.1	
35 Methyl tert-butyl ether	73	4.573	4.571	0.002	96	351122	50.0	48.4	
36 Hexane	57	4.993	4.985	0.008	92	171441	50.0	50.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.200	5.198	0.002	97	219570	50.0	49.5	
38 Vinyl acetate	43	5.236	5.234	0.002	97	182060	50.0	50.5	
42 2,2-Dichloropropane	77	5.936	5.934	0.002	60	106255	50.0	44.7	
43 cis-1,2-Dichloroethene	96	5.936	5.940	-0.004	85	137014	50.0	51.7	
44 2-Butanone (MEK)	43	5.948	5.946	0.002	79	78778	100.0	78.4	
48 Chlorobromomethane	128	6.234	6.226	0.008	97	59302	50.0	49.0	
49 Tetrahydrofuran	42	6.246	6.244	0.002	87	61595	100.0	82.3	
50 Chloroform	83	6.374	6.372	0.002	95	231010	50.0	52.5	
51 1,1,1-Trichloroethane	97	6.538	6.542	-0.004	97	162722	50.0	50.0	
52 Cyclohexane	56	6.623	6.615	0.008	91	212477	50.0	49.0	
53 Carbon tetrachloride	117	6.715	6.713	0.002	97	120634	50.0	46.9	
54 1,1-Dichloropropene	75	6.727	6.725	0.002	95	185186	50.0	53.6	
55 Isobutyl alcohol	41	6.891	6.895	-0.004	88	69703	1250.0	1045.2	
56 Benzene	78	6.940	6.944	-0.004	97	533181	50.0	52.8	
57 1,2-Dichloroethane	62	7.019	7.017	0.002	98	186479	50.0	47.4	
59 n-Heptane	43	7.311	7.309	0.002	89	145202	50.0	56.7	
61 Trichloroethene	130	7.682	7.674	0.008	96	122768	50.0	51.0	
63 Methylcyclohexane	83	7.925	7.923	0.002	91	225465	50.0	56.7	
64 1,2-Dichloropropane	63	7.949	7.948	0.001	95	128381	50.0	49.8	
65 1,4-Dioxane	88	8.022	8.033	-0.011	47	20635	1000.0	860.2	M
67 Dibromomethane	93	8.041	8.039	0.002	93	72718	50.0	48.9	
68 Dichlorobromomethane	83	8.229	8.227	0.002	99	138287	50.0	50.1	
71 cis-1,3-Dichloropropene	75	8.673	8.678	-0.005	94	157238	50.0	46.6	
72 4-Methyl-2-pentanone (MIBK	43	8.825	8.824	0.001	97	185328	100.0	89.7	
73 Toluene	91	9.008	9.012	-0.004	98	524912	50.0	55.7	
74 trans-1,3-Dichloropropene	75	9.251	9.256	-0.005	95	122665	50.0	47.9	
75 Ethyl methacrylate	69	9.312	9.310	0.002	87	129373	50.0	46.7	
76 1,1,2-Trichloroethane	97	9.446	9.444	0.002	95	102579	50.0	52.4	
77 Tetrachloroethene	164	9.525	9.529	-0.004	92	89293	50.0	50.4	
78 1,3-Dichloropropane	76	9.610	9.608	0.002	90	192715	50.0	52.3	
79 2-Hexanone	43	9.659	9.657	0.002	97	105404	100.0	67.9	
81 Chlorodibromomethane	129	9.823	9.821	0.002	90	73784	50.0	48.3	
82 Ethylene Dibromide	107	9.939	9.937	0.002	98	96534	50.0	52.7	
83 3-Chlorobenzotrifluoride	180	10.395	10.393	0.002	92	151719	50.0	49.3	
84 Chlorobenzene	112	10.425	10.430	-0.005	92	320230	50.0	52.1	
85 4-Chlorobenzotrifluoride	180	10.486	10.484	0.002	96	146250	50.0	50.3	
86 1,1,1,2-Tetrachloroethane	131	10.523	10.521	0.002	89	93708	50.0	51.5	
87 Ethylbenzene	106	10.529	10.527	0.002	99	181511	50.0	52.8	
88 m-Xylene & p-Xylene	106	10.663	10.661	0.002	100	220640	50.0	51.8	
89 o-Xylene	106	11.040	11.044	-0.004	97	222640	50.0	53.6	
90 Styrene	104	11.058	11.062	-0.004	94	356894	50.0	53.9	
91 Bromoform	173	11.241	11.245	-0.004	93	38899	50.0	45.4	
92 2-Chlorobenzotrifluoride	180	11.301	11.306	-0.005	95	153399	50.0	49.8	
93 Isopropylbenzene	105	11.405	11.409	-0.004	97	562377	50.0	56.2	
96 1,1,2,2-Tetrachloroethane	83	11.715	11.713	0.002	96	133546	50.0	52.8	
95 Bromobenzene	156	11.721	11.719	0.002	96	131671	50.0	50.5	
97 trans-1,4-Dichloro-2-buten	53	11.752	11.750	0.002	80	33489	50.0	44.7	
98 1,2,3-Trichloropropane	110	11.776	11.774	0.002	82	44605	50.0	48.6	
99 N-Propylbenzene	120	11.825	11.829	-0.004	99	160097	50.0	57.6	
100 2-Chlorotoluene	126	11.910	11.914	-0.004	95	130008	50.0	53.3	
101 3-Chlorotoluene	126	11.977	11.981	-0.004	96	133658	50.0	53.9	
102 1,3,5-Trimethylbenzene	105	12.007	12.011	-0.004	95	490251	50.0	56.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
103 4-Chlorotoluene	126	12.038	12.036	0.002	99	138277	50.0	52.2	
104 tert-Butylbenzene	119	12.323	12.322	0.001	93	395668	50.0	58.2	
106 1,2,4-Trimethylbenzene	105	12.384	12.382	0.002	99	499321	50.0	56.4	
107 1,2-dichloro-4-(trifluorom	214	12.421	12.419	0.002	96	118649	50.0	49.6	
108 sec-Butylbenzene	105	12.549	12.547	0.002	95	604267	50.0	59.9	
109 1,3-Dichlorobenzene	146	12.664	12.668	-0.004	95	251741	50.0	51.3	
110 4-Isopropyltoluene	119	12.707	12.705	0.002	97	501334	50.0	60.5	
111 1,4-Dichlorobenzene	146	12.774	12.772	0.002	89	256194	50.0	50.2	
113 2,4-Dichloro-1-(triflourom	214	12.792	12.790	0.002	94	119816	50.0	51.9	
114 2,5-Dichlorobenzotrifluori	214	12.834	12.833	0.001	97	132548	50.0	51.2	
116 n-Butylbenzene	91	13.114	13.112	0.002	98	458152	50.0	59.7	
117 1,2-Dichlorobenzene	146	13.126	13.125	0.001	95	250350	50.0	51.9	
118 1,2-Dibromo-3-Chloropropan	75	13.917	13.916	0.001	72	19551	50.0	45.9	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.063	14.062	0.001	100	608328	150.0	167.5	
121 2,3- & 3,4- Dichlorotoluen	125	14.477	14.475	0.002	99	428509	100.0	105.9	
122 1,2,4-Trichlorobenzene	180	14.745	14.743	0.002	94	168195	50.0	47.5	
123 Hexachlorobutadiene	225	14.891	14.889	0.002	96	65399	50.0	54.3	
124 Naphthalene	128	15.006	15.011	-0.005	98	357596	50.0	48.0	
125 1,2,3-Trichlorobenzene	180	15.231	15.230	0.001	94	147024	50.0	46.5	
126 2,4,5-Trichlorotoluene	159	16.010	16.008	0.002	0	68464	50.0	39.4	
127 2,3,6-Trichlorotoluene	159	16.113	16.112	0.001	94	71171	50.0	43.3	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
S 131 Xylenes, Total	106				0		100.0	105.4	
S 130 1,2-Dichloroethene, Total	96				0		100.0	106.8	
S 132 1,3-Dichloropropene, Total	1				0		100.0	94.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOA2ND_00133	Amount Added:	2.00	Units: uL	
voaWEE2nd Res_00004	Amount Added:	2.00	Units: uL	
voaWVA2nd Res_00008	Amount Added:	2.00	Units: uL	
voaWket1Reste_00001	Amount Added:	2.00	Units: uL	
voaWAcro2nd R_00006	Amount Added:	6.00	Units: uL	
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

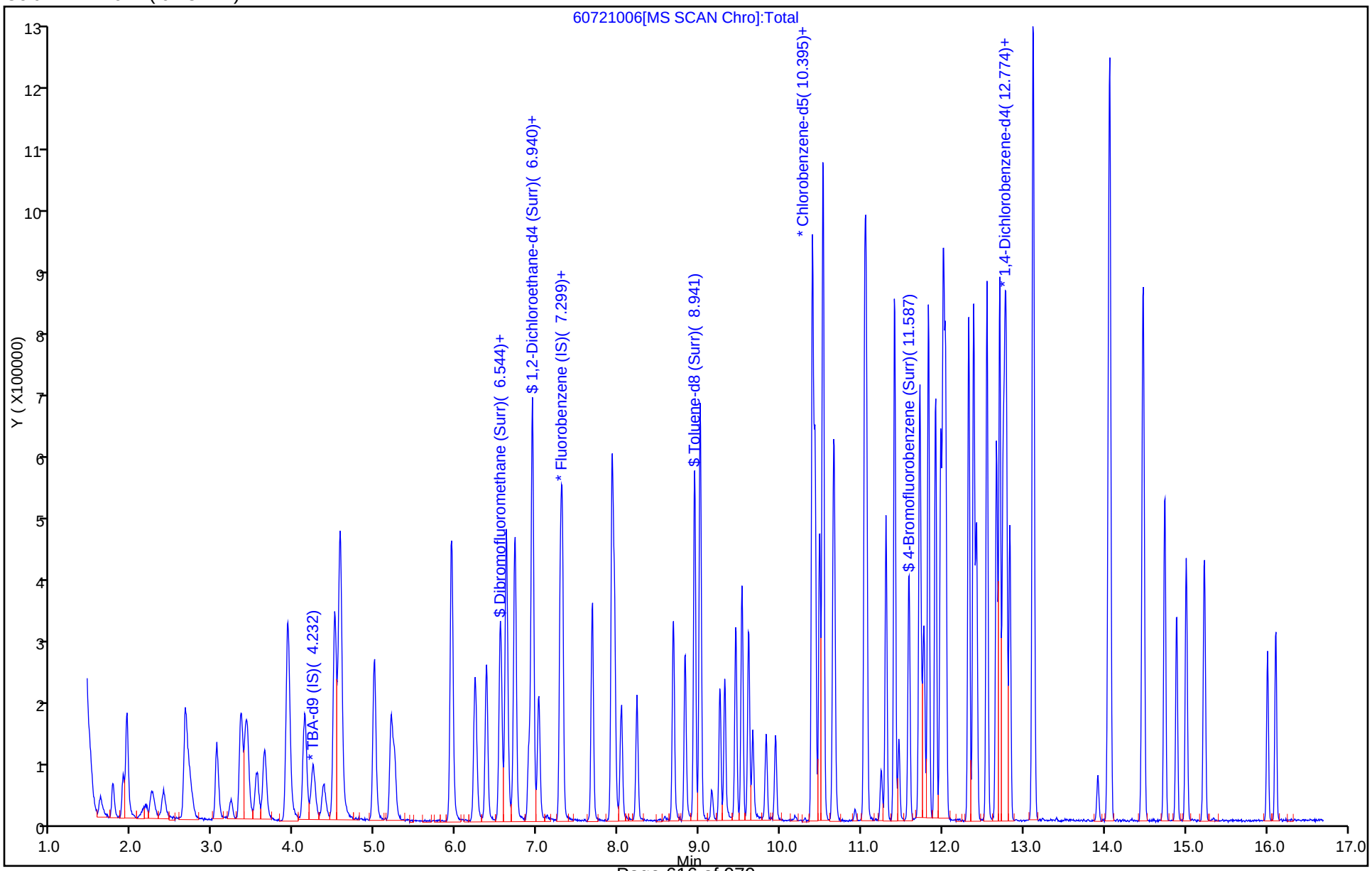
Report Date: 21-Jul-2015 13:50:08 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721006.D

Injection Date:	21-Jul-2015 13:31:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	LCS			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

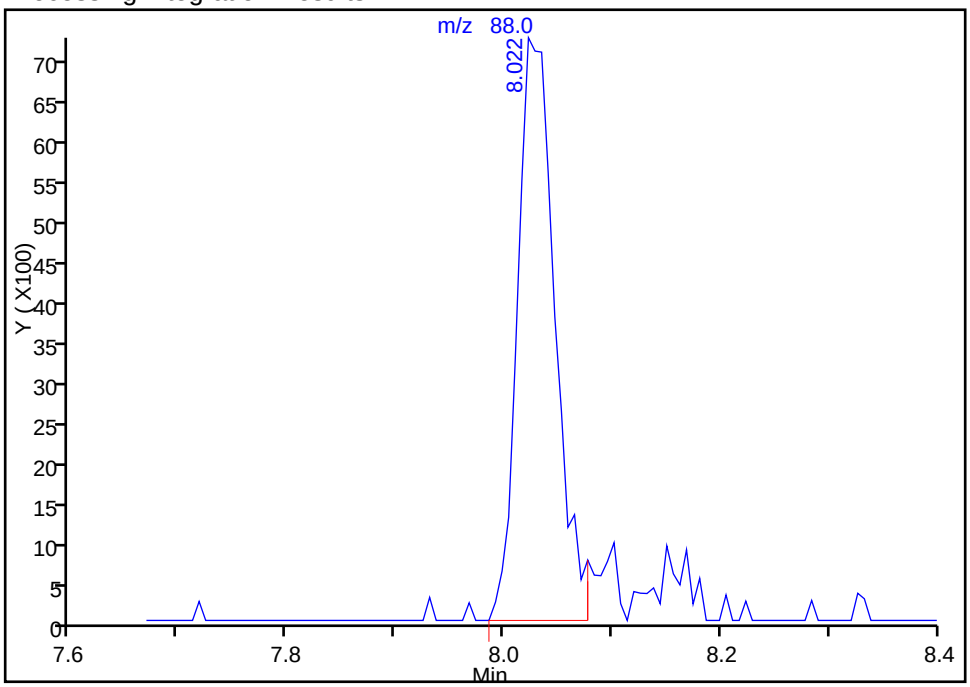
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721006.D
Injection Date: 21-Jul-2015 13:31:30 Instrument ID: CHHP6
Lims ID: LCS
Client ID:
Operator ID: 001562 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

65 1,4-Dioxane, CAS: 123-91-1

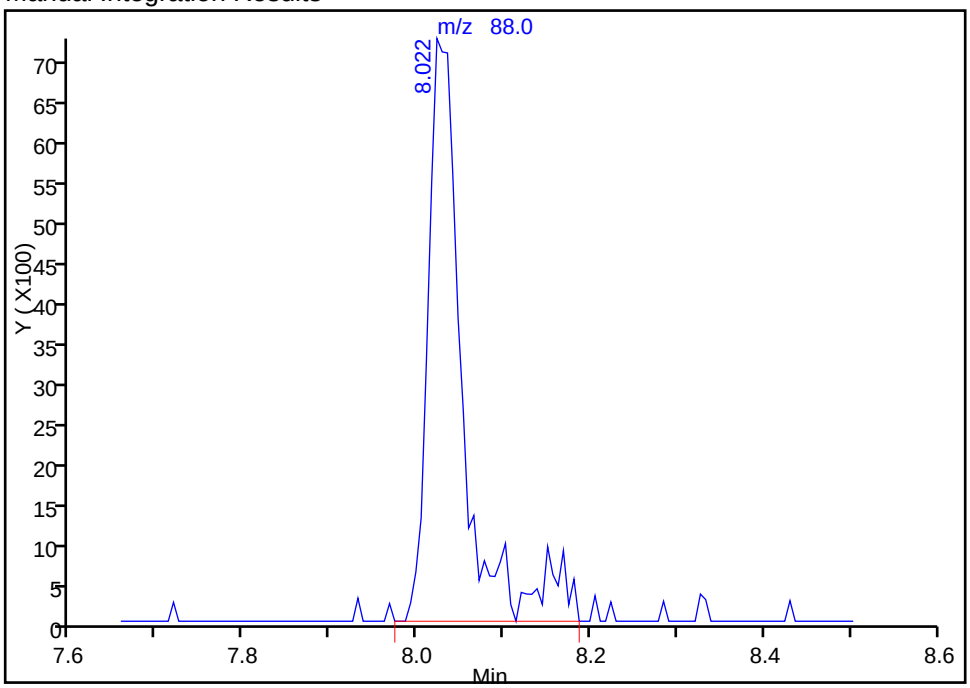
Processing Integration Results

RT: 8.02
Area: 17611
Amount: 734.1675
Amount Units: ng



Manual Integration Results

RT: 8.02
Area: 20635
Amount: 860.2320
Amount Units: ng



Reviewer: fergusond, 21-Jul-2015 13:50:07
Audit Action: Manually Integrated
Audit Reason: Peak Tail

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 180-148055/8

Matrix: Water | Lab File ID: 50717008.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 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.: 148055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	10.5		1.0	0.28
75-01-4	Vinyl chloride	9.57		1.0	0.23
74-83-9	Bromomethane	10.9		1.0	0.31
75-00-3	Chloroethane	10.6		1.0	0.21
75-35-4	1,1-Dichloroethene	8.38		1.0	0.30
67-64-1	Acetone	22.0		5.0	2.5
75-15-0	Carbon disulfide	8.02		1.0	0.21
75-09-2	Methylene Chloride	8.20		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	8.87		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.07		1.0	0.18
75-34-3	1,1-Dichloroethane	9.16		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.31		1.0	0.24
74-97-5	Bromochloromethane	9.59		1.0	0.18
78-93-3	2-Butanone (MEK)	20.6		5.0	0.55
67-66-3	Chloroform	9.73		1.0	0.17
71-55-6	1,1,1-Trichloroethane	8.84		1.0	0.29
56-23-5	Carbon tetrachloride	8.78		1.0	0.14
71-43-2	Benzene	9.49		1.0	0.11
107-06-2	1,2-Dichloroethane	9.96		1.0	0.21
79-01-6	Trichloroethene	8.99		1.0	0.14
78-87-5	1,2-Dichloropropane	9.87		1.0	0.095
75-27-4	Bromodichloromethane	9.72		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	10.0		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.6		5.0	0.53
108-88-3	Toluene	10.5		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	9.83		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.4		1.0	0.20
127-18-4	Tetrachloroethene	9.80		1.0	0.15
591-78-6	2-Hexanone	23.8		5.0	0.16
124-48-1	Dibromochloromethane	9.97		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	11.0		1.0	0.18
108-90-7	Chlorobenzene	10.6		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.3		1.0	0.28
100-41-4	Ethylbenzene	10.4		1.0	0.23
1330-20-7	Xylenes, Total	20.9		3.0	0.49
100-42-5	Styrene	11.0		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 180-148055/8

Matrix: Water | Lab File ID: 50717008.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 07/17/2015 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.: 148055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	10.6		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	11.5		1.0	0.20
107-13-1	Acrylonitrile	105		20	0.55
123-91-1	1,4-Dioxane	257		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)	98		71-118
460-00-4	4-Bromofluorobenzene (Surr)	98		70-118
1868-53-7	Dibromofluoromethane (Surr)	96		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717008.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 17-Jul-2015 14:12:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Misc. Info.: 180-0007815-008
Operator ID: 001562 Instrument ID: CHHP5

Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Jul-2015 15:28:40 Calib Date: 17-Jun-2015 18:04:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150617-7443.b\50617017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 17-Jul-2015 15:29:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.279	4.263	0.016	0	141833	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.292	-0.002	98	417448	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.387	10.389	-0.002	88	94086	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.723	12.725	-0.002	97	127605	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.566	6.559	0.007	92	93614	50.0	48.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.931	6.930	0.001	0	139875	50.0	49.8	
$ 7 Toluene-d8 (Surr)	98	8.933	8.938	-0.005	94	383994	50.0	49.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.567	11.572	-0.005	84	140705	50.0	49.0	
11 Dichlorodifluoromethane	85	1.614	1.607	0.007	98	149469	50.0	53.1	
12 Chloromethane	50	1.773	1.777	-0.004	99	165653	50.0	52.3	
13 Vinyl chloride	62	1.906	1.911	-0.005	98	152842	50.0	47.8	
14 Butadiene	39	1.943	1.948	-0.005	95	180454	50.0	52.7	
15 Bromomethane	94	2.241	2.264	-0.023	90	84318	50.0	54.3	
16 Chloroethane	64	2.411	2.410	0.001	99	101809	50.0	52.9	
17 Dichlorofluoromethane	67	2.679	2.678	0.001	97	220922	50.0	51.9	
18 Trichlorofluoromethane	101	2.697	2.714	-0.017	68	152305	50.0	43.8	M
20 Ethyl ether	59	3.056	3.049	0.007	95	111974	50.0	46.6	
21 Acrolein	56	3.233	3.231	0.002	97	49089	150.0	106.5	
22 1,1-Dichloroethene	96	3.336	3.341	-0.005	96	99111	50.0	41.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.439	3.432	0.007	94	109797	50.0	44.0	
24 Acetone	43	3.439	3.450	-0.011	98	75972	100.0	109.9	
25 Iodomethane	142	3.543	3.542	0.001	100	147057	50.0	45.0	
26 Carbon disulfide	76	3.628	3.627	0.001	99	209815	50.0	40.1	
28 3-Chloro-1-propene	76	3.926	3.919	0.007	88	57869	50.0	44.3	
30 Methyl acetate	43	3.944	3.943	0.001	99	556806	250.0	259.6	
31 Methylene Chloride	84	4.133	4.138	-0.005	99	131454	50.0	41.0	
32 2-Methyl-2-propanol	59	4.401	4.411	-0.010	88	84388	500.0	521.0	
33 Acrylonitrile	53	4.522	4.521	0.001	99	544345	500.0	523.8	
34 trans-1,2-Dichloroethene	96	4.559	4.564	-0.005	96	111426	50.0	44.3	
35 Methyl tert-butyl ether	73	4.577	4.582	-0.005	96	281151	50.0	45.3	
36 Hexane	57	4.991	4.989	0.002	95	176808	50.0	45.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.204	5.202	0.002	97	220069	50.0	45.8	
38 Vinyl acetate	43	5.252	5.245	0.007	98	183583	50.0	44.7	
44 2,2-Dichloropropane	77	5.946	5.945	0.002	57	87074	50.0	42.4	
45 cis-1,2-Dichloroethene	96	5.952	5.957	-0.005	85	123969	50.0	46.6	
46 2-Butanone (MEK)	43	5.964	5.957	0.007	78	104697	100.0	103.2	
49 Chlorobromomethane	128	6.232	6.237	-0.005	94	53861	50.0	47.9	
51 Tetrahydrofuran	42	6.250	6.249	0.001	88	81149	100.0	97.3	
52 Chloroform	83	6.378	6.376	0.002	97	214887	50.0	48.6	
53 1,1,1-Trichloroethane	97	6.536	6.541	-0.005	95	146691	50.0	44.2	
54 Cyclohexane	56	6.609	6.614	-0.005	93	213137	50.0	42.9	
56 Carbon tetrachloride	117	6.712	6.717	-0.005	96	126815	50.0	43.9	
55 1,1-Dichloropropene	75	6.731	6.729	0.002	93	165623	50.0	45.5	
57 Isobutyl alcohol	41	6.931	6.924	0.007	87	101258	1250.0	1455.1	
58 Benzene	78	6.944	6.942	0.002	97	499298	50.0	47.5	
59 1,2-Dichloroethane	62	7.023	7.015	0.008	97	179153	50.0	49.8	
62 n-Heptane	43	7.309	7.307	0.001	93	163632	50.0	47.6	
64 Trichloroethene	130	7.680	7.678	0.002	96	111641	50.0	44.9	
66 Methylcyclohexane	83	7.911	7.916	-0.005	94	181728	50.0	43.8	
67 1,2-Dichloropropane	63	7.947	7.946	0.001	95	126482	50.0	49.3	
68 Dibromomethane	93	8.039	8.031	0.008	96	66656	50.0	48.1	
70 1,4-Dioxane	88	8.032	8.037	-0.005	40	22633	1000.0	1285.3	
71 Dichlorobromomethane	83	8.227	8.232	-0.005	98	136057	50.0	48.6	
73 2-Chloroethyl vinyl ether	63	8.525	8.530	-0.005	94	134347	100.0	97.4	
74 cis-1,3-Dichloropropene	75	8.677	8.670	0.007	91	162626	50.0	50.2	
75 4-Methyl-2-pentanone (MIBK	43	8.823	8.828	-0.005	99	195493	100.0	87.8	
76 Toluene	91	9.000	9.005	-0.004	98	529582	50.0	52.4	
77 trans-1,3-Dichloropropene	75	9.249	9.248	0.001	98	133789	50.0	49.2	
78 Ethyl methacrylate	69	9.310	9.309	0.001	91	139104	50.0	53.7	
79 1,1,2-Trichloroethane	97	9.444	9.443	0.002	94	102073	50.0	52.0	
80 Tetrachloroethene	164	9.517	9.516	0.001	95	94223	50.0	49.0	
81 1,3-Dichloropropane	76	9.602	9.601	0.001	96	191548	50.0	53.4	
82 2-Hexanone	43	9.657	9.655	0.002	98	170248	100.0	119.0	
84 Chlorodibromomethane	129	9.815	9.814	0.001	90	79638	50.0	49.8	
85 Ethylene Dibromide	107	9.924	9.923	0.001	97	100815	50.0	55.0	
86 3-Chlorobenzotrifluoride	180	10.387	10.385	0.002	85	152880	50.0	46.2	
87 Chlorobenzene	112	10.417	10.416	0.001	93	334647	50.0	53.0	
88 4-Chlorobenzotrifluoride	180	10.472	10.477	-0.005	96	144271	50.0	46.2	
89 1,1,1,2-Tetrachloroethane	131	10.508	10.507	0.001	91	100654	50.0	51.6	
90 Ethylbenzene	106	10.514	10.513	0.001	99	179919	50.0	51.8	
91 m-Xylene & p-Xylene	106	10.648	10.647	0.001	0	216725	50.0	51.7	
92 o-Xylene	106	11.026	11.030	-0.004	97	213403	50.0	53.0	
93 Styrene	104	11.050	11.049	0.001	94	362395	50.0	55.1	
94 Bromoform	173	11.226	11.231	-0.005	94	45111	50.0	53.2	
96 2-Chlorobenzotrifluoride	180	11.293	11.298	-0.005	95	147431	50.0	47.2	
97 Isopropylbenzene	105	11.391	11.395	-0.005	97	522821	50.0	53.0	
99 1,1,2,2-Tetrachloroethane	83	11.701	11.706	-0.005	78	143019	50.0	57.6	
100 Bromobenzene	156	11.707	11.706	0.001	96	124766	50.0	50.2	
102 trans-1,4-Dichloro-2-buten	53	11.737	11.742	-0.005	74	30179	50.0	35.9	
101 1,2,3-Trichloropropane	110	11.762	11.760	0.002	87	48671	50.0	55.3	
103 N-Propylbenzene	120	11.810	11.809	0.001	99	144737	50.0	49.3	
104 2-Chlorotoluene	126	11.895	11.900	-0.005	95	127288	50.0	50.3	
105 3-Chlorotoluene	126	11.962	11.967	-0.005	95	123574	50.0	47.1	

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	11.993	11.991	0.002	94	445830	50.0	52.2	
107 4-Chlorotoluene	126	12.017	12.022	-0.005	99	138807	50.0	50.6	
108 tert-Butylbenzene	119	12.303	12.308	-0.005	94	335259	50.0	49.4	
110 1,2,4-Trimethylbenzene	105	12.364	12.369	-0.005	99	442615	50.0	52.7	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.411	-0.005	97	106841	50.0	43.4	
112 sec-Butylbenzene	105	12.528	12.533	-0.005	96	488497	50.0	49.9	
113 1,3-Dichlorobenzene	146	12.650	12.648	0.002	96	225322	50.0	49.9	
114 4-Isopropyltoluene	119	12.686	12.685	0.001	96	404229	50.0	51.3	
115 1,4-Dichlorobenzene	146	12.753	12.752	0.001	93	234479	50.0	51.1	
116 2,4-Dichloro-1-(triflourom	214	12.778	12.776	0.002	96	99430	50.0	44.5	
118 2,5-Dichlorobenzotrifluori	214	12.820	12.819	0.001	0	114042	50.0	47.2	
120 n-Butylbenzene	91	13.094	13.099	-0.005	98	328531	50.0	48.7	
121 1,2-Dichlorobenzene	146	13.106	13.111	-0.005	94	205563	50.0	51.4	
122 1,2-Dibromo-3-Chloropropan	75	13.897	13.902	-0.005	74	19516	50.0	56.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.043	14.042	0.001	0	326376	150.0	143.6	
124 1,3,5-Trichlorobenzene	180	14.092	14.088	0.004	97	109895	50.0	45.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.457	14.455	0.002	0	203673	100.0	97.9	
126 1,2,4-Trichlorobenzene	180	14.718	14.723	-0.005	93	74831	50.0	52.4	
127 Hexachlorobutadiene	225	14.864	14.869	-0.005	97	38230	50.0	48.2	
128 Naphthalene	128	14.986	14.991	-0.005	98	187113	50.0	50.6	
129 1,2,3-Trichlorobenzene	180	15.211	15.210	0.001	94	57938	50.0	49.8	
131 2,4,5-Trichlorotoluene	159	15.990	15.988	0.002	0	14315	50.0	41.2	
130 2,3,6-Trichlorotoluene	159	16.087	16.092	-0.005	94	14840	50.0	42.2	
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		100.0	104.7	
S 134 1,2-Dichloroethene, Total	96				0		100.0	90.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	99.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

voaWEE2nd Res_00003	Amount Added:	2.00	Units: uL	
voaWket1Reste_00001	Amount Added:	2.00	Units: uL	
voaW 135tcb A_00003	Amount Added:	2.00	Units: uL	
voaW2clev1stR_00001	Amount Added:	2.00	Units: uL	
VOA8260VOA2ND_00132	Amount Added:	2.00	Units: uL	
voaWVA2nd Res_00008	Amount Added:	2.00	Units: uL	
voaWAcro2nd R_00006	Amount Added:	6.00	Units: uL	
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent

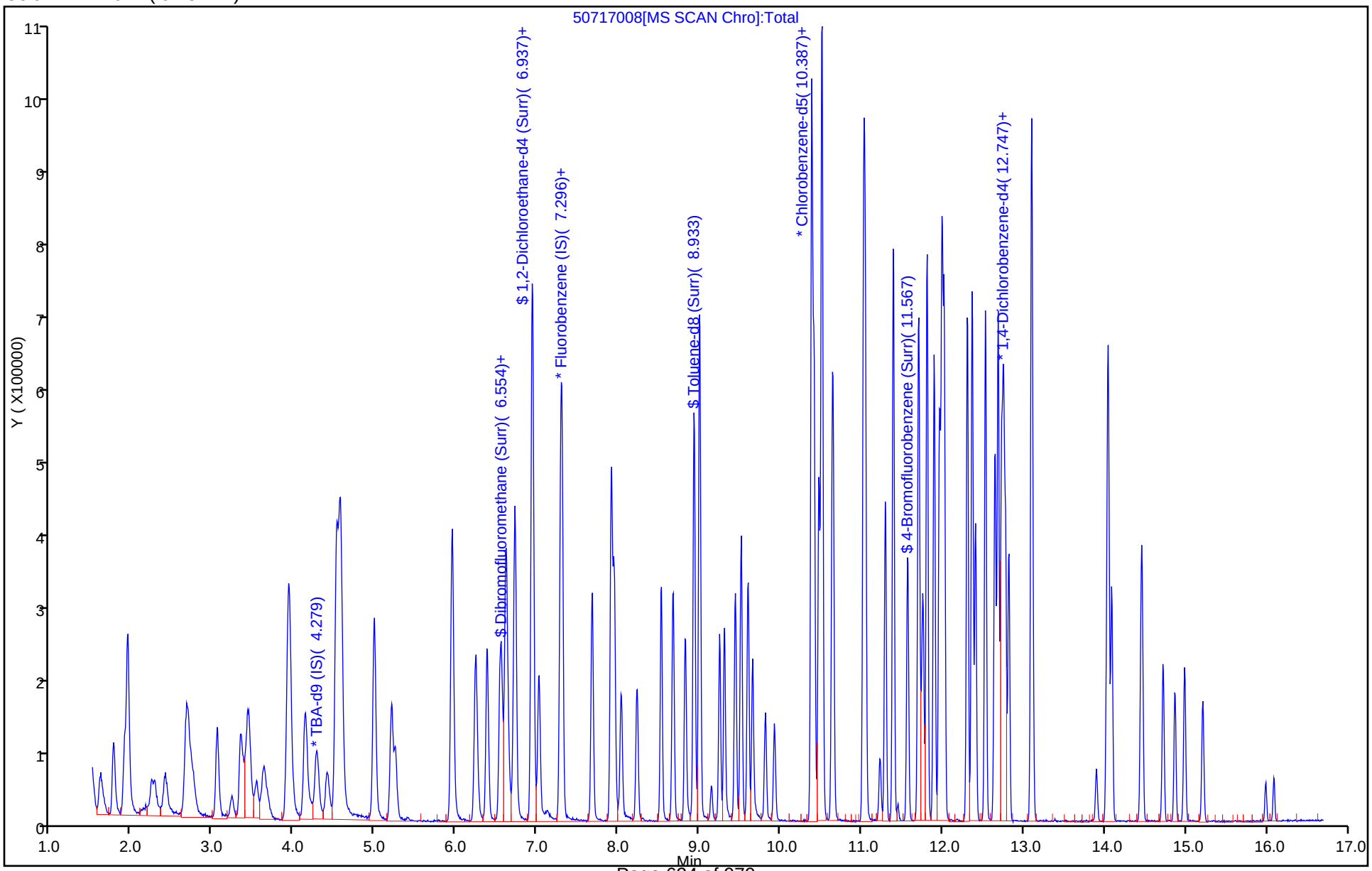
Report Date: 17-Jul-2015 15:29:23 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150717-7815.b\50717008.D

Injection Date:	17-Jul-2015 14:12:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	LCSD			Worklist Smp#:	8
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MS | Lab Sample ID: 180-45946-12 MS

Matrix: Water | Lab File ID: 60721009.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 15:36

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	6.85		1.0	0.28
75-01-4	Vinyl chloride	7.50		1.0	0.23
74-83-9	Bromomethane	9.04		1.0	0.31
75-00-3	Chloroethane	7.34		1.0	0.21
75-35-4	1,1-Dichloroethene	11.0		1.0	0.30
67-64-1	Acetone	23.5		5.0	2.5
75-15-0	Carbon disulfide	10.1		1.0	0.21
75-09-2	Methylene Chloride	10.5		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	10.8		1.0	0.17
1634-04-4	Methyl tert-butyl ether	10.1		1.0	0.18
75-34-3	1,1-Dichloroethane	10.7		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	26.3	F1	1.0	0.24
74-97-5	Bromochloromethane	10.2		1.0	0.18
78-93-3	2-Butanone (MEK)	19.8		5.0	0.55
67-66-3	Chloroform	10.5		1.0	0.17
71-55-6	1,1,1-Trichloroethane	11.6		1.0	0.29
56-23-5	Carbon tetrachloride	9.15		1.0	0.14
71-43-2	Benzene	10.5		1.0	0.11
107-06-2	1,2-Dichloroethane	9.77		1.0	0.21
79-01-6	Trichloroethene	25.8		1.0	0.14
78-87-5	1,2-Dichloropropane	9.60		1.0	0.095
75-27-4	Bromodichloromethane	9.76		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.03		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	18.5		5.0	0.53
108-88-3	Toluene	11.0		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	9.69		1.0	0.15
79-00-5	1,1,2-Trichloroethane	11.0		1.0	0.20
127-18-4	Tetrachloroethene	39.5		1.0	0.15
591-78-6	2-Hexanone	16.2		5.0	0.16
124-48-1	Dibromochloromethane	9.87		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.9		1.0	0.18
108-90-7	Chlorobenzene	10.9		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.5		1.0	0.28
100-41-4	Ethylbenzene	10.8		1.0	0.23
1330-20-7	Xylenes, Total	21.5		3.0	0.49
100-42-5	Styrene	10.9		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MS | Lab Sample ID: 180-45946-12 MS

Matrix: Water | Lab File ID: 60721009.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 15:36

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.71		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	11.7		1.0	0.20
107-13-1	Acrylonitrile	98.5		20	0.55
123-91-1	1,4-Dioxane	133	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		64-135
2037-26-5	Toluene-d8 (Surr)	110		71-118
460-00-4	4-Bromofluorobenzene (Surr)	106		70-118
1868-53-7	Dibromofluoromethane (Surr)	94		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721009.D
Lims ID: 180-45946-E-12 MS
Client ID: HD-COD-SW-17-0/1-0
Sample Type: MS
Inject. Date: 21-Jul-2015 15:36:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-E-12 MS
Misc. Info.: 180-0007861-009
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 21-Jul-2015 13:50:57 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: fergusond Date: 21-Jul-2015 15:55:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.226	4.243	-0.017	93	132962	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.286	7.285	0.001	99	396577	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.395	10.399	-0.004	89	82563	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.749	12.747	0.002	97	136916	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.550	6.548	0.002	60	89633	50.0	47.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.932	0.001	70	131925	50.0	44.5	
$ 7 Toluene-d8 (Surr)	98	8.941	8.939	0.002	94	355193	50.0	54.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.587	11.586	0.001	81	143018	50.0	52.8	
11 Dichlorodifluoromethane	85	1.604	1.603	0.001	99	62127	50.0	28.8	
12 Chloromethane	50	1.762	1.761	0.001	99	79185	50.0	34.2	
13 Vinyl chloride	62	1.890	1.889	0.002	98	96406	50.0	37.5	
14 Butadiene	39	1.939	1.931	0.008	95	94632	50.0	33.3	
15 Bromomethane	94	2.249	2.254	-0.005	93	53495	50.0	45.2	
16 Chloroethane	64	2.389	2.387	0.002	99	64697	50.0	36.7	
17 Dichlorofluoromethane	67	2.651	2.649	0.002	97	179886	50.0	41.4	
18 Trichlorofluoromethane	101	2.681	2.679	0.002	83	151913	50.0	47.3	
20 Ethyl ether	59	3.046	3.044	0.002	88	111101	50.0	48.6	
21 Acrolein	56	3.216	3.221	-0.005	97	40880	150.0	128.7	
22 1,1-Dichloroethene	96	3.344	3.336	0.008	96	110296	50.0	55.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.405	3.409	-0.004	95	107039	50.0	50.5	
24 Acetone	43	3.423	3.428	-0.005	100	70729	100.0	117.5	
25 Iodomethane	142	3.539	3.531	0.008	98	154475	50.0	49.9	
26 Carbon disulfide	76	3.630	3.634	-0.004	99	275701	50.0	50.4	
29 3-Chloro-1-propene	76	3.916	3.908	0.008	65	60513	50.0	49.8	
30 Methyl acetate	43	3.928	3.926	0.002	95	409149	250.0	239.5	
31 Methylene Chloride	84	4.135	4.127	0.008	93	148116	50.0	52.6	
32 2-Methyl-2-propanol	59	4.366	4.364	0.002	92	76215	500.0	470.6	
33 Acrylonitrile	53	4.500	4.498	0.002	98	434103	500.0	492.6	
34 trans-1,2-Dichloroethene	96	4.561	4.565	-0.004	69	127102	50.0	53.8	
35 Methyl tert-butyl ether	73	4.573	4.571	0.002	96	353761	50.0	50.7	
36 Hexane	57	4.987	4.985	0.002	94	151931	50.0	46.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.193	5.198	-0.005	97	228656	50.0	53.5	
38 Vinyl acetate	43	5.236	5.234	0.002	97	177691	50.0	51.1	
42 2,2-Dichloropropane	77	5.942	5.934	0.008	41	102849	50.0	45.0	
43 cis-1,2-Dichloroethene	96	5.942	5.940	0.002	80	335183	50.0	131.4	
44 2-Butanone (MEK)	43	5.948	5.946	0.002	39	95778	100.0	98.9	
48 Chlorobromomethane	128	6.228	6.226	0.002	98	59756	50.0	51.2	
49 Tetrahydrofuran	42	6.246	6.244	0.002	85	61813	100.0	85.8	
50 Chloroform	83	6.374	6.372	0.002	93	221619	50.0	52.3	
51 1,1,1-Trichloroethane	97	6.544	6.542	0.002	97	181785	50.0	58.0	
52 Cyclohexane	56	6.617	6.615	0.002	89	194763	50.0	46.6	
53 Carbon tetrachloride	117	6.714	6.713	0.001	97	113226	50.0	45.7	
54 1,1-Dichloropropene	75	6.726	6.725	0.001	96	172244	50.0	51.7	
55 Isobutyl alcohol	41	6.897	6.895	0.002	88	66924	1250.0	1042.0	
56 Benzene	78	6.945	6.944	0.001	97	509686	50.0	52.5	
57 1,2-Dichloroethane	62	7.018	7.017	0.001	98	185233	50.0	48.9	
59 n-Heptane	43	7.311	7.309	0.001	89	127806	50.0	51.8	
61 Trichloroethene	130	7.676	7.674	0.002	96	299191	50.0	129.1	
63 Methylcyclohexane	83	7.919	7.923	-0.004	91	207485	50.0	54.2	
64 1,2-Dichloropropane	63	7.949	7.948	0.001	94	119168	50.0	48.0	
65 1,4-Dioxane	88	8.028	8.033	-0.005	40	15372	1000.0	665.4	
67 Dibromomethane	93	8.034	8.039	-0.005	92	70866	50.0	49.5	
68 Dichlorobromomethane	83	8.229	8.227	0.002	99	129808	50.0	48.8	
71 cis-1,3-Dichloropropene	75	8.679	8.678	0.001	94	146794	50.0	45.1	
72 4-Methyl-2-pentanone (MIBK	43	8.819	8.824	-0.005	95	174087	100.0	92.7	
73 Toluene	91	9.008	9.012	-0.004	98	472335	50.0	55.1	
74 trans-1,3-Dichloropropene	75	9.257	9.256	0.001	94	112811	50.0	48.4	
75 Ethyl methacrylate	69	9.312	9.310	0.002	88	121548	50.0	48.3	
76 1,1,2-Trichloroethane	97	9.452	9.444	0.008	91	98092	50.0	55.2	
77 Tetrachloroethene	164	9.525	9.529	-0.004	94	318023	50.0	197.6	
78 1,3-Dichloropropane	76	9.610	9.608	0.002	90	183604	50.0	54.8	
79 2-Hexanone	43	9.659	9.657	0.002	95	114363	100.0	81.0	
81 Chlorodibromomethane	129	9.823	9.821	0.002	90	68612	50.0	49.4	
82 Ethylene Dibromide	107	9.939	9.937	0.002	99	90568	50.0	54.4	
83 3-Chlorobenzotrifluoride	180	10.395	10.393	0.002	89	137801	50.0	49.2	
84 Chlorobenzene	112	10.425	10.430	-0.005	93	304990	50.0	54.6	
85 4-Chlorobenzotrifluoride	180	10.480	10.484	-0.004	96	129311	50.0	48.9	
86 1,1,1,2-Tetrachloroethane	131	10.516	10.521	-0.005	88	86512	50.0	52.3	
87 Ethylbenzene	106	10.529	10.527	0.002	98	168311	50.0	53.9	
88 m-Xylene & p-Xylene	106	10.662	10.661	0.001	100	206964	50.0	53.5	
89 o-Xylene	106	11.040	11.044	-0.004	97	203844	50.0	54.0	
90 Styrene	104	11.058	11.062	-0.004	94	327125	50.0	54.4	
91 Bromoform	173	11.247	11.245	0.001	92	37812	50.0	48.5	
92 2-Chlorobenzotrifluoride	180	11.307	11.306	0.001	95	144694	50.0	51.7	
93 Isopropylbenzene	105	11.411	11.409	0.002	97	520414	50.0	57.2	
96 1,1,2,2-Tetrachloroethane	83	11.715	11.713	0.002	97	134062	50.0	58.3	
95 Bromobenzene	156	11.721	11.719	0.002	96	124381	50.0	50.1	
97 trans-1,4-Dichloro-2-buten	53	11.751	11.750	0.001	71	32179	50.0	45.1	
98 1,2,3-Trichloropropane	110	11.776	11.774	0.002	84	44696	50.0	51.1	
99 N-Propylbenzene	120	11.824	11.829	-0.005	98	145194	50.0	54.9	
100 2-Chlorotoluene	126	11.916	11.914	0.002	95	123788	50.0	53.3	
101 3-Chlorotoluene	126	11.983	11.981	0.002	96	121206	50.0	51.4	
102 1,3,5-Trimethylbenzene	105	12.007	12.011	-0.004	95	450954	50.0	54.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
103 4-Chlorotoluene	126	12.037	12.036	0.001	99	130081	50.0	51.6	
104 tert-Butylbenzene	119	12.323	12.322	0.001	92	362124	50.0	55.9	
106 1,2,4-Trimethylbenzene	105	12.384	12.382	0.002	98	463593	50.0	55.0	
107 1,2-dichloro-4-(trifluorom	214	12.421	12.419	0.002	97	111587	50.0	49.0	
108 sec-Butylbenzene	105	12.548	12.547	0.001	95	552779	50.0	57.6	
109 1,3-Dichlorobenzene	146	12.664	12.668	-0.004	95	238829	50.0	51.1	
110 4-Isopropyltoluene	119	12.707	12.705	0.002	96	466093	50.0	59.1	
111 1,4-Dichlorobenzene	146	12.773	12.772	0.001	90	249956	50.0	51.4	
113 2,4-Dichloro-1-(triflourom	214	12.792	12.790	0.002	95	110422	50.0	50.2	
114 2,5-Dichlorobenzotrifluori	214	12.828	12.833	-0.005	97	127225	50.0	51.6	
116 n-Butylbenzene	91	13.114	13.112	0.002	98	433647	50.0	59.4	
117 1,2-Dichlorobenzene	146	13.126	13.125	0.001	94	244294	50.0	53.2	
118 1,2-Dibromo-3-Chloropropan	75	13.917	13.916	0.001	72	19498	50.0	48.1	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.057	14.062	-0.005	99	574272	150.0	166.1	
121 2,3- & 3,4- Dichlorotoluen	125	14.477	14.475	0.002	99	411709	100.0	106.9	
122 1,2,4-Trichlorobenzene	180	14.744	14.743	0.001	93	167232	50.0	49.6	
123 Hexachlorobutadiene	225	14.891	14.889	0.001	95	60520	50.0	52.8	
124 Naphthalene	128	15.006	15.011	-0.005	98	365189	50.0	51.5	
125 1,2,3-Trichlorobenzene	180	15.225	15.230	-0.005	93	144301	50.0	47.9	
126 2,4,5-Trichlorotoluene	159	16.004	16.008	-0.004	0	66476	50.0	40.2	
127 2,3,6-Trichlorotoluene	159	16.107	16.112	-0.005	95	69683	50.0	44.5	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		100.0	185.1	
S 131 Xylenes, Total	106				0		100.0	107.4	
S 132 1,3-Dichloropropene, Total	1				0		100.0	93.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOA2ND_00133	Amount Added:	2.00	Units: uL	
voaWEE2nd Res_00004	Amount Added:	2.00	Units: uL	
voaWVA2nd Res_00008	Amount Added:	2.00	Units: uL	
voaWket1Reste_00001	Amount Added:	2.00	Units: uL	
voaWAcro2nd R_00006	Amount Added:	6.00	Units: uL	
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

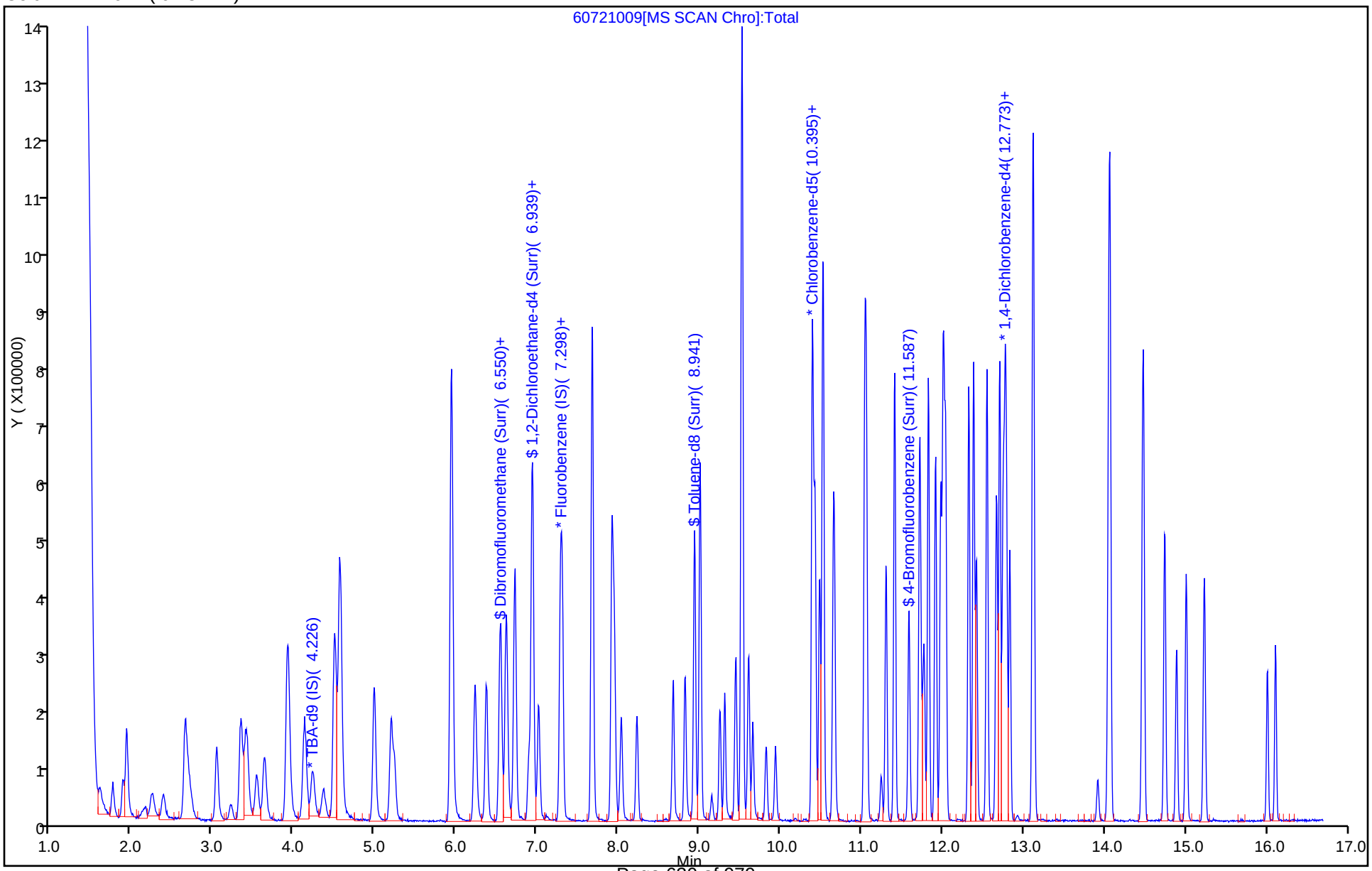
Report Date: 21-Jul-2015 15:55:11 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721009.D

Injection Date:	21-Jul-2015 15:36:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-E-12 MS			Worklist Smp#:	9
Client ID:	HD-COD-SW-17-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSVOA_LL_CHHP6	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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MSD | Lab Sample ID: 180-45946-12 MSD

Matrix: Water | Lab File ID: 60721010.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 16:00

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	6.67		1.0	0.28
75-01-4	Vinyl chloride	7.44		1.0	0.23
74-83-9	Bromomethane	8.50		1.0	0.31
75-00-3	Chloroethane	7.04		1.0	0.21
75-35-4	1,1-Dichloroethene	11.1		1.0	0.30
67-64-1	Acetone	22.0		5.0	2.5
75-15-0	Carbon disulfide	9.57		1.0	0.21
75-09-2	Methylene Chloride	10.5		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	10.6		1.0	0.17
1634-04-4	Methyl tert-butyl ether	10.2		1.0	0.18
75-34-3	1,1-Dichloroethane	10.4		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	25.4		1.0	0.24
74-97-5	Bromochloromethane	10.0		1.0	0.18
78-93-3	2-Butanone (MEK)	21.2		5.0	0.55
67-66-3	Chloroform	10.5		1.0	0.17
71-55-6	1,1,1-Trichloroethane	11.6		1.0	0.29
56-23-5	Carbon tetrachloride	9.13		1.0	0.14
71-43-2	Benzene	10.4		1.0	0.11
107-06-2	1,2-Dichloroethane	9.47		1.0	0.21
79-01-6	Trichloroethene	25.2		1.0	0.14
78-87-5	1,2-Dichloropropane	9.47		1.0	0.095
75-27-4	Bromodichloromethane	9.65		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.03		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	19.6		5.0	0.53
108-88-3	Toluene	10.7		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	9.59		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.3		1.0	0.20
127-18-4	Tetrachloroethene	37.4		1.0	0.15
591-78-6	2-Hexanone	16.3		5.0	0.16
124-48-1	Dibromochloromethane	9.85		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.3		1.0	0.18
108-90-7	Chlorobenzene	10.4		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.3		1.0	0.28
100-41-4	Ethylbenzene	10.3		1.0	0.23
1330-20-7	Xylenes, Total	20.4		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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MSD | Lab Sample ID: 180-45946-12 MSD

Matrix: Water | Lab File ID: 60721010.D

Analysis Method: 8260C | Date Collected: 07/15/2015 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 07/21/2015 16:00

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.: 148334 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.70		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	11.5		1.0	0.20
107-13-1	Acrylonitrile	102		20	0.55
123-91-1	1,4-Dioxane	120	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		64-135
2037-26-5	Toluene-d8 (Surr)	105		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	94		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721010.D
Lims ID: 180-45946-E-12 MSD
Client ID: HD-COD-SW-17-0/1-0
Sample Type: MSD
Inject. Date: 21-Jul-2015 16:00:30 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-45946-E-12 MSD
Misc. Info.: 180-0007861-010
Operator ID: 001562 Instrument ID: CHHP6

Method: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jul-2015 08:25:23 Calib Date: 02-Jun-2015 20:05:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150602-7230.b\60602017.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 22-Jul-2015 08:26:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.235	4.243	-0.008	92	127234	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.285	0.004	98	403129	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.398	10.399	-0.001	88	87753	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.746	12.747	-0.001	95	140751	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.559	6.548	0.011	93	90375	50.0	46.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.937	6.932	0.004	70	139201	50.0	46.2	
$ 7 Toluene-d8 (Surr)	98	8.944	8.939	0.005	94	362772	50.0	52.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.584	11.586	-0.002	81	145119	50.0	50.4	
11 Dichlorodifluoromethane	85	1.613	1.603	0.010	77	73807	50.0	33.6	
12 Chloromethane	50	1.766	1.761	0.005	100	78393	50.0	33.3	
13 Vinyl chloride	62	1.893	1.889	0.005	98	97239	50.0	37.2	
14 Butadiene	39	1.936	1.931	0.005	96	98144	50.0	33.9	
15 Bromomethane	94	2.252	2.254	-0.002	92	51150	50.0	42.5	
16 Chloroethane	64	2.392	2.387	0.005	99	63063	50.0	35.2	
17 Dichlorofluoromethane	67	2.660	2.649	0.011	95	173223	50.0	39.2	
18 Trichlorofluoromethane	101	2.696	2.679	0.017	84	149543	50.0	45.8	
20 Ethyl ether	59	3.049	3.044	0.005	89	112179	50.0	48.3	
21 Acrolein	56	3.226	3.221	0.005	99	41142	150.0	127.4	
22 1,1-Dichloroethene	96	3.347	3.336	0.011	96	112802	50.0	55.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.414	3.409	0.005	95	106291	50.0	49.3	
24 Acetone	43	3.432	3.428	0.004	93	67208	100.0	109.8	
25 Iodomethane	142	3.542	3.531	0.011	100	156424	50.0	49.7	
26 Carbon disulfide	76	3.639	3.634	0.005	99	265906	50.0	47.8	
29 3-Chloro-1-propene	76	3.925	3.908	0.017	60	62302	50.0	50.4	
30 Methyl acetate	43	3.931	3.926	0.005	96	431260	250.0	248.3	
31 Methylene Chloride	84	4.132	4.127	0.005	91	150006	50.0	52.4	
32 2-Methyl-2-propanol	59	4.363	4.364	-0.001	91	70505	500.0	455.0	
33 Acrylonitrile	53	4.509	4.498	0.011	100	455816	500.0	508.8	
34 trans-1,2-Dichloroethene	96	4.570	4.565	0.005	91	127761	50.0	53.2	
35 Methyl tert-butyl ether	73	4.576	4.571	0.005	97	362454	50.0	51.1	
36 Hexane	57	4.990	4.985	0.005	92	154033	50.0	46.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.203	5.198	0.005	96	225212	50.0	51.8	
38 Vinyl acetate	43	5.239	5.234	0.005	98	191792	50.0	54.3	
42 2,2-Dichloropropane	77	5.945	5.934	0.011	42	109197	50.0	47.0	
43 cis-1,2-Dichloroethene	96	5.945	5.940	0.005	82	329413	50.0	127.0	
44 2-Butanone (MEK)	43	5.945	5.946	-0.001	39	104396	100.0	106.1	
48 Chlorobromomethane	128	6.231	6.226	0.005	97	59563	50.0	50.2	
49 Tetrahydrofuran	42	6.243	6.244	-0.001	81	70332	100.0	96.0	
50 Chloroform	83	6.371	6.372	-0.001	94	226434	50.0	52.6	
51 1,1,1-Trichloroethane	97	6.541	6.542	-0.001	98	185252	50.0	58.1	
52 Cyclohexane	56	6.620	6.615	0.005	89	194244	50.0	45.8	
53 Carbon tetrachloride	117	6.718	6.713	0.005	77	114834	50.0	45.6	
54 1,1-Dichloropropene	75	6.730	6.725	0.005	95	174074	50.0	51.4	
55 Isobutyl alcohol	41	6.894	6.895	-0.001	90	66894	1250.0	1024.6	
56 Benzene	78	6.943	6.944	-0.001	97	512617	50.0	51.9	
57 1,2-Dichloroethane	62	7.022	7.017	0.005	98	182585	50.0	47.4	
59 n-Heptane	43	7.314	7.309	0.005	88	128740	50.0	51.4	
61 Trichloroethene	130	7.679	7.674	0.005	95	297220	50.0	126.1	
63 Methylcyclohexane	83	7.922	7.923	-0.001	89	204208	50.0	52.5	
64 1,2-Dichloropropane	63	7.952	7.948	0.004	85	119550	50.0	47.3	
65 1,4-Dioxane	88	8.038	8.033	0.005	34	14089	1000.0	600.0	
67 Dibromomethane	93	8.032	8.039	-0.007	92	75494	50.0	51.9	
68 Dichlorobromomethane	83	8.232	8.227	0.005	99	130396	50.0	48.2	
71 cis-1,3-Dichloropropene	75	8.676	8.678	-0.002	94	149277	50.0	45.2	
72 4-Methyl-2-pentanone (MIBK	43	8.822	8.824	-0.002	96	195331	100.0	97.9	
73 Toluene	91	9.011	9.012	-0.001	98	487320	50.0	53.5	
74 trans-1,3-Dichloropropene	75	9.254	9.256	-0.002	94	118706	50.0	48.0	
75 Ethyl methacrylate	69	9.315	9.310	0.005	87	130979	50.0	48.9	
76 1,1,2-Trichloroethane	97	9.449	9.444	0.005	94	97302	50.0	51.5	
77 Tetrachloroethene	164	9.528	9.529	-0.001	92	320240	50.0	187.2	
78 1,3-Dichloropropane	76	9.607	9.608	-0.001	90	187419	50.0	52.6	
79 2-Hexanone	43	9.662	9.657	0.005	95	122551	100.0	81.7	
81 Chlorodibromomethane	129	9.826	9.821	0.005	90	72749	50.0	49.2	
82 Ethylene Dibromide	107	9.942	9.937	0.005	100	91370	50.0	51.6	
83 3-Chlorobenzotrifluoride	180	10.392	10.393	-0.001	92	141588	50.0	47.6	
84 Chlorobenzene	112	10.428	10.430	-0.002	92	309339	50.0	52.1	
85 4-Chlorobenzotrifluoride	180	10.483	10.484	-0.001	97	126359	50.0	45.0	
86 1,1,1,2-Tetrachloroethane	131	10.520	10.521	-0.001	88	90187	50.0	51.3	
87 Ethylbenzene	106	10.526	10.527	-0.001	99	170129	50.0	51.3	
88 m-Xylene & p-Xylene	106	10.660	10.661	-0.001	100	208408	50.0	50.6	
89 o-Xylene	106	11.043	11.044	-0.001	97	207086	50.0	51.6	
90 Styrene	104	11.061	11.062	-0.001	94	329266	50.0	51.5	
91 Bromoform	173	11.244	11.245	-0.001	94	40148	50.0	48.5	
92 2-Chlorobenzotrifluoride	180	11.304	11.306	-0.002	95	144679	50.0	48.6	
93 Isopropylbenzene	105	11.408	11.409	-0.001	97	525848	50.0	54.4	
96 1,1,2,2-Tetrachloroethane	83	11.712	11.713	-0.001	96	140311	50.0	57.4	
95 Bromobenzene	156	11.724	11.719	0.005	96	126649	50.0	49.6	
97 trans-1,4-Dichloro-2-buten	53	11.755	11.750	0.005	78	33399	50.0	45.6	
98 1,2,3-Trichloropropane	110	11.773	11.774	-0.001	85	48664	50.0	54.2	
99 N-Propylbenzene	120	11.828	11.829	-0.001	98	148320	50.0	54.5	
100 2-Chlorotoluene	126	11.913	11.914	-0.001	94	125816	50.0	52.7	
101 3-Chlorotoluene	126	11.980	11.981	-0.001	96	114657	50.0	47.3	
102 1,3,5-Trimethylbenzene	105	12.010	12.011	-0.001	94	446980	50.0	52.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
103 4-Chlorotoluene	126	12.041	12.036	0.005	99	134207	50.0	51.8	
104 tert-Butylbenzene	119	12.326	12.322	0.004	93	365759	50.0	54.9	
106 1,2,4-Trimethylbenzene	105	12.381	12.382	-0.001	98	468749	50.0	54.1	
107 1,2-dichloro-4-(trifluorom	214	12.424	12.419	0.005	96	110079	50.0	47.0	
108 sec-Butylbenzene	105	12.552	12.547	0.005	95	542990	50.0	55.0	
109 1,3-Dichlorobenzene	146	12.667	12.668	-0.001	94	239164	50.0	49.8	
110 4-Isopropyltoluene	119	12.704	12.705	-0.001	96	465567	50.0	57.4	
111 1,4-Dichlorobenzene	146	12.771	12.772	-0.001	91	248724	50.0	49.8	
113 2,4-Dichloro-1-(triflourom	214	12.789	12.790	-0.001	94	106864	50.0	47.3	
114 2,5-Dichlorobenzotrifluori	214	12.831	12.833	-0.002	98	127827	50.0	50.5	
116 n-Butylbenzene	91	13.111	13.112	-0.001	99	427141	50.0	56.9	
117 1,2-Dichlorobenzene	146	13.123	13.125	-0.002	93	241396	50.0	51.2	
118 1,2-Dibromo-3-Chloropropan	75	13.914	13.916	-0.002	71	20592	50.0	49.4	
119 2,4- & 2,5- & 2,6- Dichlor	125	14.060	14.062	-0.002	99	571010	150.0	160.7	
121 2,3- & 3,4- Dichlorotoluen	125	14.474	14.475	-0.001	99	406083	100.0	102.6	
122 1,2,4-Trichlorobenzene	180	14.742	14.743	-0.001	93	167222	50.0	48.3	
123 Hexachlorobutadiene	225	14.888	14.889	-0.001	95	58150	50.0	49.3	
124 Naphthalene	128	15.003	15.011	-0.008	98	381146	50.0	52.3	
125 1,2,3-Trichlorobenzene	180	15.228	15.230	-0.002	94	150536	50.0	48.6	
126 2,4,5-Trichlorotoluene	159	16.007	16.008	-0.001	0	73241	50.0	43.1	
127 2,3,6-Trichlorotoluene	159	16.110	16.112	-0.002	94	75990	50.0	47.2	
143 2,5-Dichlorotoluene	1		0.000				ND	ND	
147 2,6-Dichlorotoluene	1		0.000				ND	ND	
144 2,4-Dichlorotoluene	1		0.000				ND	ND	
145 2,3-Dichlorotoluene	1		0.000				ND	ND	
146 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 130 1,2-Dichloroethene, Total	96				0		100.0	180.2	
S 131 Xylenes, Total	106				0		100.0	102.2	
S 132 1,3-Dichloropropene, Total	1				0		100.0	93.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

voaWAcro2nd R_00006	Amount Added:	6.00	Units: uL	
voaWVA2nd Res_00008	Amount Added:	2.00	Units: uL	
voaWket1Reste_00001	Amount Added:	2.00	Units: uL	
VOA8260VOA2ND_00133	Amount Added:	2.00	Units: uL	
voaWEE2nd Res_00004	Amount Added:	2.00	Units: uL	
VOA8260INT_00039	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00039	Amount Added:	2.00	Units: uL	Run Reagent

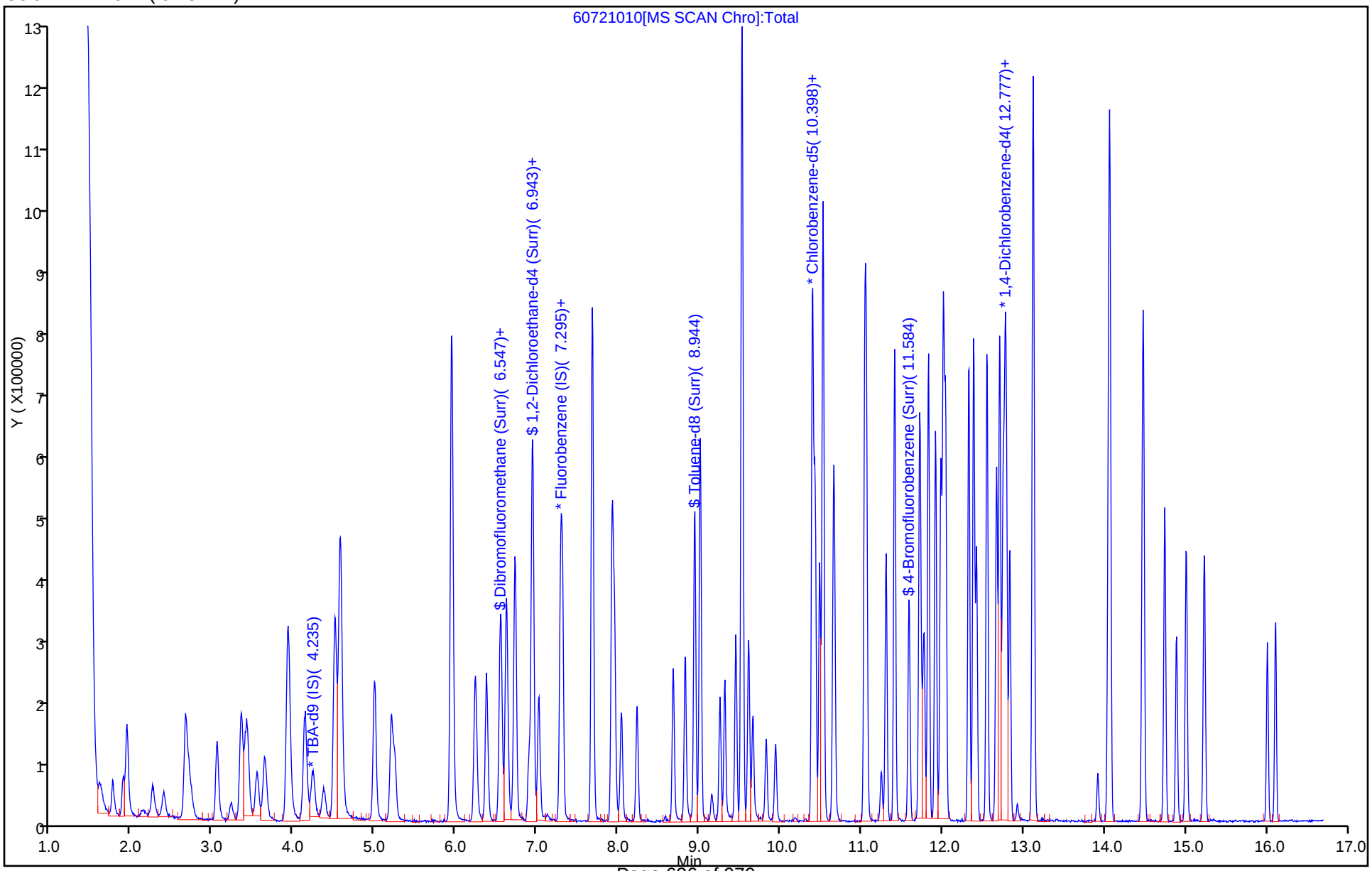
Report Date: 22-Jul-2015 08:26:04 Chrom Revision: 2.2 09-Jul-2015 10:16:20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP6\20150721-7861.b\60721010.D

Injection Date:	21-Jul-2015 16:00:30	Instrument ID:	CHHP6	Operator ID:	001562
Lims ID:	180-45946-E-12 MSD			Worklist Smp#:	10
Client ID:	HD-COD-SW-17-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP6 Start Date: 06/02/2015 14:36

Analysis Batch Number: 143599 End Date: 06/03/2015 13:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-143599/4		06/02/2015 14:36	1	60602004.D	DB-624 0.18(mm)
IC 180-143599/7		06/02/2015 16:07	1	60602007.D	DB-624 0.18(mm)
ICIS 180-143599/8		06/02/2015 16:31	1	60602008.D	DB-624 0.18(mm)
IC 180-143599/9		06/02/2015 16:55	1	60602009.D	DB-624 0.18(mm)
IC 180-143599/10		06/02/2015 17:19	1	60602010.D	DB-624 0.18(mm)
IC 180-143599/11		06/02/2015 17:43	1	60602011.D	DB-624 0.18(mm)
IC 180-143599/12		06/02/2015 18:07	1	60602012.D	DB-624 0.18(mm)
IC 180-143599/13		06/02/2015 18:31	1	60602013.D	DB-624 0.18(mm)
IC 180-143599/17		06/02/2015 20:05	1	60602017.D	DB-624 0.18(mm)
LODV 180-143599/18		06/02/2015 20:30	1		DB-624 0.18(mm)
ICV 180-143599/19		06/02/2015 20:54	1		DB-624 0.18(mm)
ICV 180-143599/20		06/03/2015 13:30	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP5 Start Date: 06/17/2015 11:58

Analysis Batch Number: 145277 End Date: 06/17/2015 18:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-145277/16		06/17/2015 11:58	1	50617016.D	DB-624 0.18(mm)
IC 180-145277/6		06/17/2015 14:07	1	50617006.D	DB-624 0.18(mm)
ICIS 180-145277/7		06/17/2015 14:30	1	50617007.D	DB-624 0.18(mm)
IC 180-145277/8		06/17/2015 14:54	1	50617008.D	DB-624 0.18(mm)
IC 180-145277/9		06/17/2015 15:18	1	50617009.D	DB-624 0.18(mm)
IC 180-145277/10		06/17/2015 15:42	1	50617010.D	DB-624 0.18(mm)
IC 180-145277/11		06/17/2015 16:06	1	50617011.D	DB-624 0.18(mm)
IC 180-145277/12		06/17/2015 16:29	1	50617012.D	DB-624 0.18(mm)
IC 180-145277/17		06/17/2015 18:04	1	50617017.D	DB-624 0.18(mm)
LODV 180-145277/18		06/17/2015 18:27	1		DB-624 0.18(mm)
ICV 180-145277/19		06/17/2015 18:51	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP5 Start Date: 07/17/2015 11:22

Analysis Batch Number: 148055 End Date: 07/17/2015 23:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-148055/4		07/17/2015 11:22	1	50717004.D	DB-624 0.18(mm)
CCVIS 180-148055/2		07/17/2015 12:02	1	50717002.D	DB-624 0.18(mm)
ZZZZZ		07/17/2015 12:02	1		DB-624 0.18(mm)
CCV 180-148055/3		07/17/2015 12:25	1	50717003.D	DB-624 0.18(mm)
MB 180-148055/6		07/17/2015 13:13	1	50717006.D	DB-624 0.18(mm)
LCS 180-148055/7		07/17/2015 13:48	1	50717007.D	DB-624 0.18(mm)
LCSD 180-148055/8		07/17/2015 14:12	1	50717008.D	DB-624 0.18(mm)
ZZZZZ		07/17/2015 15:24	12.5		DB-624 0.18(mm)
ZZZZZ		07/17/2015 15:58	12.5		DB-624 0.18(mm)
ZZZZZ		07/17/2015 17:32	1		DB-624 0.18(mm)
ZZZZZ		07/17/2015 17:56	1		DB-624 0.18(mm)
ZZZZZ		07/17/2015 18:19	1		DB-624 0.18(mm)
ZZZZZ		07/17/2015 18:43	1		DB-624 0.18(mm)
ZZZZZ		07/17/2015 19:07	125		DB-624 0.18(mm)
ZZZZZ		07/17/2015 19:31	100		DB-624 0.18(mm)
ZZZZZ		07/17/2015 19:54	25		DB-624 0.18(mm)
180-45946-1	HD-COD-SW-6-0/1-0	07/17/2015 21:06	1	50717025.D	DB-624 0.18(mm)
180-45946-2	HD-COD-SW-7-0/1-0	07/17/2015 21:29	1	50717026.D	DB-624 0.18(mm)
180-45946-3	HD-COD-SW-8-0/1-0	07/17/2015 21:53	1	50717027.D	DB-624 0.18(mm)
180-45946-4	HD-COD-SW-9-0/1-0	07/17/2015 22:17	1	50717028.D	DB-624 0.18(mm)
180-45946-5	HD-COD-SW-10-0/1-0	07/17/2015 22:40	1	50717029.D	DB-624 0.18(mm)
180-45946-6	HD-COD-SW-11-0/1-0	07/17/2015 23:04	1	50717030.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHHP6 Start Date: 07/21/2015 10:05

Analysis Batch Number: 148334 End Date: 07/21/2015 21:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-148334/1		07/21/2015 10:05	1	60721001.D	DB-624 0.18(mm)
CCVIS 180-148334/3		07/21/2015 11:45	1	60721003.D	DB-624 0.18(mm)
MB 180-148334/5		07/21/2015 12:44	1	60721005.D	DB-624 0.18(mm)
LCS 180-148334/6		07/21/2015 13:31	1	60721006.D	DB-624 0.18(mm)
180-45946-12	HD-COD-SW-17-0/1-0	07/21/2015 14:41	1	60721007.D	DB-624 0.18(mm)
180-45946-19	HD-QC2-0/1-2	07/21/2015 15:05	1	60721008.D	DB-624 0.18(mm)
180-45946-12 MS	HD-COD-SW-17-0/1-0 MS	07/21/2015 15:36	1	60721009.D	DB-624 0.18(mm)
180-45946-12 MSD	HD-COD-SW-17-0/1-0 MSD	07/21/2015 16:00	1	60721010.D	DB-624 0.18(mm)
180-45946-7	HD-COD-SW-12-0/1-0	07/21/2015 16:32	1	60721011.D	DB-624 0.18(mm)
180-45946-8	HD-COD-SW-13-0/1-0	07/21/2015 16:56	1	60721012.D	DB-624 0.18(mm)
180-45946-9	HD-COD-SW-15-0/1-0	07/21/2015 17:20	1	60721013.D	DB-624 0.18(mm)
180-45946-10	HD-QC1-0/1-2	07/21/2015 17:43	1	60721014.D	DB-624 0.18(mm)
180-45946-11	HD-COD-SW-16-0/1-0	07/21/2015 18:07	1	60721015.D	DB-624 0.18(mm)
180-45946-13	HD-COD-SW-20-0/1-0	07/21/2015 18:31	1	60721016.D	DB-624 0.18(mm)
180-45946-14	HD-COD-SW-26-0/1-0	07/21/2015 18:55	1	60721017.D	DB-624 0.18(mm)
180-45946-15	HD-COD-SW-27-0/1-0	07/21/2015 19:19	1	60721018.D	DB-624 0.18(mm)
180-45946-16	HD-COD-SW-28-0/1-0	07/21/2015 19:43	1	60721019.D	DB-624 0.18(mm)
180-45946-17	HD-COD-SW-29-0/1-0	07/21/2015 20:07	1	60721020.D	DB-624 0.18(mm)
180-45946-18	HD-QC1-0/1-1	07/21/2015 20:31	1	60721021.D	DB-624 0.18(mm)
ZZZZZ		07/21/2015 20:55	1		DB-624 0.18(mm)
ZZZZZ		07/21/2015 21:19	1		DB-624 0.18(mm)
ZZZZZ		07/21/2015 21:43	1		DB-624 0.18(mm)

300_ORGFMS

Anions, Ion Chromatography

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water Level: Low Lab File ID: B-ICS2100 B 07-16-2015-5.d

Lab ID: LCS 180-147937/5 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Nitrate as N	2.50	2.62	105	90-110	
Chloride	50.0	51.7	103	90-110	
Sulfate	50.0	51.6	103	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 07-16-2015-5.d

Lab ID: LCS 180-147963/5 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Nitrate as N	2.50	2.51	101	90-110	
Chloride	50.0	50.1	100	90-110	
Sulfate	50.0	49.0	98	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 07-16-2015-18.d

Lab ID: 180-45946-12 MS Client ID: HD-COD-SW-17-0/1-0 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Nitrate as N	1.25	3.3	4.47	90	80-120	
Chloride	25.0	130	155	83	80-120	4
Sulfate	25.0	33	55.5	90	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 07-16-2015-19.d

Lab ID: 180-45946-12 MSD Client ID: HD-COD-SW-17-0/1-0 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Nitrate as N	1.25	4.39	84	2	20	80-120	
Chloride	25.0	154	78	1	20	80-120	4
Sulfate	25.0	54.0	84	3	20	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab File ID: A-ICS2100 A 07-16-2015-6.d Lab Sample ID: MB 180-147963/6

Matrix: Water Date Extracted:

Instrument ID: CHIC2100A Date Analyzed: 07/16/2015 16:21

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-147963/4	A-ICS2100 A 07-16-2015-4.d	07/16/2015 15:50
	LCS 180-147963/5	A-ICS2100 A 07-16-2015-5.d	07/16/2015 16:05
HD-COD-SW-13-0/1-0	180-45946-8	A-ICS2100 A 07-16-2015-7.d	07/16/2015 16:36
HD-COD-SW-15-0/1-0	180-45946-9	A-ICS2100 A 07-16-2015-8.d	07/16/2015 16:53
HD-COD-SW-16-0/1-0	180-45946-11	A-ICS2100 A 07-16-2015-9.d	07/16/2015 17:11
HD-COD-SW-20-0/1-0	180-45946-13	A-ICS2100 A 07-16-2015-10.d	07/16/2015 17:28
HD-COD-SW-26-0/1-0	180-45946-14	A-ICS2100 A 07-16-2015-11.d	07/16/2015 17:45
HD-COD-SW-28-0/1-0	180-45946-16	A-ICS2100 A 07-16-2015-12.d	07/16/2015 18:03
HD-COD-SW-29-0/1-0	180-45946-17	A-ICS2100 A 07-16-2015-13.d	07/16/2015 18:20
HD-QC1-0/1-1	180-45946-18	A-ICS2100 A 07-16-2015-14.d	07/16/2015 18:37
	CCB 180-147963/16	A-ICS2100 A 07-16-2015-16.d	07/16/2015 19:12
HD-COD-SW-17-0/1-0	180-45946-12	A-ICS2100 A 07-16-2015-17.d	07/16/2015 19:29
HD-COD-SW-17-0/1-0 MS	180-45946-12 MS	A-ICS2100 A 07-16-2015-18.d	07/16/2015 19:47
HD-COD-SW-17-0/1-0 MSD	180-45946-12 MSD	A-ICS2100 A 07-16-2015-19.d	07/16/2015 20:04
HD-COD-SW-27-0/1-0	180-45946-15	A-ICS2100 A 07-16-2015-20.d	07/16/2015 20:21

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab File ID: A-ICS2100 A 07-16-2015-6.d Lab Sample ID: MB 180-147963/6

Matrix: Water Date Extracted:

Instrument ID: CHIC2100A Date Analyzed: 07/16/2015 16:21

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-147963/25	A-ICS2100 A 07-16-2015-25.d	07/16/2015 21:48

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab File ID: B-ICS2100 B 07-16-2015-6.d Lab Sample ID: MB 180-147937/6

Matrix: Water Date Extracted:

Instrument ID: CHICS2100B Date Analyzed: 07/16/2015 11:34

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-147937/4	B-ICS2100 B 07-16-2015-4.d	07/16/2015 11:00
	LCS 180-147937/5	B-ICS2100 B 07-16-2015-5.d	07/16/2015 11:17
	CCB 180-147937/16	B-ICS2100 B 07-16-2015-16.d	07/16/2015 15:24
	CCB 180-147937/40	B-ICS2100 B 07-16-2015-40.d	07/16/2015 22:20
HD-COD-SW-6-0/1-0	180-45946-1	B-ICS2100 B 07-16-2015-44.d	07/16/2015 23:29
HD-COD-SW-7-0/1-0	180-45946-2	B-ICS2100 B 07-16-2015-45.d	07/16/2015 23:46
HD-COD-SW-8-0/1-0	180-45946-3	B-ICS2100 B 07-16-2015-46.d	07/17/2015 00:04
HD-COD-SW-9-0/1-0	180-45946-4	B-ICS2100 B 07-16-2015-47.d	07/17/2015 00:21
HD-COD-SW-10-0/1-0	180-45946-5	B-ICS2100 B 07-16-2015-48.d	07/17/2015 00:38
HD-COD-SW-11-0/1-0	180-45946-6	B-ICS2100 B 07-16-2015-49.d	07/17/2015 00:55
HD-COD-SW-12-0/1-0	180-45946-7	B-ICS2100 B 07-16-2015-50.d	07/17/2015 01:13
	CCB 180-147937/52	B-ICS2100 B 07-16-2015-52.d	07/17/2015 01:47

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-45946-1

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-44.d

Analysis Method: 300.0 Date Collected: 07/15/2015 10:55

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 23:29

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	1.8	B	0.10	0.0062
16887-00-6	Chloride	46		1.0	0.20
14808-79-8	Sulfate	11		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

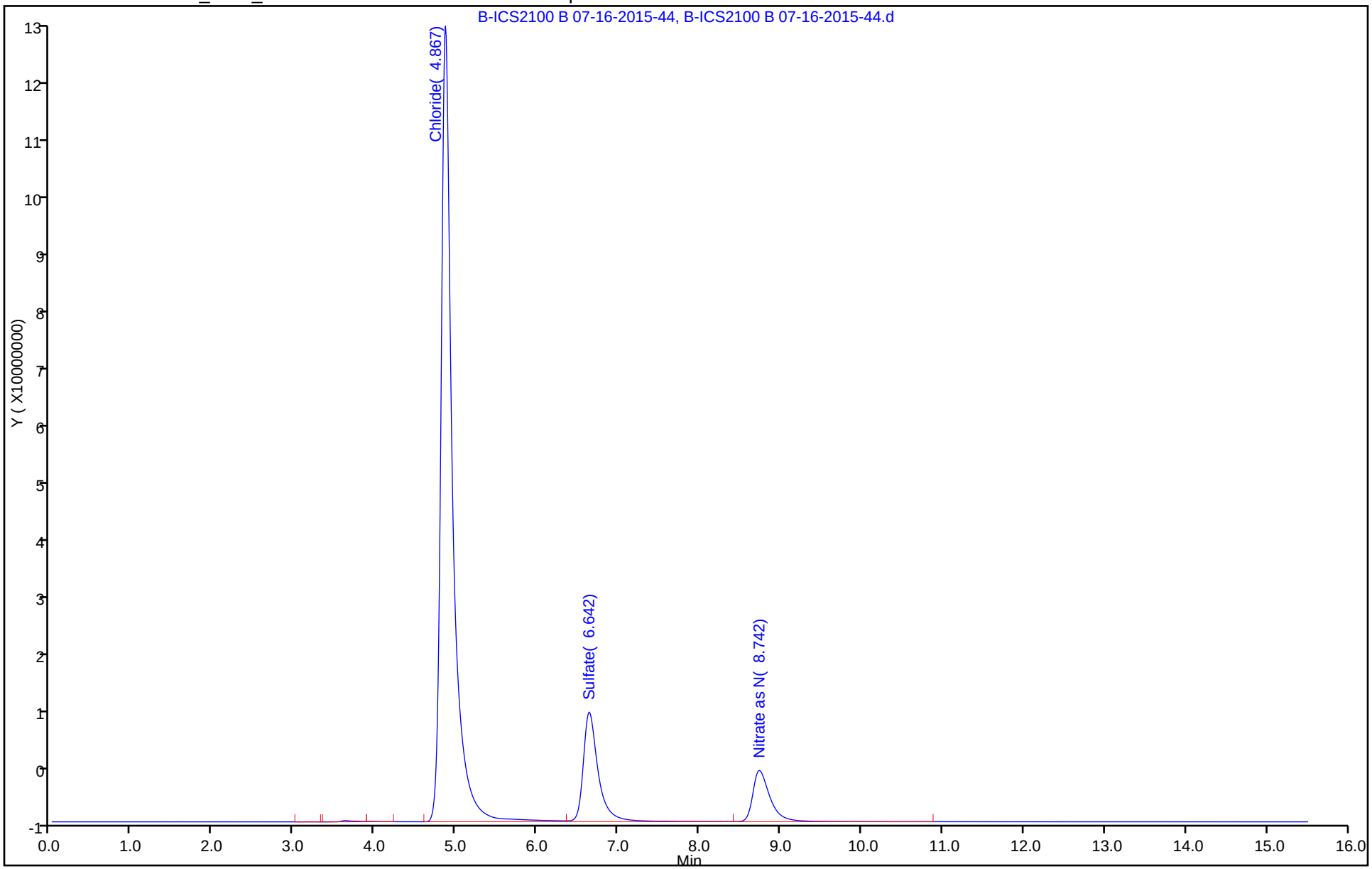
Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-44.d				
Lims ID:	180-45946-A-1	Lab Sample ID:	180-45946-1		
Client ID:	HD-COD-SW-6-0/1-0				
Sample Type:	Client				
Inject. Date:	16-Jul-2015 23:29:00	ALS Bottle#:	0	Worklist Smp#:	44
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0007801-044				
Misc. Info.:	31189 180-45946-a-1				
Operator ID:		Instrument ID:	CHICS2100B		
Method:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m				
Limit Group:	GC Anions ICAL				
Last Update:	17-Jul-2015 14:38:46	Calib Date:	15-Apr-2015 17:45:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK017				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.867	4.858	0.009	1218871430	45.7	
3 Sulfate	6.642	6.575	0.067	217049641	10.9	
5 Nitrate as N	8.742	8.717	0.025	116296958	1.76	

Report Date: 17-Jul-2015 14:38:48 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-44.d				
Injection Date:	16-Jul-2015 23:29:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	180-45946-A-1	Lab Sample ID:	180-45946-1	Worklist Smp#:	44
Client ID:	HD-COD-SW-6-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 | Lab Sample ID: 180-45946-2

Matrix: Water | Lab File ID: B-ICS2100 B 07-16-2015-45.d

Analysis Method: 300.0 | Date Collected: 07/15/2015 11:35

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 07/16/2015 23:46

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: AS-18 ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.7	B	0.10	0.0062
16887-00-6	Chloride	59		1.0	0.20
14808-79-8	Sulfate	38		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-45.d
Lims ID: 180-45946-A-2 Lab Sample ID: 180-45946-2
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 16-Jul-2015 23:46:00 ALS Bottle#: 0 Worklist Smp#: 45
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-045
Misc. Info.: 10991 180-45946-a-2
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:46 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

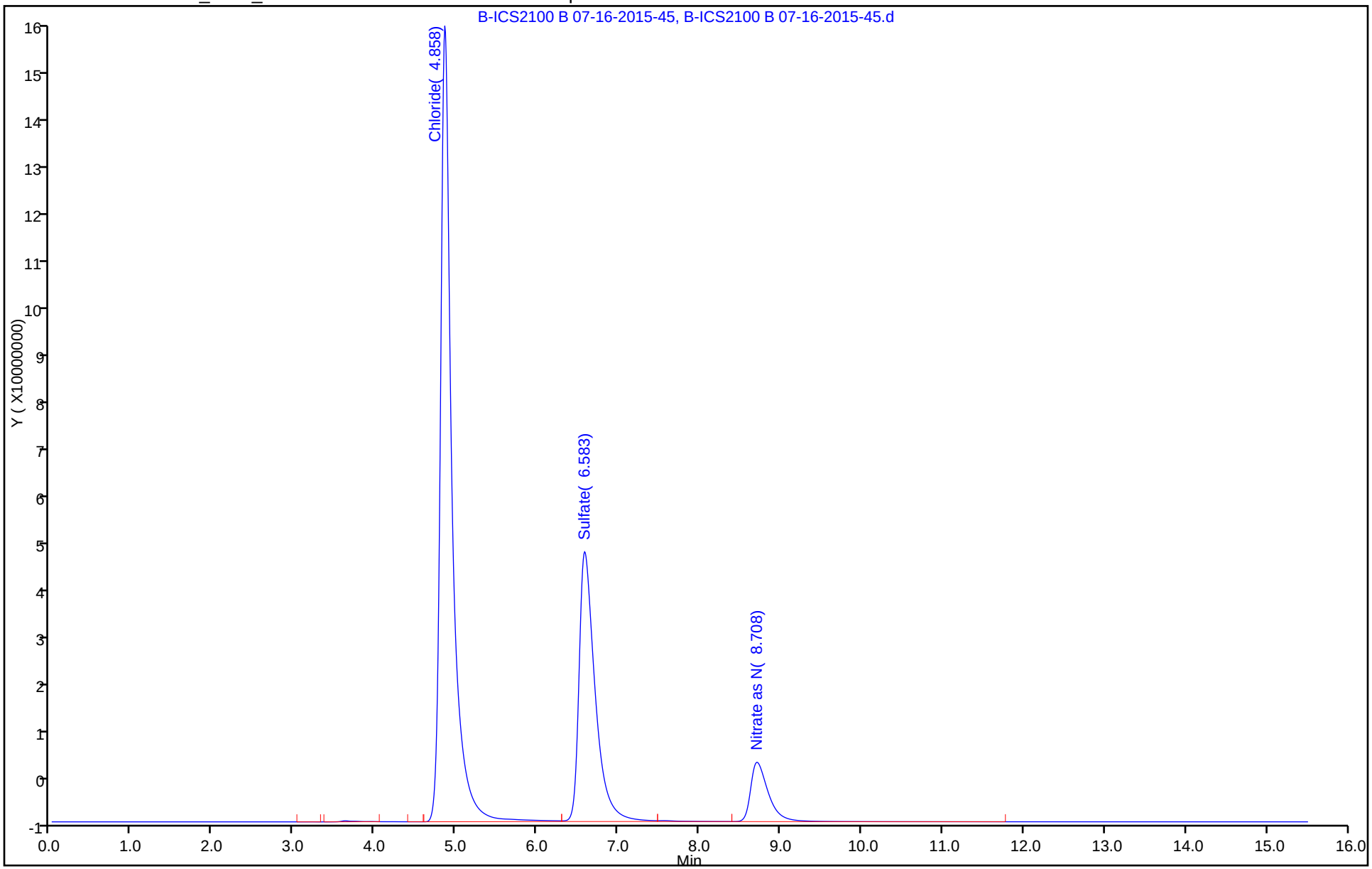
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.858	4.858	0.000	1582038057	59.3	
3 Sulfate	6.583	6.575	0.008	750162256	38.3	
5 Nitrate as N	8.708	8.717	-0.009	181250974	2.75	

Report Date: 17-Jul-2015 14:38:48 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-45.d				
Injection Date:	16-Jul-2015 23:46:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	180-45946-A-2	Lab Sample ID:	180-45946-2	Worklist Smp#:	45
Client ID:	HD-COD-SW-7-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-45946-3

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-46.d

Analysis Method: 300.0 Date Collected: 07/15/2015 08:55

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/17/2015 00:04

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.2	B	0.10	0.0062
16887-00-6	Chloride	45		1.0	0.20
14808-79-8	Sulfate	26		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-46.d
Lims ID: 180-45946-A-3 Lab Sample ID: 180-45946-3
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 00:04:00 ALS Bottle#: 0 Worklist Smp#: 46
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-046
Misc. Info.: 20608 180-45946-a-3
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:46 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

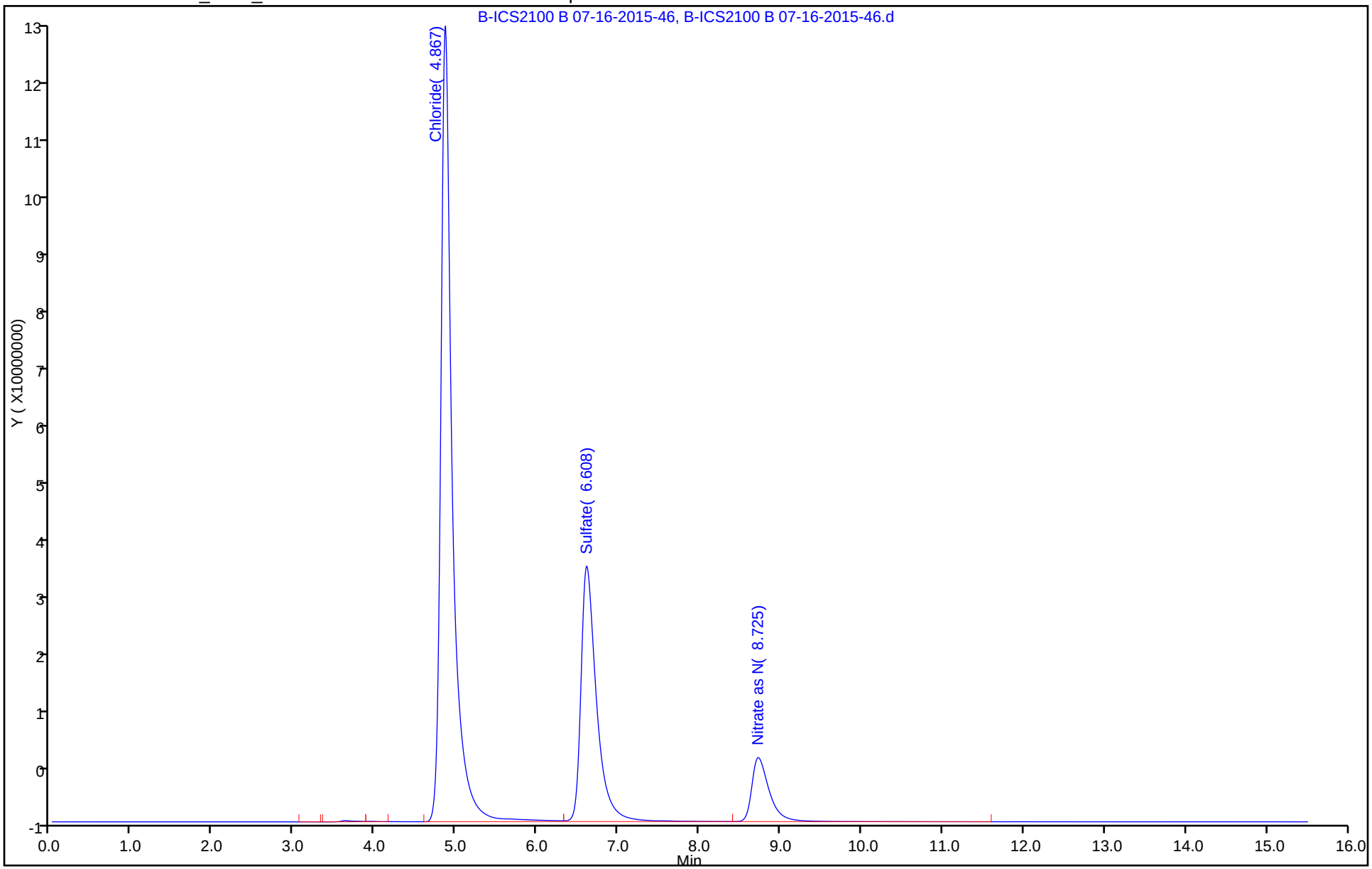
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.867	4.858	0.009	1192981960	44.8	
3 Sulfate	6.608	6.575	0.033	516696186	26.3	
5 Nitrate as N	8.725	8.717	0.008	144798034	2.19	

Report Date: 17-Jul-2015 14:38:49 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-46.d				
Injection Date:	17-Jul-2015 00:04:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	180-45946-A-3	Lab Sample ID:	180-45946-3	Worklist Smp#:	46
Client ID:	HD-COD-SW-8-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-45946-4

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-47.d

Analysis Method: 300.0 Date Collected: 07/15/2015 12:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/17/2015 00:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	4.0	B	0.10	0.0062
16887-00-6	Chloride	84		1.0	0.20
14808-79-8	Sulfate	38		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-47.d
Lims ID: 180-45946-A-4 Lab Sample ID: 180-45946-4
Client ID: HD-COD-SW-9-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 00:21:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-047
Misc. Info.: 28962 180-45946-a-4
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:46 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

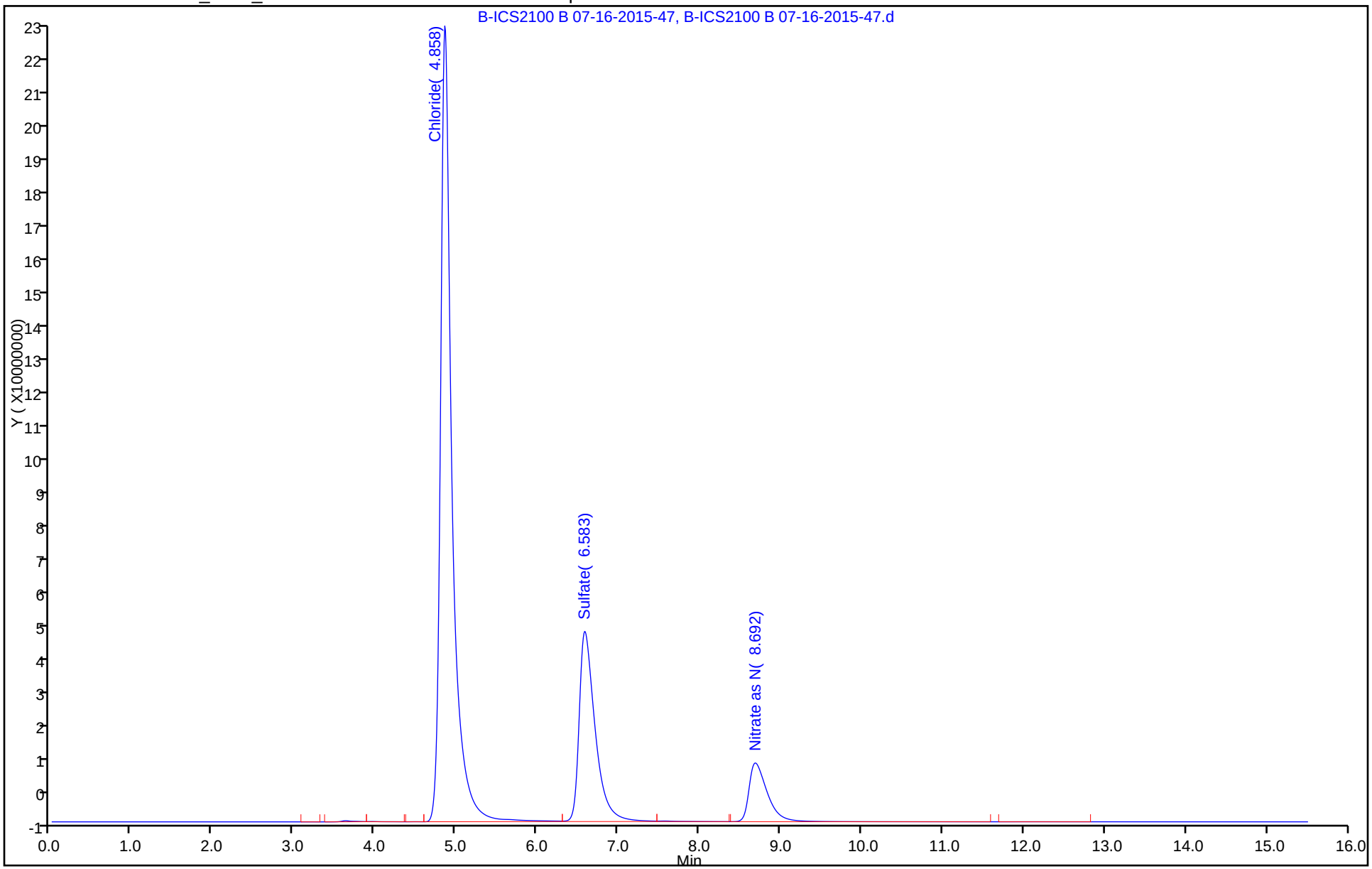
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.858	4.858	0.000	2234849752	83.8	
3 Sulfate	6.583	6.575	0.008	744636772	38.0	
5 Nitrate as N	8.692	8.717	-0.025	262052692	3.97	

Report Date: 17-Jul-2015 14:38:49 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-47.d				
Injection Date:	17-Jul-2015 00:21:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	180-45946-A-4	Lab Sample ID:	180-45946-4	Worklist Smp#:	47
Client ID:	HD-COD-SW-9-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-10-0/1-0 Lab Sample ID: 180-45946-5

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-48.d

Analysis Method: 300.0 Date Collected: 07/15/2015 09:35

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/17/2015 00:38

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.5	B	0.10	0.0062
16887-00-6	Chloride	100		1.0	0.20
14808-79-8	Sulfate	29		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-48.d
Lims ID: 180-45946-A-5 Lab Sample ID: 180-45946-5
Client ID: HD-COD-SW-10-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 00:38:00 ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-048
Misc. Info.: 26474 180-45946-a-5
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:46 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

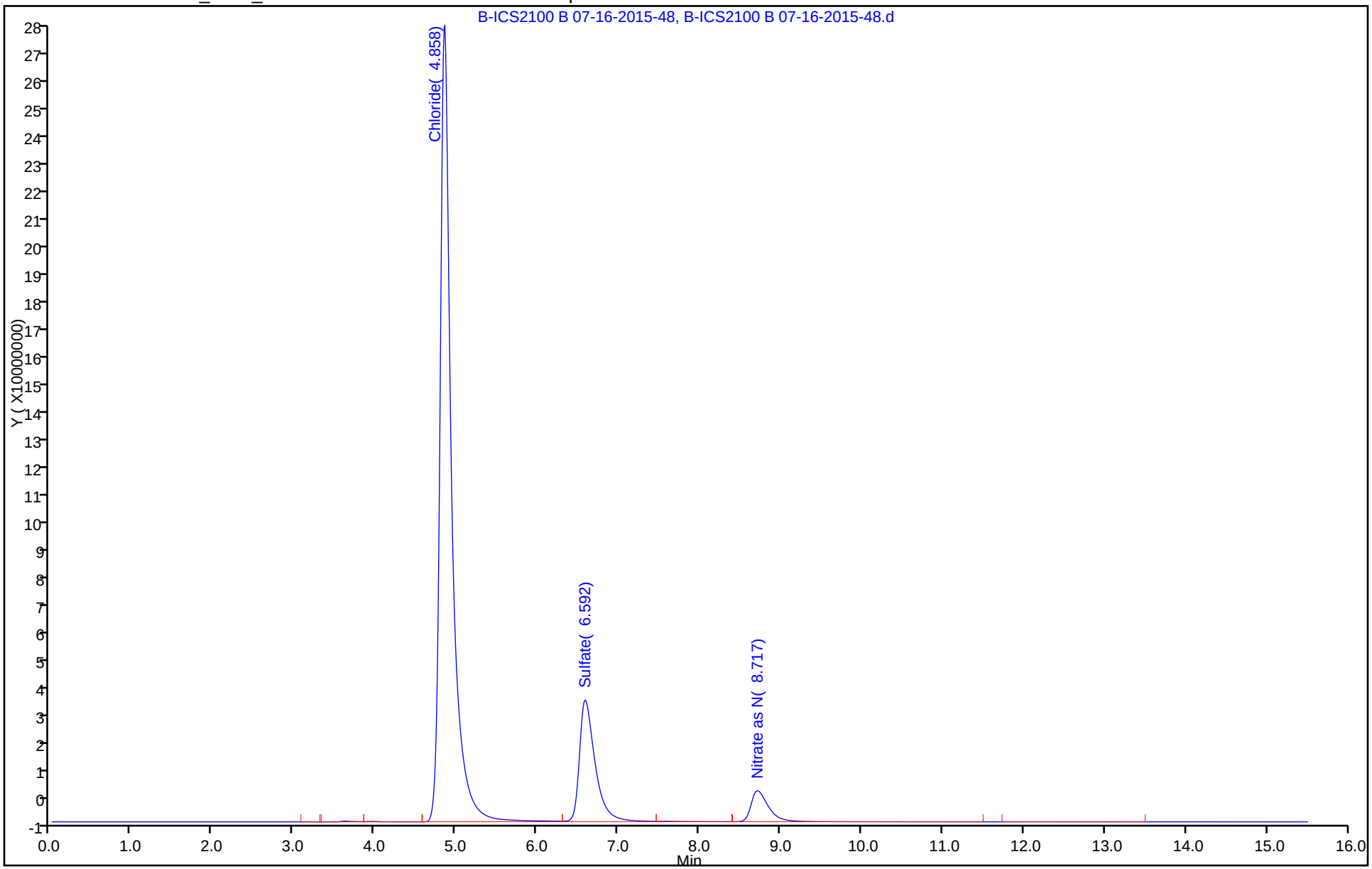
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.858	4.858	0.000	2754192517	103.3	
3 Sulfate	6.592	6.575	0.017	573518774	29.2	
5 Nitrate as N	8.717	8.717	0.000	161978393	2.45	

Report Date: 17-Jul-2015 14:38:49 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-48.d				
Injection Date:	17-Jul-2015 00:38:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	180-45946-A-5	Lab Sample ID:	180-45946-5	Worklist Smp#:	48
Client ID:	HD-COD-SW-10-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-11-0/1-0 Lab Sample ID: 180-45946-6

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-49.d

Analysis Method: 300.0 Date Collected: 07/15/2015 12:45

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/17/2015 00:55

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	4.1	B	0.10	0.0062
16887-00-6	Chloride	68		1.0	0.20
14808-79-8	Sulfate	19		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-49.d
Lims ID: 180-45946-A-6 Lab Sample ID: 180-45946-6
Client ID: HD-COD-SW-11-0/1-0
Sample Type: Client
Inject. Date: 17-Jul-2015 00:55:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-049
Misc. Info.: 6002 180-45946-a-6
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:46 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

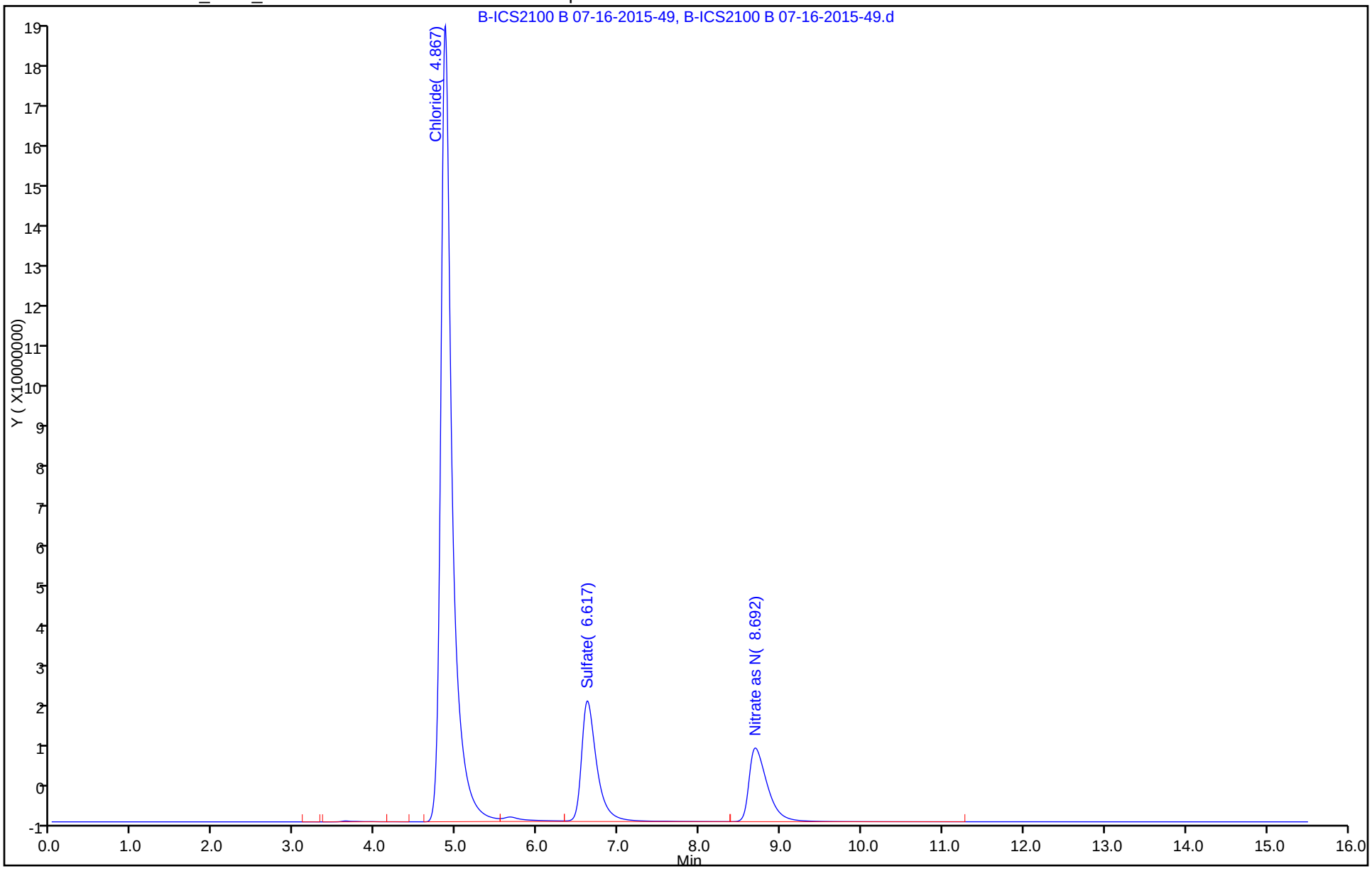
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.867	4.858	0.009	1812110530	68.0	
3 Sulfate	6.617	6.575	0.042	368920194	18.7	
5 Nitrate as N	8.692	8.717	-0.025	270118336	4.09	

Report Date: 17-Jul-2015 14:38:49 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-49.d				
Injection Date:	17-Jul-2015 00:55:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	180-45946-A-6	Lab Sample ID:	180-45946-6	Worklist Smp#:	49
Client ID:	HD-COD-SW-11-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-12-0/1-0 Lab Sample ID: 180-45946-7

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-50.d

Analysis Method: 300.0 Date Collected: 07/15/2015 13:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/17/2015 01:13

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	6.3	B	0.10	0.0062
16887-00-6	Chloride	140		1.0	0.20
14808-79-8	Sulfate	43		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

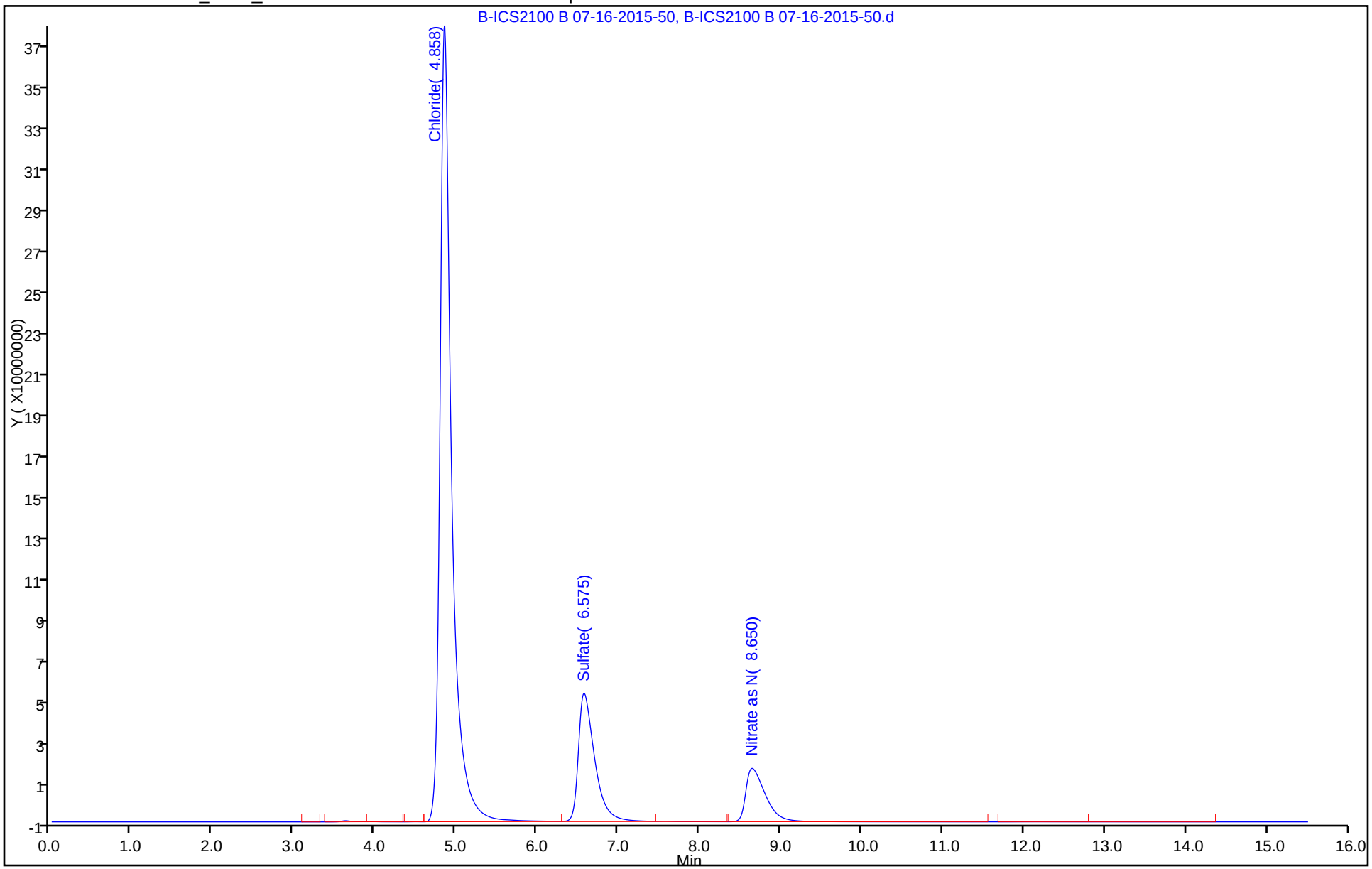
Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-50.d				
Lims ID:	180-45946-A-7	Lab Sample ID:	180-45946-7		
Client ID:	HD-COD-SW-12-0/1-0				
Sample Type:	Client				
Inject. Date:	17-Jul-2015 01:13:00	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0007801-050				
Misc. Info.:	15468 180-45946-a-7				
Operator ID:		Instrument ID:	CHICS2100B		
Method:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m				
Limit Group:	GC Anions ICAL				
Last Update:	17-Jul-2015 14:38:46	Calib Date:	15-Apr-2015 17:45:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK017				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.858	4.858	0.000	3714247400	139.2	
3 Sulfate	6.575	6.575	0.000	837680309	42.8	
5 Nitrate as N	8.650	8.717	-0.067	416026183	6.29	

Report Date: 17-Jul-2015 14:38:50 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-50.d				
Injection Date:	17-Jul-2015 01:13:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	180-45946-A-7	Lab Sample ID:	180-45946-7	Worklist Smp#:	50
Client ID:	HD-COD-SW-12-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-45946-8

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-7.d

Analysis Method: 300.0 Date Collected: 07/15/2015 09:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 16:36

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.3	B	0.10	0.0062
16887-00-6	Chloride	46	B	1.0	0.20
14808-79-8	Sulfate	27		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-7.d
Lims ID: 180-45946-A-8 Lab Sample ID: 180-45946-8
Client ID: HD-COD-SW-13-0/1-0
Sample Type: Client
Inject. Date: 16-Jul-2015 16:36:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-007
Misc. Info.: 7 180-45946-a-8
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

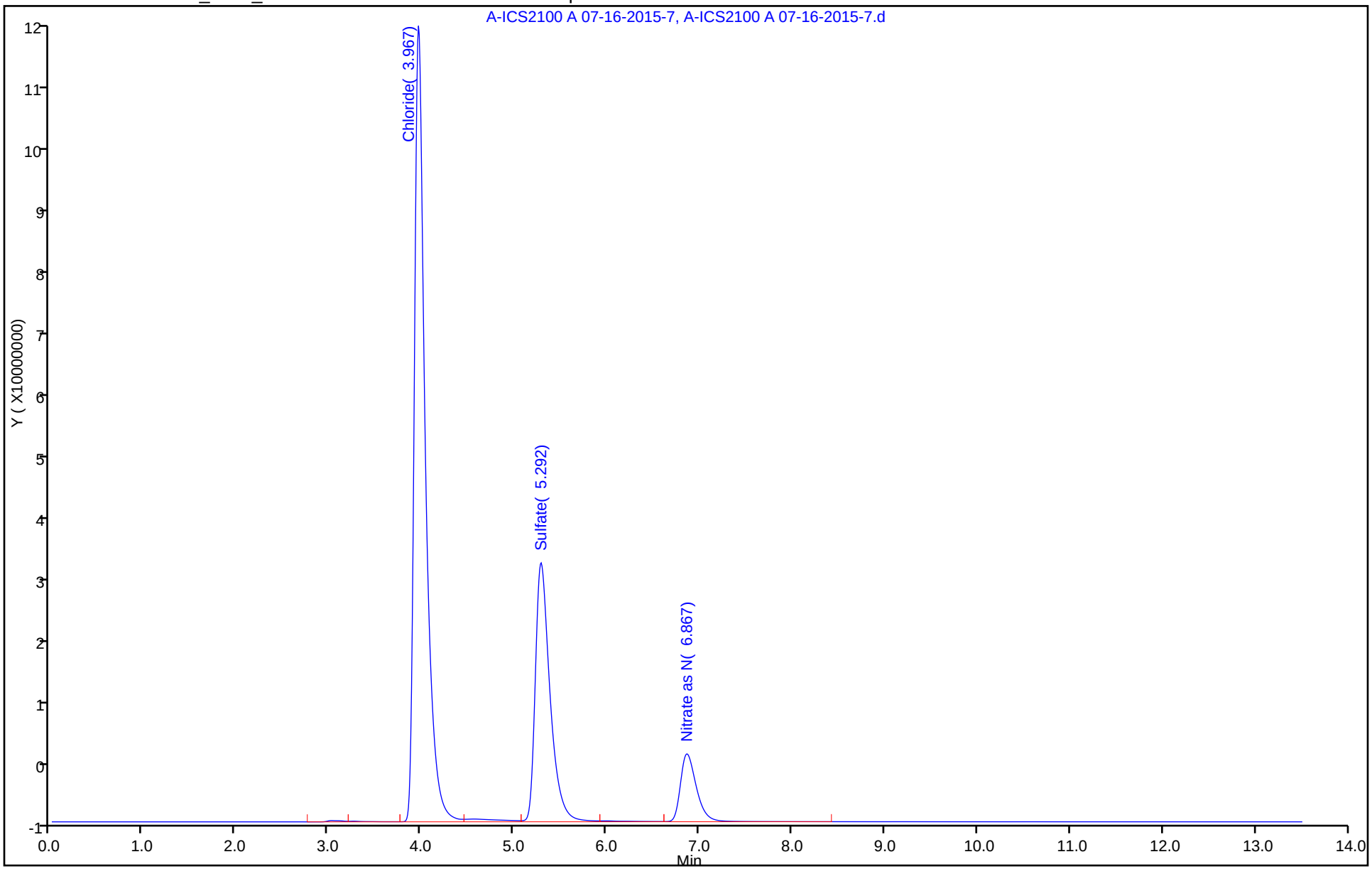
First Level Reviewer: hartmanm Date: 16-Jul-2015 17:57:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.967	3.958	0.009	982204501	45.7	
3 Sulfate	5.292	5.258	0.034	426416474	27.1	
5 Nitrate as N	6.867	6.850	0.017	121558856	2.27	

Report Date: 17-Jul-2015 11:57:09 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-7.d				
Injection Date:	16-Jul-2015 16:36:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-8	Lab Sample ID:	180-45946-8	Worklist Smp#:	7
Client ID:	HD-COD-SW-13-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 | Lab Sample ID: 180-45946-9

Matrix: Water | Lab File ID: A-ICS2100 A 07-16-2015-8.d

Analysis Method: 300.0 | Date Collected: 07/15/2015 13:20

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 07/16/2015 16:53

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: AS-18 ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.3	B	0.10	0.0062
16887-00-6	Chloride	130	B	1.0	0.20
14808-79-8	Sulfate	33		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-8.d
Lims ID: 180-45946-A-9 Lab Sample ID: 180-45946-9
Client ID: HD-COD-SW-15-0/1-0
Sample Type: Client
Inject. Date: 16-Jul-2015 16:53:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-008
Misc. Info.: 8 180-45946-a-9
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

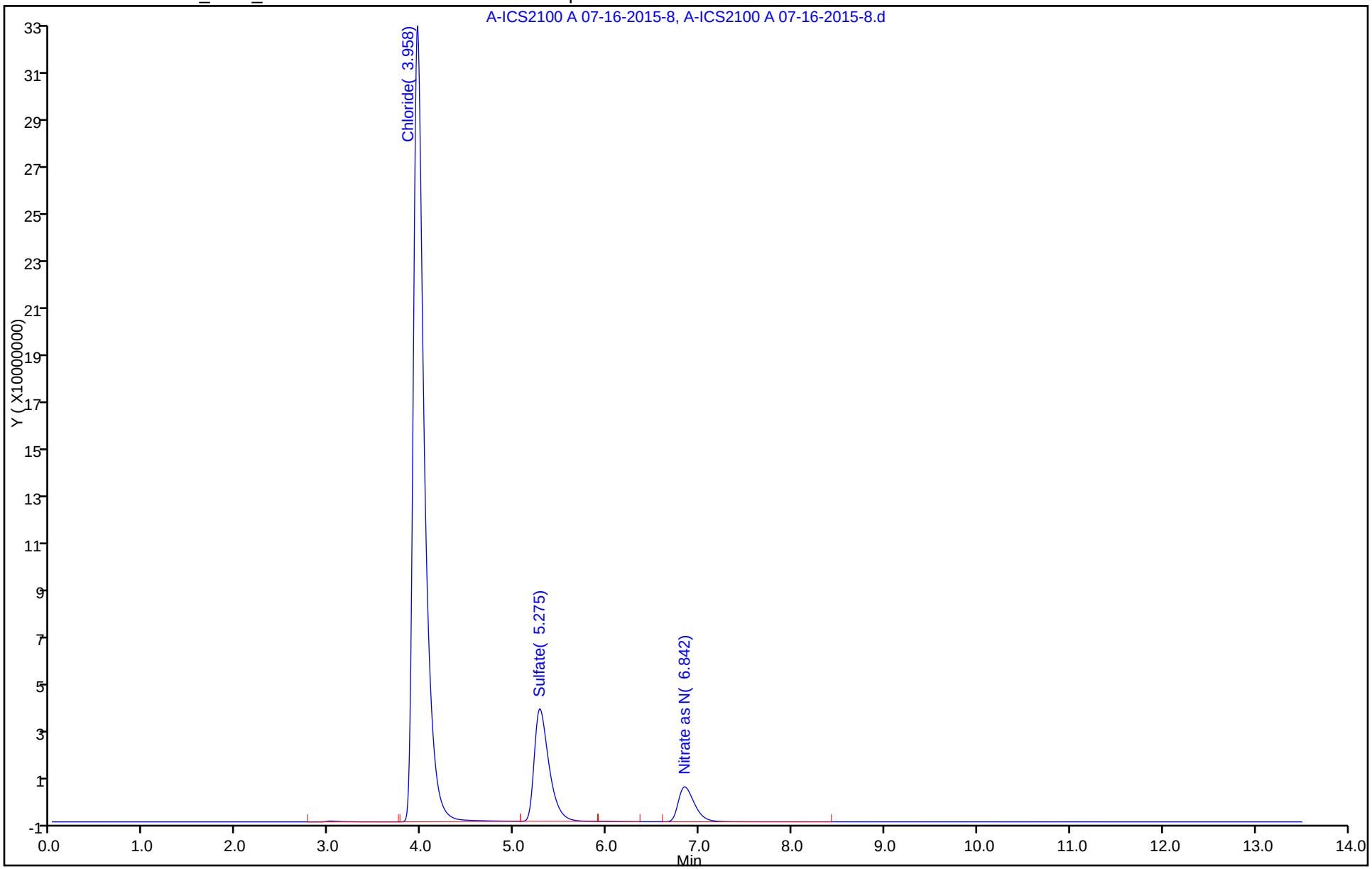
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.958	3.958	0.000	2735587753	127.2	
3 Sulfate	5.275	5.258	0.017	513495843	32.7	
5 Nitrate as N	6.842	6.850	-0.008	174696087	3.26	

Report Date: 17-Jul-2015 11:57:09 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-8.d

Injection Date:	16-Jul-2015 16:53:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-9	Lab Sample ID:	180-45946-9	Worklist Smp#:	8
Client ID:	HD-COD-SW-15-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-45946-11

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-9.d

Analysis Method: 300.0 Date Collected: 07/15/2015 10:25

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 17:11

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.4	B	0.10	0.0062
16887-00-6	Chloride	47	B	1.0	0.20
14808-79-8	Sulfate	30		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-9.d
Lims ID: 180-45946-A-11 Lab Sample ID: 180-45946-11
Client ID: HD-COD-SW-16-0/1-0
Sample Type: Client
Inject. Date: 16-Jul-2015 17:11:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-009
Misc. Info.: 9 180-45946-a-11
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

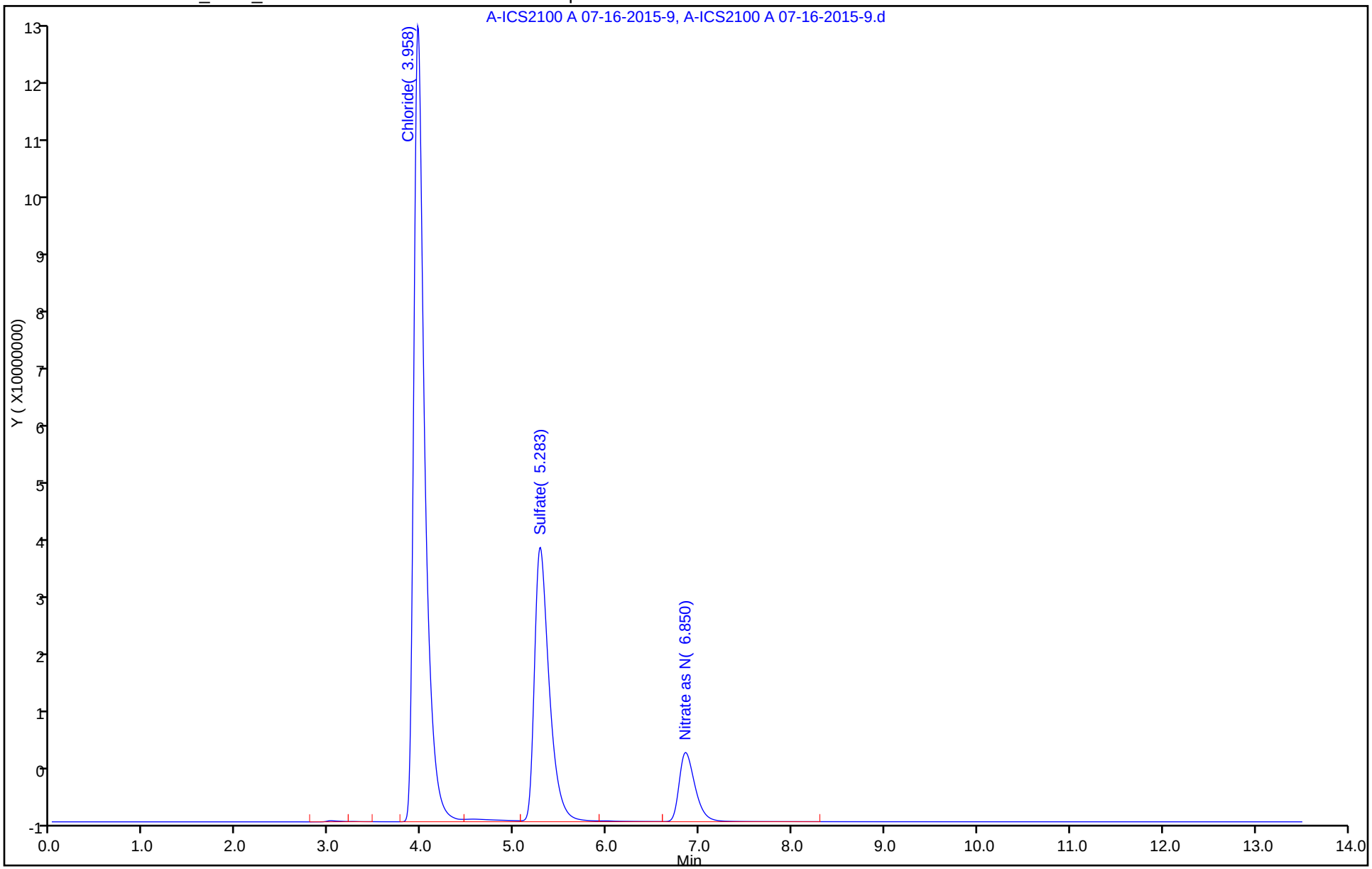
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.958	3.958	0.000	1011042217	47.1	
3 Sulfate	5.283	5.258	0.025	468483019	29.8	
5 Nitrate as N	6.850	6.850	0.000	127670751	2.39	

Report Date: 17-Jul-2015 11:57:10 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-9.d				
Injection Date:	16-Jul-2015 17:11:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-11	Lab Sample ID:	180-45946-11	Worklist Smp#:	9
Client ID:	HD-COD-SW-16-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 180-45946-12

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-17.d

Analysis Method: 300.0 Date Collected: 07/15/2015 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 19:29

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.3	B	0.10	0.0062
16887-00-6	Chloride	130	B ^	1.0	0.20
14808-79-8	Sulfate	33		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-17.d
Lims ID: 180-45946-A-12 Lab Sample ID: 180-45946-12
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 16-Jul-2015 19:29:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-017
Misc. Info.: 17 180-45946-a-12
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:12 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

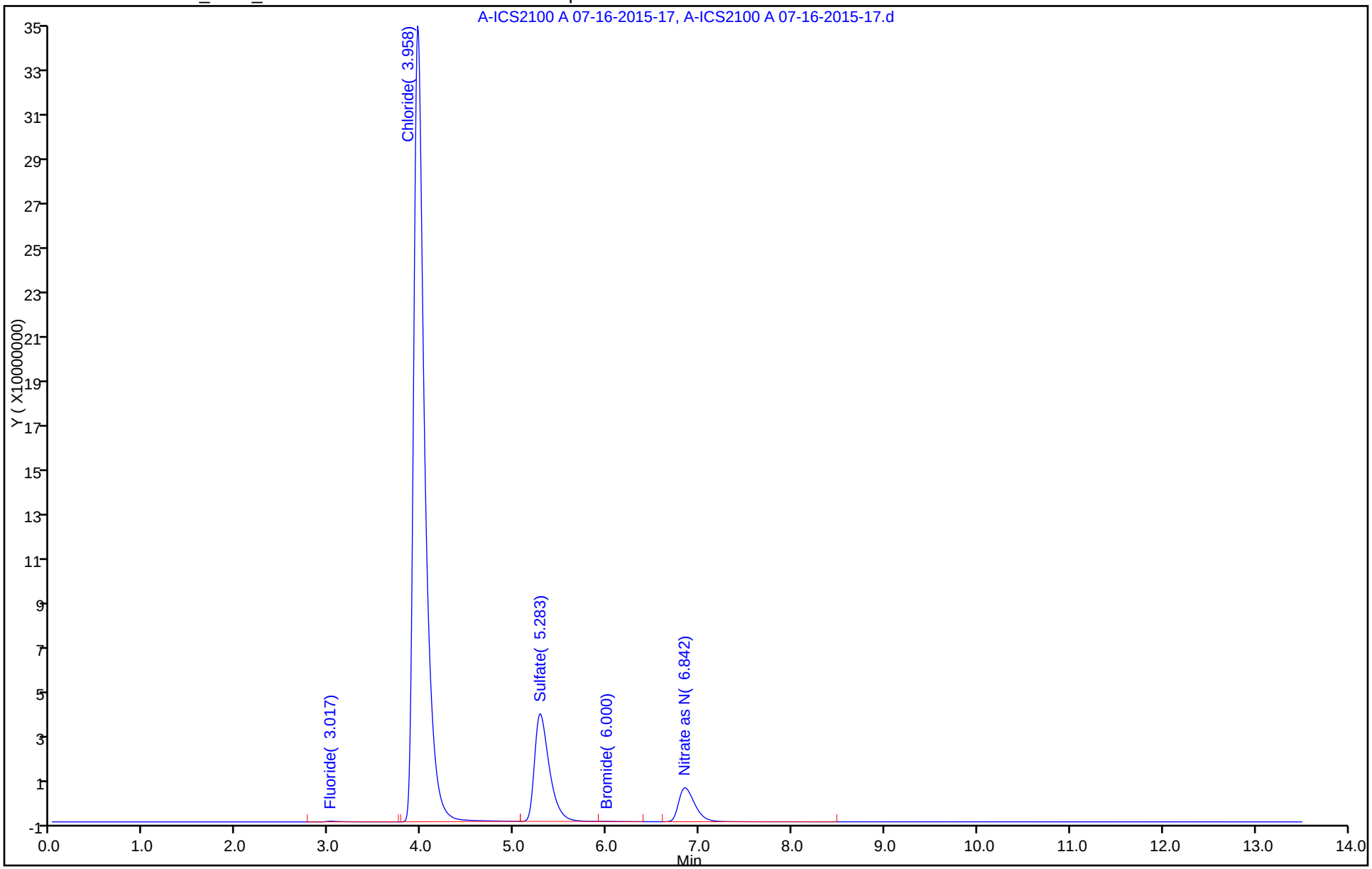
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.017	3.033	-0.016	304809H	0.0821	
2 Chloride	3.958	3.958	0.000	2891457882	134.4	
7 Nitrite as N		4.583			ND	
3 Sulfate	5.283	5.258	0.025	517673571	32.9	
4 Bromide	6.000	5.992	0.008	448915	0.0628	
5 Nitrate as N	6.842	6.850	-0.008	179006249	3.34	
6 Orthophosphate as P		9.092			ND	

Report Date: 17-Jul-2015 11:57:14 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-17.d				
Injection Date:	16-Jul-2015 19:29:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-12	Lab Sample ID:	180-45946-12	Worklist Smp#:	17
Client ID:	HD-COD-SW-17-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-20-0/1-0 Lab Sample ID: 180-45946-13

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-10.d

Analysis Method: 300.0 Date Collected: 07/15/2015 10:55

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 17:28

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	1.7	B	0.10	0.0062
16887-00-6	Chloride	46	B	1.0	0.20
14808-79-8	Sulfate	9.1		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

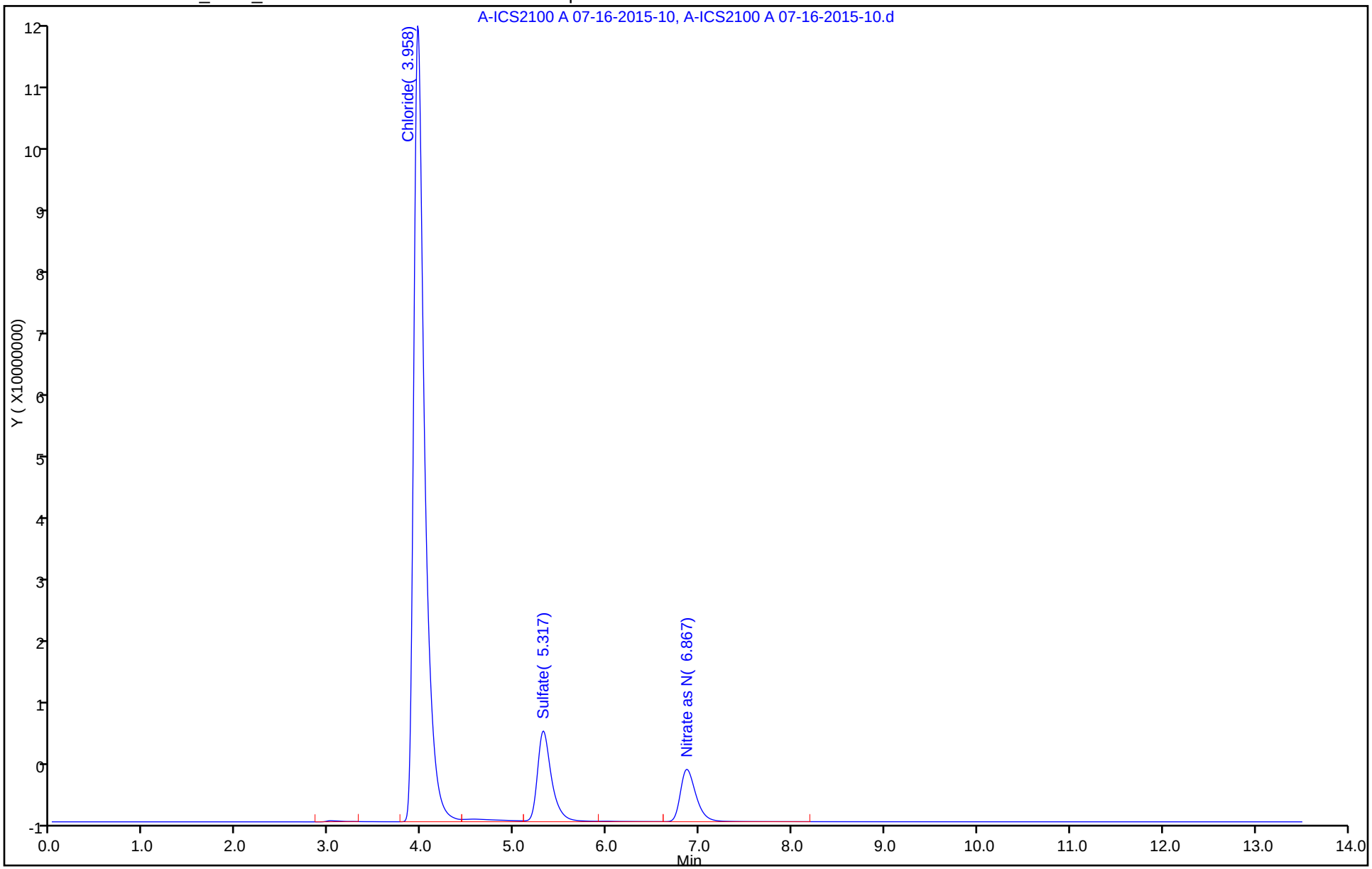
Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-10.d				
Lims ID:	180-45946-A-13	Lab Sample ID:	180-45946-13		
Client ID:	HD-COD-SW-20-0/1-0				
Sample Type:	Client				
Inject. Date:	16-Jul-2015 17:28:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0007802-010				
Misc. Info.:	10 180-45946-a-13				
Operator ID:		Instrument ID:	CHIC2100A		
Method:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	17-Jul-2015 11:57:07	Calib Date:	19-May-2015 14:18:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK017				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.958	3.958	0.000	982278455	45.7	
3 Sulfate	5.317	5.258	0.059	144020032	9.11	
5 Nitrate as N	6.867	6.850	0.017	92125818	1.73	

Report Date: 17-Jul-2015 11:57:10 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-10.d				
Injection Date:	16-Jul-2015 17:28:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-13	Lab Sample ID:	180-45946-13	Worklist Smp#:	10
Client ID:	HD-COD-SW-20-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-45946-14

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-11.d

Analysis Method: 300.0 Date Collected: 07/15/2015 11:15

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 17:45

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.5	B	0.10	0.0062
16887-00-6	Chloride	64	B	1.0	0.20
14808-79-8	Sulfate	35		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-11.d
Lims ID: 180-45946-A-14 Lab Sample ID: 180-45946-14
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 16-Jul-2015 17:45:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-011
Misc. Info.: 11 180-45946-a-14
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

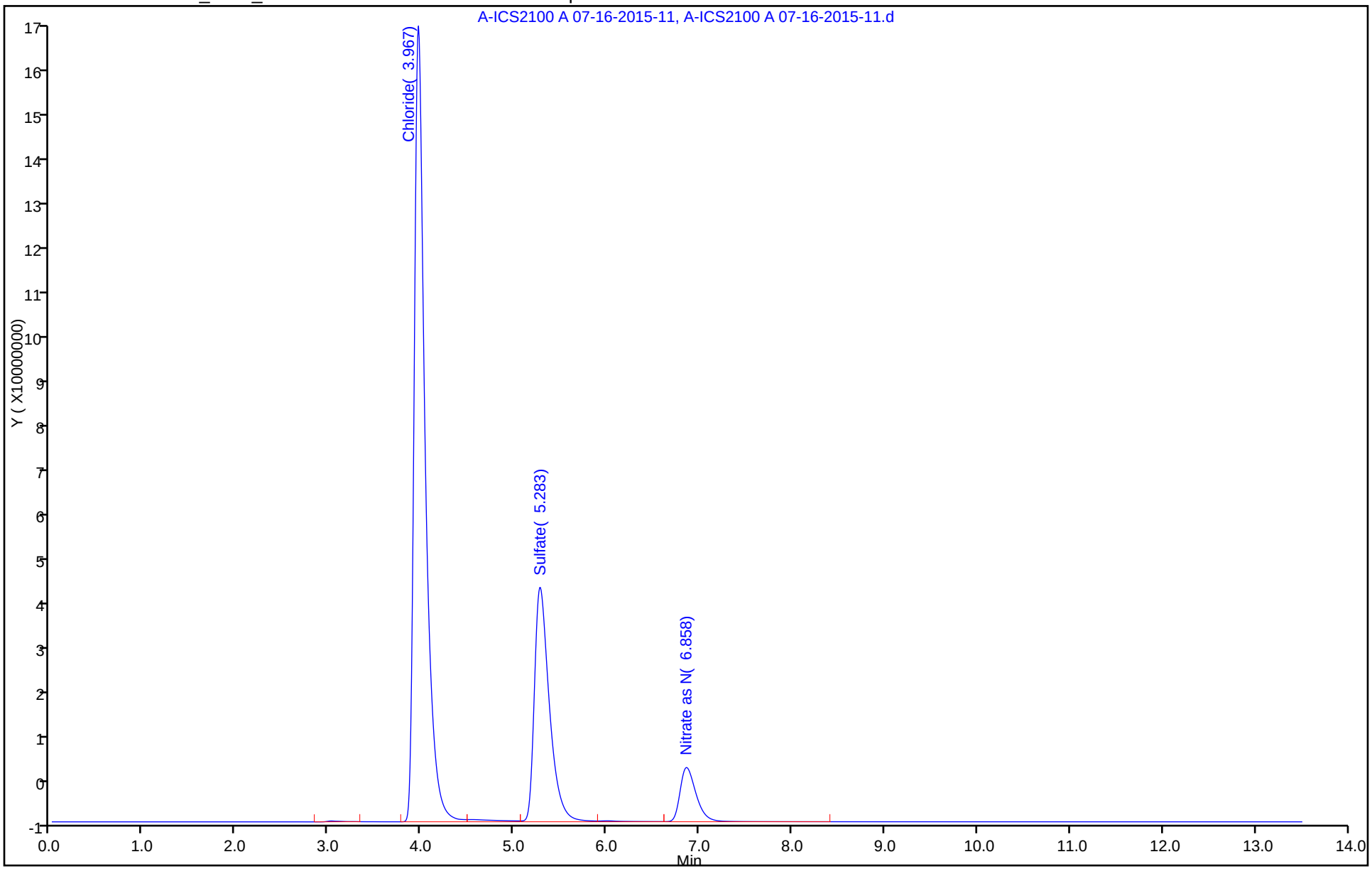
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.967	3.958	0.009	1370291551	63.8	
3 Sulfate	5.283	5.258	0.025	549281513	34.9	
5 Nitrate as N	6.858	6.850	0.008	136410307	2.55	

Report Date: 17-Jul-2015 11:57:11 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-11.d				
Injection Date:	16-Jul-2015 17:45:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-14	Lab Sample ID:	180-45946-14	Worklist Smp#:	11
Client ID:	HD-COD-SW-26-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-45946-15

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-20.d

Analysis Method: 300.0 Date Collected: 07/15/2015 13:30

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 20:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.1	B	0.10	0.0062
16887-00-6	Chloride	60	B ^	1.0	0.20
14808-79-8	Sulfate	27		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

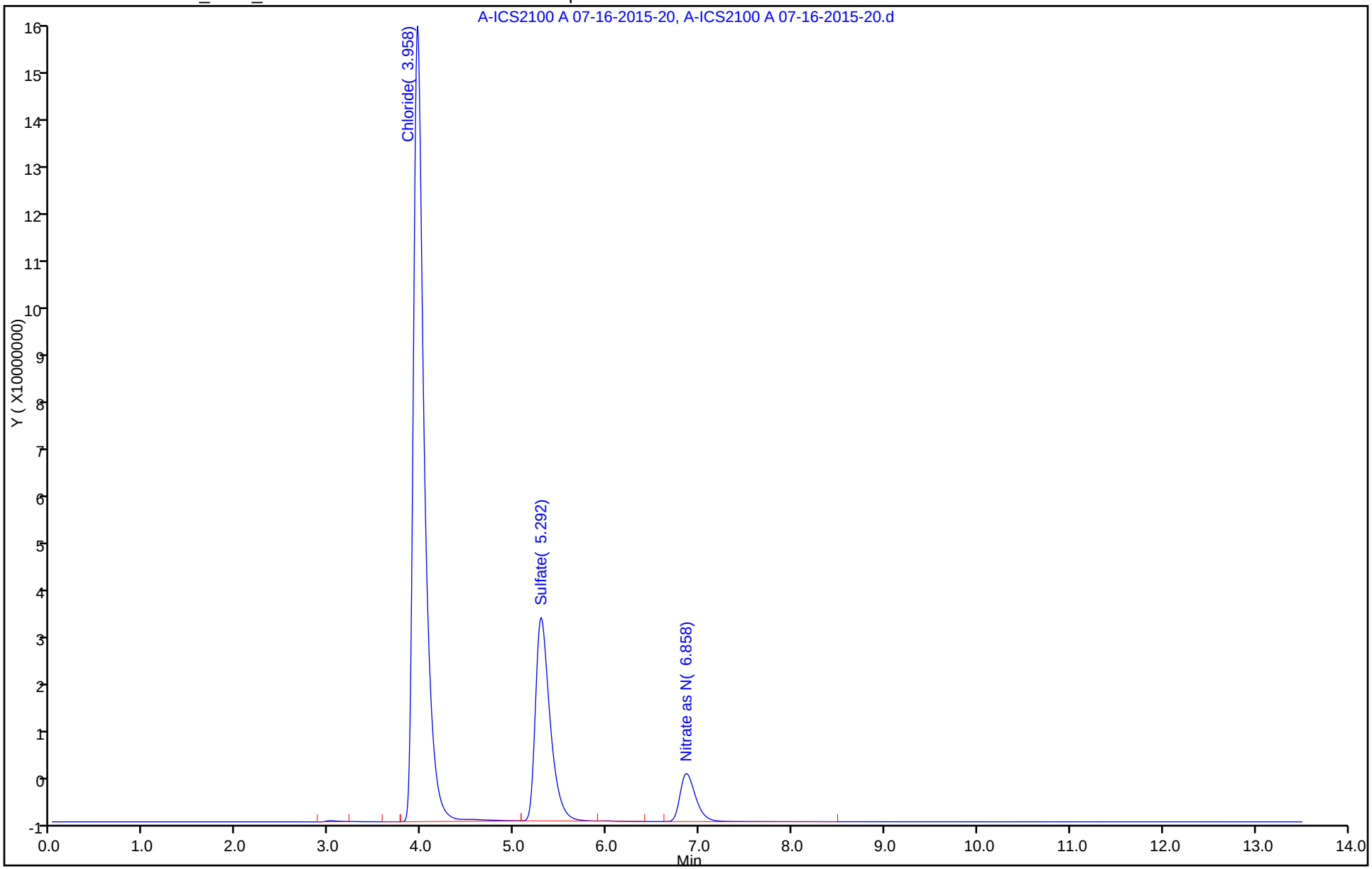
Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-20.d				
Lims ID:	180-45946-A-15	Lab Sample ID:	180-45946-15		
Client ID:	HD-COD-SW-27-0/1-0				
Sample Type:	Client				
Inject. Date:	16-Jul-2015 20:21:00	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0007802-020				
Misc. Info.:	20 180-45946-a-15				
Operator ID:		Instrument ID:	CHIC2100A		
Method:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	17-Jul-2015 11:57:12	Calib Date:	19-May-2015 14:18:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK017				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.958	3.958	0.000	1280681244	59.6	
3 Sulfate	5.292	5.258	0.034	432338548	27.5	
5 Nitrate as N	6.858	6.850	0.008	109817646	2.06	

Report Date: 17-Jul-2015 11:57:15 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-20.d				
Injection Date:	16-Jul-2015 20:21:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-15	Lab Sample ID:	180-45946-15	Worklist Smp#:	20
Client ID:	HD-COD-SW-27-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-45946-16

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-12.d

Analysis Method: 300.0 Date Collected: 07/15/2015 12:35

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 18:03

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	4.0	B	0.10	0.0062
16887-00-6	Chloride	82	B	1.0	0.20
14808-79-8	Sulfate	35		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-12.d
Lims ID: 180-45946-A-16 Lab Sample ID: 180-45946-16
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 16-Jul-2015 18:03:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-012
Misc. Info.: 12 180-45946-a-16
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

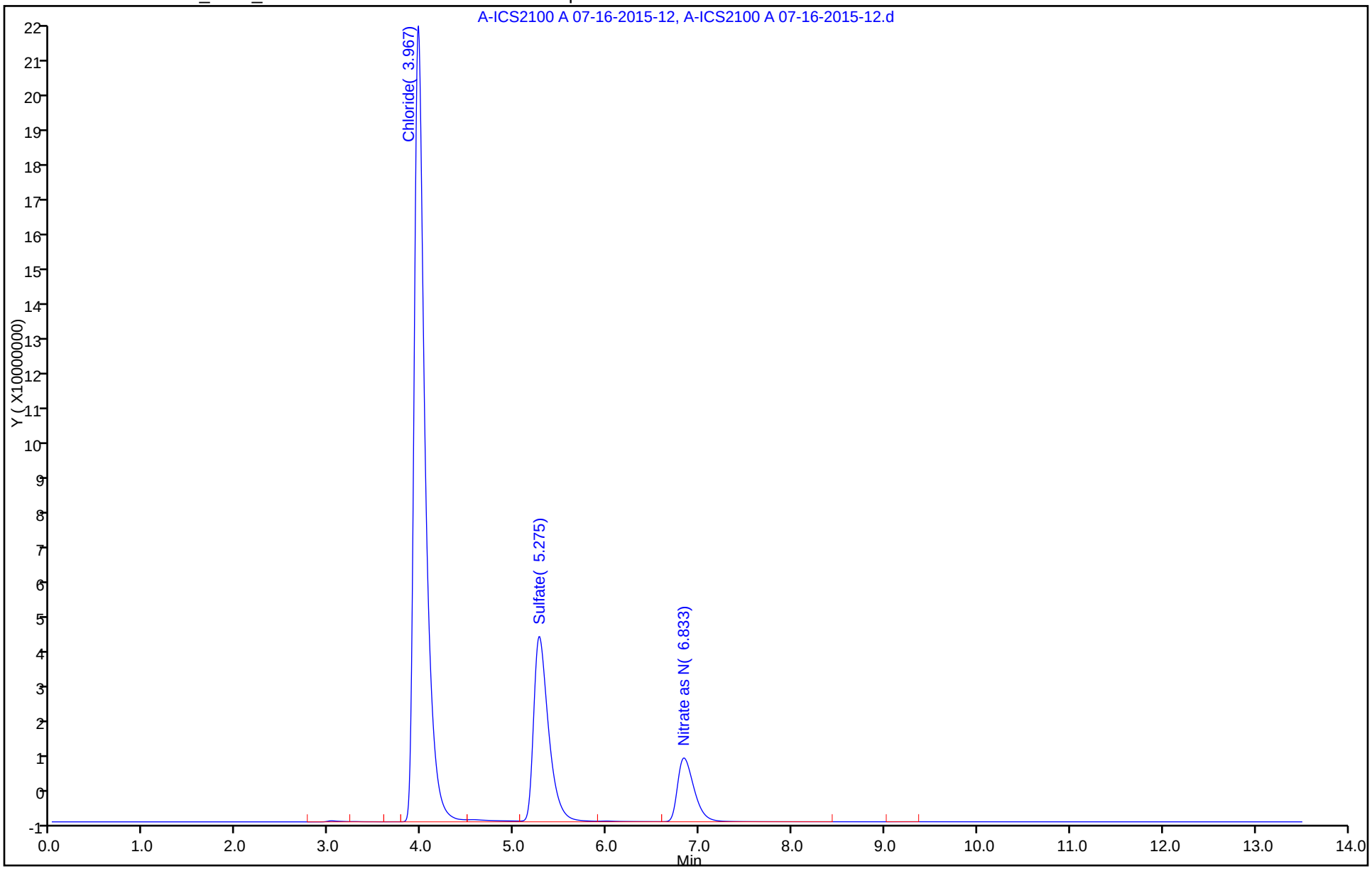
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.967	3.958	0.009	1755598397	81.7	
3 Sulfate	5.275	5.258	0.017	554797805	35.3	
5 Nitrate as N	6.833	6.850	-0.017	211793925	3.95	

Report Date: 17-Jul-2015 11:57:11 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-12.d				
Injection Date:	16-Jul-2015 18:03:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-16	Lab Sample ID:	180-45946-16	Worklist Smp#:	12
Client ID:	HD-COD-SW-28-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 | Lab Sample ID: 180-45946-17

Matrix: Water | Lab File ID: A-ICS2100 A 07-16-2015-13.d

Analysis Method: 300.0 | Date Collected: 07/15/2015 08:40

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 07/16/2015 18:20

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: AS-18 ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.3	B	0.10	0.0062
16887-00-6	Chloride	48	B	1.0	0.20
14808-79-8	Sulfate	28		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-13.d
Lims ID: 180-45946-A-17 Lab Sample ID: 180-45946-17
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 16-Jul-2015 18:20:00 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-013
Misc. Info.: 13 180-45946-a-17
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

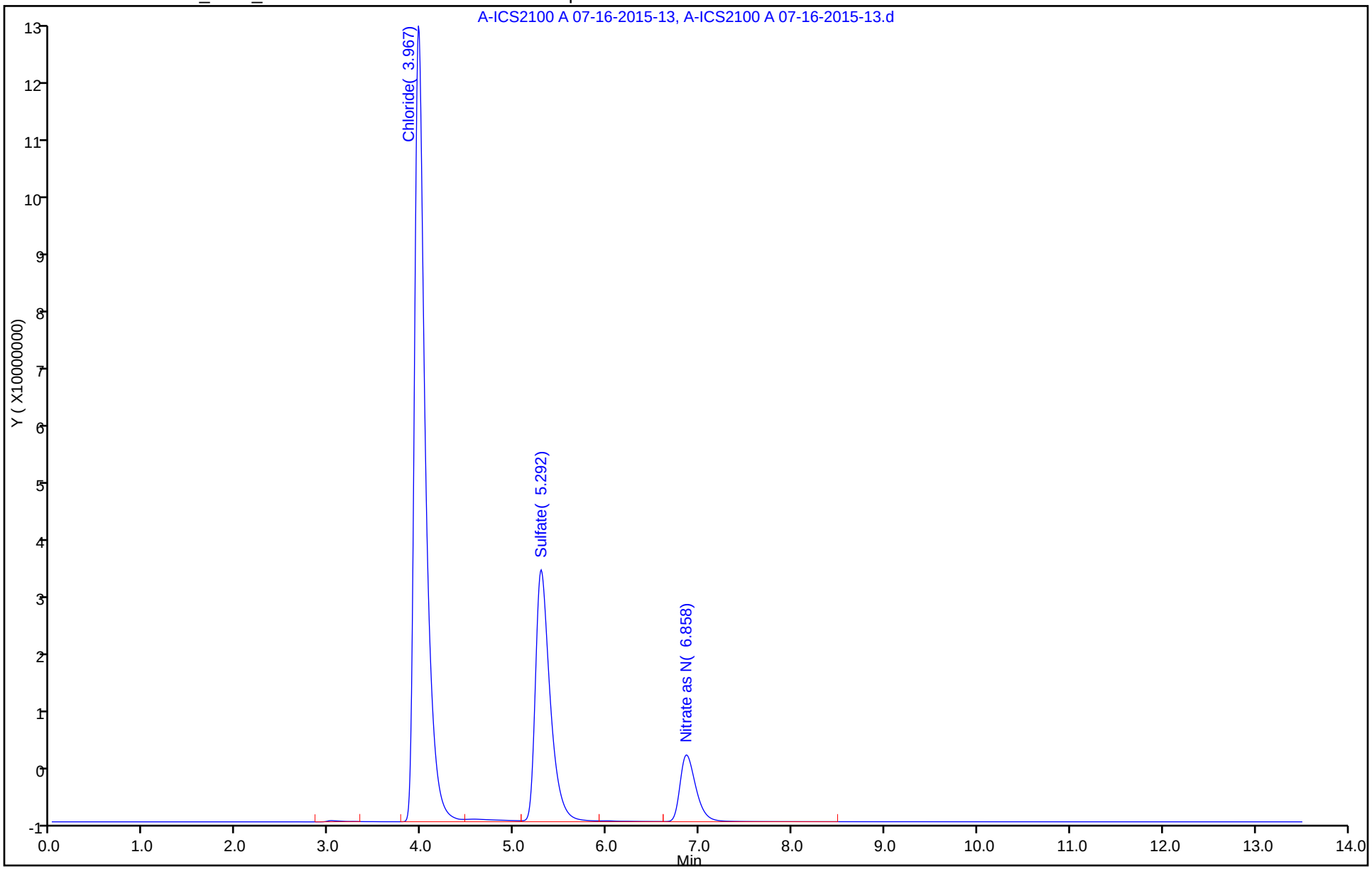
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.967	3.958	0.009	1029273797	47.9	
3 Sulfate	5.292	5.258	0.034	434447326	27.6	
5 Nitrate as N	6.858	6.850	0.008	125391525	2.34	

Report Date: 17-Jul-2015 11:57:12 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-13.d				
Injection Date:	16-Jul-2015 18:20:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-17	Lab Sample ID:	180-45946-17	Worklist Smp#:	13
Client ID:	HD-COD-SW-29-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-45946-18

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-14.d

Analysis Method: 300.0 Date Collected: 07/15/2015 08:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 18:37

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.3	B	0.10	0.0062
16887-00-6	Chloride	130	B	1.0	0.20
14808-79-8	Sulfate	33		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-14.d
Lims ID: 180-45946-A-18 Lab Sample ID: 180-45946-18
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 16-Jul-2015 18:37:00 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-014
Misc. Info.: 14 180-45946-a-18
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

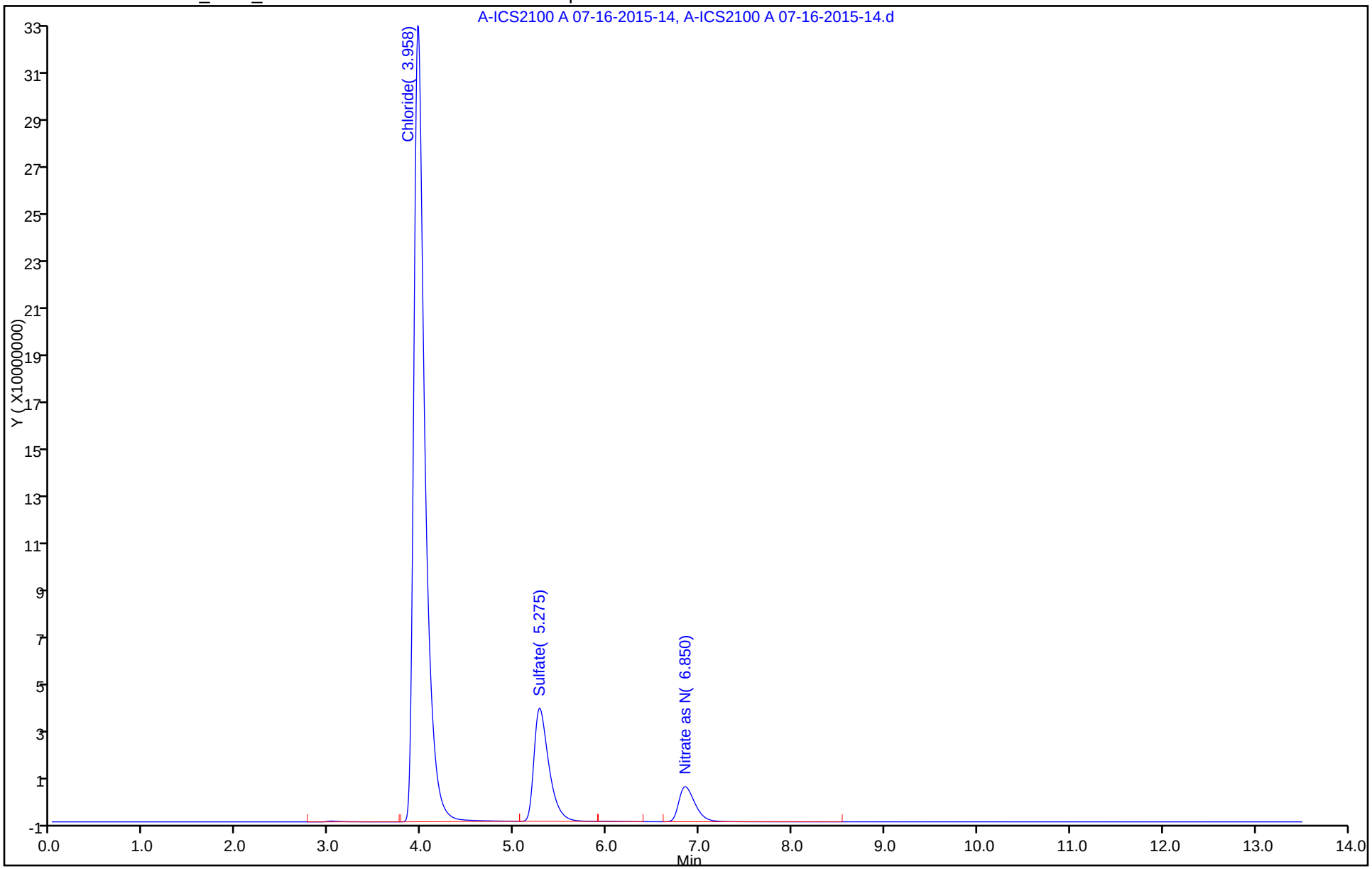
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.958	3.958	0.000	2775368863	129.0	
3 Sulfate	5.275	5.258	0.017	522454022	33.2	
5 Nitrate as N	6.850	6.850	0.000	177197403	3.31	

Report Date: 17-Jul-2015 11:57:12 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-14.d				
Injection Date:	16-Jul-2015 18:37:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-18	Lab Sample ID:	180-45946-18	Worklist Smp#:	14
Client ID:	HD-QC1-0/1-1				
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.: 180-45946-1 Analy Batch No.: 142103

SDG No.:

Instrument ID: CHIC2100A GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 05/19/2015 12:31 Calibration End Date: 05/19/2015 14:18 Calibration ID: 23936

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-142103/2	A-ICS2100 A 05-19-2015-2.d
Level 2	IC 180-142103/3	A-ICS2100 A 05-19-2015-3.d
Level 3	ICRT 180-142103/4	A-ICS2100 A 05-19-2015-4.d
Level 4	IC 180-142103/5	A-ICS2100 A 05-19-2015-5.d
Level 5	IC 180-142103/6	A-ICS2100 A 05-19-2015-6.d
Level 6	IC 180-142103/7	A-ICS2100 A 05-19-2015-7.d
Level 7	IC 180-142103/8	A-ICS2100 A 05-19-2015-8.d
Level 8	IC 180-142103/9	A-ICS2100 A 05-19-2015-9.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Fluoride	3.083	3.092	3.092	3.092	3.092	3.083	3.083	3.083			2.733 - 3.433	3.088
Chloride	4.067	4.067	4.067	4.058	4.058	4.050	4.042	4.033			3.700 - 4.400	4.055
Nitrite as N	4.708	4.708	4.708	4.708	4.708	+++++	+++++	+++++			4.450 - 4.950	4.708
Sulfate	5.433	5.433	5.425	5.408	5.367	5.325	5.275	5.258			5.025 - 5.725	5.366
Bromide	6.192	6.200	6.200	6.192	6.183	6.158	6.133	6.117			5.817 - 6.517	6.172
Nitrate as N	7.125	7.133	7.125	7.108	7.083	7.042	7.000	6.975			6.825 - 7.325	7.074
Orthophosphate as P	+++++	9.467	9.442	9.400	9.308	9.233	9.150	9.092			9.117 - 9.617	9.299

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1 Analy Batch No.: 142103

SDG No.:

Instrument ID: CHIC2100A GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 05/19/2015 12:31 Calibration End Date: 05/19/2015 14:18 Calibration ID: 23936

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-142103/2	A-ICS2100 A 05-19-2015-2.d
Level 2	IC 180-142103/3	A-ICS2100 A 05-19-2015-3.d
Level 3	ICRT 180-142103/4	A-ICS2100 A 05-19-2015-4.d
Level 4	IC 180-142103/5	A-ICS2100 A 05-19-2015-5.d
Level 5	IC 180-142103/6	A-ICS2100 A 05-19-2015-6.d
Level 6	IC 180-142103/7	A-ICS2100 A 05-19-2015-7.d
Level 7	IC 180-142103/8	A-ICS2100 A 05-19-2015-8.d
Level 8	IC 180-142103/9	A-ICS2100 A 05-19-2015-9.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	3455360 4386234	3874176 4081731	4200910 4084534	4193692 3739261	Lin2	-32984.443	4116745.50							0.9970		0.9950
Chloride	19689183 21359131	22242308 20493892	22712075 21671984	21258789 20612105	Lin2	-1514627.6	21518415.5							0.9980		0.9950
Nitrite as N	71586720 45200728	55889756 +++++	54188364 +++++	47372184 +++++	Lin2	1204022.56	48249506.8							0.9950		0.9950
Sulfate	16543334 15539008	17164970 14900977	17026632 15700707	15569128 14708371	Lin2	1203615.18	15684762.0							0.9970		0.9950
Bromide	8559145 9078427	10040729 9121705	10072858 9728017	8753657 9279629	Lin2	-144748.46	9455171.83							0.9970		0.9950
Nitrate as N	40718480 53252602	52290872 51583541	55641962 54966225	51654104 52320137	Lin2	-629659.24	53744179.8							0.9990		0.9950
Orthophosphate as P	+++++ 20034764	14182088 19801129	17226090 21353245	17663285 20080471	Lin	-1838363.9	20663065.4							0.9980		0.9950

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.: 180-45946-1 Analy Batch No.: 142103

SDG No.:

Instrument ID: CHIC2100A GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 05/19/2015 12:31 Calibration End Date: 05/19/2015 14:18 Calibration ID: 23936

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-142103/2	A-ICS2100 A 05-19-2015-2.d
Level 2	IC 180-142103/3	A-ICS2100 A 05-19-2015-3.d
Level 3	ICRT 180-142103/4	A-ICS2100 A 05-19-2015-4.d
Level 4	IC 180-142103/5	A-ICS2100 A 05-19-2015-5.d
Level 5	IC 180-142103/6	A-ICS2100 A 05-19-2015-6.d
Level 6	IC 180-142103/7	A-ICS2100 A 05-19-2015-7.d
Level 7	IC 180-142103/8	A-ICS2100 A 05-19-2015-8.d
Level 8	IC 180-142103/9	A-ICS2100 A 05-19-2015-9.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	172768 20408654	968544 30634003	2100455 37392605	4193692	10965585	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Chloride	Lin2	19689183 2049389234	111211541 3250797562	227120751 4122421026	425175787	1067956527	1.00 100	5.00 150	10.0 200	20.0	50.0
Nitrite as N	Lin2	3579336 +++++	13972439 +++++	27094182 +++++	47372184	113001820	0.0500 +++++	0.250 +++++	0.500 +++++	1.00	2.50
Sulfate	Lin2	16543334 1490097661	85824852 2355106108	170266320 2941674111	311382557	776950423	1.00 100	5.00 150	10.0 200	20.0	50.0
Bromide	Lin2	1711829 182434104	10040729 291840519	20145715 371185166	35014627	90784267	0.200 20.0	1.00 30.0	2.00 40.0	4.00	10.0
Nitrate as N	Lin2	2035924 257917705	13072718 412246685	27820981 523201370	51654104	133131506	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Orthophosphate as P	Lin	+++++ 99005645	3545522 160149338	8613045 200804708	17663285	50086909	+++++ 5.00	0.250 7.50	0.500 10.0	1.00	2.50

Curve Type Legend:

Lin = Linear
Lin2 = Linear 1/conc^2

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-2.d
Lims ID: ic L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 19-May-2015 12:31:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007010-002
Misc. Info.: 2 IC L2
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 20-May-2015 16:39:36 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK002

First Level Reviewer: hartmanm Date: 19-May-2015 19:34:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.083	3.083	0.000	172768H	0.0500	0.0500	
2 Chloride	4.067	4.050	0.017	19689183	1.00	0.9854	
7 Nitrite as N	4.708	4.700	0.008	3579336	0.0500	0.0492	
3 Sulfate	5.433	5.375	0.058	16543334	1.00	0.9780	
4 Bromide	6.192	6.167	0.025	1711829	0.2000	0.1964	
5 Nitrate as N	7.125	7.075	0.050	2035924	0.0500	0.0496	
6 Orthophosphate as P	9.467	9.367	0.100	427235	0.0500	0.1096	

Reagents:

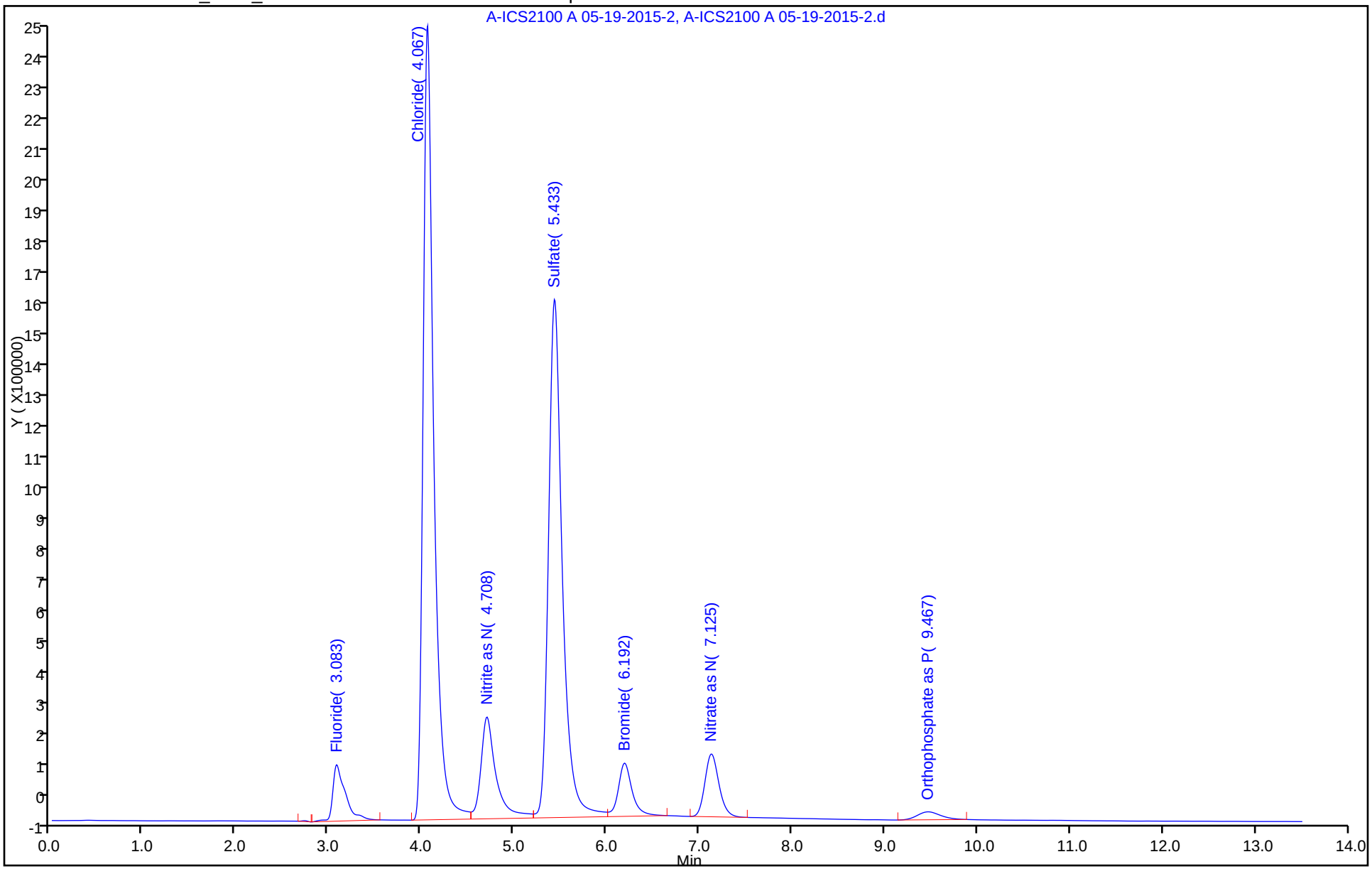
ICSTDL2_00179 Amount Added: 1.00 Units: mL

Report Date: 20-May-2015 16:39:37 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-2.d

Injection Date:	19-May-2015 12:31:00	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\20150519-7010.b\A-ICS2100 A 05-19-2015-3.d
Lims ID: ic L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-May-2015 12:46:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007010-003
Misc. Info.: 3 IC L3
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 20-May-2015 16:39:37 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK002

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.092	3.083	0.009	968544H	0.2500	0.2433	
2 Chloride	4.067	4.050	0.017	111211541	5.00	5.24	
7 Nitrite as N	4.708	4.700	0.008	13972439	0.2500	0.2646	
3 Sulfate	5.433	5.375	0.058	85824852	5.00	5.40	
4 Bromide	6.200	6.167	0.033	10040729	1.00	1.08	
5 Nitrate as N	7.133	7.075	0.058	13072718	0.2500	0.2550	
6 Orthophosphate as P	9.467	9.367	0.100	3545522	0.2500	0.2606	

Reagents:

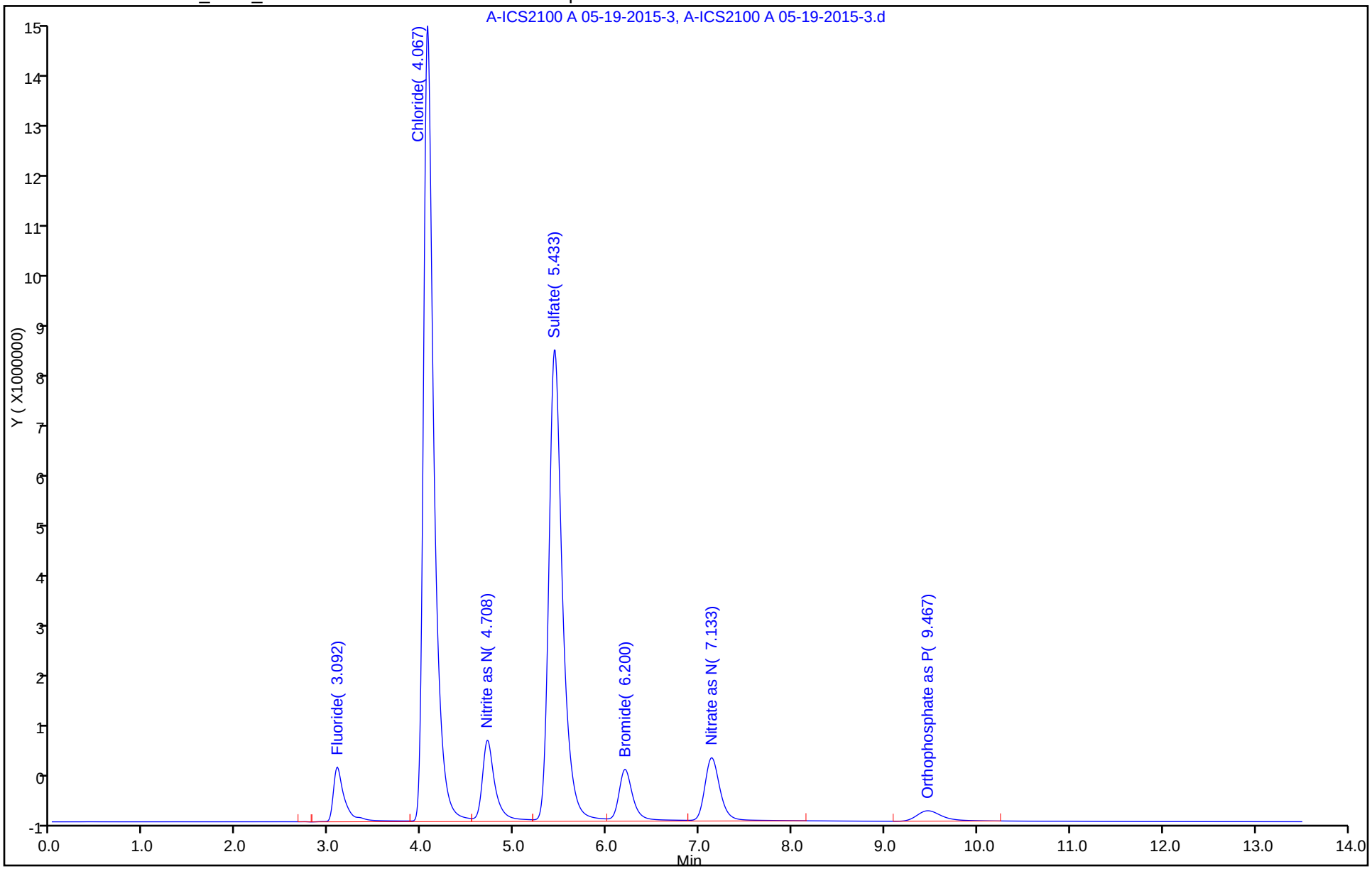
ICSTDL3_00225 Amount Added: 1.00 Units: mL

Report Date: 20-May-2015 16:39:37 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-3.d

Injection Date:	19-May-2015 12:46:00	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\20150519-7010.b\A-ICS2100 A 05-19-2015-4.d
Lims ID: icrt L4
Client ID:
Sample Type: ICRT Calib Level: 4
Inject. Date: 19-May-2015 13:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007010-004
Misc. Info.: 4 ICRT L4
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 20-May-2015 16:39:38 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK002

First Level Reviewer: hartmanm Date: 19-May-2015 19:34:18

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.092	3.092	0.000	2100455H	0.5000	0.5182	
2 Chloride	4.067	4.067	0.000	227120751	10.0	10.6	
7 Nitrite as N	4.708	4.708	0.000	27094182	0.5000	0.5366	
3 Sulfate	5.425	5.425	0.000	170266320	10.0	10.8	
4 Bromide	6.200	6.200	0.000	20145715	2.00	2.15	
5 Nitrate as N	7.125	7.125	0.000	27820981	0.5000	0.5294	
6 Orthophosphate as P	9.442	9.442	0.000	8613045	0.5000	0.5058	

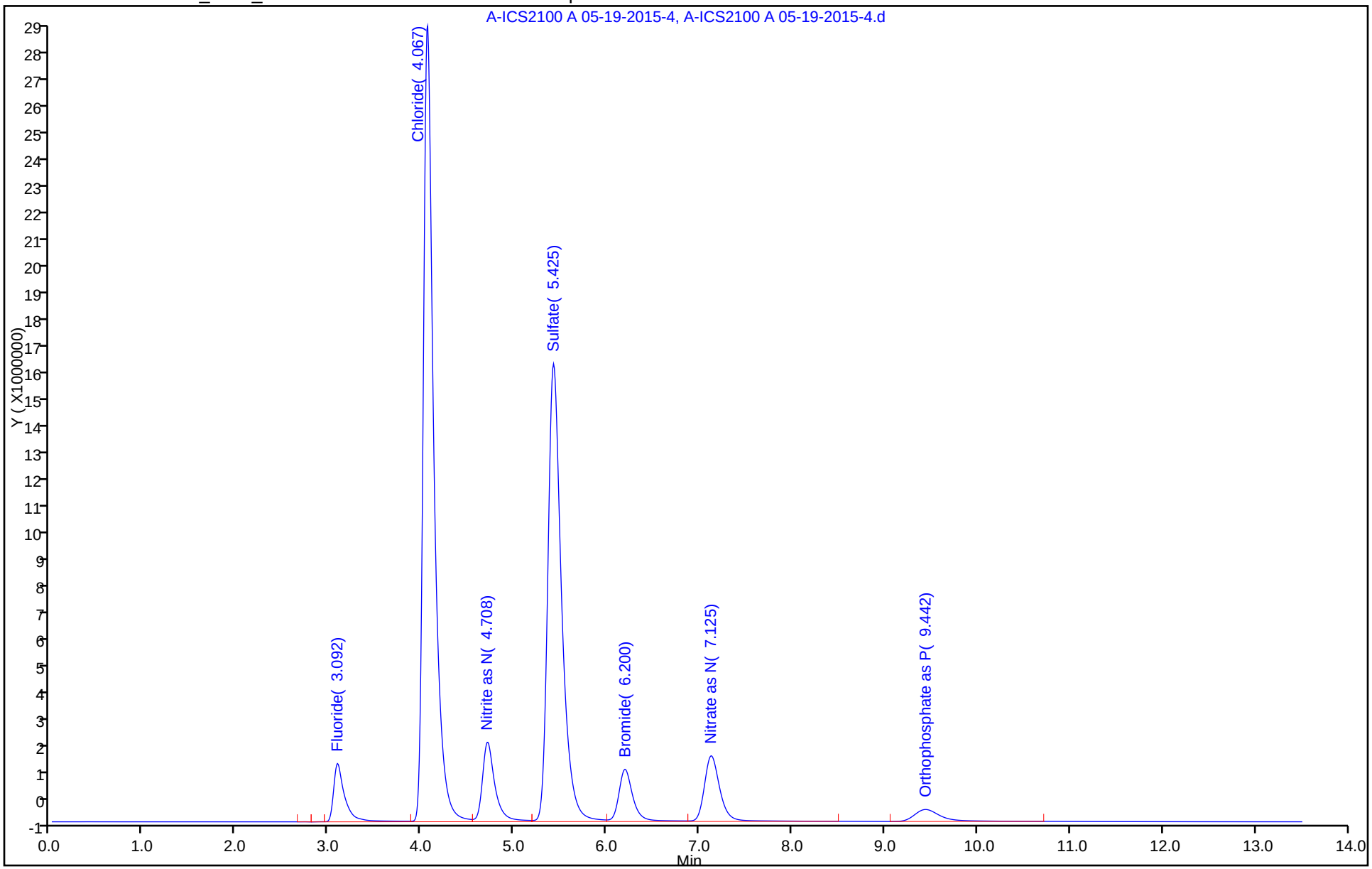
Reagents:

ICSTDL4_00150 Amount Added: 1.00 Units: mL

Report Date: 20-May-2015 16:39:38 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-4.d				
Injection Date:	19-May-2015 13:01:00	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\20150519-7010.b\A-ICS2100 A 05-19-2015-5.d
Lims ID: ic L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-May-2015 13:17:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007010-005
Misc. Info.: 5 IC L5
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 20-May-2015 16:39:38 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK002

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.092	3.092	0.000	4193692H	1.00	1.03	
2 Chloride	4.058	4.067	-0.009	425175787	20.0	19.8	
7 Nitrite as N	4.708	4.708	0.000	47372184	1.00	0.9569	
3 Sulfate	5.408	5.425	-0.017	311382557	20.0	19.8	
4 Bromide	6.192	6.200	-0.008	35014627	4.00	3.72	
5 Nitrate as N	7.108	7.125	-0.017	51654104	1.00	0.9728	
6 Orthophosphate as P	9.400	9.442	-0.042	17663285	1.00	0.9438	

Reagents:

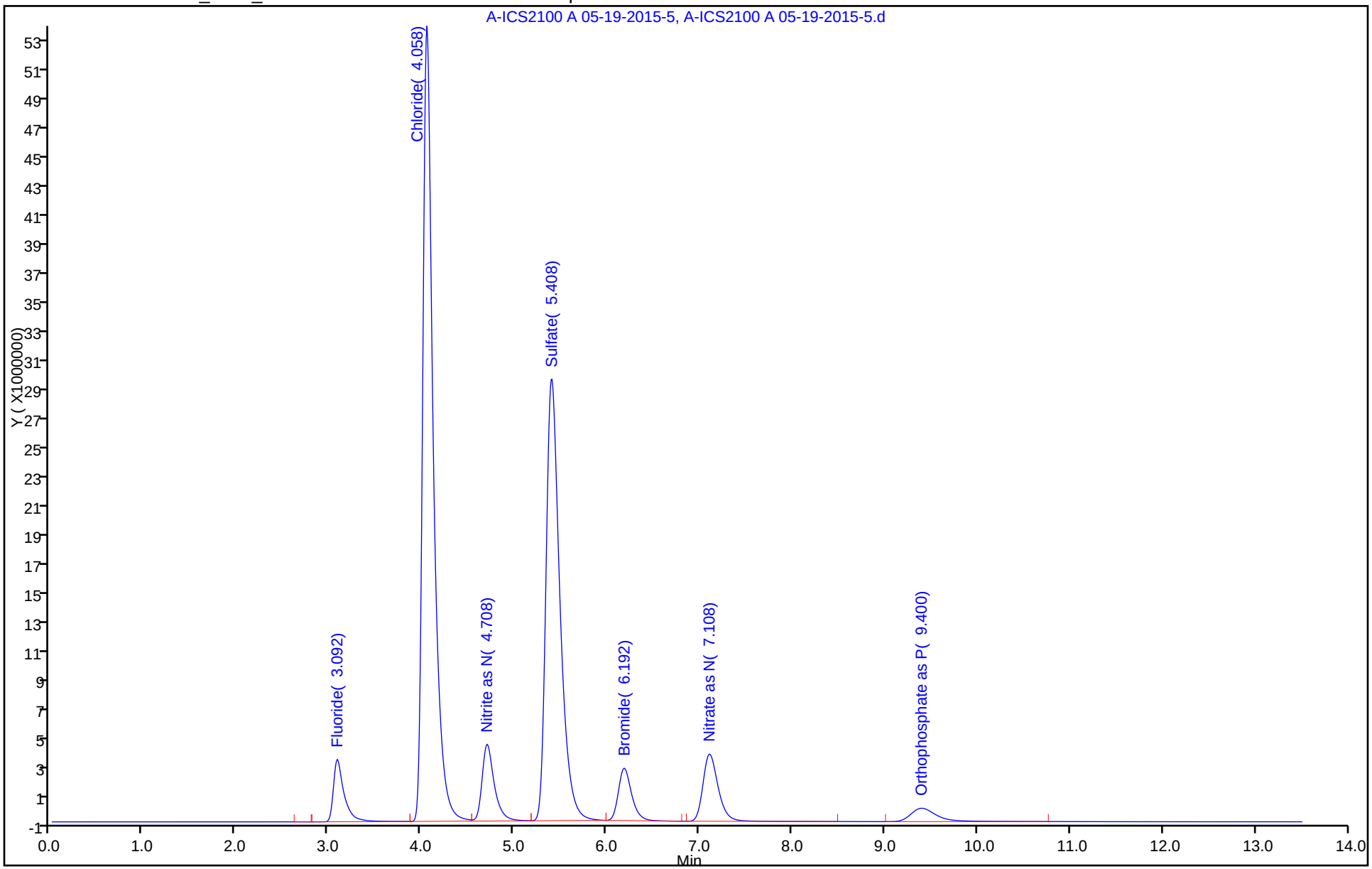
ICSTDL5_00156 Amount Added: 1.00 Units: mL

Report Date: 20-May-2015 16:39:38 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-5.d

Injection Date:	19-May-2015 13:17:00	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\20150519-7010.b\A-ICS2100 A 05-19-2015-6.d				
Lims ID:	ic L6				
Client ID:					
Sample Type:	IC	Calib Level:	6		
Inject. Date:	19-May-2015 13:32:00	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0007010-006				
Misc. Info.:	6 IC L6				
Operator ID:		Instrument ID:	CHIC2100A		
Sublist:	chrom-300_9056_CHIC2100A*sub3				
Method:	\\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	20-May-2015 16:39:39	Calib Date:	19-May-2015 14:18:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK002				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.092	3.092	0.000	10965585H	2.50	2.67	
2 Chloride	4.058	4.067	-0.009	1067956527	50.0	49.7	
7 Nitrite as N	4.708	4.708	0.000	113001820	2.50	2.32	
3 Sulfate	5.367	5.425	-0.058	776950423	50.0	49.5	
4 Bromide	6.183	6.200	-0.017	90784267	10.0	9.62	
5 Nitrate as N	7.083	7.125	-0.042	133131506	2.50	2.49	
6 Orthophosphate as P	9.308	9.442	-0.134	50086909	2.50	2.51	

Reagents:

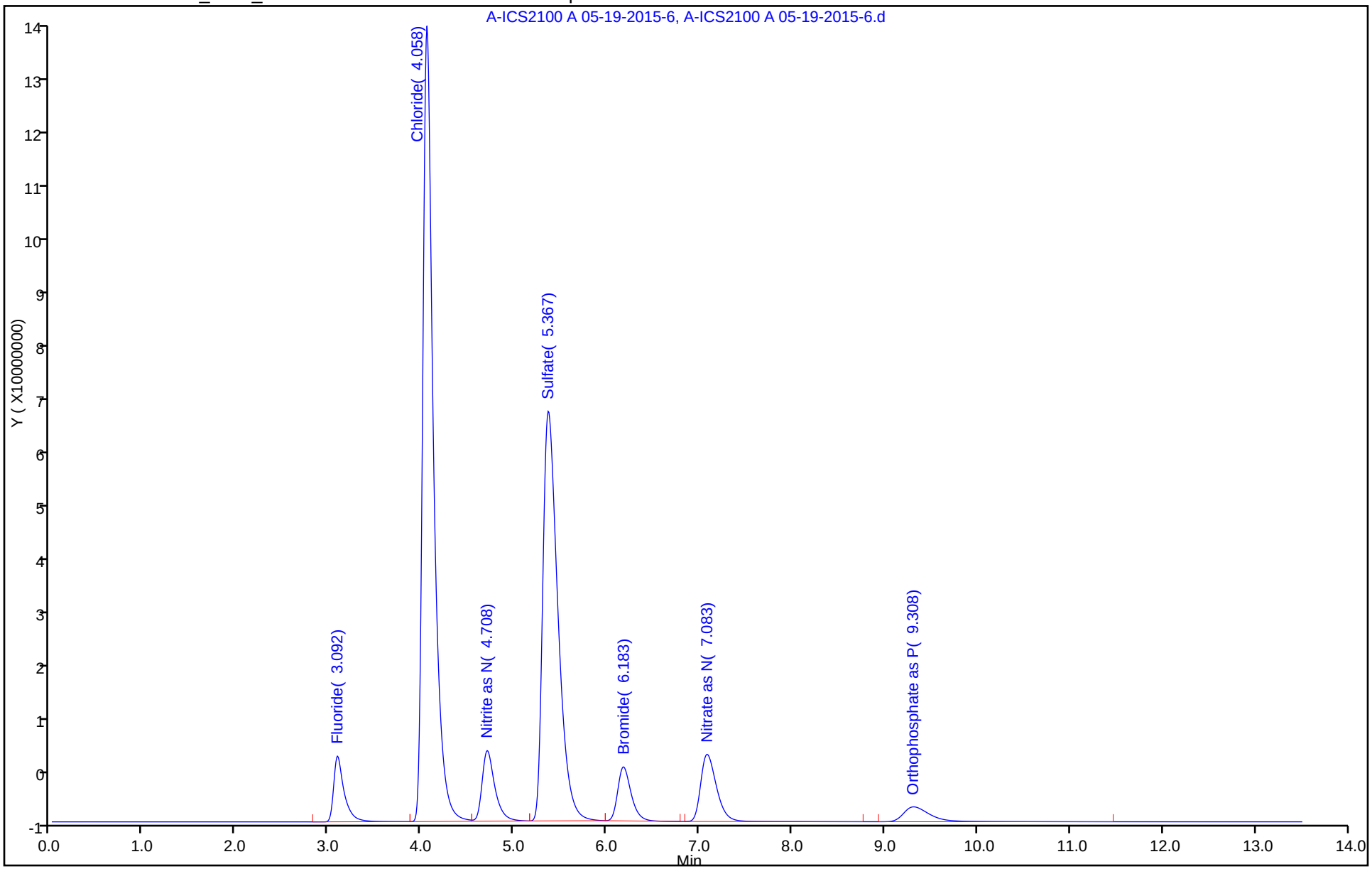
ICSTDL6_00228 Amount Added: 1.00 Units: mL

Report Date: 20-May-2015 16:39:39 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-6.d

Injection Date:	19-May-2015 13:32:00	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\20150519-7010.b\A-ICS2100 A 05-19-2015-7.d
Lims ID: ic L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 19-May-2015 13:47:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007010-007
Misc. Info.: 7 IC L7
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 20-May-2015 16:39:39 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK002

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.083	3.092	-0.009	20408654H	5.00	4.97	
2 Chloride	4.050	4.067	-0.017	2049389234	100.0	95.3	
7 Nitrite as N	4.700	4.708	-0.008	209281469	5.00	4.31	
3 Sulfate	5.325	5.425	-0.100	1490097661	100.0	94.9	
4 Bromide	6.158	6.200	-0.042	182434104	20.0	19.3	
5 Nitrate as N	7.042	7.125	-0.083	257917705	5.00	4.81	
6 Orthophosphate as P	9.233	9.442	-0.209	99005645	5.00	4.88	

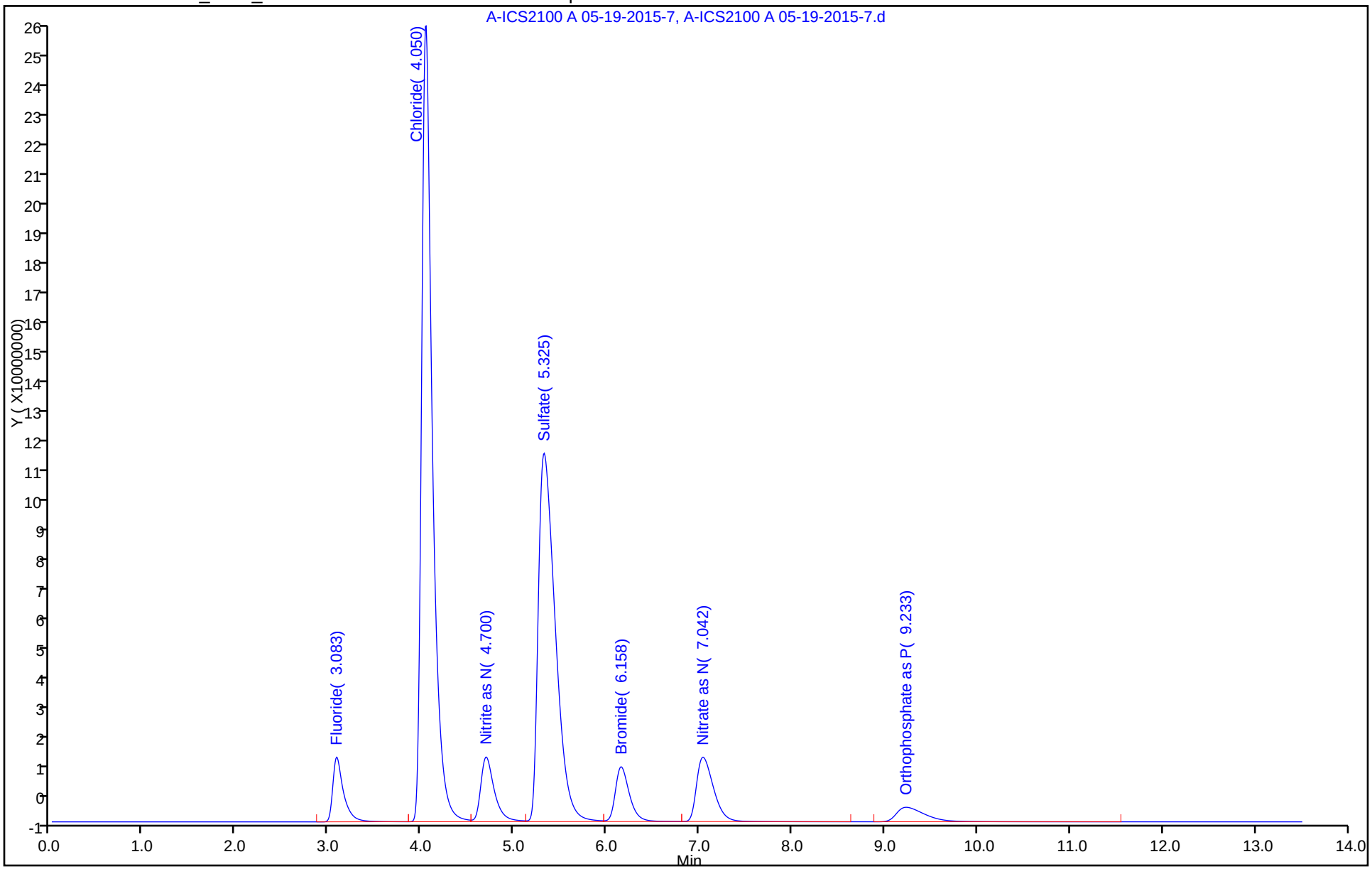
Reagents:

ICSTDL7_00149 Amount Added: 1.00 Units: mL

Report Date: 20-May-2015 16:39:39 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-7.d				
Injection Date:	19-May-2015 13:47:00	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		



Report Date: 20-May-2015 16:39:40 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-8.d
Lims ID: ic L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 19-May-2015 14:03:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007010-008
Misc. Info.: 8 IC L8
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 20-May-2015 16:39:40 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK002

First Level Reviewer: hartmanm Date: 19-May-2015 19:35:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.083	3.092	-0.009	30634003H	7.50	7.45	
2 Chloride	4.042	4.067	-0.025	3250797562	150.0	151.1	
7 Nitrite as N	4.683	4.708	-0.025	312548798	7.50	6.45	
3 Sulfate	5.275	5.425	-0.150	2355106108	150.0	150.1	
4 Bromide	6.133	6.200	-0.067	291840519	30.0	30.9	
5 Nitrate as N	7.000	7.125	-0.125	412246685	7.50	7.68	
6 Orthophosphate as P	9.150	9.442	-0.292	160149338	7.50	7.84	

Reagents:

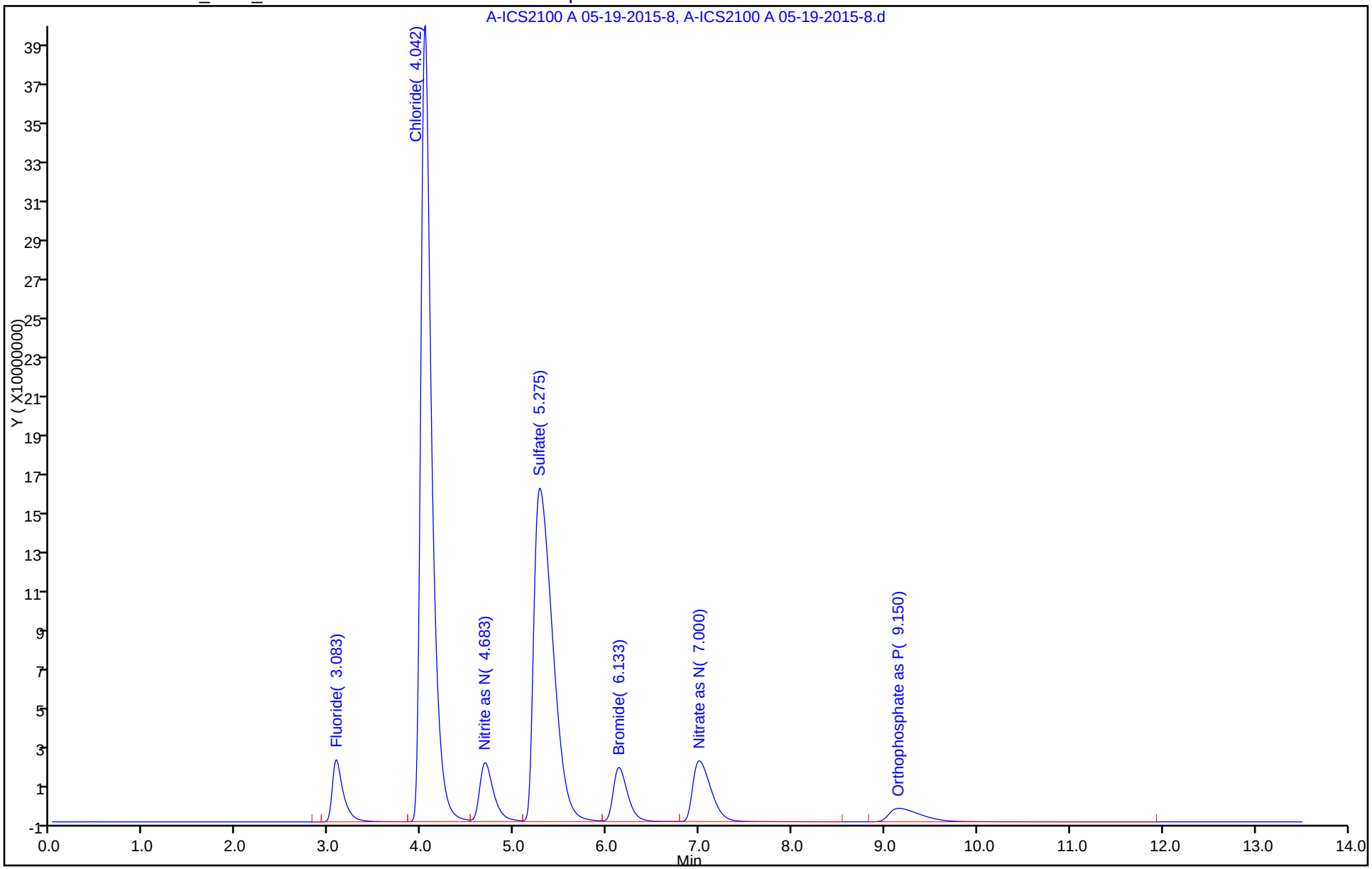
ICSTDL8_00118 Amount Added: 1.00 Units: mL

Report Date: 20-May-2015 16:39:40 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-8.d

Injection Date:	19-May-2015 14:03:00	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\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d
Lims ID: ic L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 19-May-2015 14:18:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007010-009
Misc. Info.: 9 IC L9
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 20-May-2015 16:39:40 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK002

First Level Reviewer: hartmanm Date: 19-May-2015 19:38:31

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.083	3.092	-0.009	37392605H	10.0	9.09	
2 Chloride	4.033	4.067	-0.034	4122421026	200.0	191.6	
7 Nitrite as N	4.683	4.708	-0.025	385383668	10.0	7.96	
3 Sulfate	5.258	5.425	-0.167	2941674111	200.0	187.5	
4 Bromide	6.117	6.200	-0.083	371185166	40.0	39.3	
5 Nitrate as N	6.975	7.125	-0.150	523201370	10.0	9.75	
6 Orthophosphate as P	9.092	9.442	-0.350	200804708	10.0	9.81	

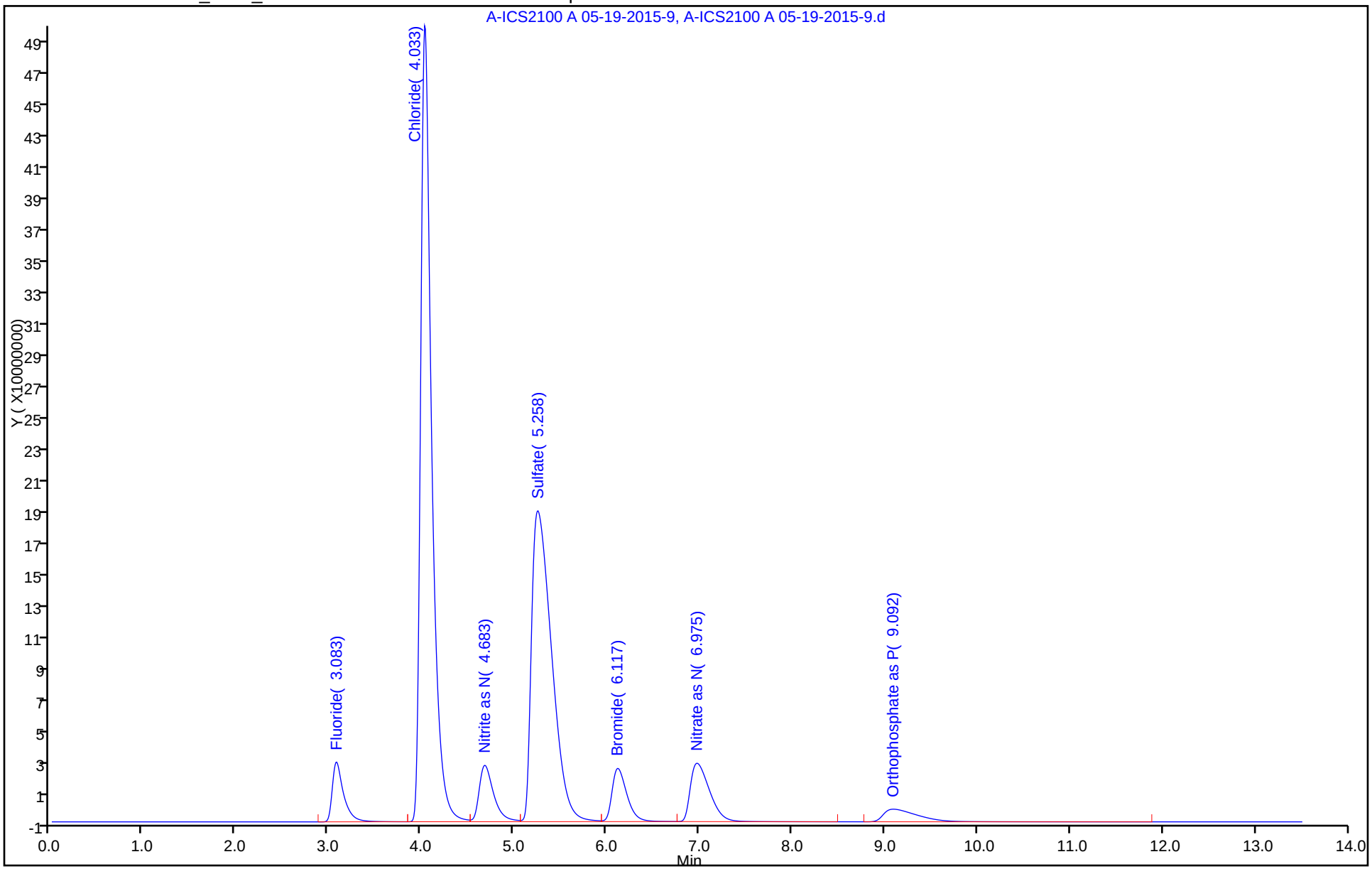
Reagents:

ICSTDL9_00119 Amount Added: 1.00 Units: mL

Report Date: 20-May-2015 16:39:41 Chrom Revision: 2.2 05-May-2015 11:39:10

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d				
Injection Date:	19-May-2015 14:18:00	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 VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1 Analy Batch No.: 138618

SDG No.:

Instrument ID: CHICS2100B GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/15/2015 15:44 Calibration End Date: 04/15/2015 17:45 Calibration ID: 23326

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-138618/2	B-ICS2100 B 04-15-2015-2.d
Level 2	IC 180-138618/3	B-ICS2100 B 04-15-2015-3.d
Level 3	ICRT 180-138618/4	B-ICS2100 B 04-15-2015-4.d
Level 4	IC 180-138618/5	B-ICS2100 B 04-15-2015-5.d
Level 5	IC 180-138618/6	B-ICS2100 B 04-15-2015-6.d
Level 6	IC 180-138618/7	B-ICS2100 B 04-15-2015-7.d
Level 7	IC 180-138618/8	B-ICS2100 B 04-15-2015-8.d
Level 8	IC 180-138618/9	B-ICS2100 B 04-15-2015-9.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Fluoride	3.658	3.658	3.658	3.667	3.667	3.667	3.667	3.675			3.308 - 4.008	3.665
Chloride	4.950	4.950	4.942	4.942	4.933	4.933	4.925	4.917			4.592 - 5.292	4.937
Nitrite as N	5.817	5.817	5.817	5.817	5.817	5.817	+++++	+++++			5.567 - 6.067	5.817
Sulfate	6.858	6.850	6.833	6.808	6.750	6.683	6.625	6.575			6.483 - 7.183	6.748
Bromide	7.817	7.817	7.808	7.808	7.783	7.767	7.733	7.717			7.458 - 8.158	7.781
Nitrate as N	9.100	9.100	9.083	9.067	9.017	8.967	8.917	8.875			8.833 - 9.333	9.016
Orthophosphate as P	+++++	+++++	12.633	12.600	12.467	12.317	12.183	12.083			12.133 - 13.133	12.381

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1 Analy Batch No.: 138618

SDG No.:

Instrument ID: CHICS2100B GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/15/2015 15:44 Calibration End Date: 04/15/2015 17:45 Calibration ID: 23326

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-138618/2	B-ICS2100 B 04-15-2015-2.d
Level 2	IC 180-138618/3	B-ICS2100 B 04-15-2015-3.d
Level 3	ICRT 180-138618/4	B-ICS2100 B 04-15-2015-4.d
Level 4	IC 180-138618/5	B-ICS2100 B 04-15-2015-5.d
Level 5	IC 180-138618/6	B-ICS2100 B 04-15-2015-6.d
Level 6	IC 180-138618/7	B-ICS2100 B 04-15-2015-7.d
Level 7	IC 180-138618/8	B-ICS2100 B 04-15-2015-8.d
Level 8	IC 180-138618/9	B-ICS2100 B 04-15-2015-9.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	46484040 44488770	41188952 43022992	45611308 42521689	45839580 41976790	Lin2	142149.513	43397203.3							0.9980		0.9950
Chloride	25085564 26660142	26222144 26369330	26666796 26648824	26747431 26853496	Lin2	-1610994.2	26686961.8							1.0000		0.9950
Nitrite as N	76927840 57882564	60781072 54059356	61607114 +++++	61339242 +++++	Lin2	972853.413	57624405.7							0.9980		0.9950
Sulfate	23335222 19577256	20457294 19212636	19964310 19359210	19887329 19477723	Lin2	3912770.84	19478213.4							1.0000		0.9950
Bromide	835850 915403	853785 881845	884616 868328	909169 849773	Lin2	-9816.0251	883383.993							0.9990		0.9950
Nitrate as N	55575600 66453469	60515684 66412101	63992838 67380292	65497209 68126262	Lin2	-571568.42	66232763.7							0.9990		0.9950
Orthophosphate as P	+++++ 26468473	+++++ 26383080	23630620 26946762	24921352 27192225	Lin2	-1805036.3	27076969.6							1.0000		0.9950

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.: 180-45946-1 Analy Batch No.: 138618

SDG No.:

Instrument ID: CHICS2100B GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/15/2015 15:44 Calibration End Date: 04/15/2015 17:45 Calibration ID: 23326

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-138618/2	B-ICS2100 B 04-15-2015-2.d
Level 2	IC 180-138618/3	B-ICS2100 B 04-15-2015-3.d
Level 3	ICRT 180-138618/4	B-ICS2100 B 04-15-2015-4.d
Level 4	IC 180-138618/5	B-ICS2100 B 04-15-2015-5.d
Level 5	IC 180-138618/6	B-ICS2100 B 04-15-2015-6.d
Level 6	IC 180-138618/7	B-ICS2100 B 04-15-2015-7.d
Level 7	IC 180-138618/8	B-ICS2100 B 04-15-2015-8.d
Level 8	IC 180-138618/9	B-ICS2100 B 04-15-2015-9.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	2324202 215114961	10297238 318912666	22805654 419767900	45839580	111221925	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Chloride	Lin2	25085564 2636933019	131110722 3997323672	266667960 5370699112	534948618	1333007108	1.00 100	5.00 150	10.0 200	20.0	50.0
Nitrite as N	Lin2	3846392 270296782	15195268 +++++	30803557 +++++	61339242	144706410	0.0500 5.00	0.250 +++++	0.500 +++++	1.00	2.50
Sulfate	Lin2	23335222 1921263587	102286469 2903881535	199643096 3895544554	397746587	978862804	1.00 100	5.00 150	10.0 200	20.0	50.0
Bromide	Lin2	167170 17636894	853785 26049842	1769232 33990920	3636676	9154030	0.200 20.0	1.00 30.0	2.00 40.0	4.00	10.0
Nitrate as N	Lin2	2778780 332060506	15128921 505352191	31996419 681262618	65497209	166133672	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Orthophosphate as P	Lin2	+++++ 131915399	+++++ 202100715	11815310 271922248	24921352	66171182	+++++ 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\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-2.d
Lims ID: ic L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 15-Apr-2015 15:44:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0006484-002
Misc. Info.: 3659 ic l2
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 16-Apr-2015 12:08:32 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK011

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.658	3.658	0.000	2324202	0.0500	0.0503	
2 Chloride	4.950	4.942	0.008	25085564	1.00	1.00	
7 Nitrite as N	5.817	5.817	0.000	3846392	0.0500	0.0499	
3 Sulfate	6.858	6.833	0.025	23335222	1.00	1.00	
4 Bromide	7.817	7.808	0.009	167170H	0.2000	0.2004	
5 Nitrate as N	9.100	9.083	0.017	2778780	0.0500	0.0506	
6 Orthophosphate as P	12.667	12.633	0.034	870881	0.0500	0.0988	

Reagents:

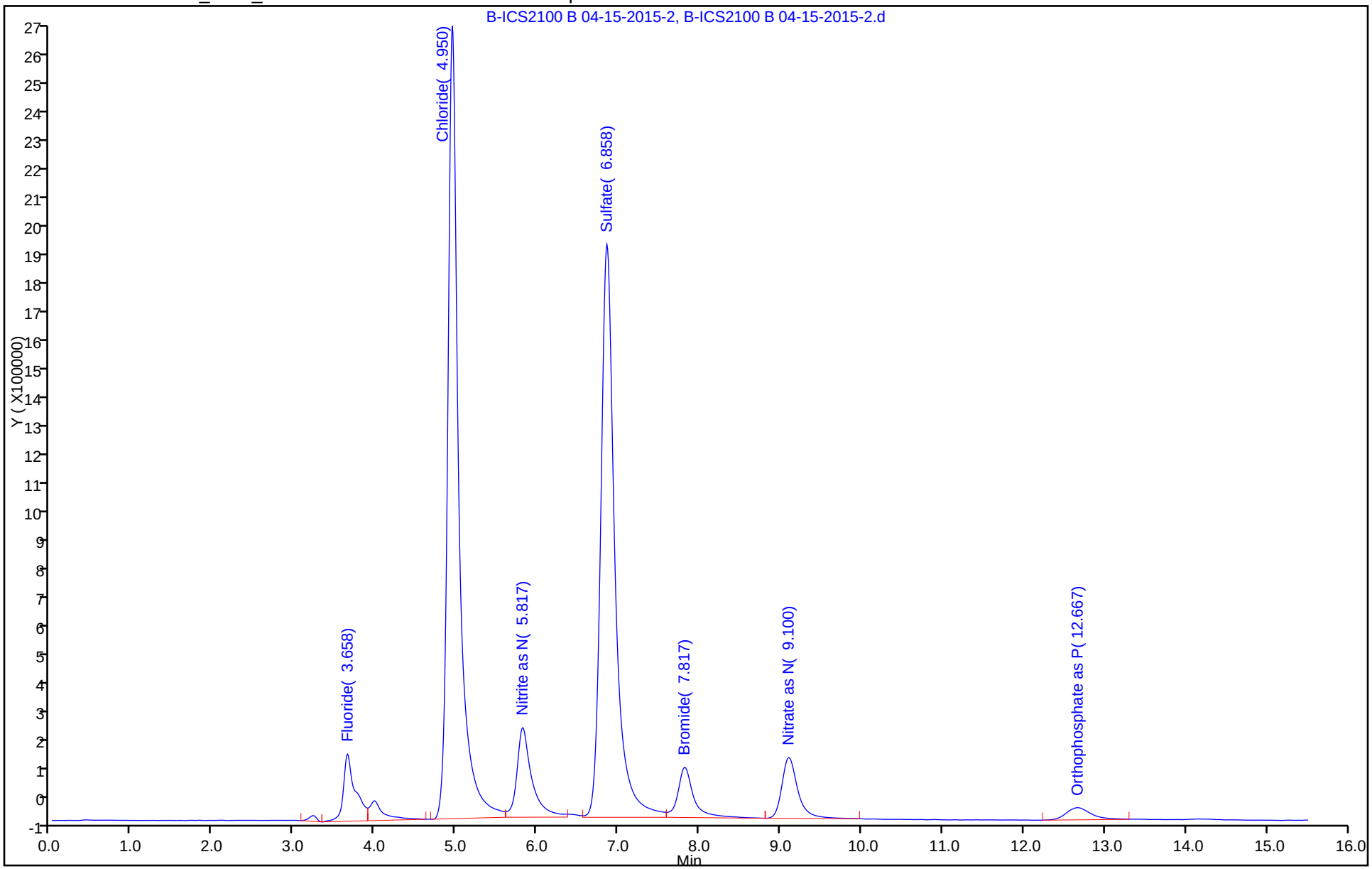
ICSTDL2_00171 Amount Added: 1.00 Units: mL

Report Date: 16-Apr-2015 12:08:32 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-2.d

Injection Date:	15-Apr-2015 15:44:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-3.d
Lims ID: ic L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 15-Apr-2015 16:01:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0006484-003
Misc. Info.: 27860 ic l3
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 16-Apr-2015 12:08:32 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK011

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.658	3.658	0.000	10297238	0.2500	0.2340	
2 Chloride	4.950	4.942	0.008	131110722	5.00	4.97	
7 Nitrite as N	5.817	5.817	0.000	15195268	0.2500	0.2468	
3 Sulfate	6.850	6.833	0.017	102286469	5.00	5.05	
4 Bromide	7.817	7.808	0.009	853785H	1.00	0.9776	
5 Nitrate as N	9.100	9.083	0.017	15128921	0.2500	0.2371	
6 Orthophosphate as P	12.667	12.633	0.034	5299466	0.2500	0.2624	

Reagents:

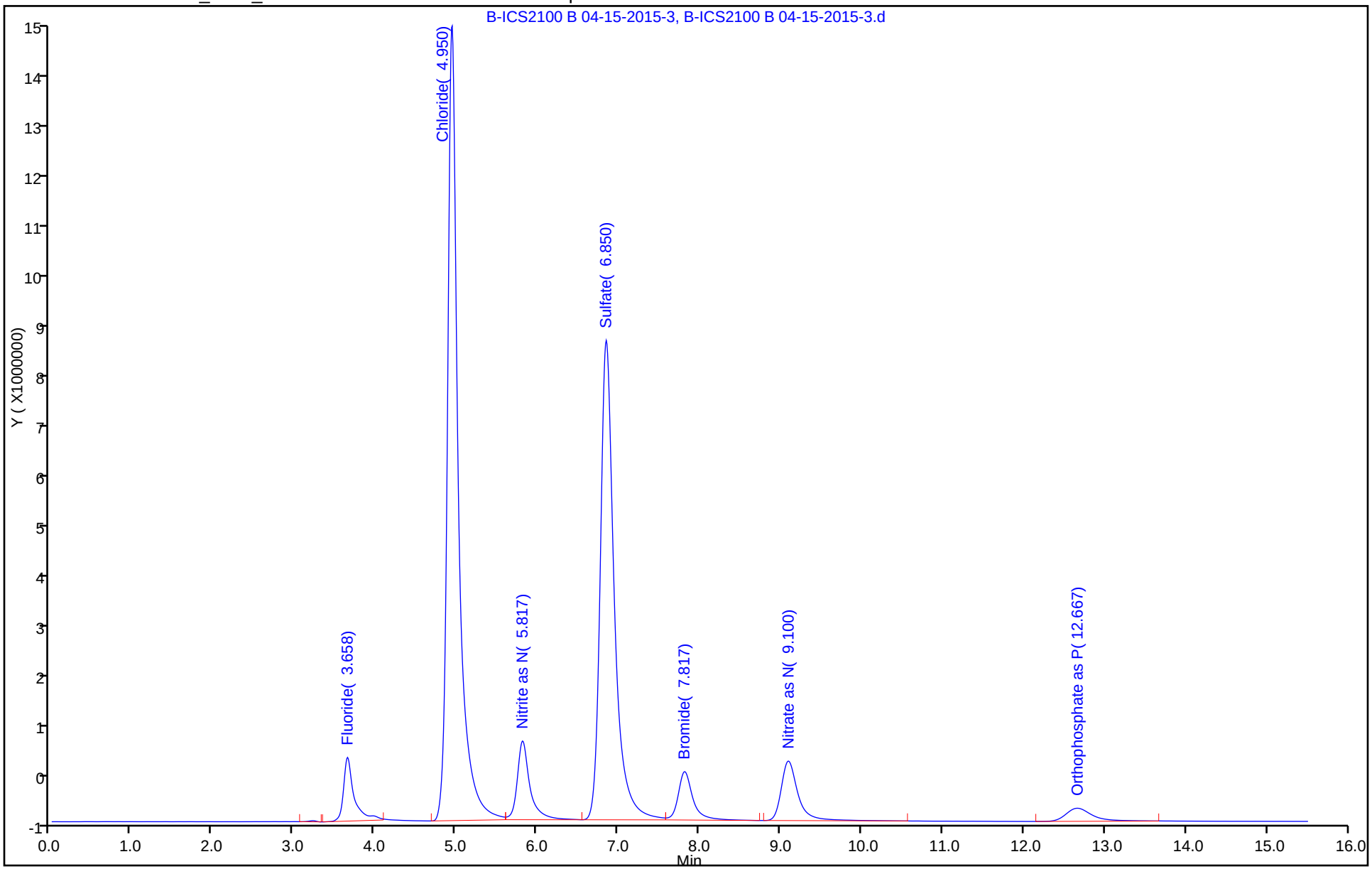
ICSTDL3_00209 Amount Added: 1.00 Units: mL

Report Date: 16-Apr-2015 12:08:32 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-3.d

Injection Date:	15-Apr-2015 16:01:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-4.d
Lims ID: icrt L4
Client ID:
Sample Type: ICRT Calib Level: 4
Inject. Date: 15-Apr-2015 16:19:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0006484-004
Misc. Info.: 21504 icrt l4
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 16-Apr-2015 12:08:32 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK011

First Level Reviewer: hartmanm Date: 16-Apr-2015 11:57:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.658	3.658	0.000	22805654	0.5000	0.5222	
2 Chloride	4.942	4.942	0.000	266667960	10.0	10.1	
7 Nitrite as N	5.817	5.817	0.000	30803557	0.5000	0.5177	
3 Sulfate	6.833	6.833	0.000	199643096	10.0	10.0	
4 Bromide	7.808	7.808	0.000	1769232H	2.00	2.01	
5 Nitrate as N	9.083	9.083	0.000	31996419	0.5000	0.4917	
6 Orthophosphate as P	12.633	12.633	0.000	11815310	0.5000	0.5030	

Reagents:

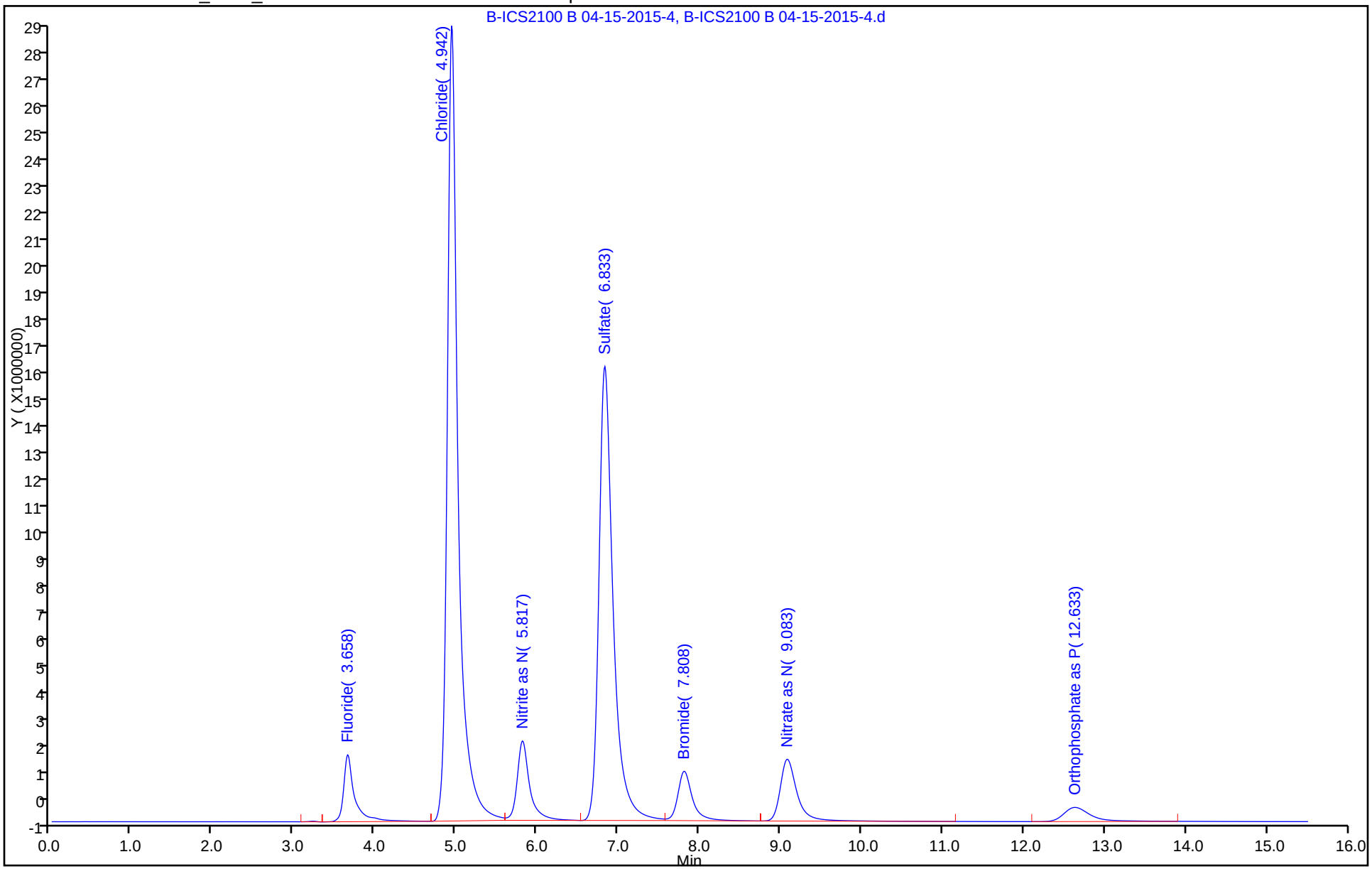
ICSTDL4_00143 Amount Added: 1.00 Units: mL

Report Date: 16-Apr-2015 12:08:33 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-4.d

Injection Date:	15-Apr-2015 16:19:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-5.d
Lims ID: ic L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 15-Apr-2015 16:36:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0006484-005
Misc. Info.: 13847 ic l5
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 16-Apr-2015 12:08:33 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK011

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.667	3.658	0.009	45839580	1.00	1.05	
2 Chloride	4.942	4.942	0.000	534948618	20.0	20.1	
7 Nitrite as N	5.817	5.817	0.000	61339242	1.00	1.05	
3 Sulfate	6.808	6.833	-0.025	397746587	20.0	20.2	
4 Bromide	7.808	7.808	0.000	3636676	4.00	4.13	H
5 Nitrate as N	9.067	9.083	-0.016	65497209	1.00	1.00	
6 Orthophosphate as P	12.600	12.633	-0.033	24921352	1.00	0.9871	

Reagents:

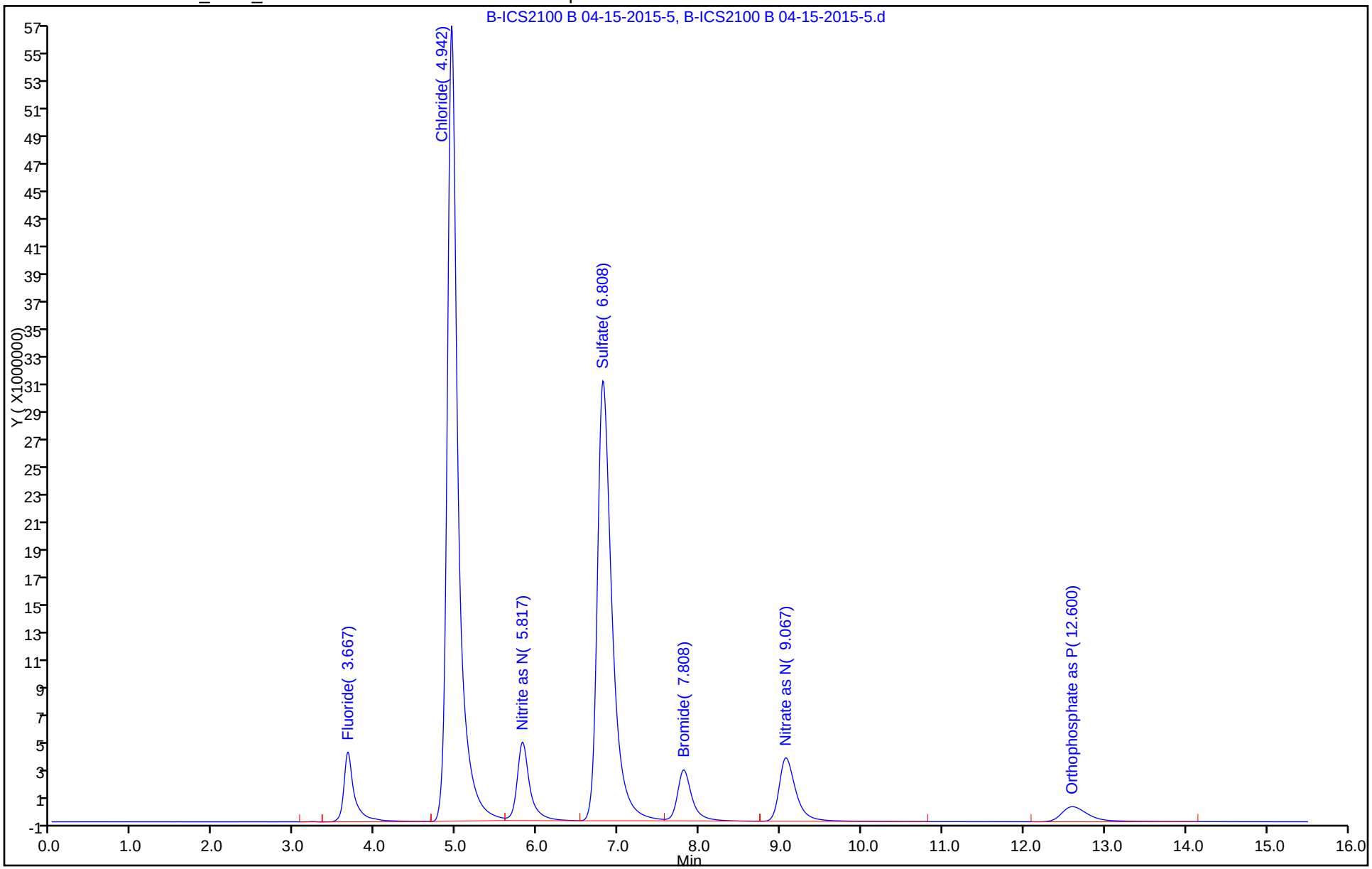
ICSTDL5_00145 Amount Added: 1.00 Units: mL

Report Date: 16-Apr-2015 12:08:33 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-5.d

Injection Date:	15-Apr-2015 16:36:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-6.d
Lims ID: ic L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 15-Apr-2015 16:53:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0006484-006
Misc. Info.: 10546 ic l6
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 16-Apr-2015 12:08:33 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK011

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.667	3.658	0.009	111221925	2.50	2.56	
2 Chloride	4.933	4.942	-0.009	1333007108	50.0	50.0	
7 Nitrite as N	5.817	5.817	0.000	144706410	2.50	2.49	
3 Sulfate	6.750	6.833	-0.083	978862804	50.0	50.1	
4 Bromide	7.783	7.808	-0.025	9154030	10.0	10.4	H
5 Nitrate as N	9.017	9.083	-0.066	166133672	2.50	2.52	
6 Orthophosphate as P	12.467	12.633	-0.166	66171182	2.50	2.51	

Reagents:

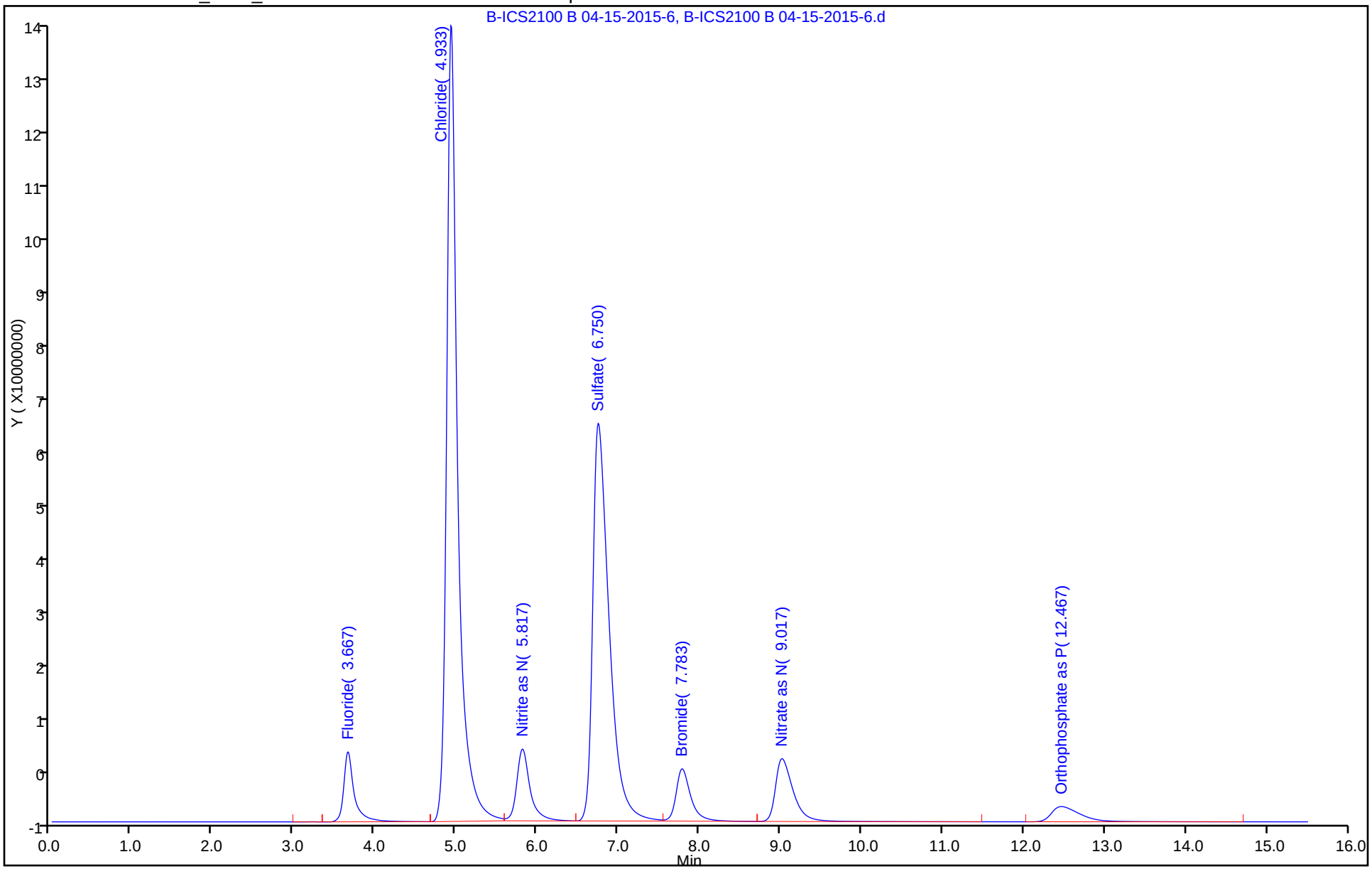
ICSTDL6_00213 Amount Added: 1.00 Units: mL

Report Date: 16-Apr-2015 12:08:33 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-6.d

Injection Date:	15-Apr-2015 16:53:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-7.d
Lims ID: ic L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 15-Apr-2015 17:11:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0006484-007
Misc. Info.: 9005 ic l7
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 16-Apr-2015 12:08:34 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK011

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.667	3.658	0.009	215114961	5.00	4.95	
2 Chloride	4.933	4.942	-0.009	2636933019	100.0	98.9	
7 Nitrite as N	5.817	5.817	0.000	270296782	5.00	4.67	
3 Sulfate	6.683	6.833	-0.150	1921263587	100.0	98.4	
4 Bromide	7.767	7.808	-0.041	17636894	20.0	20.0	H
5 Nitrate as N	8.967	9.083	-0.116	332060506	5.00	5.02	
6 Orthophosphate as P	12.317	12.633	-0.316	131915399	5.00	4.94	

Reagents:

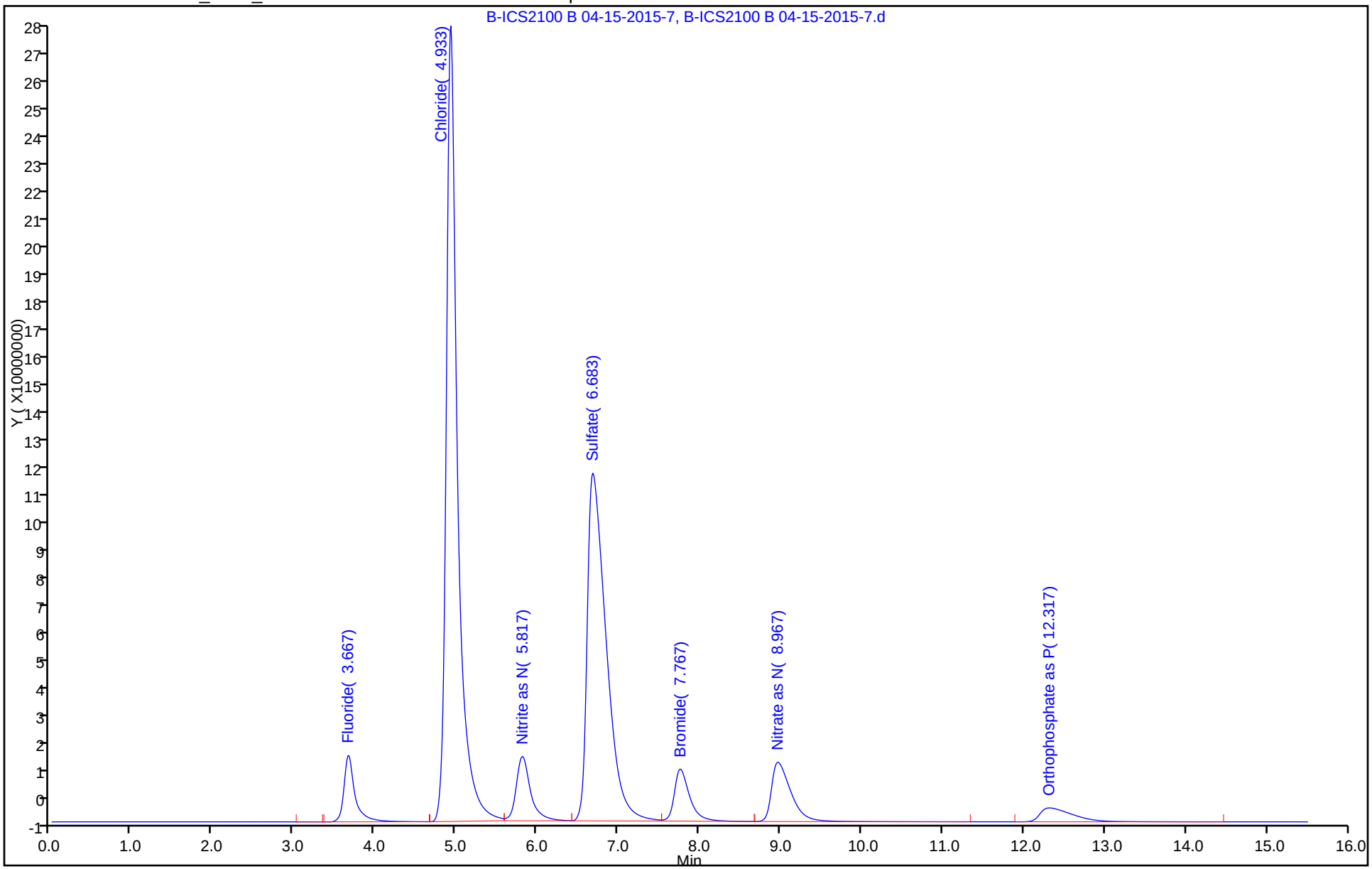
ICSTDL7_00141 Amount Added: 1.00 Units: mL

Report Date: 16-Apr-2015 12:08:34 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-7.d

Injection Date:	15-Apr-2015 17:11:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-8.d
Lims ID: ic L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 15-Apr-2015 17:28:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0006484-008
Misc. Info.: 7430 ic l8
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 16-Apr-2015 12:08:34 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK011

First Level Reviewer: hartmanm Date: 16-Apr-2015 12:00:41

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.667	3.658	0.009	318912666	7.50	7.35	
2 Chloride	4.925	4.942	-0.017	3997323672	150.0	149.8	
7 Nitrite as N	5.808	5.817	-0.009	362807489	7.50	6.28	
3 Sulfate	6.625	6.833	-0.208	2903881535	150.0	148.9	
4 Bromide	7.733	7.808	-0.075	26049842H	30.0	29.5	
5 Nitrate as N	8.917	9.083	-0.166	505352191	7.50	7.64	
6 Orthophosphate as P	12.183	12.633	-0.450	202100715	7.50	7.53	

Reagents:

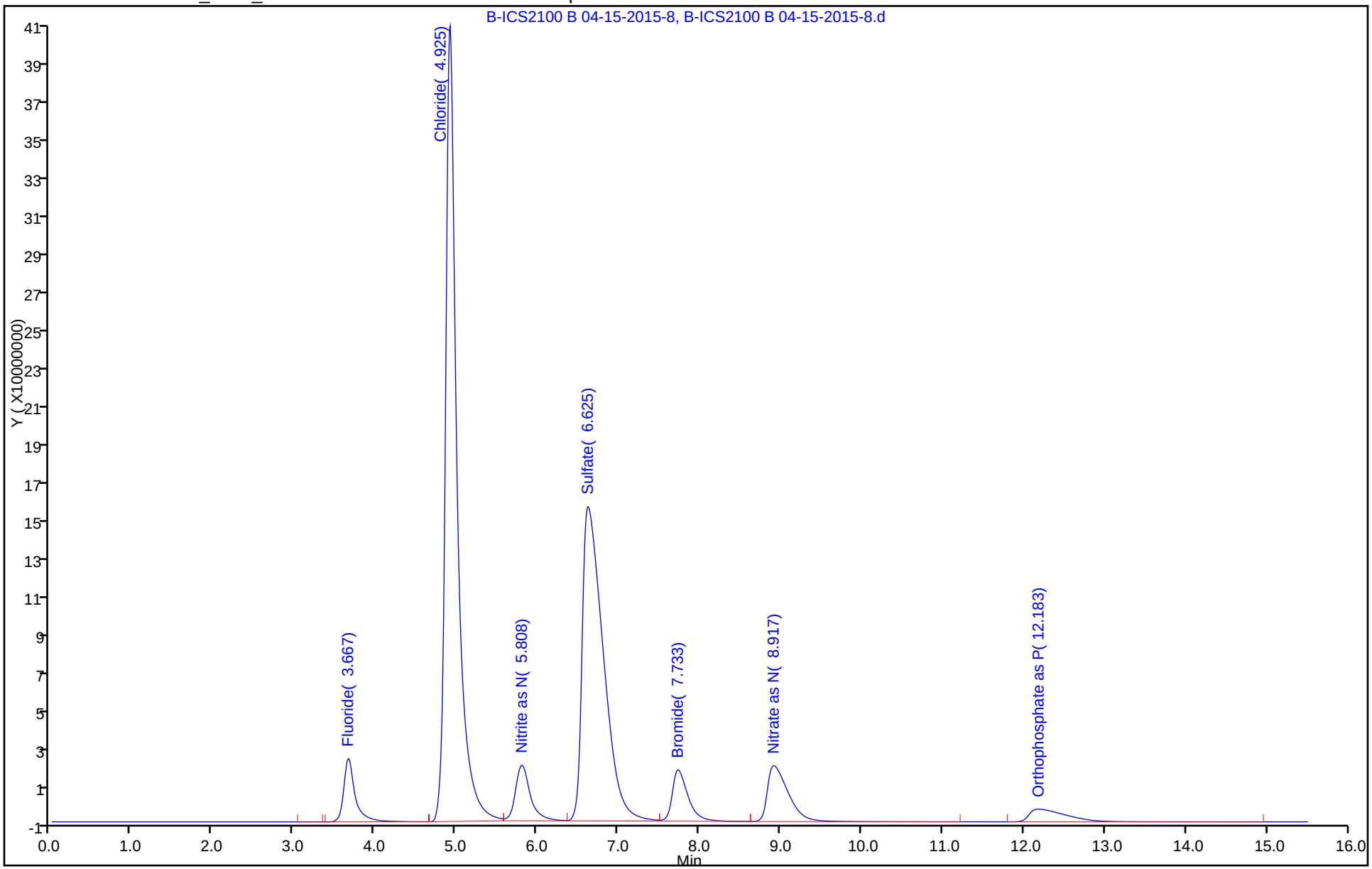
ICSTDL8_00112 Amount Added: 1.00 Units: mL

Report Date: 16-Apr-2015 12:08:34 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-8.d

Injection Date:	15-Apr-2015 17:28:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d
Lims ID: ic L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 15-Apr-2015 17:45:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0006484-009
Misc. Info.: 4878 ic l9
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 16-Apr-2015 12:08:34 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK011

First Level Reviewer: hartmanm Date: 16-Apr-2015 11:58:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.675	3.658	0.017	419767900	10.0	9.67	
2 Chloride	4.917	4.942	-0.025	5370699112	200.0	201.3	
7 Nitrite as N	5.808	5.817	-0.009	499624168	10.0	8.65	
3 Sulfate	6.575	6.833	-0.258	3895544554	200.0	199.8	
4 Bromide	7.717	7.808	-0.091	33990920H	40.0	38.5	
5 Nitrate as N	8.875	9.083	-0.208	681262618	10.0	10.3	
6 Orthophosphate as P	12.083	12.633	-0.550	271922248	10.0	10.1	

Reagents:

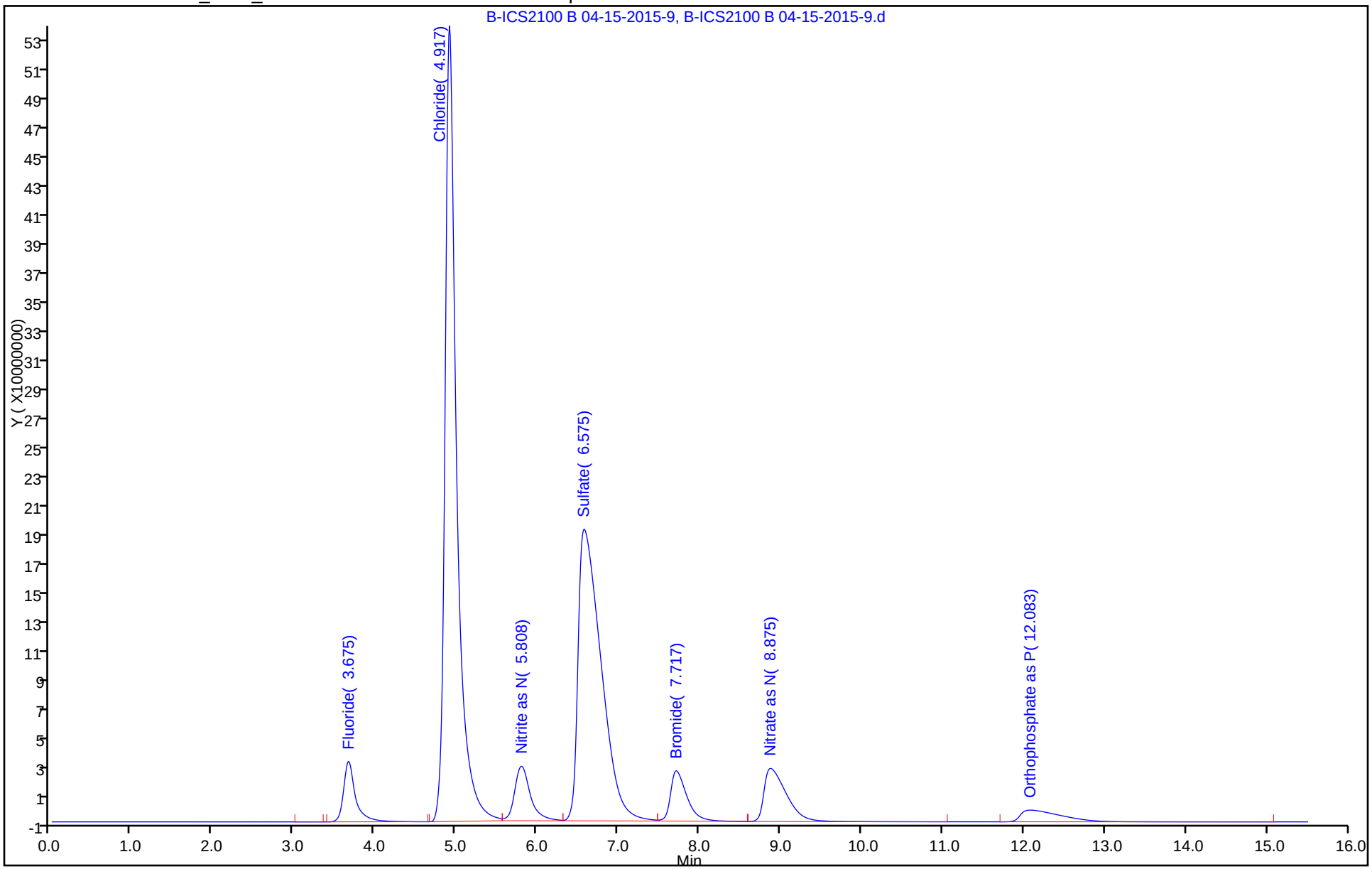
ICSTDL9_00115 Amount Added: 1.00 Units: mL

Report Date: 16-Apr-2015 12:08:34 Chrom Revision: 2.2 13-Mar-2015 11:20:44

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Injection Date:	15-Apr-2015 17:45:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: ICV 180-147963/2 Calibration Date: 07/16/2015 15:19

Instrument ID: CHIC2100A Calib Start Date: 05/19/2015 12:31

GC Column: AS-18 ID: Calib End Date: 05/19/2015 14:18

Lab File ID: A-ICS2100 A 07-16-2015-2.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		4183978		3.06	3.00	1.9	10.0
Chloride	Lin2		21810803		60.9	60.0	1.5	10.0
Nitrite as N	Lin2	54847550	48005855		2.96	3.00	-1.3	10.0
Sulfate	Lin2		15813606		60.4	60.0	0.7	10.0
Bromide	Lin2		9797759		12.5	12.0	3.8	10.0
Nitrate as N	Lin2		53600250		3.00	3.00	0.1	10.0
Orthophosphate as P	Lin		18987349		2.85	3.00	-5.1	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: ICV 180-147963/2 Calibration Date: 07/16/2015 15:19

Instrument ID: CHIC2100A Calib Start Date: 05/19/2015 12:31

GC Column: AS-18 ID: Calib End Date: 05/19/2015 14:18

Lab File ID: A-ICS2100 A 07-16-2015-2.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.03	2.68	3.38
Chloride	3.96	3.61	4.31
Nitrite as N	4.58	4.33	4.83
Sulfate	5.25	4.92	5.62
Bromide	5.98	5.64	6.34
Nitrate as N	6.83	6.59	7.09
Orthophosphate as P	9.07	8.84	9.34

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-2.d
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 16-Jul-2015 15:19:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-002
Misc. Info.: 2 ICV
Operator ID: Instrument ID: CHIC2100A
Sublist:

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 09:54:01 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.025	3.025	0.000	12551935H	3.00	3.06	
2 Chloride	3.958	3.958	0.000	1308648181	60.0	60.9	
7 Nitrite as N	4.575	4.575	0.000	144075171	3.00	2.96	E
3 Sulfate	5.250	5.267	-0.017	948816372	60.0	60.4	
4 Bromide	5.983	5.992	-0.009	117573110	12.0	12.5	
5 Nitrate as N	6.833	6.842	-0.009	160800749	3.00	3.00	
6 Orthophosphate as P	9.067	9.092	-0.025	56962048	3.00	2.85	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
H - Response Measured by Height

Reagents:

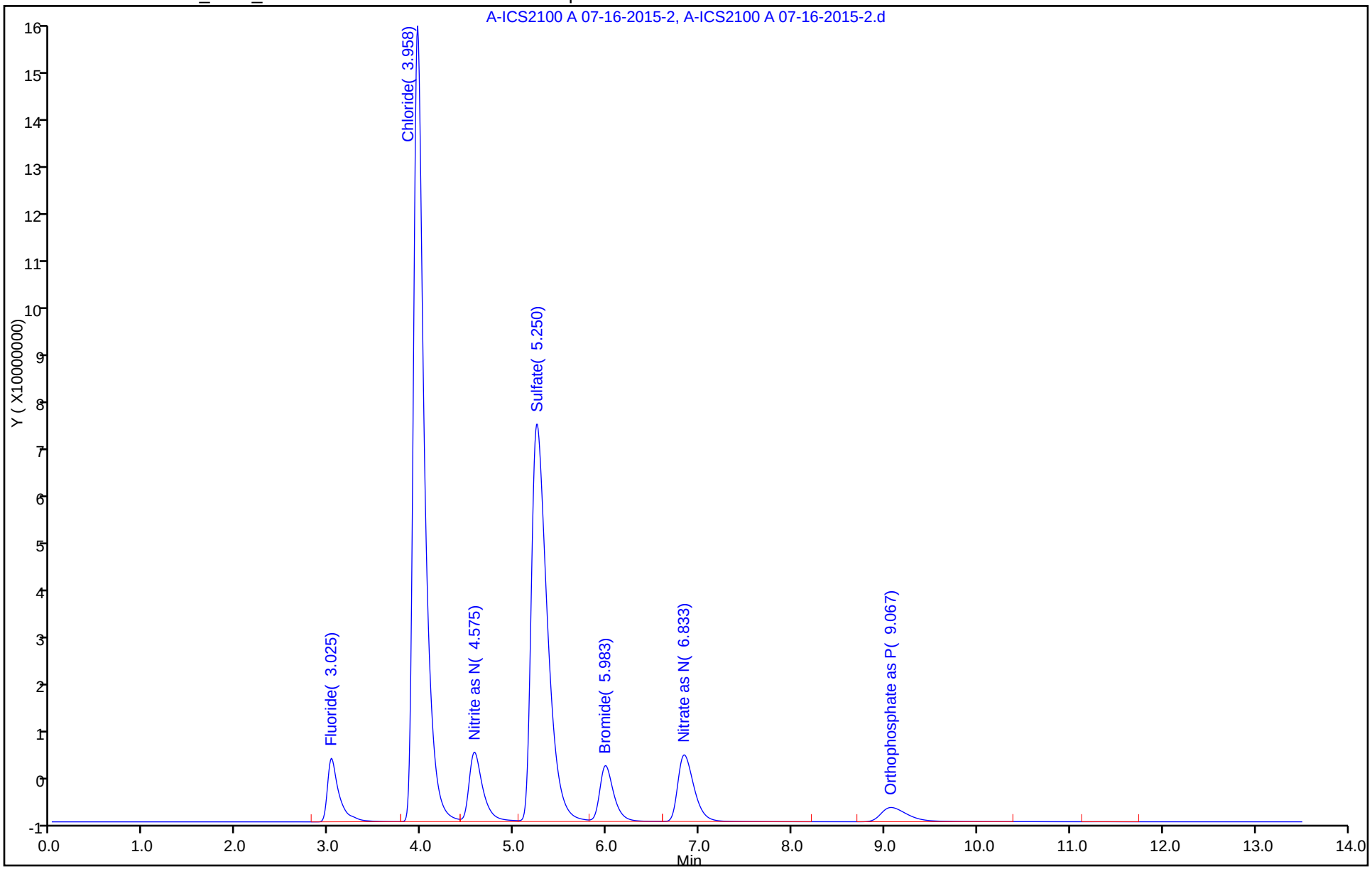
icicv_01303 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 11:57:06 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-2.d

Injection Date:	16-Jul-2015 15:19:00	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.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147963/3 Calibration Date: 07/16/2015 15:34

Instrument ID: CHIC2100A Calib Start Date: 05/19/2015 12:31

GC Column: AS-18 ID: Calib End Date: 05/19/2015 14:18

Lab File ID: A-ICS2100 A 07-16-2015-3.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		4354108		2.65	2.50	6.1	10.0
Chloride	Lin2		22720298		52.9	50.0	5.7	10.0
Nitrite as N	Lin2	54847550	48161429		2.47	2.50	-1.2	10.0
Sulfate	Lin2		16453550		52.4	50.0	4.7	10.0
Bromide	Lin2		10031303		10.6	10.0	6.2	10.0
Nitrate as N	Lin2		56994416		2.66	2.50	6.5	10.0
Orthophosphate as P	Lin		20177177		2.53	2.50	1.2	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147963/3 Calibration Date: 07/16/2015 15:34

Instrument ID: CHIC2100A Calib Start Date: 05/19/2015 12:31

GC Column: AS-18 ID: Calib End Date: 05/19/2015 14:18

Lab File ID: A-ICS2100 A 07-16-2015-3.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.03	2.68	3.38
Chloride	3.96	3.61	4.31
Nitrite as N	4.58	4.33	4.83
Sulfate	5.26	4.91	5.61
Bromide	5.99	5.64	6.34
Nitrate as N	6.85	6.60	7.10
Orthophosphate as P	9.09	8.84	9.34

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-3.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 16-Jul-2015 15:34:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-003
Misc. Info.: 3 CCV
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.025	3.025	0.000	10885270H	2.50	2.65	
2 Chloride	3.958	3.958	0.000	1136014894	50.0	52.9	
7 Nitrite as N	4.583	4.583	0.000	120403573	2.50	2.47	
3 Sulfate	5.258	5.258	0.000	822677517	50.0	52.4	
4 Bromide	5.992	5.992	0.000	100313027	10.0	10.6	
5 Nitrate as N	6.850	6.850	0.000	142486040	2.50	2.66	
6 Orthophosphate as P	9.092	9.092	0.000	50442943	2.50	2.53	

Reagents:

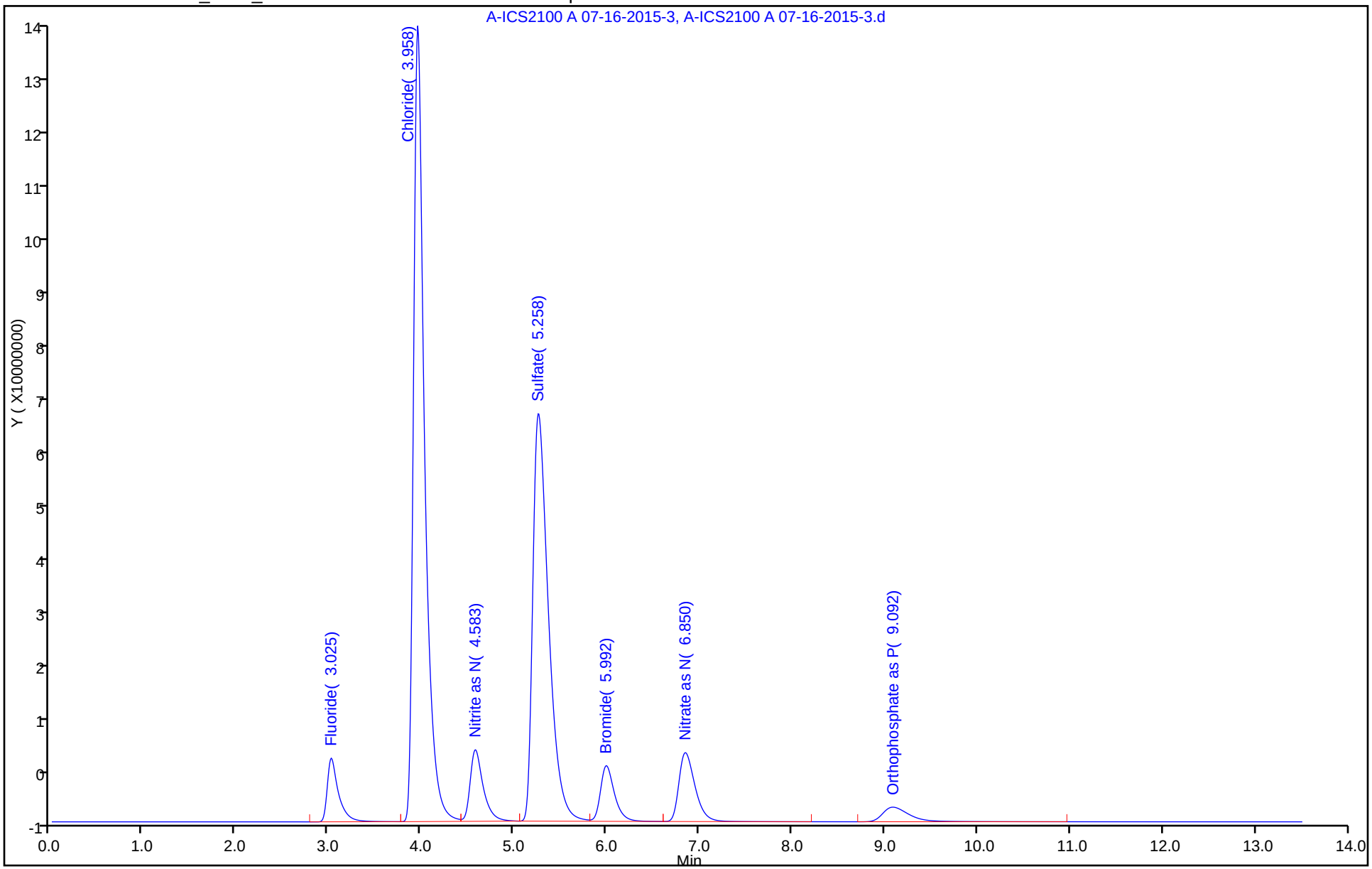
icccv_01271 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 11:57:07 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-3.d

Injection Date:	16-Jul-2015 15:34:00	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.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147963/15 Calibration Date: 07/16/2015 18:55

Instrument ID: CHIC2100A Calib Start Date: 05/19/2015 12:31

GC Column: AS-18 ID: Calib End Date: 05/19/2015 14:18

Lab File ID: A-ICS2100 A 07-16-2015-15.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		4099596		2.50	2.50	-0.1	10.0
Chloride	Lin2		21498884		50.0	50.0	0.0	10.0
Nitrite as N	Lin2	54847550	45599068		2.34	2.50	-6.5	10.0
Sulfate	Lin2		15354485		48.9	50.0	-2.3	10.0
Bromide	Lin2		9453018		10.0	10.0	0.1	10.0
Nitrate as N	Lin2		53849903		2.52	2.50	0.7	10.0
Orthophosphate as P	Lin		18157072		2.29	2.50	-8.6	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147963/15 Calibration Date: 07/16/2015 18:55

Instrument ID: CHIC2100A Calib Start Date: 05/19/2015 12:31

GC Column: AS-18 ID: Calib End Date: 05/19/2015 14:18

Lab File ID: A-ICS2100 A 07-16-2015-15.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.03	2.68	3.38
Chloride	3.96	3.61	4.31
Nitrite as N	4.58	4.33	4.83
Sulfate	5.26	4.91	5.61
Bromide	5.99	5.64	6.34
Nitrate as N	6.85	6.60	7.10
Orthophosphate as P	9.09	8.84	9.34

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-15.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 16-Jul-2015 18:55:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-015
Misc. Info.: 15 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:12 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.033	3.033	0.000	10248991H	2.50	2.50	
2 Chloride	3.958	3.958	0.000	1074944188	50.0	50.0	
7 Nitrite as N	4.583	4.583	0.000	113997670	2.50	2.34	
3 Sulfate	5.258	5.258	0.000	767724251	50.0	48.9	
4 Bromide	5.992	5.992	0.000	94530184	10.0	10.0	
5 Nitrate as N	6.850	6.850	0.000	134624758	2.50	2.52	
6 Orthophosphate as P	9.092	9.092	0.000	45392680	2.50	2.29	

Reagents:

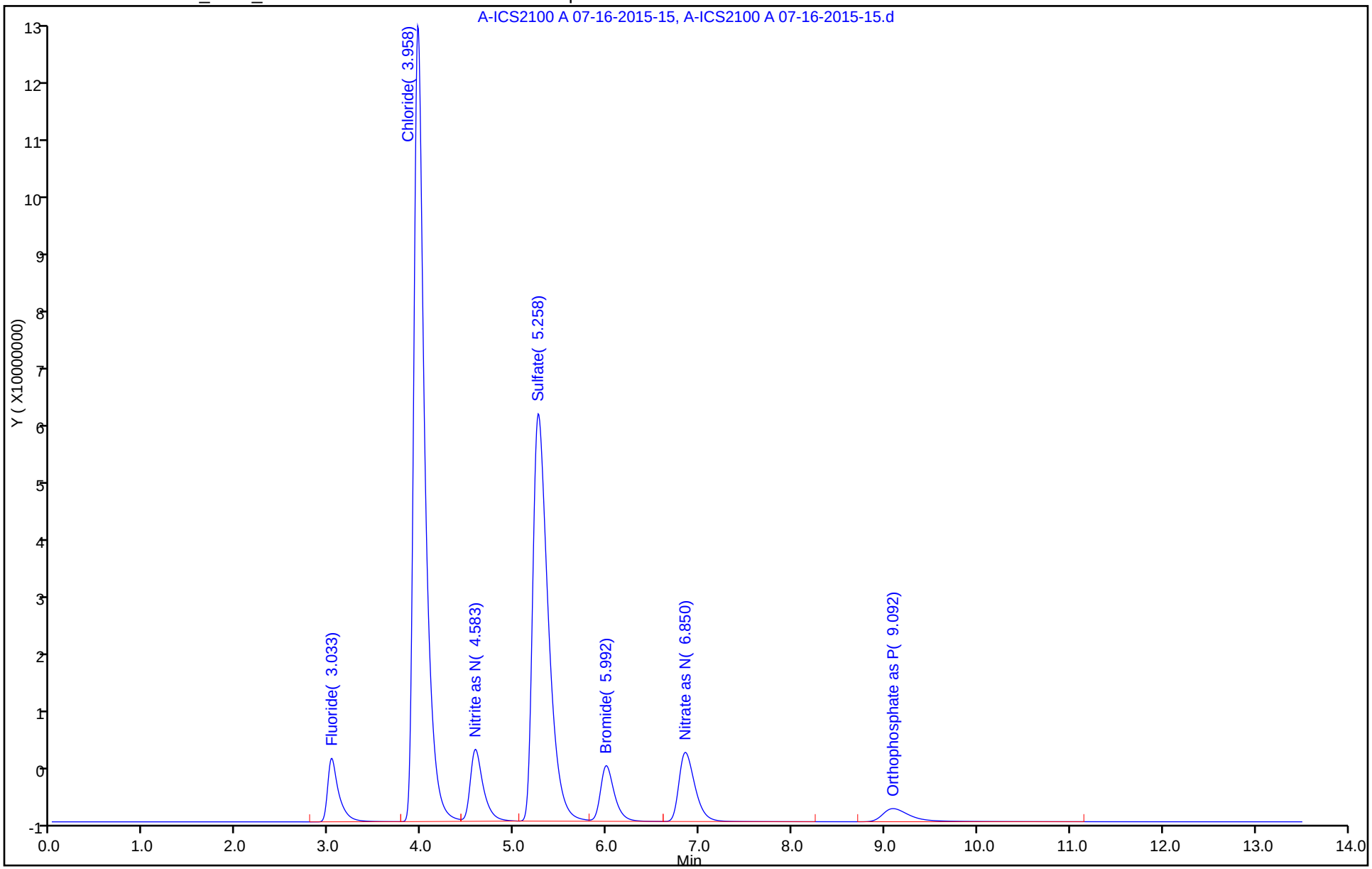
icccv_01271 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 11:57:12 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-15.d

Injection Date:	16-Jul-2015 18:55:00	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.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147963/24 Calibration Date: 07/16/2015 21:31

Instrument ID: CHIC2100A Calib Start Date: 05/19/2015 12:31

GC Column: AS-18 ID: Calib End Date: 05/19/2015 14:18

Lab File ID: A-ICS2100 A 07-16-2015-24.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		4157118		2.53	2.50	1.3	10.0
Chloride	Lin2		21709460		50.5	50.0	1.0	10.0
Nitrite as N	Lin2	54847550	45961758		2.36	2.50	-5.7	10.0
Sulfate	Lin2		15523448		49.4	50.0	-1.2	10.0
Bromide	Lin2		9536152		10.1	10.0	1.0	10.0
Nitrate as N	Lin2		54263621		2.54	2.50	1.4	10.0
Orthophosphate as P	Lin		18595844		2.34	2.50	-6.4	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147963/24 Calibration Date: 07/16/2015 21:31

Instrument ID: CHIC2100A Calib Start Date: 05/19/2015 12:31

GC Column: AS-18 ID: Calib End Date: 05/19/2015 14:18

Lab File ID: A-ICS2100 A 07-16-2015-24.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.03	2.68	3.38
Chloride	3.96	3.61	4.31
Nitrite as N	4.58	4.33	4.83
Sulfate	5.27	4.92	5.62
Bromide	5.99	5.64	6.34
Nitrate as N	6.84	6.59	7.09
Orthophosphate as P	9.09	8.84	9.34

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-24.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 16-Jul-2015 21:31:00 ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-024
Misc. Info.: 27 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:16 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.025	3.025	0.000	10392794H	2.50	2.53	
2 Chloride	3.958	3.958	0.000	1085473005	50.0	50.5	
7 Nitrite as N	4.575	4.575	0.000	114904396	2.50	2.36	
3 Sulfate	5.267	5.267	0.000	776172379	50.0	49.4	
4 Bromide	5.992	5.992	0.000	95361520	10.0	10.1	
5 Nitrate as N	6.842	6.842	0.000	135659052	2.50	2.54	
6 Orthophosphate as P	9.092	9.092	0.000	46489611	2.50	2.34	

Reagents:

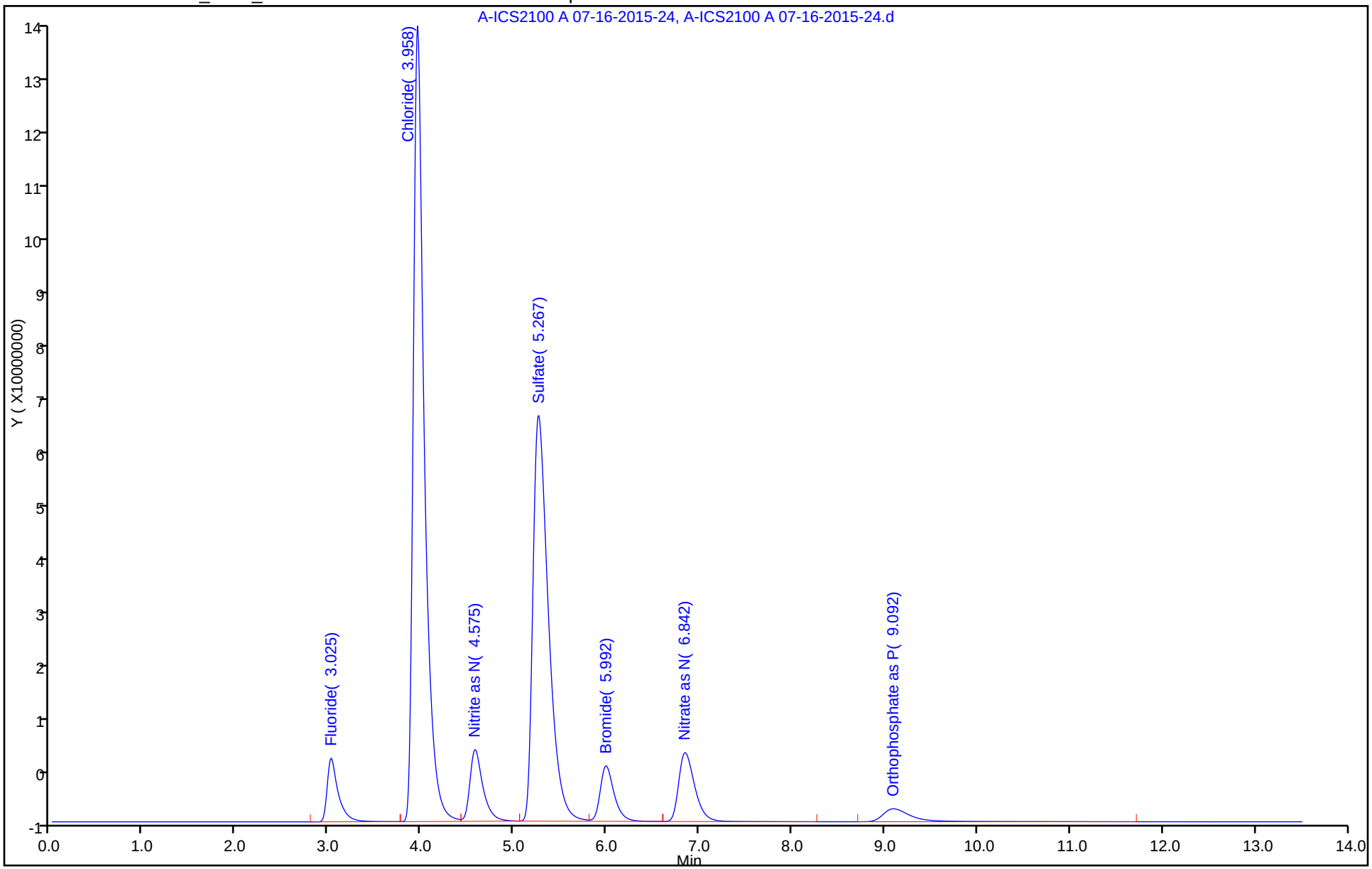
icccv_01271 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 11:57:16 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-24.d

Injection Date:	16-Jul-2015 21:31:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	24
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.: 180-45946-1

SDG No.:

Lab Sample ID: ICV 180-147937/2 Calibration Date: 07/16/2015 10:25

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-2.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		47957296		3.31	3.00	10.4*	10.0
Chloride	Lin2		28123521		63.3	60.0	5.5	10.0
Nitrite as N	Lin2	62099531	61470988		3.18	3.00	6.1	10.0
Sulfate	Lin2		20733081		63.7	60.0	6.1	10.0
Bromide	Lin2		957686		13.0	12.0	8.5	10.0
Nitrate as N	Lin2		69202902		3.14	3.00	4.8	10.0
Orthophosphate as P	Lin2		24353093		2.76	3.00	-7.8	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: ICV 180-147937/2 Calibration Date: 07/16/2015 10:25

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-2.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.65	3.29	3.99
Chloride	4.87	4.51	5.21
Nitrite as N	5.68	5.44	5.94
Sulfate	6.55	6.23	6.93
Bromide	7.57	7.22	7.92
Nitrate as N	8.70	8.47	8.97
Orthophosphate as P	11.73	11.27	12.27

Report Date: 17-Jul-2015 13:34:51 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-2.d
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 16-Jul-2015 10:25:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-002
Misc. Info.: 2 icv
Operator ID: Instrument ID: CHICS2100B
Sublist:

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 13:34:49 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 16-Jul-2015 12:05:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.650	3.642	0.008	143871889	3.00	3.31	
2 Chloride	4.867	4.858	0.009	1687411249	60.0	63.3	
7 Nitrite as N	5.683	5.692	-0.009	184486730	3.00	3.18	
3 Sulfate	6.550	6.575	-0.025	1243984881	60.0	63.7	
4 Bromide	7.567	7.567	0.000	11492231H	12.0	13.0	
5 Nitrate as N	8.700	8.717	-0.017	207608706	3.00	3.14	
6 Orthophosphate as P	11.725	11.767	-0.042	73059278	3.00	2.76	

Reagents:

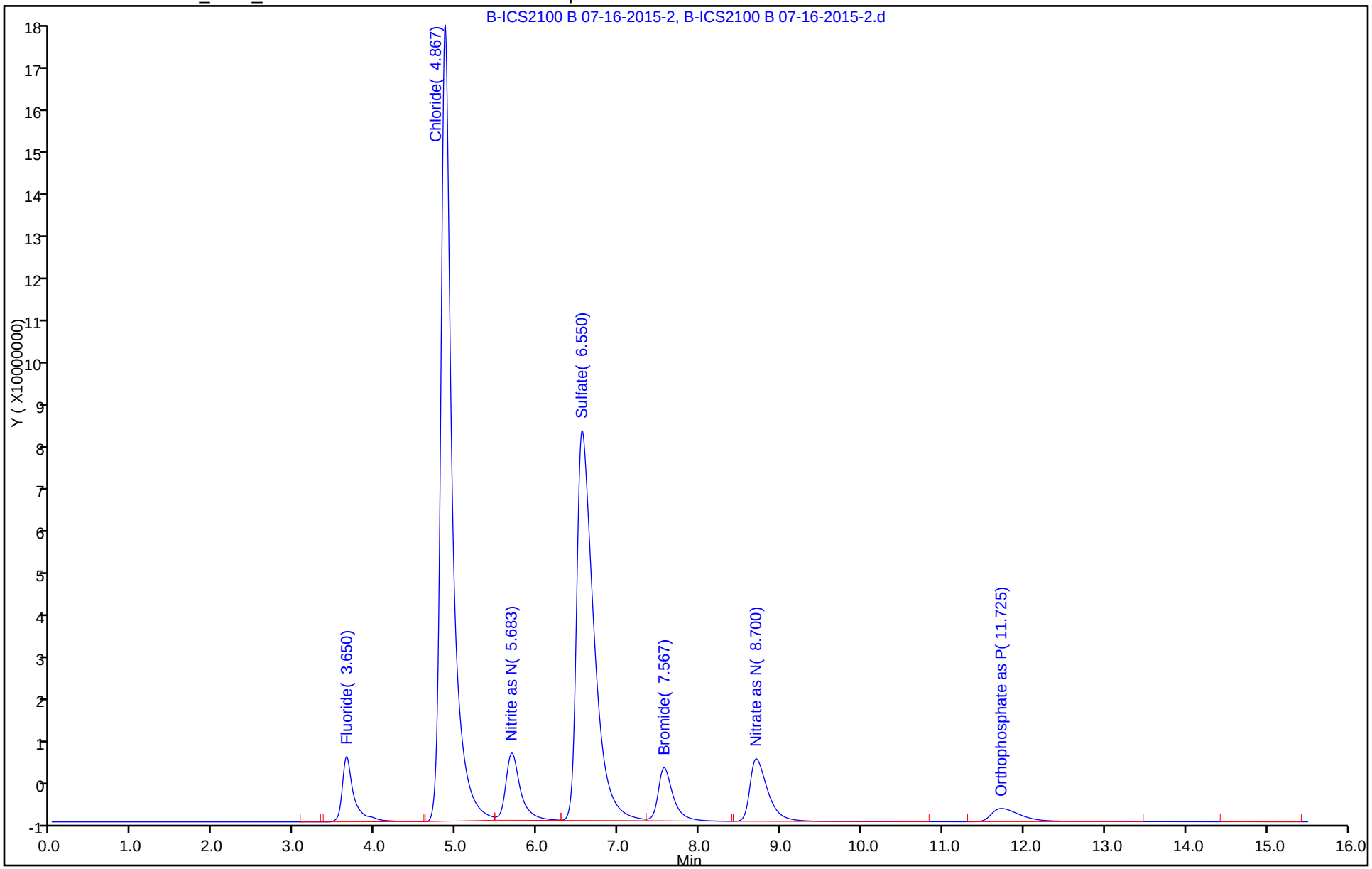
icicv_01303 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 13:34:51 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-2.d

Injection Date:	16-Jul-2015 10:25:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147937/3 Calibration Date: 07/16/2015 10:42

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-3.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		42798857		2.46	2.50	-1.5	10.0
Chloride	Lin2		26383662		49.5	50.0	-1.0	10.0
Nitrite as N	Lin2	62099531	56494584		2.43	2.50	-2.6	10.0
Sulfate	Lin2		19014257		48.6	50.0	-2.8	10.0
Bromide	Lin2		901451		10.2	10.0	2.2	10.0
Nitrate as N	Lin2		66060236		2.50	2.50	0.0	10.0
Orthophosphate as P	Lin2		22992999		2.19	2.50	-12.4*	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147937/3 Calibration Date: 07/16/2015 10:42

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-3.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.64	3.29	3.99
Chloride	4.86	4.51	5.21
Nitrite as N	5.69	5.44	5.94
Sulfate	6.58	6.23	6.93
Bromide	7.57	7.22	7.92
Nitrate as N	8.72	8.47	8.97
Orthophosphate as P	11.77	11.27	12.27

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-3.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 16-Jul-2015 10:42:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-003
Misc. Info.: 3 ccv
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 13:34:49 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.642	3.642	0.000	106997143	2.50	2.46	
2 Chloride	4.858	4.858	0.000	1319183098	50.0	49.5	
7 Nitrite as N	5.692	5.692	0.000	141236461	2.50	2.43	
3 Sulfate	6.575	6.575	0.000	950712871	50.0	48.6	
4 Bromide	7.567	7.567	0.000	9014509	10.0	10.2	H
5 Nitrate as N	8.717	8.717	0.000	165150589	2.50	2.50	
6 Orthophosphate as P	11.767	11.767	0.000	57482497	2.50	2.19	

Reagents:

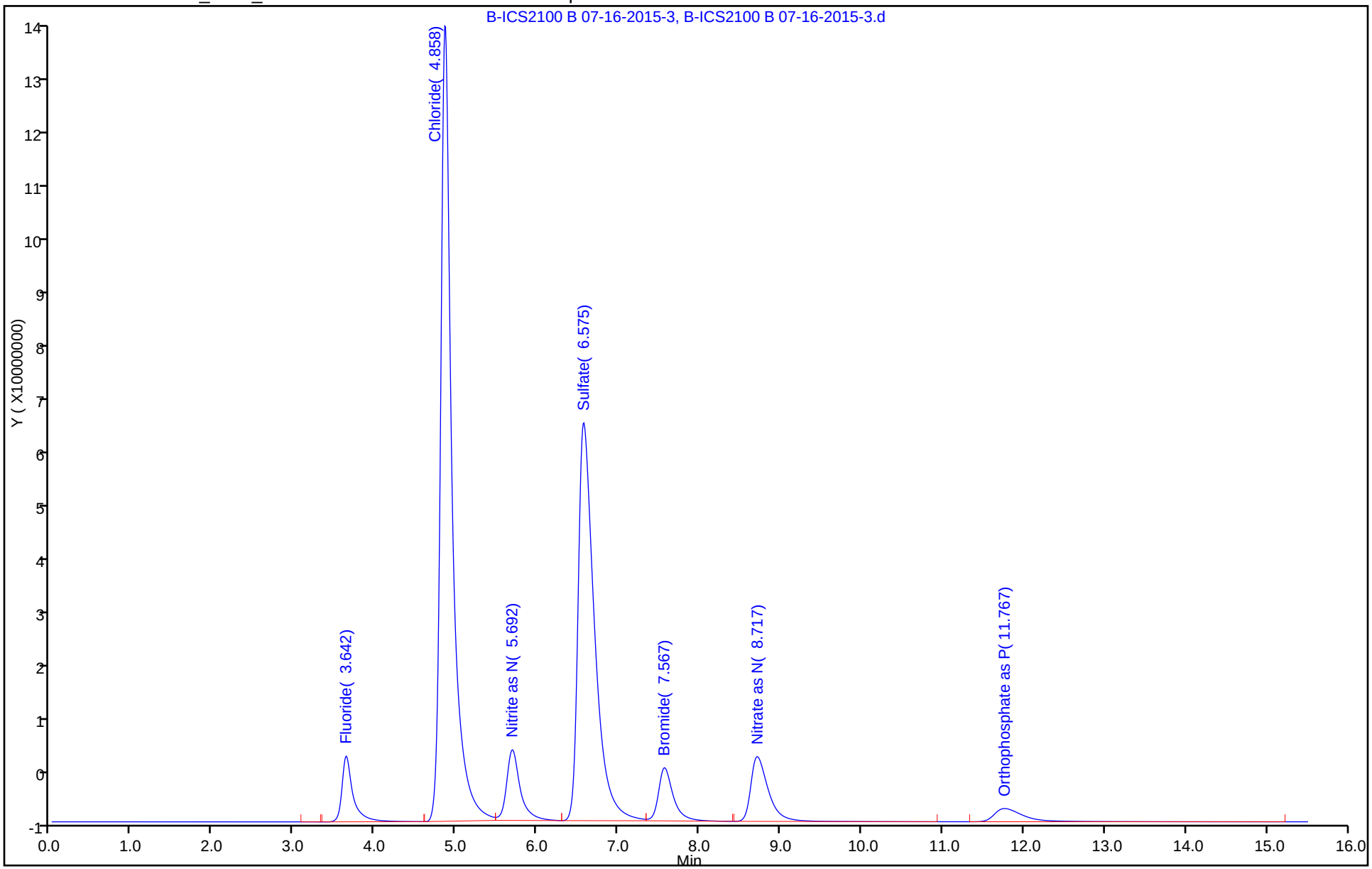
icccv_01271 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 13:34:50 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-3.d

Injection Date:	16-Jul-2015 10:42:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147937/15 Calibration Date: 07/16/2015 15:07

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-15.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		42226102		2.43	2.50	-2.8	10.0
Chloride	Lin2		26199077		49.1	50.0	-1.7	10.0
Nitrite as N	Lin2	62099531	56106387		2.42	2.50	-3.3	10.0
Sulfate	Lin2		18842554		48.2	50.0	-3.7	10.0
Bromide	Lin2		892468		10.1	10.0	1.1	10.0
Nitrate as N	Lin2		65334913		2.47	2.50	-1.0	10.0
Orthophosphate as P	Lin2		21773360		2.08	2.50	-16.9*	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147937/15 Calibration Date: 07/16/2015 15:07

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-15.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.65	3.30	4.00
Chloride	4.87	4.52	5.22
Nitrite as N	5.70	5.45	5.95
Sulfate	6.58	6.23	6.93
Bromide	7.58	7.23	7.93
Nitrate as N	8.72	8.47	8.97
Orthophosphate as P	11.72	11.22	12.22

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-15.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 16-Jul-2015 15:07:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-015
Misc. Info.: 15 CCV
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:37 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.650	3.650	0.000	105565256	2.50	2.43	
2 Chloride	4.867	4.867	0.000	1309953851	50.0	49.1	
7 Nitrite as N	5.700	5.700	0.000	140265967	2.50	2.42	
3 Sulfate	6.575	6.575	0.000	942127709	50.0	48.2	
4 Bromide	7.575	7.575	0.000	8924676	10.0	10.1	H
5 Nitrate as N	8.717	8.717	0.000	163337283	2.50	2.47	
6 Orthophosphate as P	11.717	11.717	0.000	54433400	2.50	2.08	

Reagents:

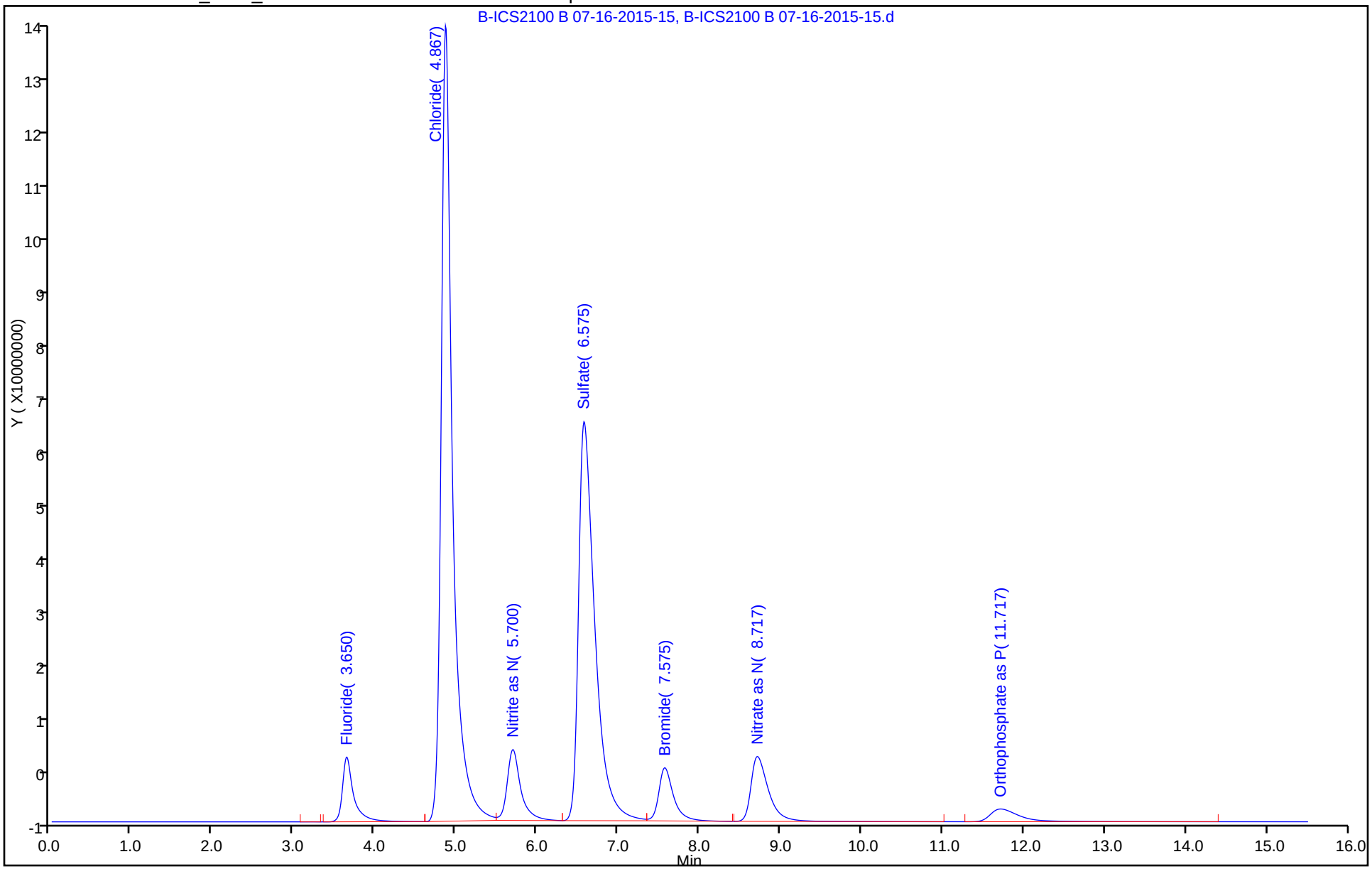
icccv_01271 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 14:38:38 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-15.d

Injection Date:	16-Jul-2015 15:07:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147937/39 Calibration Date: 07/16/2015 22:02

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-39.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		43155875		2.48	2.50	-0.7	10.0
Chloride	Lin2		26762555		50.2	50.0	0.4	10.0
Nitrite as N	Lin2	62099531	57484002		2.48	2.50	-0.9	10.0
Sulfate	Lin2		19319714		49.4	50.0	-1.2	10.0
Bromide	Lin2		905440		10.3	10.0	2.6	10.0
Nitrate as N	Lin2		66886106		2.53	2.50	1.3	10.0
Orthophosphate as P	Lin2		22841650		2.18	2.50	-13.0*	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147937/39 Calibration Date: 07/16/2015 22:02

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-39.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.64	3.29	3.99
Chloride	4.86	4.51	5.21
Nitrite as N	5.69	5.44	5.94
Sulfate	6.58	6.23	6.93
Bromide	7.58	7.23	7.93
Nitrate as N	8.72	8.47	8.97
Orthophosphate as P	11.72	11.22	12.22

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-39.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 16-Jul-2015 22:02:00 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-039
Misc. Info.: 23232 CCV
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:46 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.642	3.642	0.000	107889687	2.50	2.48	
2 Chloride	4.858	4.858	0.000	1338127726	50.0	50.2	
7 Nitrite as N	5.692	5.692	0.000	143710006	2.50	2.48	
3 Sulfate	6.575	6.575	0.000	965985689	50.0	49.4	
4 Bromide	7.575	7.575	0.000	9054395	10.0	10.3	H
5 Nitrate as N	8.717	8.717	0.000	167215265	2.50	2.53	
6 Orthophosphate as P	11.717	11.717	0.000	57104124	2.50	2.18	

Reagents:

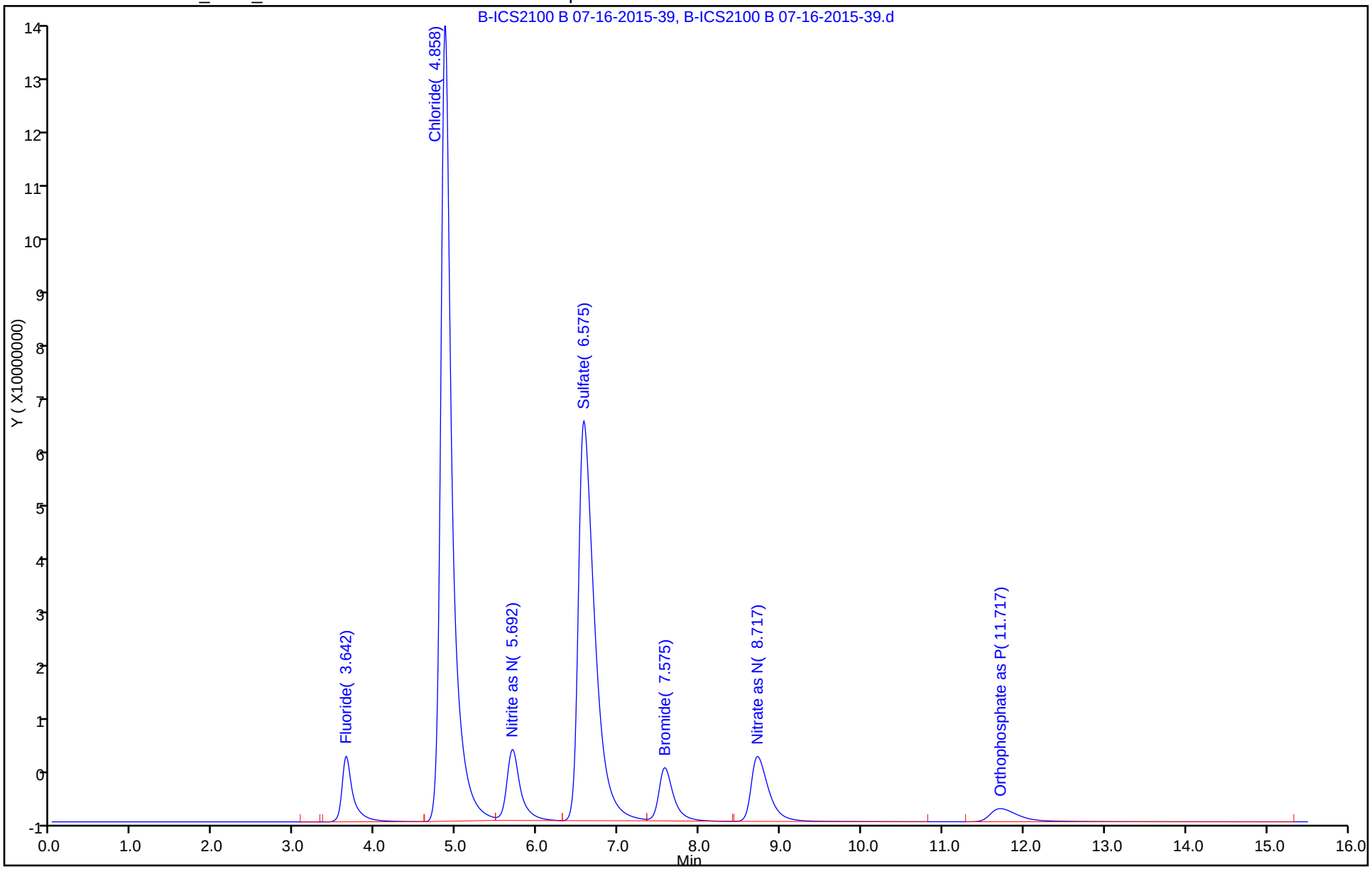
icccv_01271 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 14:38:46 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-39.d

Injection Date:	16-Jul-2015 22:02:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	39
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147937/51 Calibration Date: 07/17/2015 01:30

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-51.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		44870086		2.58	2.50	3.3	10.0
Chloride	Lin2		27648626		51.9	50.0	3.7	10.0
Nitrite as N	Lin2	62099531	59061887		2.55	2.50	1.8	10.0
Sulfate	Lin2		20227522		51.7	50.0	3.4	10.0
Bromide	Lin2		936009		10.6	10.0	6.1	10.0
Nitrate as N	Lin2		69216467		2.62	2.50	4.9	10.0
Orthophosphate as P	Lin2		23889640		2.27	2.50	-9.1	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: CCV 180-147937/51 Calibration Date: 07/17/2015 01:30

Instrument ID: CHICS2100B Calib Start Date: 04/15/2015 15:44

GC Column: AS-18 ID: Calib End Date: 04/15/2015 17:45

Lab File ID: B-ICS2100 B 07-16-2015-51.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.64	3.29	3.99
Chloride	4.86	4.51	5.21
Nitrite as N	5.69	5.44	5.94
Sulfate	6.57	6.22	6.92
Bromide	7.57	7.22	7.92
Nitrate as N	8.72	8.47	8.97
Orthophosphate as P	11.73	11.23	12.23

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-51.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Jul-2015 01:30:00 ALS Bottle#: 0 Worklist Smp#: 51
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-051
Misc. Info.: 30 CCV
Operator ID: Instrument ID: CHICS2100B
Sublist: chrom-300_9056_CHIC2100B*sub1

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:50 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.642	3.642	0.000	112175216	2.50	2.58	
2 Chloride	4.858	4.858	0.000	1382431296	50.0	51.9	
7 Nitrite as N	5.692	5.692	0.000	147654718	2.50	2.55	
3 Sulfate	6.567	6.567	0.000	1011376124	50.0	51.7	
4 Bromide	7.567	7.567	0.000	9360091H	10.0	10.6	
5 Nitrate as N	8.717	8.717	0.000	173041167	2.50	2.62	
6 Orthophosphate as P	11.733	11.733	0.000	59724100	2.50	2.27	

Reagents:

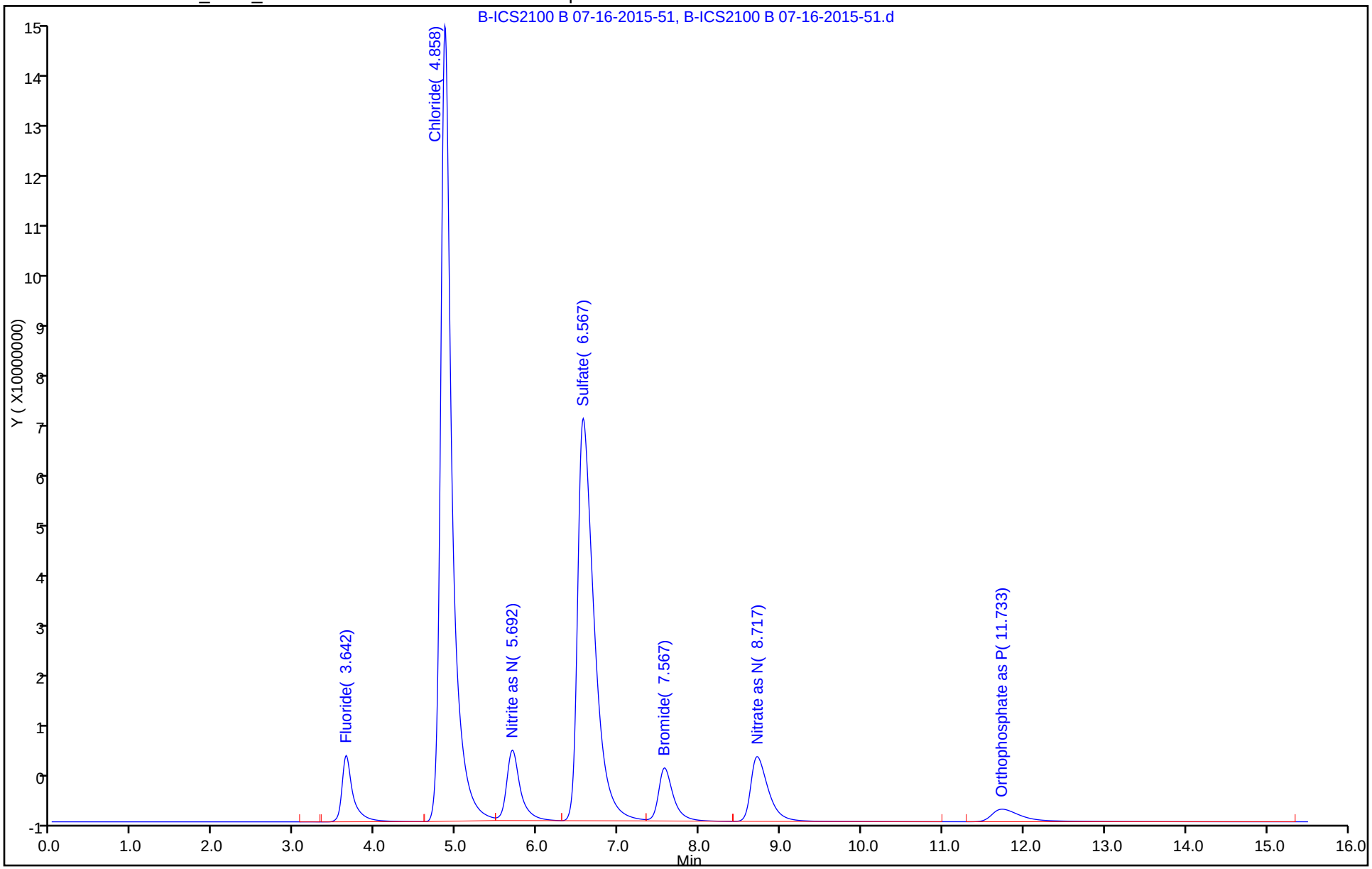
icccv_01271 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 14:38:50 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-51.d

Injection Date:	17-Jul-2015 01:30:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	51
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-147937/6

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-6.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 11:34

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00915	J	0.10	0.0062
16887-00-6	Chloride	ND		1.0	0.20
14808-79-8	Sulfate	ND		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-6.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 16-Jul-2015 11:34:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-006
Misc. Info.: 6 MB
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 13:34:35 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

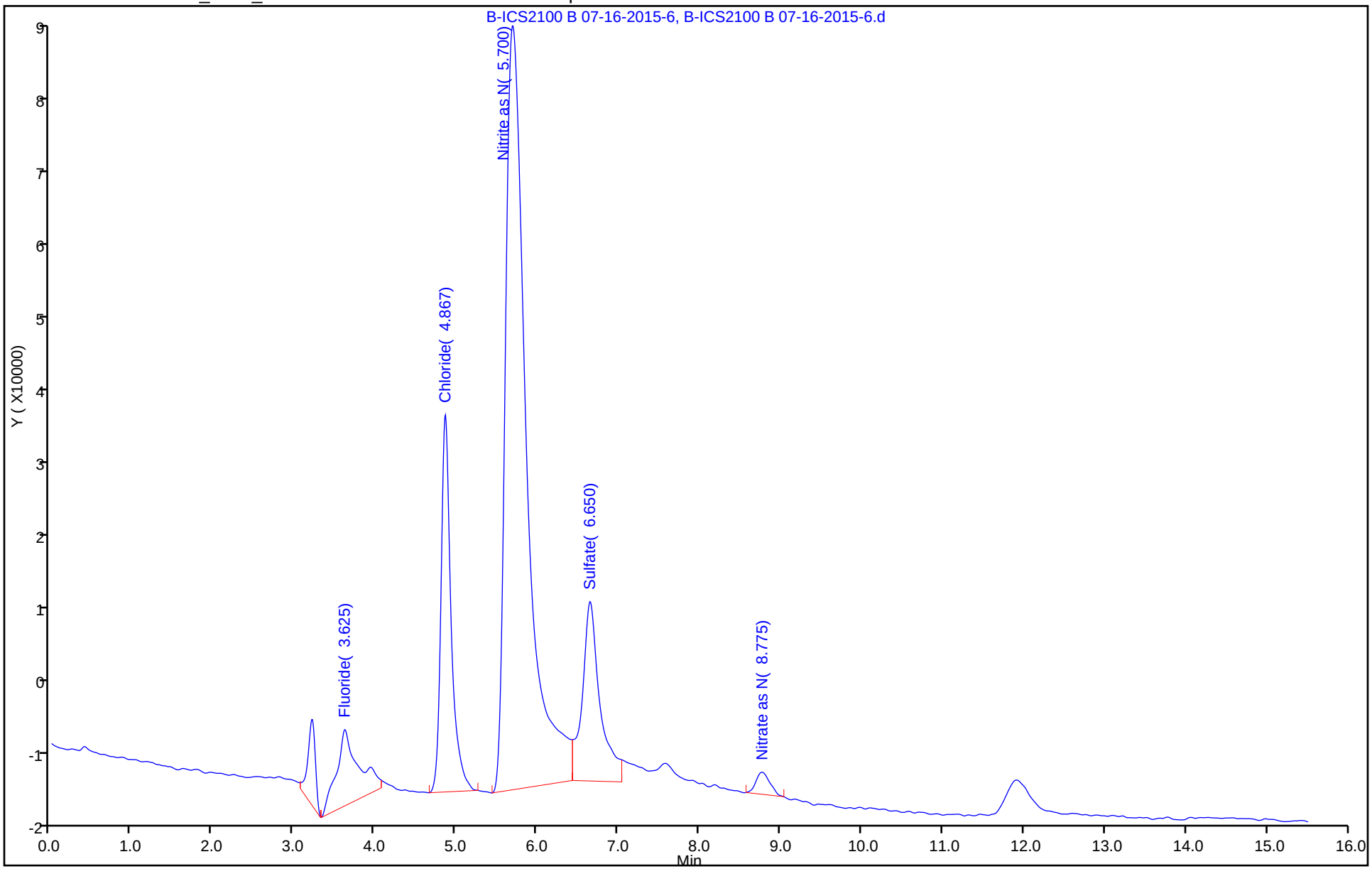
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.625	3.650	-0.025	188012		0.001057	
2 Chloride	4.867	4.867	0.000	428665		0.0764	
7 Nitrite as N	5.700	5.700	0.000	1821477		0.0147	
3 Sulfate	6.650	6.575	0.075	358169		-0.1825	
4 Bromide		7.575				ND	
5 Nitrate as N	8.775	8.717	0.058	34554		0.009151	
6 Orthophosphate as P		11.717				ND	

Report Date: 17-Jul-2015 13:34:47 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-6.d

Injection Date:	16-Jul-2015 11:34:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-147963/6

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-6.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 16:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0135	J	0.10	0.0062
16887-00-6	Chloride	0.255	J	1.0	0.20
14808-79-8	Sulfate	ND		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-6.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 16-Jul-2015 16:21:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-006
Misc. Info.: 6 mb
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

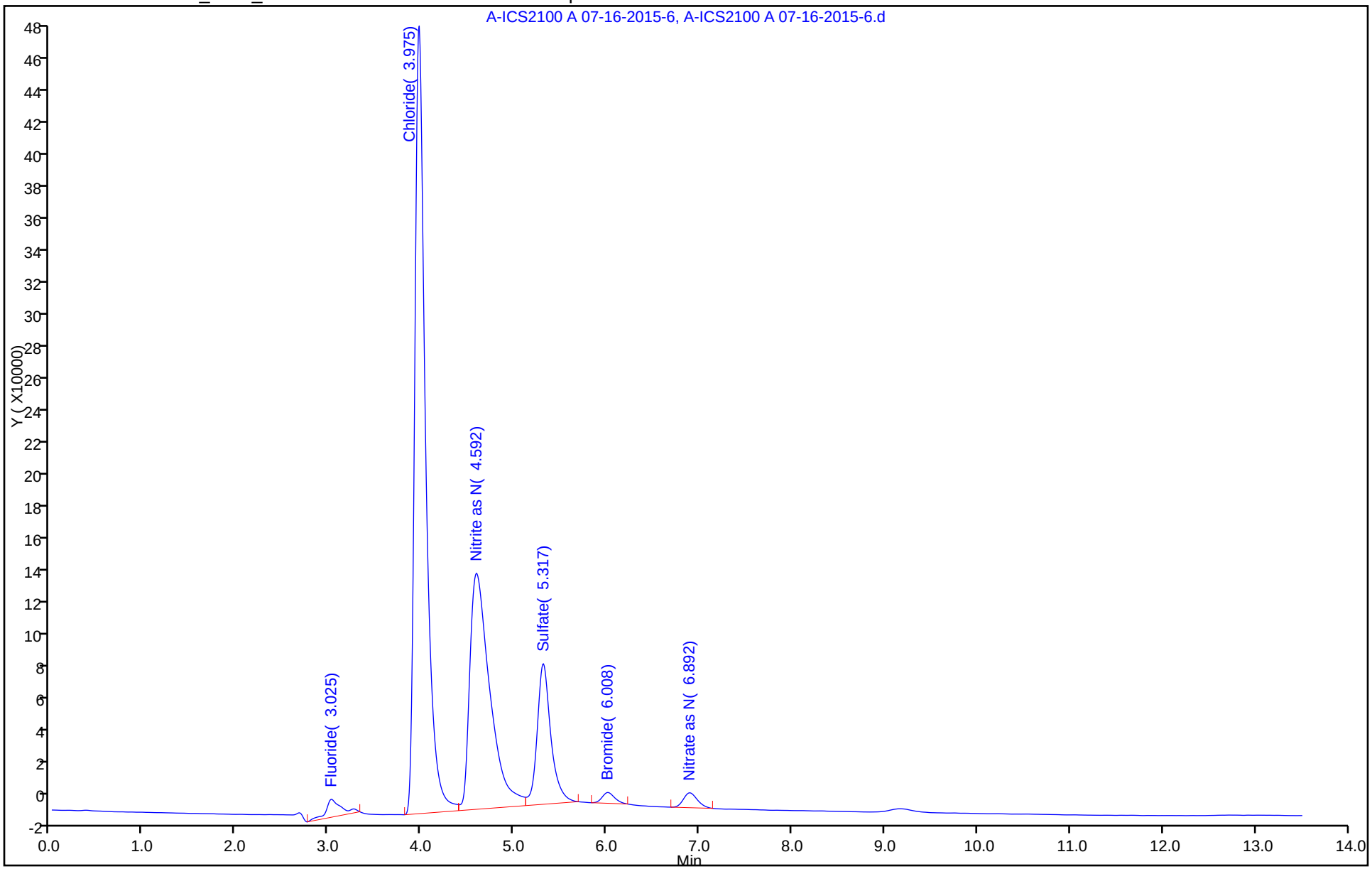
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.025	3.025	0.000	10992H		0.0107	
2 Chloride	3.975	3.958	0.017	3962699		0.2545	
7 Nitrite as N	4.592	4.583	0.009	2195964		0.0206	
3 Sulfate	5.317	5.258	0.059	889027		-0.0201	
4 Bromide	6.008	5.992	0.016	61988		0.0219	
5 Nitrate as N	6.892	6.850	0.042	95887		0.0135	
6 Orthophosphate as P		9.092				ND	

Report Date: 17-Jul-2015 11:57:08 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-6.d

Injection Date:	16-Jul-2015 16:21:00	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.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-147937/4

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-4.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 11:00

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00952	J	0.10	0.0062
16887-00-6	Chloride	ND		1.0	0.20
14808-79-8	Sulfate	ND		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-4.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 16-Jul-2015 11:00:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-004
Misc. Info.: 4 ccb
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 13:34:35 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

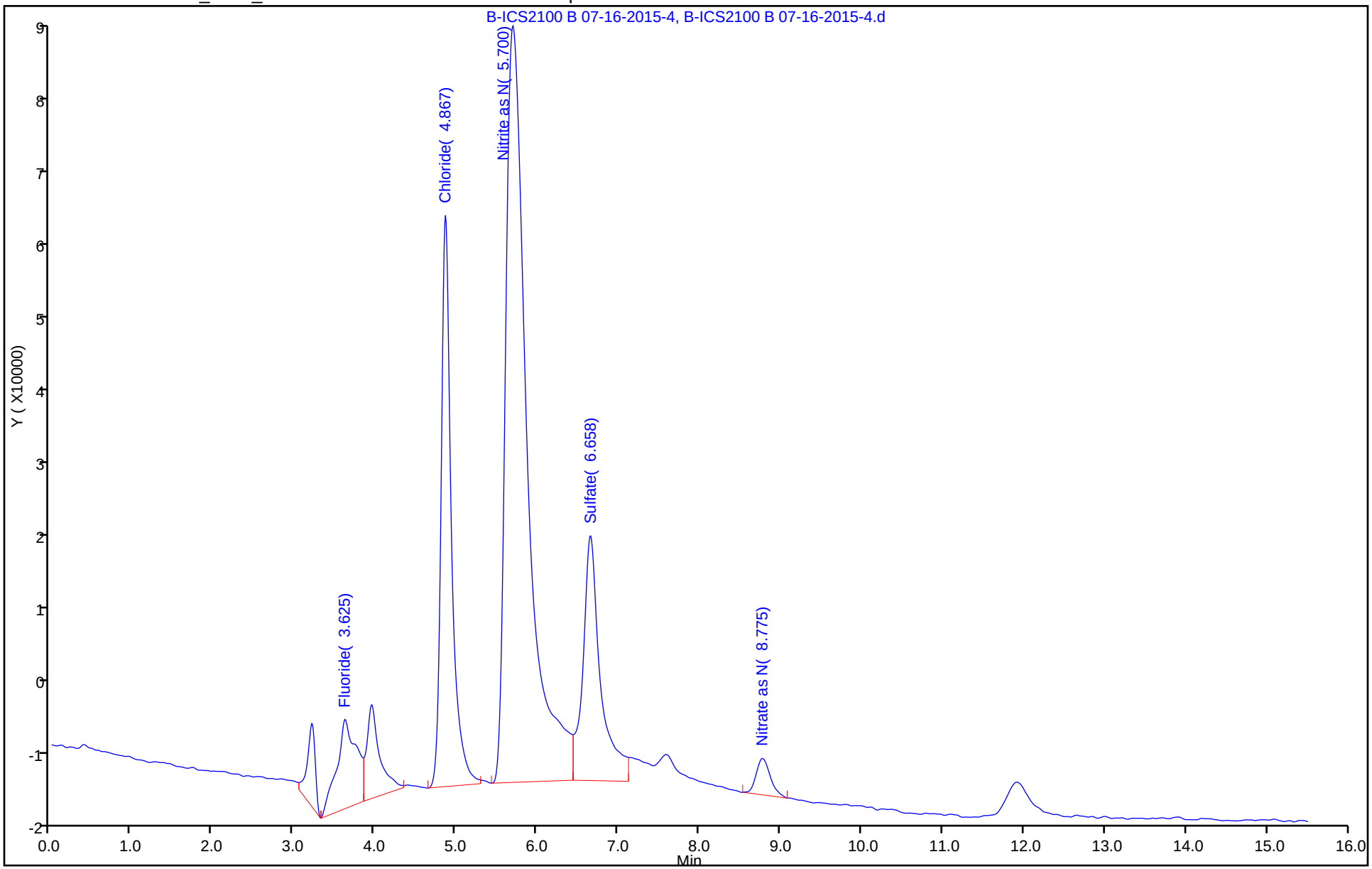
First Level Reviewer: hartmanm Date: 16-Jul-2015 13:19:41

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.625	3.650	-0.025	200841		0.001352	
2 Chloride	4.867	4.867	0.000	672220		0.0856	
7 Nitrite as N	5.700	5.700	0.000	1880001		0.0157	
3 Sulfate	6.658	6.575	0.083	491077		-0.1757	
4 Bromide		7.575				ND	
5 Nitrate as N	8.775	8.717	0.058	58815		0.009518	
6 Orthophosphate as P		11.717				ND	

Report Date: 17-Jul-2015 13:34:49 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-4.d				
Injection Date:	16-Jul-2015 11:00:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-147937/16

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-16.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 15:24

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00934	J	0.10	0.0062
16887-00-6	Chloride	ND		1.0	0.20
14808-79-8	Sulfate	ND		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-16.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 16-Jul-2015 15:24:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-016
Misc. Info.: 16 CCB
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:37 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

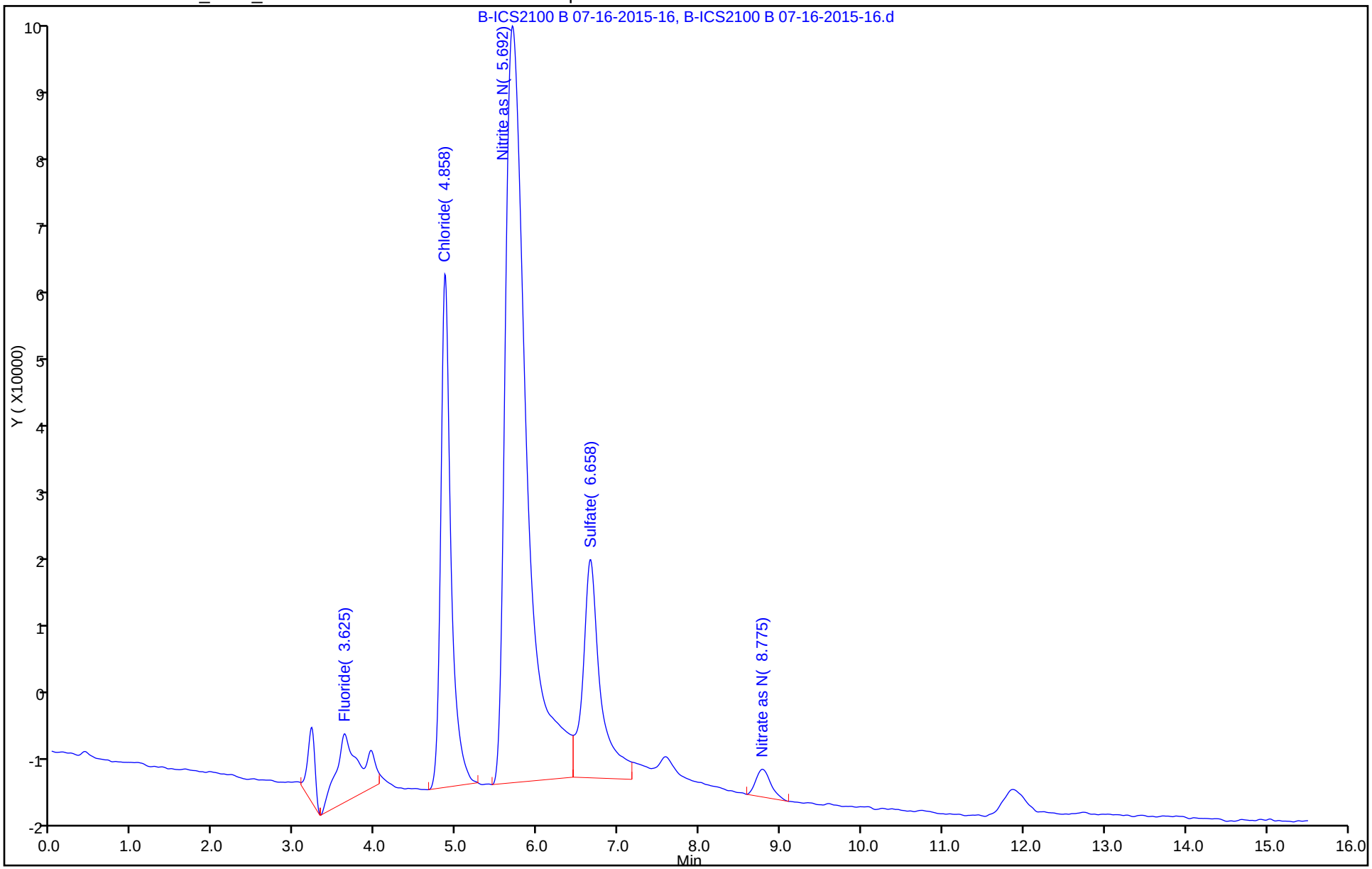
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.625	3.650	-0.025	189810		0.001098	
2 Chloride	4.858	4.867	-0.009	593658		0.0826	
7 Nitrite as N	5.692	5.700	-0.008	1844876		0.0151	
3 Sulfate	6.658	6.575	0.083	439730		-0.1783	
4 Bromide		7.575				ND	
5 Nitrate as N	8.775	8.717	0.058	47252		0.009343	
6 Orthophosphate as P		11.717				ND	

Report Date: 17-Jul-2015 14:38:38 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-16.d				
Injection Date:	16-Jul-2015 15:24:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-147937/40

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-40.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 22:20

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 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	ND		1.0	0.20
14808-79-8	Sulfate	ND		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-40.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 16-Jul-2015 22:20:00 ALS Bottle#: 0 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-040
Misc. Info.: 828 CCB
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:46 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

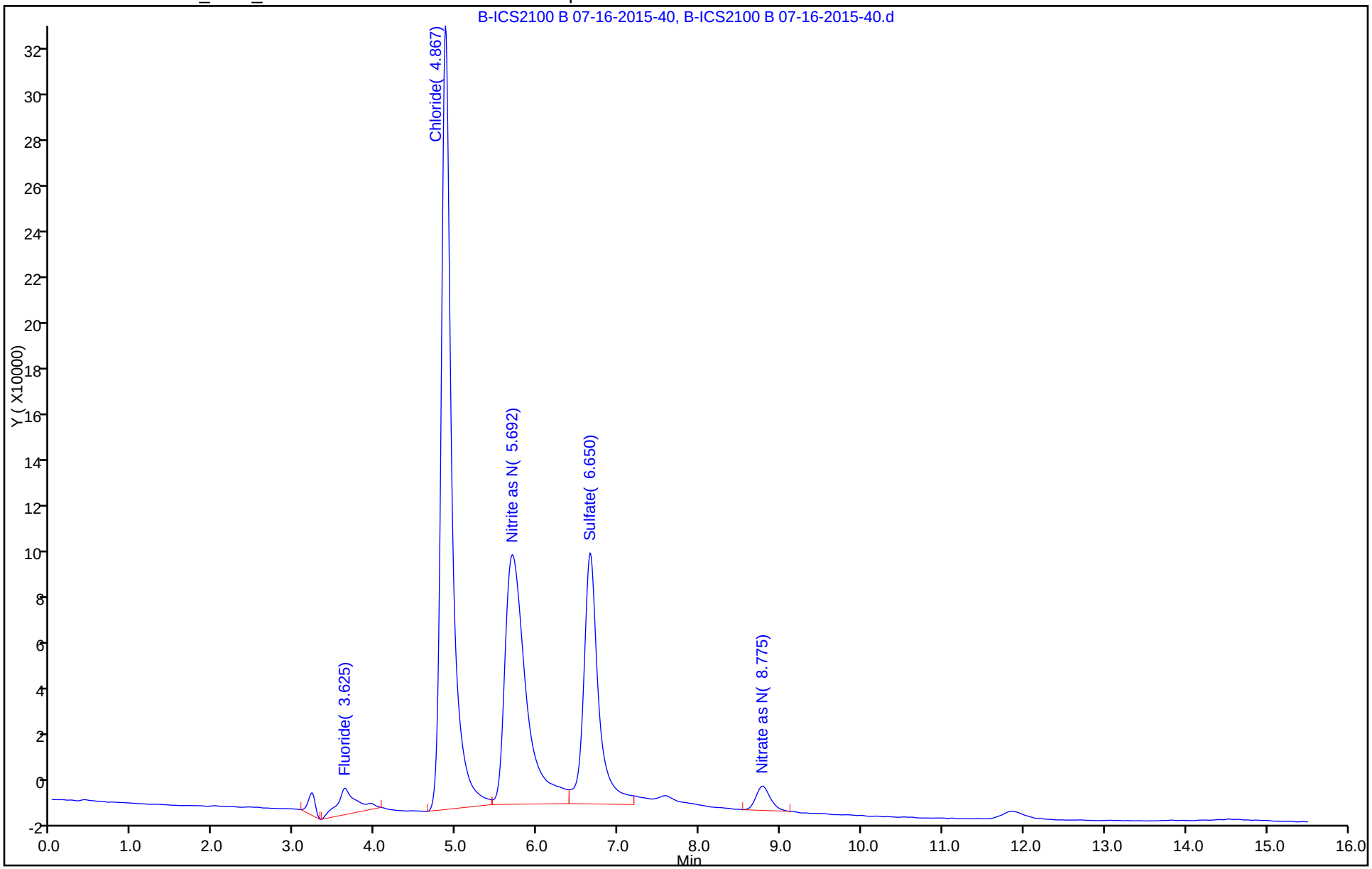
Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.625	3.642	-0.017	188792		0.001075	
2 Chloride	4.867	4.858	0.009	3089839		0.1761	
7 Nitrite as N	5.692	5.692	0.000	1962073		0.0172	
3 Sulfate	6.650	6.575	0.075	1373841		-0.1303	
4 Bromide		7.575				ND	
5 Nitrate as N	8.775	8.717	0.058	128728		0.0106	
6 Orthophosphate as P		11.717				ND	

Report Date: 17-Jul-2015 14:38:47 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-40.d				
Injection Date:	16-Jul-2015 22:20:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	40
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-147937/52

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-52.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/17/2015 01:47

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00947	J	0.10	0.0062
16887-00-6	Chloride	ND		1.0	0.20
14808-79-8	Sulfate	ND		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-52.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Jul-2015 01:47:00 ALS Bottle#: 0 Worklist Smp#: 52
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-052
Misc. Info.: 31 CCB
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 14:38:50 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

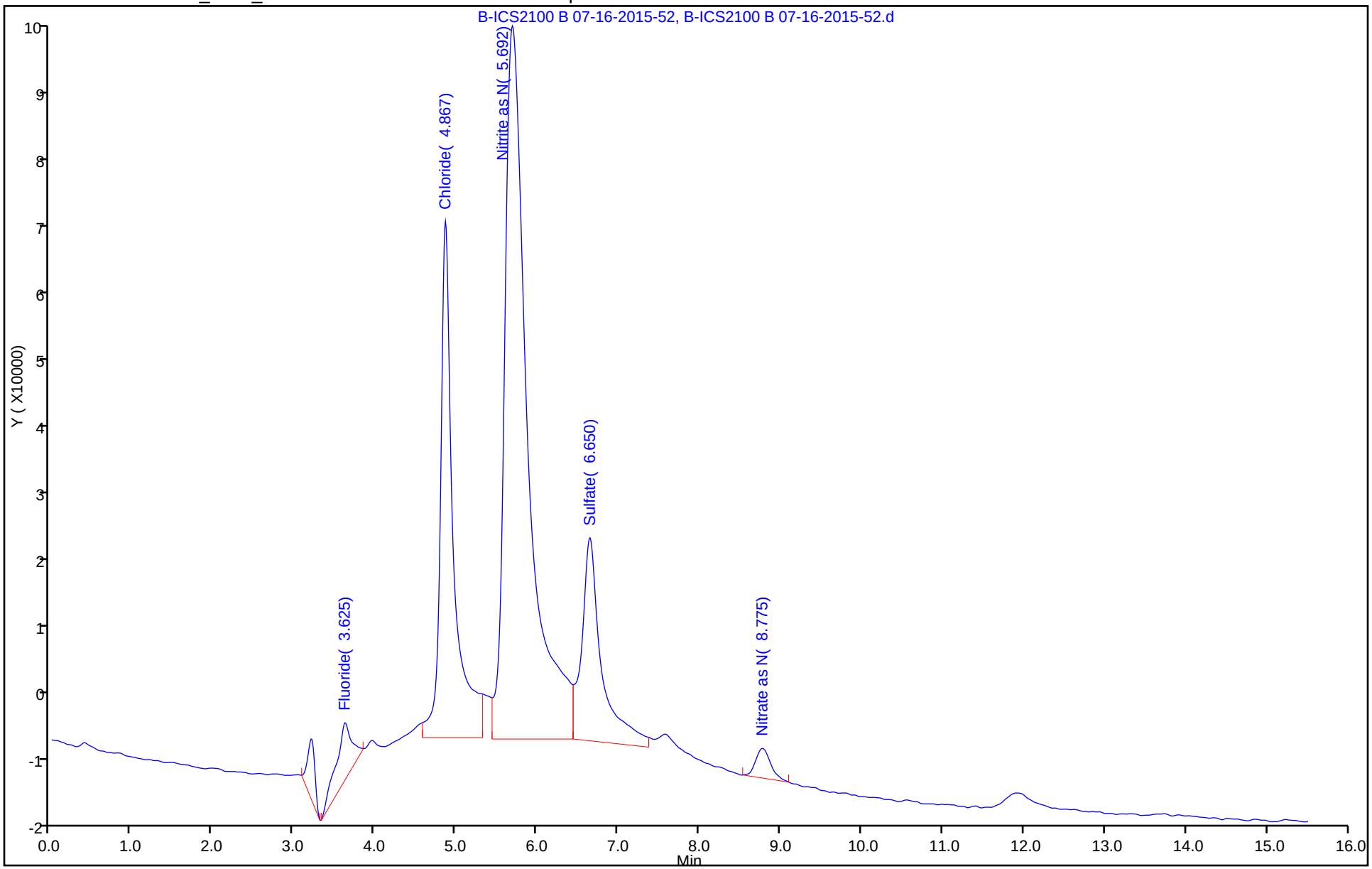
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.625	3.642	-0.017	114371		-0.000640	
2 Chloride	4.867	4.858	0.009	835996		0.0917	
7 Nitrite as N	5.692	5.692	0.000	2077710		0.0192	
3 Sulfate	6.650	6.567	0.083	500424		-0.1752	
4 Bromide		7.567				ND	
5 Nitrate as N	8.775	8.717	0.058	55616		0.009469	
6 Orthophosphate as P		11.733				ND	

Report Date: 17-Jul-2015 14:38:50 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-52.d

Injection Date:	17-Jul-2015 01:47:00	Instrument ID:	CHICS2100B	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	52
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-147963/4

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-4.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 15:50

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0143	J	0.10	0.0062
16887-00-6	Chloride	0.321	J	1.0	0.20
14808-79-8	Sulfate	ND		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-4.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 16-Jul-2015 15:50:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-004
Misc. Info.: 4 CCB
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

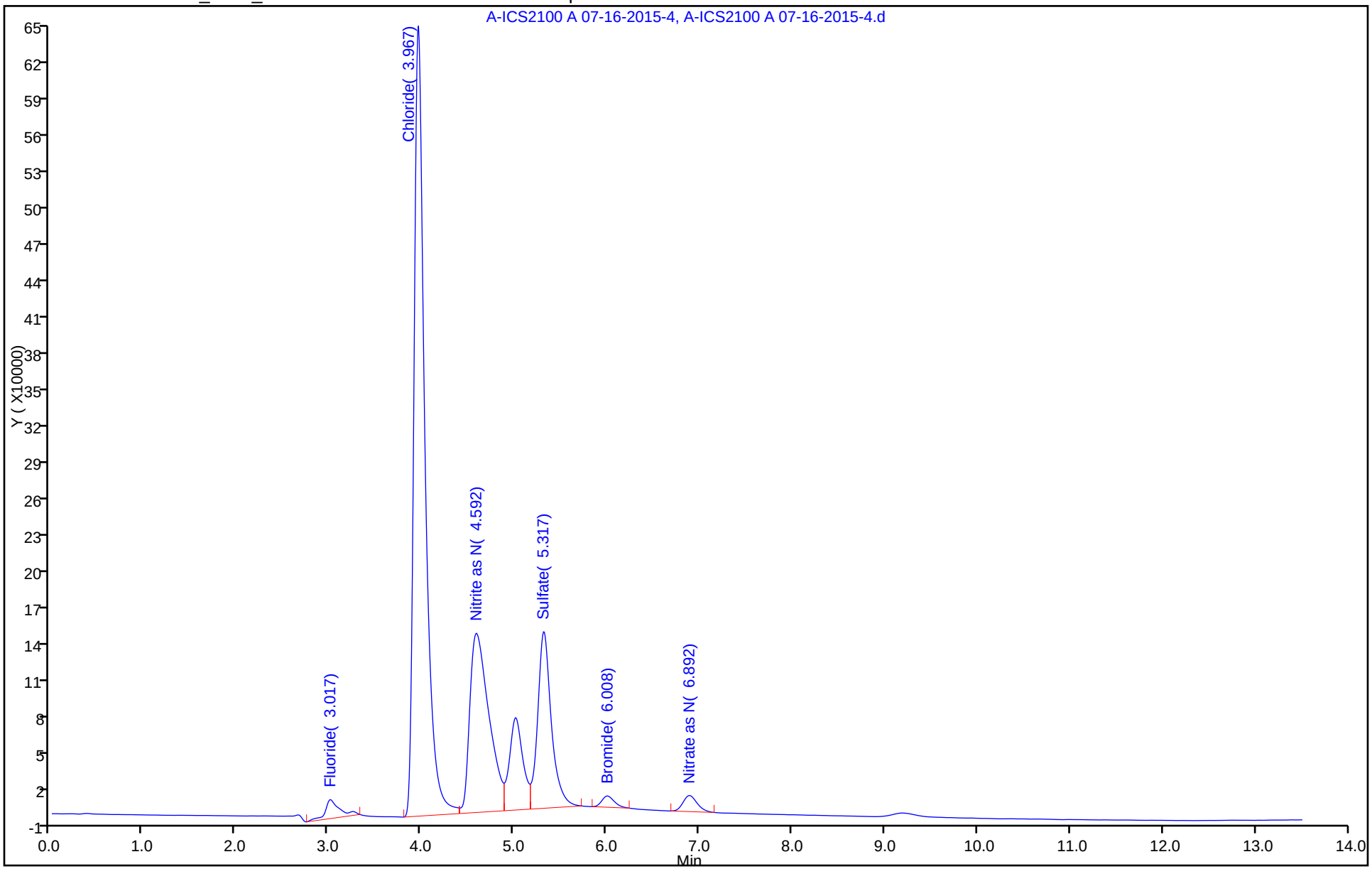
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.017	3.025	-0.008	15573H		0.0118	
2 Chloride	3.967	3.958	0.009	5382491		0.3205	
7 Nitrite as N	4.592	4.583	0.009	2134830		0.0193	
3 Sulfate	5.317	5.258	0.059	1497882		0.0188	
4 Bromide	6.008	5.992	0.016	87426		0.0246	
5 Nitrate as N	6.892	6.850	0.042	141043		0.0143	
6 Orthophosphate as P		9.092				ND	

Report Date: 17-Jul-2015 11:57:07 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-4.d

Injection Date:	16-Jul-2015 15:50:00	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.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-147963/16

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-16.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 19:12

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0156	J	0.10	0.0062
16887-00-6	Chloride	0.359	J	1.0	0.20
14808-79-8	Sulfate	ND		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-16.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 16-Jul-2015 19:12:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-016
Misc. Info.: 16 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:12 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

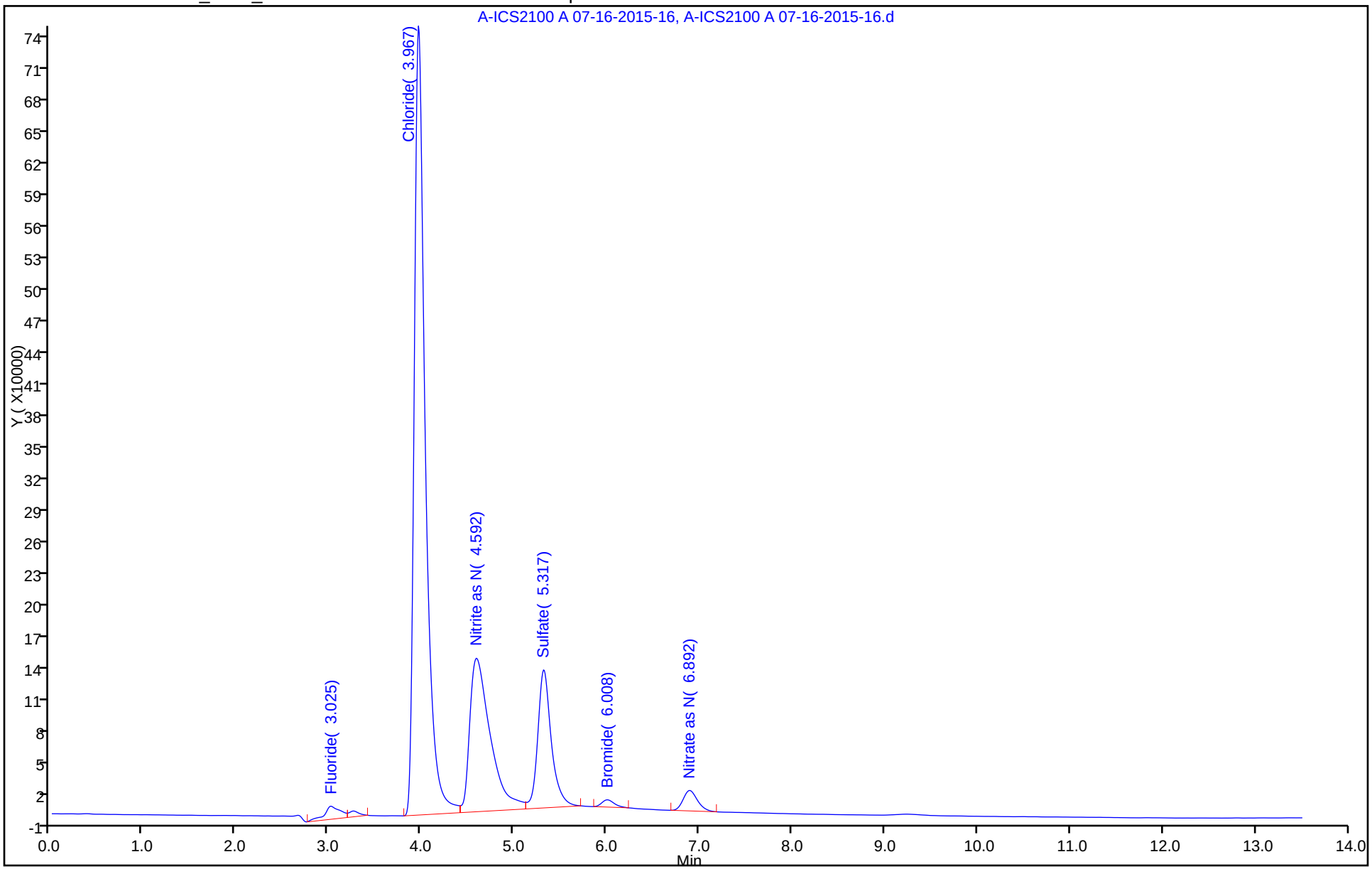
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.025	3.033	-0.008	12266H		0.0110	
2 Chloride	3.967	3.958	0.009	6217122		0.3593	
7 Nitrite as N	4.592	4.583	0.009	2243308		0.0215	
3 Sulfate	5.317	5.258	0.059	1331468		0.008151	
4 Bromide	6.008	5.992	0.016	63855		0.0221	
5 Nitrate as N	6.892	6.850	0.042	207372		0.0156	
6 Orthophosphate as P		9.092				ND	

Report Date: 17-Jul-2015 11:57:13 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-16.d

Injection Date:	16-Jul-2015 19:12:00	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.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-147963/25

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-25.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 21:48

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0281	J	0.10	0.0062
16887-00-6	Chloride	1.43		1.0	0.20
14808-79-8	Sulfate	0.312	J	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-25.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 16-Jul-2015 21:48:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-025
Misc. Info.: 28 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:16 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

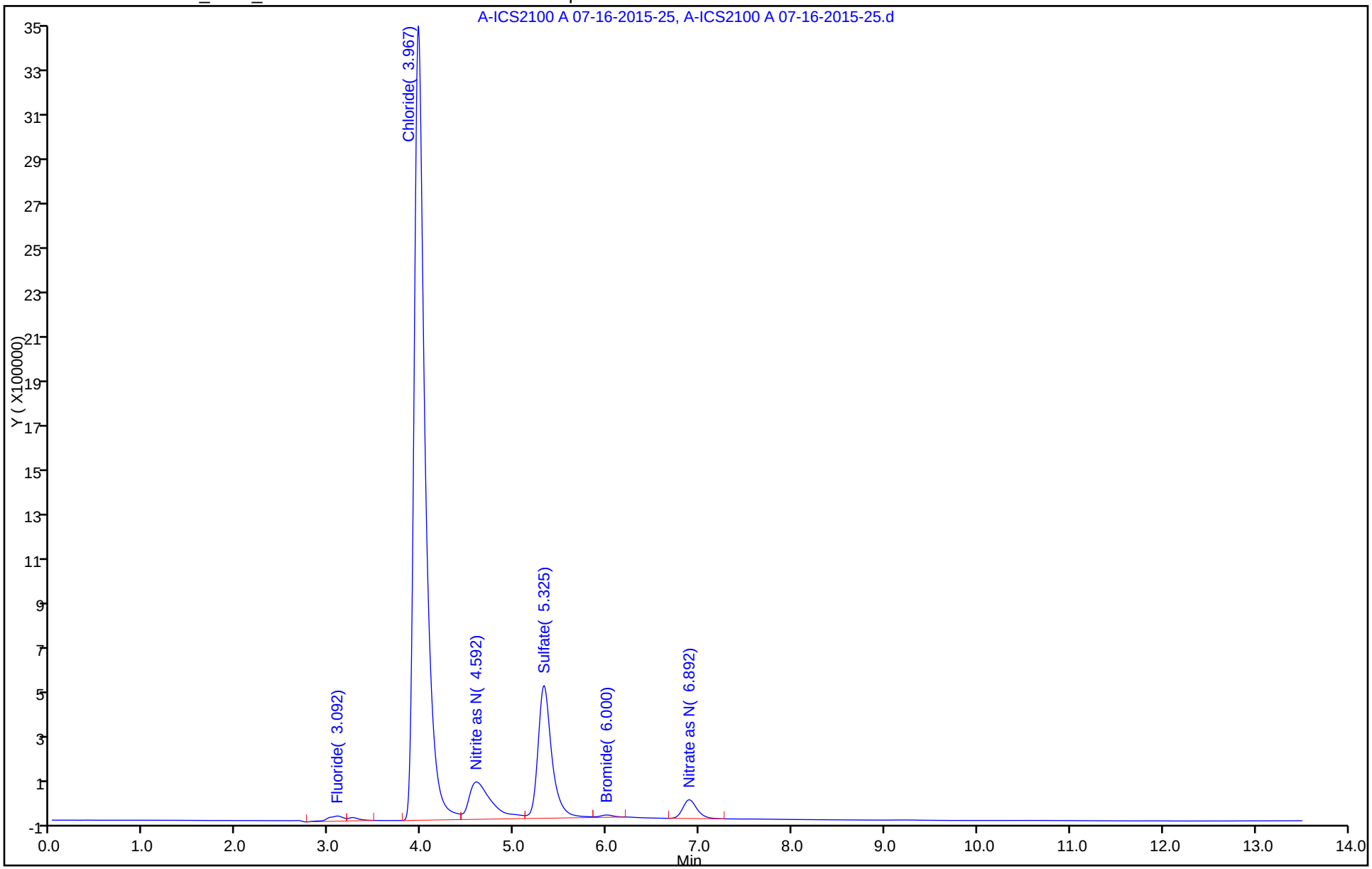
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.092	3.025	0.067	22714H		0.0135	
2 Chloride	3.967	3.958	0.009	29249472		1.43	
7 Nitrite as N	4.592	4.575	0.017	2817489		0.0334	
3 Sulfate	5.325	5.267	0.058	6094988		0.3119	
4 Bromide	6.000	5.992	0.008	102099		0.0261	
5 Nitrate as N	6.892	6.842	0.050	882751		0.0281	
6 Orthophosphate as P		9.092				ND	

Report Date: 17-Jul-2015 11:57:17 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-25.d

Injection Date:	16-Jul-2015 21:48:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	25
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.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-147937/5

Matrix: Water Lab File ID: B-ICS2100 B 07-16-2015-5.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 11:17

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147937 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.62		0.10	0.0062
16887-00-6	Chloride	51.7		1.0	0.20
14808-79-8	Sulfate	51.6		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-5.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 16-Jul-2015 11:17:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007801-005
Misc. Info.: 5 LCS
Operator ID: Instrument ID: CHICS2100B

Method: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\300_9056_CHIC2100B.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 13:34:35 Calib Date: 15-Apr-2015 17:45:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150415-6484.b\B-ICS2100 B 04-15-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.642	3.650	-0.008	112023331	2.50	2.58	
2 Chloride	4.858	4.867	-0.009	1378540926	50.0	51.7	
7 Nitrite as N	5.692	5.700	-0.008	147432576	2.50	2.54	
3 Sulfate	6.567	6.575	-0.008	1008976243	50.0	51.6	
4 Bromide	7.567	7.575	-0.008	9363704H	10.0	10.6	
5 Nitrate as N	8.717	8.717	0.000	172912017	2.50	2.62	
6 Orthophosphate as P	11.758	11.717	0.041	60974502	2.50	2.32	

Reagents:

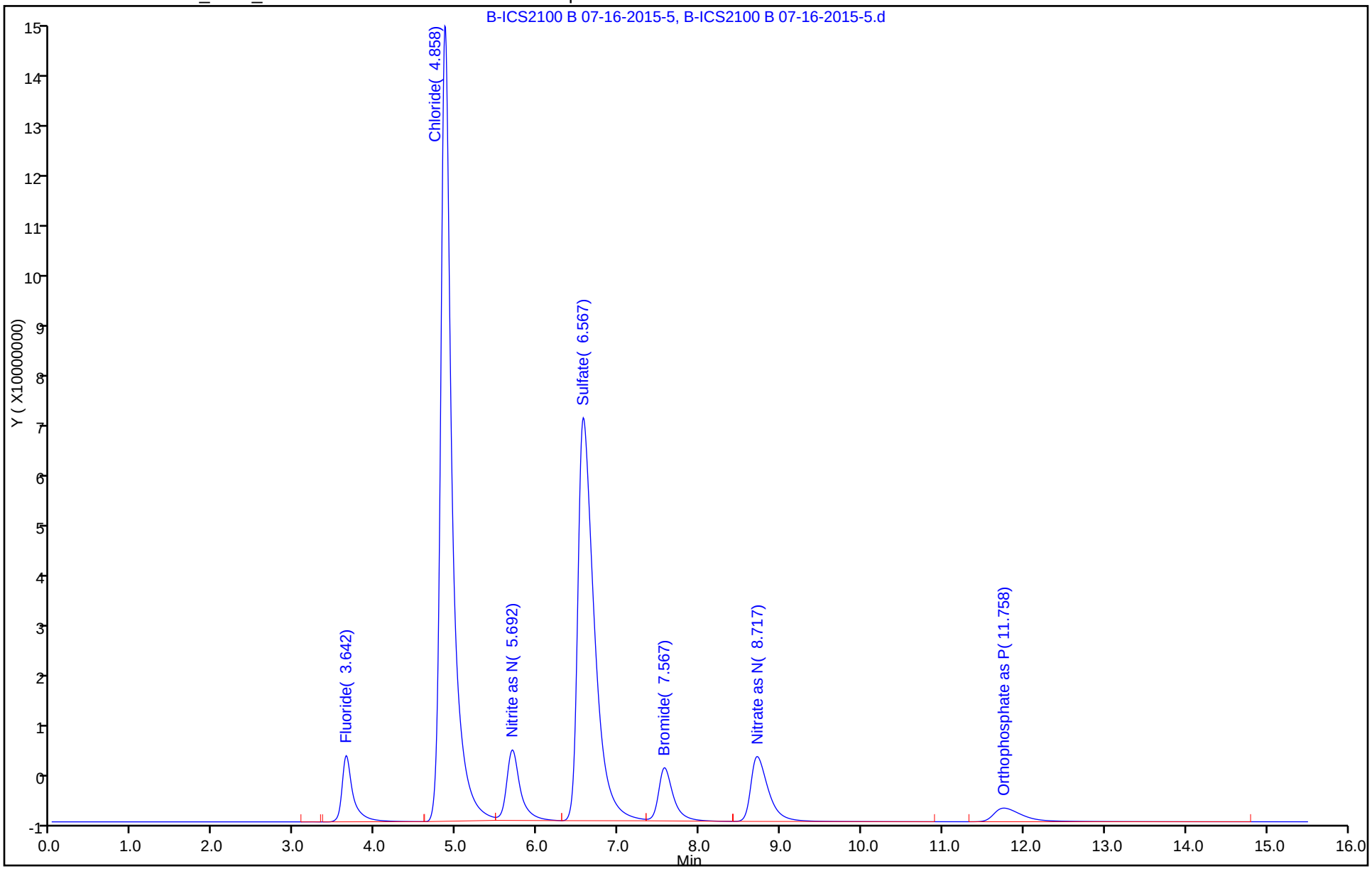
icccv_01271 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 13:34:48 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHICS2100B\20150716-7801.b\B-ICS2100 B 07-16-2015-5.d

Injection Date:	16-Jul-2015 11:17:00	Instrument ID:	CHICS2100B	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_CHIC2100B	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-147963/5

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-5.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 16:05

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.51		0.10	0.0062
16887-00-6	Chloride	50.1		1.0	0.20
14808-79-8	Sulfate	49.0		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-5.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 16-Jul-2015 16:05:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-005
Misc. Info.: 5 lcs
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:07 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.025	3.025	0.000	10353777H	2.50	2.52	
2 Chloride	3.958	3.958	0.000	1075817403	50.0	50.1	
7 Nitrite as N	4.583	4.583	0.000	114795906	2.50	2.35	
3 Sulfate	5.267	5.258	0.009	770142054	50.0	49.0	
4 Bromide	6.000	5.992	0.008	94998878	10.0	10.1	
5 Nitrate as N	6.858	6.850	0.008	134507556	2.50	2.51	
6 Orthophosphate as P	9.092	9.092	0.000	47055120	2.50	2.37	

Reagents:

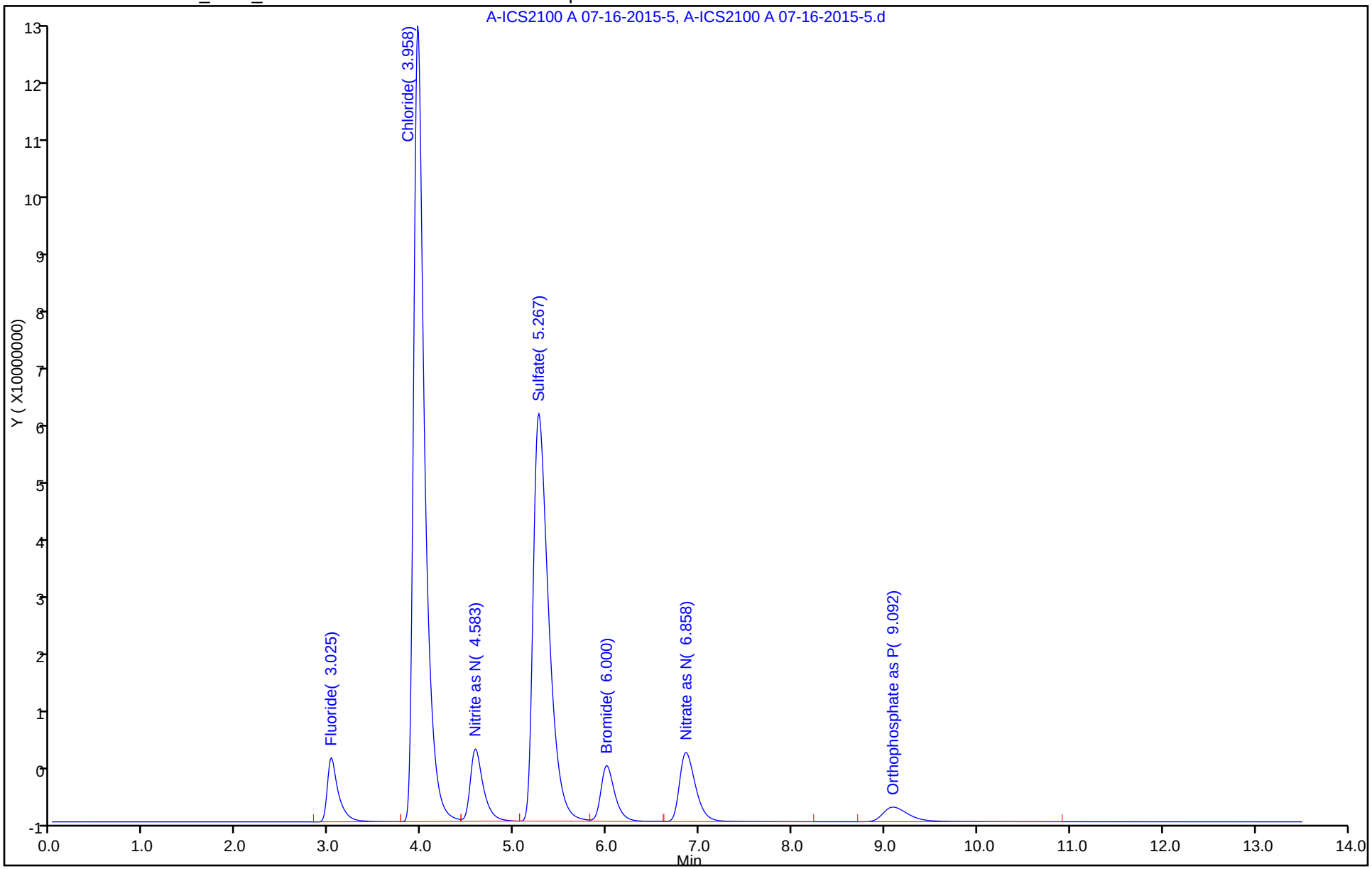
icccv_01271 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2015 11:57:08 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-5.d

Injection Date:	16-Jul-2015 16:05:00	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		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MS Lab Sample ID: 180-45946-12 MS

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-18.d

Analysis Method: 300.0 Date Collected: 07/15/2015 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 19:47

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	4.47		0.10	0.0062
16887-00-6	Chloride	155	4	1.0	0.20
14808-79-8	Sulfate	55.5		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-18.d
Lims ID: 180-45946-A-12 MS
Client ID: HD-COD-SW-17-0/1-0
Sample Type: MS
Inject. Date: 16-Jul-2015 19:47:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-018
Misc. Info.: 18 180-45946-a-12 ms
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:12 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.025	3.033	-0.008	4964561H	1.25	1.21	
2 Chloride	3.950	3.958	-0.008	3338532613	25.0	155.2	
7 Nitrite as N		4.583				ND	
3 Sulfate	5.250	5.258	-0.008	871120364	25.0	55.5	
4 Bromide	6.000	5.992	0.008	44554846	5.00	4.73	
5 Nitrate as N	6.825	6.850	-0.025	239495429	1.25	4.47	
6 Orthophosphate as P	9.317	9.092	0.225	14353819	1.25	0.7836	

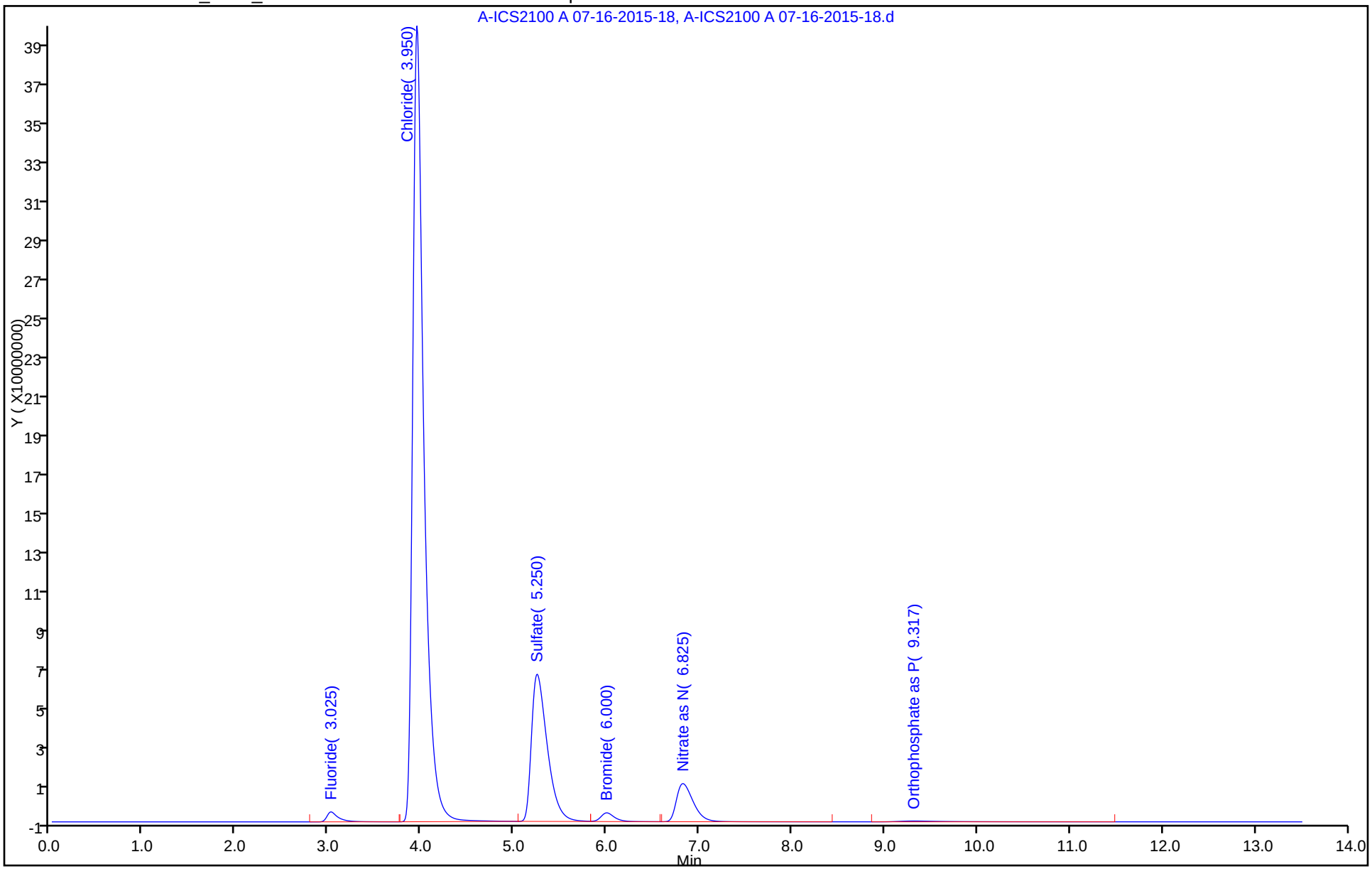
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 17-Jul-2015 11:57:14 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-18.d				
Injection Date:	16-Jul-2015 19:47:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-12 MS			Worklist Smp#:	18
Client ID:	HD-COD-SW-17-0/1-0				
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.: 180-45946-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MSD Lab Sample ID: 180-45946-12 MSD

Matrix: Water Lab File ID: A-ICS2100 A 07-16-2015-19.d

Analysis Method: 300.0 Date Collected: 07/15/2015 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/16/2015 20:04

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 147963 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	4.39		0.10	0.0062
16887-00-6	Chloride	154	4	1.0	0.20
14808-79-8	Sulfate	54.0		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-19.d
Lims ID: 180-45946-A-12 MSD
Client ID: HD-COD-SW-17-0/1-0
Sample Type: MSD
Inject. Date: 16-Jul-2015 20:04:00 ALS Bottle#: 0 Worklist Smp#: 19
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0007802-019
Misc. Info.: 19 180-45946-a-12 msd
Operator ID: Instrument ID: CHIC2100A

Method: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jul-2015 11:57:12 Calib Date: 19-May-2015 14:18:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150519-7010.b\A-ICS2100 A 05-19-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.025	3.033	-0.008	4663438H	1.25	1.14	
2 Chloride	3.950	3.958	-0.008	3312555913	25.0	154.0	
7 Nitrite as N		4.583				ND	
3 Sulfate	5.250	5.258	-0.008	848660853	25.0	54.0	
4 Bromide	6.000	5.992	0.008	41641364	5.00	4.42	
5 Nitrate as N	6.825	6.850	-0.025	235377995	1.25	4.39	
6 Orthophosphate as P	9.333	9.092	0.241	13036205	1.25	0.7199	

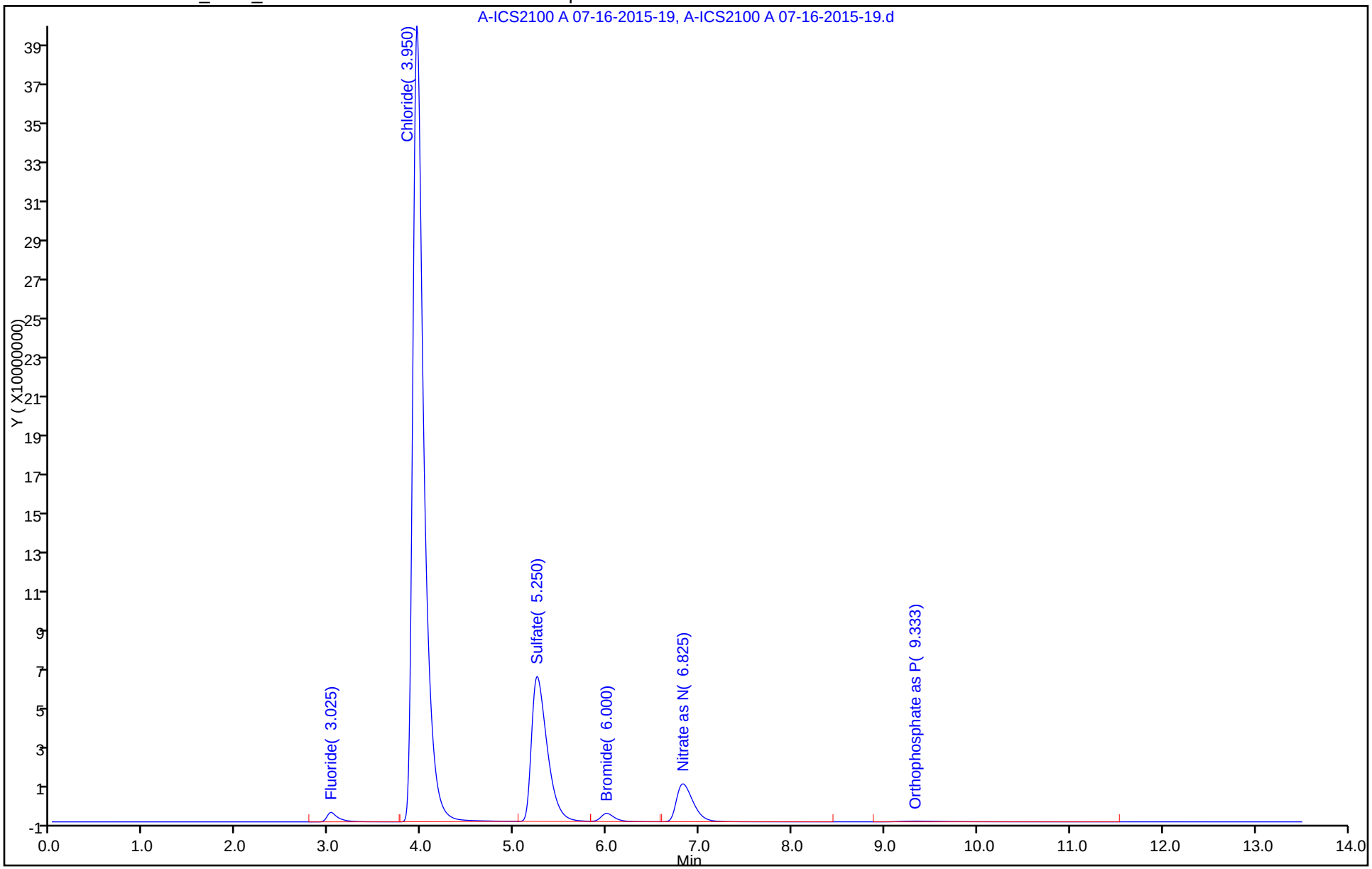
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 17-Jul-2015 11:57:15 Chrom Revision: 2.2 23-Jun-2015 15:30:48

TestAmerica Pittsburgh

Data File:	\\ChromNA\Pittsburgh\ChromData\CHIC2100A\20150716-7802.b\A-ICS2100 A 07-16-2015-19.d				
Injection Date:	16-Jul-2015 20:04:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-45946-A-12 MSD			Worklist Smp#:	19
Client ID:	HD-COD-SW-17-0/1-0				
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 Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHICS2100B Start Date: 04/15/2015 14:54

Analysis Batch Number: 138618 End Date: 04/15/2015 19:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/15/2015 14:54	1		AS-18
IC 180-138618/2		04/15/2015 15:44	1	B-ICS2100 B 04-15-2015-2.d	AS-18
IC 180-138618/3		04/15/2015 16:01	1	B-ICS2100 B 04-15-2015-3.d	AS-18
ICRT 180-138618/4		04/15/2015 16:19	1	B-ICS2100 B 04-15-2015-4.d	AS-18
IC 180-138618/5		04/15/2015 16:36	1	B-ICS2100 B 04-15-2015-5.d	AS-18
IC 180-138618/6		04/15/2015 16:53	1	B-ICS2100 B 04-15-2015-6.d	AS-18
IC 180-138618/7		04/15/2015 17:11	1	B-ICS2100 B 04-15-2015-7.d	AS-18
IC 180-138618/8		04/15/2015 17:28	1	B-ICS2100 B 04-15-2015-8.d	AS-18
IC 180-138618/9		04/15/2015 17:45	1	B-ICS2100 B 04-15-2015-9.d	AS-18
ZZZZZ		04/15/2015 18:03	1		AS-18
ZZZZZ		04/15/2015 18:20	1		AS-18
ZZZZZ		04/15/2015 18:37	1		AS-18
ICV 180-138618/13		04/15/2015 18:55	1		AS-18
CCV 180-138618/14		04/15/2015 19:12	1		AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 05/19/2015 12:31

Analysis Batch Number: 142103 End Date: 05/20/2015 00:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 180-142103/2		05/19/2015 12:31	1	A-ICS2100 A 05-19-2015-2.d	AS-18
IC 180-142103/3		05/19/2015 12:46	1	A-ICS2100 A 05-19-2015-3.d	AS-18
ICRT 180-142103/4		05/19/2015 13:01	1	A-ICS2100 A 05-19-2015-4.d	AS-18
IC 180-142103/5		05/19/2015 13:17	1	A-ICS2100 A 05-19-2015-5.d	AS-18
IC 180-142103/6		05/19/2015 13:32	1	A-ICS2100 A 05-19-2015-6.d	AS-18
IC 180-142103/7		05/19/2015 13:47	1	A-ICS2100 A 05-19-2015-7.d	AS-18
IC 180-142103/8		05/19/2015 14:03	1	A-ICS2100 A 05-19-2015-8.d	AS-18
IC 180-142103/9		05/19/2015 14:18	1	A-ICS2100 A 05-19-2015-9.d	AS-18
ZZZZZ		05/19/2015 14:33	1		AS-18
ZZZZZ		05/19/2015 14:52	1		AS-18
ZZZZZ		05/19/2015 15:08	1		AS-18
ICV 180-142103/13		05/19/2015 15:23	1		AS-18
CCV 180-142103/14		05/19/2015 15:38	1		AS-18
CCB 180-142103/15		05/19/2015 15:54	1		AS-18
ZZZZZ		05/19/2015 16:12	1		AS-18
ZZZZZ		05/19/2015 16:29	1		AS-18
ZZZZZ		05/19/2015 19:45	1		AS-18
ZZZZZ		05/19/2015 20:08	1		AS-18
ZZZZZ		05/19/2015 20:23	1		AS-18
ZZZZZ		05/19/2015 20:38	1		AS-18
ZZZZZ		05/19/2015 20:54	1		AS-18
ZZZZZ		05/19/2015 21:09	1		AS-18
ZZZZZ		05/19/2015 21:24	1		AS-18
ZZZZZ		05/19/2015 21:41	1		AS-18
CCV 180-142103/26		05/19/2015 21:58	1		AS-18
CCB 180-142103/27		05/19/2015 22:15	1		AS-18
ZZZZZ		05/19/2015 22:33	1		AS-18
ZZZZZ		05/19/2015 22:50	1		AS-18
ZZZZZ		05/19/2015 23:07	1		AS-18
ZZZZZ		05/19/2015 23:25	1		AS-18
ZZZZZ		05/19/2015 23:42	1		AS-18
CCV 180-142103/38		05/19/2015 23:59	1		AS-18
CCB 180-142103/39		05/20/2015 00:16	1		AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHICS2100B Start Date: 07/16/2015 10:08

Analysis Batch Number: 147937 End Date: 07/17/2015 01:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		07/16/2015 10:08	1		AS-18
ICV 180-147937/2		07/16/2015 10:25	1	B-ICS2100 B 07-16-2015-2.d	AS-18
CCV 180-147937/3		07/16/2015 10:42	1	B-ICS2100 B 07-16-2015-3.d	AS-18
CCB 180-147937/4		07/16/2015 11:00	1	B-ICS2100 B 07-16-2015-4.d	AS-18
LCS 180-147937/5		07/16/2015 11:17	1	B-ICS2100 B 07-16-2015-5.d	AS-18
MB 180-147937/6		07/16/2015 11:34	1	B-ICS2100 B 07-16-2015-6.d	AS-18
ZZZZZ		07/16/2015 12:47	10		AS-18
ZZZZZ		07/16/2015 13:05	100		AS-18
ZZZZZ		07/16/2015 13:22	10		AS-18
ZZZZZ		07/16/2015 13:39	100		AS-18
ZZZZZ		07/16/2015 13:57	10		AS-18
ZZZZZ		07/16/2015 14:14	100		AS-18
ZZZZZ		07/16/2015 14:31	10		AS-18
ZZZZZ		07/16/2015 14:48	100		AS-18
CCV 180-147937/15		07/16/2015 15:07	1	B-ICS2100 B 07-16-2015-15.d	AS-18
CCB 180-147937/16		07/16/2015 15:24	1	B-ICS2100 B 07-16-2015-16.d	AS-18
ZZZZZ		07/16/2015 15:41	10		AS-18
ZZZZZ		07/16/2015 15:59	100		AS-18
ZZZZZ		07/16/2015 16:16	5		AS-18
ZZZZZ		07/16/2015 16:33	50		AS-18
ZZZZZ		07/16/2015 16:51	5		AS-18
ZZZZZ		07/16/2015 17:08	5		AS-18
ZZZZZ		07/16/2015 17:25	5		AS-18
ZZZZZ		07/16/2015 17:43	50		AS-18
ZZZZZ		07/16/2015 18:00	50		AS-18
ZZZZZ		07/16/2015 18:17	50		AS-18
CCV 180-147937/27		07/16/2015 18:35	1		AS-18
CCB 180-147937/28		07/16/2015 18:52	1		AS-18
ZZZZZ		07/16/2015 19:09	5		AS-18
ZZZZZ		07/16/2015 19:27	50		AS-18
ZZZZZ		07/16/2015 19:44	5		AS-18
ZZZZZ		07/16/2015 20:01	50		AS-18
ZZZZZ		07/16/2015 20:18	5		AS-18
ZZZZZ		07/16/2015 20:36	50		AS-18
ZZZZZ		07/16/2015 20:53	10		AS-18
ZZZZZ		07/16/2015 21:10	100		AS-18
ZZZZZ		07/16/2015 21:28	25		AS-18
ZZZZZ		07/16/2015 21:45	250		AS-18
CCV 180-147937/39		07/16/2015 22:02	1	B-ICS2100 B 07-16-2015-39.d	AS-18
CCB 180-147937/40		07/16/2015 22:20	1	B-ICS2100 B 07-16-2015-40.d	AS-18
ZZZZZ		07/16/2015 22:37	1		AS-18

300.0

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHICS2100B Start Date: 07/16/2015 10:08

Analysis Batch Number: 147937 End Date: 07/17/2015 01:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		07/16/2015 22:54	1		AS-18
ZZZZZ		07/16/2015 23:12	1		AS-18
180-45946-1	HD-COD-SW-6-0/1-0	07/16/2015 23:29	1	B-ICS2100 B 07-16-2015-44.d	AS-18
180-45946-2	HD-COD-SW-7-0/1-0	07/16/2015 23:46	1	B-ICS2100 B 07-16-2015-45.d	AS-18
180-45946-3	HD-COD-SW-8-0/1-0	07/17/2015 00:04	1	B-ICS2100 B 07-16-2015-46.d	AS-18
180-45946-4	HD-COD-SW-9-0/1-0	07/17/2015 00:21	1	B-ICS2100 B 07-16-2015-47.d	AS-18
180-45946-5	HD-COD-SW-10-0/1-0	07/17/2015 00:38	1	B-ICS2100 B 07-16-2015-48.d	AS-18
180-45946-6	HD-COD-SW-11-0/1-0	07/17/2015 00:55	1	B-ICS2100 B 07-16-2015-49.d	AS-18
180-45946-7	HD-COD-SW-12-0/1-0	07/17/2015 01:13	1	B-ICS2100 B 07-16-2015-50.d	AS-18
CCV 180-147937/51		07/17/2015 01:30	1	B-ICS2100 B 07-16-2015-51.d	AS-18
CCB 180-147937/52		07/17/2015 01:47	1	B-ICS2100 B 07-16-2015-52.d	AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 07/16/2015 15:04

Analysis Batch Number: 147963 End Date: 07/16/2015 21:48

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		07/16/2015 15:04	1		AS-18
ICV 180-147963/2		07/16/2015 15:19	1	A-ICS2100 A 07-16-2015-2.d	AS-18
CCV 180-147963/3		07/16/2015 15:34	1	A-ICS2100 A 07-16-2015-3.d	AS-18
CCB 180-147963/4		07/16/2015 15:50	1	A-ICS2100 A 07-16-2015-4.d	AS-18
LCS 180-147963/5		07/16/2015 16:05	1	A-ICS2100 A 07-16-2015-5.d	AS-18
MB 180-147963/6		07/16/2015 16:21	1	A-ICS2100 A 07-16-2015-6.d	AS-18
180-45946-8	HD-COD-SW-13-0/1-0	07/16/2015 16:36	1	A-ICS2100 A 07-16-2015-7.d	AS-18
180-45946-9	HD-COD-SW-15-0/1-0	07/16/2015 16:53	1	A-ICS2100 A 07-16-2015-8.d	AS-18
180-45946-11	HD-COD-SW-16-0/1-0	07/16/2015 17:11	1	A-ICS2100 A 07-16-2015-9.d	AS-18
180-45946-13	HD-COD-SW-20-0/1-0	07/16/2015 17:28	1	A-ICS2100 A 07-16-2015-10.d	AS-18
180-45946-14	HD-COD-SW-26-0/1-0	07/16/2015 17:45	1	A-ICS2100 A 07-16-2015-11.d	AS-18
180-45946-16	HD-COD-SW-28-0/1-0	07/16/2015 18:03	1	A-ICS2100 A 07-16-2015-12.d	AS-18
180-45946-17	HD-COD-SW-29-0/1-0	07/16/2015 18:20	1	A-ICS2100 A 07-16-2015-13.d	AS-18
180-45946-18	HD-QC1-0/1-1	07/16/2015 18:37	1	A-ICS2100 A 07-16-2015-14.d	AS-18
CCV 180-147963/15		07/16/2015 18:55	1	A-ICS2100 A 07-16-2015-15.d	AS-18
CCB 180-147963/16		07/16/2015 19:12	1	A-ICS2100 A 07-16-2015-16.d	AS-18
180-45946-12	HD-COD-SW-17-0/1-0	07/16/2015 19:29	1	A-ICS2100 A 07-16-2015-17.d	AS-18
180-45946-12 MS	HD-COD-SW-17-0/1-0 MS	07/16/2015 19:47	1	A-ICS2100 A 07-16-2015-18.d	AS-18
180-45946-12 MSD	HD-COD-SW-17-0/1-0 MSD	07/16/2015 20:04	1	A-ICS2100 A 07-16-2015-19.d	AS-18
180-45946-15	HD-COD-SW-27-0/1-0	07/16/2015 20:21	1	A-ICS2100 A 07-16-2015-20.d	AS-18
ZZZZZ		07/16/2015 20:39	1000		AS-18
ZZZZZ		07/16/2015 20:56	1		AS-18
ZZZZZ		07/16/2015 21:13	5		AS-18
CCV 180-147963/24		07/16/2015 21:31	1	A-ICS2100 A 07-16-2015-24.d	AS-18
CCB 180-147963/25		07/16/2015 21:48	1	A-ICS2100 A 07-16-2015-25.d	AS-18

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-45946-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-COD-SW-6-0/1-0	180-45946-1
HD-COD-SW-7-0/1-0	180-45946-2
HD-COD-SW-8-0/1-0	180-45946-3
HD-COD-SW-9-0/1-0	180-45946-4
HD-COD-SW-10-0/1-0	180-45946-5
HD-COD-SW-11-0/1-0	180-45946-6
HD-COD-SW-12-0/1-0	180-45946-7
HD-COD-SW-13-0/1-0	180-45946-8
HD-COD-SW-15-0/1-0	180-45946-9
HD-COD-SW-16-0/1-0	180-45946-11
HD-COD-SW-17-0/1-0	180-45946-12
HD-COD-SW-20-0/1-0	180-45946-13
HD-COD-SW-26-0/1-0	180-45946-14
HD-COD-SW-27-0/1-0	180-45946-15
HD-COD-SW-28-0/1-0	180-45946-16
HD-COD-SW-29-0/1-0	180-45946-17
HD-QC1-0/1-1	180-45946-18

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-45946-1

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 10:55

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	31000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	2800	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	6300	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	21000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-45946-2

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 11:35

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	36000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	4300	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	10000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	35000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-45946-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 08:55

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	30000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	3600	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	6900	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	27000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-45946-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 12:20

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	50000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	8000	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	11000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	49000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-10-0/1-0 Lab Sample ID: 180-45946-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 09:35

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	90000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	7100	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	12000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	35000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-11-0/1-0 Lab Sample ID: 180-45946-6

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 12:45

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	71000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	2100	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	16000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	28000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-12-0/1-0 Lab Sample ID: 180-45946-7

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 13:00

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	67000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	16000	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	11000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	74000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-45946-8

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 09:20

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	31000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	3700	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	6800	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	27000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-45946-9

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 13:20

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	89000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	5400	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	18000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	57000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-45946-11

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 10:25

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	32000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	4000	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	7300	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	30000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 180-45946-12

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 10:00

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	95000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	5400	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	19000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	58000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-20-0/1-0 Lab Sample ID: 180-45946-13

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 10:55

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	29000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	2600	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	5700	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	20000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-45946-14

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 11:15

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	40000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	4200	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	11000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	36000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-45946-15

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 13:30

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	51000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	4200	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	11000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	33000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-45946-16

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 12:35

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	50000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	8000	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	11000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	47000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-45946-17

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 08:40

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	32000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	3800	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	7600	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	29000	500	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-45946-18

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 08:00

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	89000	500	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	5400	500	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	18000	500	1.2	ug/L			1	6020A
7440-23-5	Sodium	56000	500	3.8	ug/L			1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

ICV Source: MICVX_00033 Concentration Units: ug/L

CCV Source: MCCV1X_00077

Analyte	ICV 180-148293/5 07/20/2015 13:43				CCV 180-148293/10 07/20/2015 14:12				CCV 180-148293/22 07/20/2015 15:16			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	39200		40000	98	49700		50000	99	48900		50000	98
Magnesium	39600		40000	99	48000		50000	96	47300		50000	95
Potassium	39600		40000	99	49100		50000	98	47900		50000	96
Sodium	39700		40000	99	48600		50000	97	47600		50000	95

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.: 180-45946-1

SDG No.:

ICV Source: MICVX_00033 Concentration Units: ug/L

CCV Source: MCCV1X_00077

Analyte	CCV 180-148293/34 07/20/2015 16:25				CCV 180-148293/46 07/20/2015 17:30				CCV 180-148293/58 07/20/2015 18:35			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	48600		50000	97	49500		50000	99	50100		50000	100
Magnesium	46400		50000	93	46300		50000	93	45900		50000	92
Potassium	47400		50000	95	47500		50000	95	48100		50000	96
Sodium	46900		50000	94	46500		50000	93	45700		50000	91

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.: 180-45946-1

SDG No.:

Method: 6020A Instrument ID: X

Lab Sample ID: CRI 180-148293/7 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00069

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	500	434	J	87	70-130
Potassium	500	482	J	96	70-130
Magnesium	500	488	J	98	70-130
Sodium	500	481	J	96	70-130

Lab Sample ID: CRI 180-148293/72 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00069

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	500	452	J	90	70-130
Potassium	500	476	J	95	70-130
Magnesium	500	497	J	99	70-130
Sodium	500	464	J	93	70-130

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

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 180-148293/6 07/20/2015 13:48		CCB1 180-148293/11 07/20/2015 14:21		CCB2 180-148293/23 07/20/2015 15:25		CCB3 180-148293/35 07/20/2015 16:34	
		Found	C	Found	C	Found	C	Found	C
Calcium	500	28.6	J	28.1	J	28.8	J	32.2	J
Magnesium	500	2.56	J	3.31	J	3.80	J	3.90	J
Potassium	500	21.9	J	14.3	J	9.87	J	5.99	J
Sodium	500	25.9	J	30.0	J	17.0	J	12.4	J

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB4 180-148293/47 07/20/2015 17:39		CCB5 180-148293/59 07/20/2015 18:44					
		Found	C	Found	C	Found	C	Found	C
Calcium	500	31.3	J	33.0	J				
Magnesium	500	5.23	J	6.02	J				
Potassium	500	ND		ND					
Sodium	500	13.5	J	7.41	J				

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 180-148049/1-A

Instrument Code: X Batch No.: 148293

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	20.3	J		6020A
7440-09-7	Potassium	7.48	J		6020A
7439-95-4	Magnesium	ND			6020A
7440-23-5	Sodium	ND			6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: ICSA 180-148293/8 Instrument ID: X

Lab File ID: X50720A.xml ICS Source: MICSAX_00068

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**100000**	**98660**	**99**
Magnesium	**100000**	**95420**	**95**
Potassium	**100000**	**96040**	**96**
Sodium	**100000**	**95780**	**96**
Aluminum	*100000*	*91400*	*91*
Antimony		*0.0030*	
Arsenic		*0.209*	
Barium		*0.0820*	
Beryllium		*0.0160*	
Boron		*0.924*	
Cadmium		*0.446*	
Chromium		*1.44*	
Cobalt		*0.0960*	
Copper		*1.20*	
Iron	*100000*	*95980*	*96*
Lead		*0.177*	
Manganese		*0.527*	
Molybdenum	*2000*	*2172*	*109*
Nickel		*0.196*	
Selenium		*0.0500*	
Silicon		*20.0*	
Silver		*0.0240*	
Strontium		*0.638*	
Thallium		*0.0290*	
Tin		*0.278*	
Titanium	*2000*	*2009*	*100*
Vanadium		*0.371*	
Zinc		*1.68*	

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

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Lab Sample ID: ICSAB 180-148293/9 Instrument ID: X

Lab File ID: X50720A.xml ICS Source: MICSABX_00072

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**100000**	**99940**	**100**
Magnesium	**100000**	**97497**	**97**
Potassium	**100000**	**97493**	**97**
Sodium	**100000**	**97110**	**97**
Aluminum	*100000*	*92407*	*92*
Antimony	*20.0*	*19.2*	*96*
Arsenic	*20.0*	*20.4*	*102*
Barium	*20.0*	*20.6*	*103*
Beryllium	*20.0*	*19.7*	*98*
Boron	*50.0*	*48.6*	*97*
Cadmium	*20.0*	*20.2*	*101*
Chromium	*20.0*	*20.5*	*103*
Cobalt	*20.0*	*20.7*	*104*
Copper	*20.0*	*20.6*	*103*
Iron	*100000*	*99403*	*99*
Lead	*20.0*	*20.5*	*102*
Manganese	*22.5*	*19.4*	*86*
Molybdenum	*2000*	*2189*	*109*
Nickel	*20.0*	*19.4*	*97*
Selenium	*50.0*	*50.2*	*100*
Silicon	*500*	*573*	*115*
Silver	*20.0*	*19.4*	*97*
Strontium	*25.0*	*20.4*	*81*
Thallium	*20.0*	*20.1*	*100*
Tin	*100*	*96.9*	*97*
Titanium	*2000*	*2029*	*101*
Vanadium	*20.0*	*19.4*	*97*
Zinc	*25.0*	*21.1*	*85*

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

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: HD-COD-SW-17-0/1-0 MS Lab ID: 180-45946-12 MS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

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	139000		95000		50000	88	75-125		6020A
Potassium	50400		5400		50000	90	75-125		6020A
Magnesium	59400		19000		50000	81	75-125		6020A
Sodium	97600		58000		50000	80	75-125		6020A

SSR = Spiked Sample Result

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

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: HD-COD-SW-17-0/1-0 MSD Lab ID: 180-45946-12 MSD

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

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	145000		50000	99	75-125	4	20		6020A
Potassium	52000		50000	93	75-125	3	20		6020A
Magnesium	62000		50000	86	75-125	4	20		6020A
Sodium	101000		50000	87	75-125	4	20		6020A

SDR = Sample Duplicate Result

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

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: HD-COD-SW-17-0/1-0 PDS Lab ID: 180-45946-12 PDS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

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	148000		95000		50000	105	75-125		6020A
Potassium	57000		5400		50000	103	75-125		6020A
Magnesium	65900		19000		50000	94	75-125		6020A
Sodium	105000		58000		50000	94	75-125		6020A

SSR = Spiked Sample Result

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

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 180-148049/2-A

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

Sample Matrix: Water LCS Source: MTAPITTMSA_00024

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	48900		98	80	120		6020A
Potassium	50000	47000		94	80	120		6020A
Magnesium	50000	44700		89	80	120		6020A
Sodium	50000	45000		90	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: 180-45946-12

SDG No:

Lab Name: TestAmerica Pittsburgh Job No: 180-45946-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	95000		89200		6.3		6020A
Potassium	5400		5600		2.7		6020A
Magnesium	19000		18700		0.79		6020A
Sodium	58000		59400		2.8		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: 180-45946-1

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	500	2.8374
Magnesium	26	500	1.1665
Potassium	39	500	5.823
Sodium	23	500	3.8135

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-45946-1

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	500	2.8374
Magnesium	26	500	1.1665
Potassium	39	500	5.823
Sodium	23	500	3.8135

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Pittsburgh Job No: 180-45946-1

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.: 180-45946-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 180-148049/1-A	07/17/2015 10:19	148049		50	50
LCS 180-148049/2-A	07/17/2015 10:19	148049		50	50
180-45946-1	07/17/2015 10:19	148049		50	50
180-45946-2	07/17/2015 10:19	148049		50	50
180-45946-3	07/17/2015 10:19	148049		50	50
180-45946-4	07/17/2015 10:19	148049		50	50
180-45946-5	07/17/2015 10:19	148049		50	50
180-45946-6	07/17/2015 10:19	148049		50	50
180-45946-7	07/17/2015 10:19	148049		50	50
180-45946-8	07/17/2015 10:19	148049		50	50
180-45946-9	07/17/2015 10:19	148049		50	50
180-45946-11	07/17/2015 10:19	148049		50	50
180-45946-12	07/17/2015 10:19	148049		50	50
180-45946-12 MS	07/17/2015 10:19	148049		50	50
180-45946-12 MSD	07/17/2015 10:19	148049		50	50
180-45946-13	07/17/2015 10:19	148049		50	50
180-45946-14	07/17/2015 10:19	148049		50	50
180-45946-15	07/17/2015 10:19	148049		50	50
180-45946-16	07/17/2015 10:19	148049		50	50
180-45946-17	07/17/2015 10:19	148049		50	50
180-45946-18	07/17/2015 10:19	148049		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 07/20/2015 07:03 End Date: 07/20/2015 20:49

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ca	K	Mg	Na																						
ITUNE 180-148293/1			07:03																										
STD1 180-148293/2 IC	1		13:28	X	X	X	X																						
STD2 180-148293/3 IC	1		13:32	X	X	X	X																						
STD3 180-148293/4 IC	1		13:38	X	X	X	X																						
ICV 180-148293/5	1		13:43	X	X	X	X																						
ICB 180-148293/6	1		13:48	X	X	X	X																						
CRI 180-148293/7	1		13:53	X	X	X	X																						
ICSA 180-148293/8	1		13:58	X	X	X	X																						
ICSAB 180-148293/9	1		14:03	X	X	X	X																						
CCV 180-148293/10	1		14:12	X	X	X	X																						
CCB1 180-148293/11	1		14:21	X	X	X	X																						
ZZZZZZ			14:26																										
ZZZZZZ			14:31																										
ZZZZZZ			14:36																										
ZZZZZZ			14:41																										
ZZZZZZ			14:46																										
ZZZZZZ			14:51																										
ZZZZZZ			14:56																										
ZZZZZZ			15:01																										
ZZZZZZ			15:06																										
ZZZZZZ			15:11																										
CCV 180-148293/22	1		15:16	X	X	X	X																						
CCB2 180-148293/23	1		15:25	X	X	X	X																						
ZZZZZZ			15:30																										
ZZZZZZ			15:36																										
ZZZZZZ			15:41																										
ZZZZZZ			15:46																										
MB 180-148049/1-A	1	R	15:55	X	X	X	X																						
LCS 180-148049/2-A	1	R	16:00	X	X	X	X																						
180-45946-1	1	T	16:05	X	X	X	X																						
180-45946-2	1	T	16:10	X	X	X	X																						
180-45946-3	1	T	16:15	X	X	X	X																						
180-45946-4	1	T	16:20	X	X	X	X																						
CCV 180-148293/34	1		16:25	X	X	X	X																						
CCB3 180-148293/35	1		16:34	X	X	X	X																						
180-45946-5	1	T	16:39	X	X	X	X																						
180-45946-6	1	T	16:44	X	X	X	X																						
180-45946-7	1	T	16:49	X	X	X	X																						
180-45946-8	1	T	16:55	X	X	X	X																						
180-45946-9	1	T	17:00	X	X	X	X																						
180-45946-11	1	T	17:05	X	X	X	X																						
180-45946-12	1	T	17:10	X	X	X	X																						

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 07/20/2015 07:03 End Date: 07/20/2015 20:49

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ca	K	Mg	Na																					
180-45946-12 SD	5	T	17:15	X	X	X	X																					
180-45946-12 MS	1	T	17:20	X	X	X	X																					
180-45946-12 MSD	1	T	17:25	X	X	X	X																					
CCV 180-148293/46	1		17:30	X	X	X	X																					
CCB4 180-148293/47	1		17:39	X	X	X	X																					
180-45946-12 PDS	1	T	17:44	X	X	X	X																					
180-45946-13	1	T	17:49	X	X	X	X																					
180-45946-14	1	T	17:54	X	X	X	X																					
180-45946-15	1	T	18:00	X	X	X	X																					
180-45946-16	1	T	18:05	X	X	X	X																					
180-45946-17	1	T	18:10	X	X	X	X																					
180-45946-18	1	T	18:15	X	X	X	X																					
ZZZZZZ			18:20																									
ZZZZZZ			18:25																									
ZZZZZZ			18:30																									
CCV 180-148293/58	1		18:35	X	X	X	X																					
CCB5 180-148293/59	1		18:44	X	X	X	X																					
ZZZZZZ			18:49																									
ZZZZZZ			18:54																									
ZZZZZZ			18:59																									
ZZZZZZ			19:05																									
ZZZZZZ			19:10																									
ZZZZZZ			19:15																									
ZZZZZZ			19:20																									
ZZZZZZ			19:25																									
ZZZZZZ			19:30																									
ZZZZZZ			19:35																									
CCV 180-148293/70			19:40																									
CCB6 180-148293/71			19:49																									
CRI 180-148293/72	1		19:54	X	X	X	X																					
ZZZZZZ			20:04																									
ZZZZZZ			20:09																									
ZZZZZZ			20:15																									
ZZZZZZ			20:20																									
ZZZZZZ			20:25																									
ZZZZZZ			20:30																									
ZZZZZZ			20:35																									
CCV 180-148293/80			20:40																									
CCB7 180-148293/81			20:49																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 07/20/2015 07:03 End Date: 07/20/2015 20:49

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ca	K	Mg	Na																					

Prep Types:
R = Total Recoverable
T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 07/20/2015 End Date: 07/20/2015

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 180-148293/2 I	13:28	100		100		100		100		100	
STD2 180-148293/3 I	13:32	97		102		103		96		100	
STD3 180-148293/4 I	13:38	106		102		103		102		103	
ICV 180-148293/5	13:43	98		101		103		99		101	
ICB 180-148293/6	13:48	106		105		108		105		107	
CRI 180-148293/7	13:53	103		105		106		104		105	
ICSA 180-148293/8	13:58	85		93		95		86		92	
ICSAB 180-148293/9	14:03	82		90		93		86		92	
CCV 180-148293/10	14:12	85		96		101		95		98	
CCB1 180-148293/11	14:21	93		101		104		103		104	
CCV 180-148293/22	15:16	90		101		102		96		99	
CCB2 180-148293/23	15:25	96		104		104		103		106	
MB 180-148049/1-A	15:55	86		94		97		94		96	
LCS 180-148049/2-A	16:00	67		77		80		78		79	
180-45946-1	16:05	66		81		82		80		83	
180-45946-2	16:10	67		80		82		79		82	
180-45946-3	16:15	65		81		82		79		81	
180-45946-4	16:20	62		81		80		78		81	
CCV 180-148293/34	16:25	81		94		94		90		92	
CCB3 180-148293/35	16:34	92		97		99		97		99	
180-45946-5	16:39	64		78		79		77		80	
180-45946-6	16:44	63		80		79		78		82	
180-45946-7	16:49	56		79		79		78		80	
180-45946-8	16:55	60		80		80		79		82	
180-45946-9	17:00	59		79		79		77		80	
180-45946-11	17:05	58		80		80		80		81	
180-45946-12	17:10	58		79		77		77		80	
180-45946-12 SD	17:15	70		88		87		87		89	
180-45946-12 MS	17:20	55		75		75		73		75	
180-45946-12 MSD	17:25	54		72		74		72		73	
CCV 180-148293/46	17:30	75		91		94		89		90	
CCB4 180-148293/47	17:39	86		96		97		97		97	
180-45946-12 PDS	17:44	55		71		73		71		74	
180-45946-13	17:49	57		74		76		75		78	
180-45946-14	17:54	54		75		77		75		78	
180-45946-15	18:00	56		75		74		74		78	
180-45946-16	18:05	53		75		77		76		77	
180-45946-17	18:10	55		75		77		75		79	
180-45946-18	18:15	53		75		74		74		76	
CCV 180-148293/58	18:35	74		91		94		89		91	
CCB5 180-148293/59	18:44	86		98		99		97		98	
CRI 180-148293/72	19:54	103		103		107		101		102	

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 07/20/2015 End Date: 07/20/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 180-148293/2 I	13:28	100		100		100					
STD2 180-148293/3 I	13:32	103		104		105					
STD3 180-148293/4 I	13:38	103		103		103					
ICV 180-148293/5	13:43	104		104		105					
ICB 180-148293/6	13:48	108		109		112					
CRI 180-148293/7	13:53	105		105		104					
ICSA 180-148293/8	13:58	97		99		102					
ICSAB 180-148293/9	14:03	97		97		96					
CCV 180-148293/10	14:12	104		104		104					
CCB1 180-148293/11	14:21	103		104		107					
CCV 180-148293/22	15:16	105		104		101					
CCB2 180-148293/23	15:25	105		106		108					
MB 180-148049/1-A	15:55	101		101		105					
LCS 180-148049/2-A	16:00	86		87		84					
180-45946-1	16:05	89		90		91					
180-45946-2	16:10	89		91		90					
180-45946-3	16:15	86		88		86					
180-45946-4	16:20	90		91		90					
CCV 180-148293/34	16:25	95		97		91					
CCB3 180-148293/35	16:34	103		104		106					
180-45946-5	16:39	85		86		84					
180-45946-6	16:44	89		90		91					
180-45946-7	16:49	86		87		85					
180-45946-8	16:55	89		90		90					
180-45946-9	17:00	88		90		88					
180-45946-11	17:05	86		87		86					
180-45946-12	17:10	89		90		90					
180-45946-12 SD	17:15	91		93		93					
180-45946-12 MS	17:20	85		87		83					
180-45946-12 MSD	17:25	85		86		84					
CCV 180-148293/46	17:30	94		96		91					
CCB4 180-148293/47	17:39	98		99		101					
180-45946-12 PDS	17:44	83		85		82					
180-45946-13	17:49	86		87		89					
180-45946-14	17:54	84		86		87					
180-45946-15	18:00	87		88		88					
180-45946-16	18:05	83		85		84					
180-45946-17	18:10	87		88		88					
180-45946-18	18:15	84		84		83					
CCV 180-148293/58	18:35	98		99		96					
CCB5 180-148293/59	18:44	100		101		103					
CRI 180-148293/72	19:54	98		97		105					

FORM XV - IN

Dilution Corrected Concentrations

STD1 1602856 7/20/2015 1:28:14 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	13:27:18	100.508%	-0.000	0.022	-0.053	0.000	0.361	-0.436	0.163
2	13:27:27	99.056%	0.001	0.186	0.005	0.000	0.307	0.671	0.014
3	13:27:37	100.436%	-0.000	-0.208	0.048	0.000	-0.667	-0.235	-0.176
x		100.000%	-0.000	-0.000	0.000	0.000	0.000	-0.000	0.000
σ		0.818%	0.001	0.198	0.051	0.000	0.579	0.590	0.170
%RSD		0.818	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	13:27:18	-0.031	0.594	0.000	-1.197	-4.563	-0.454	99.690%	-0.076
2	13:27:27	-0.028	0.050	0.000	2.523	0.722	-0.511	99.387%	0.088
3	13:27:37	0.059	-0.644	0.000	-1.325	3.841	0.965	100.923%	-0.012
x		0.000	0.000	0.000	-0.000	-0.000	-0.000	100.000%	-0.000
σ		0.051	0.621	0.000	2.186	4.248	0.836	0.813%	0.083
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.813	0.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:18	-0.059	0.000	0.015	0.112	0.610	-0.002	-0.035	-0.021
2	13:27:27	0.029	0.005	0.012	-0.050	-1.103	0.005	-0.092	0.034
3	13:27:37	0.030	-0.005	-0.026	-0.062	0.493	-0.002	0.127	-0.013
x		0.000	0.000	-0.000	-0.000	0.000	0.000	-0.000	0.000
σ		0.051	0.005	0.023	0.097	0.957	0.004	0.113	0.030
%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	13:27:18	-0.025	0.064	0.040	0.006	0.003	0.877	0.000	-0.008
2	13:27:27	-0.047	-0.075	-0.123	-0.003	-0.001	1.134	0.000	-0.008
3	13:27:37	0.072	0.011	0.083	-0.003	-0.002	-2.011	0.000	0.017
x		0.000	0.000	-0.000	0.000	-0.000	0.000	0.000	-0.000
σ		0.063	0.070	0.109	0.006	0.003	1.746	0.000	0.015
%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	13:27:18	96.988%	0.101	-0.038	98.833%	0.000	0.004	0.000	-0.012
2	13:27:27	100.738%	-0.096	0.032	99.966%	0.005	-0.007	0.000	0.012
3	13:27:37	102.274%	-0.005	0.005	101.201%	-0.005	0.003	-0.000	-0.000
x		100.000%	-0.000	-0.000	100.000%	0.000	-0.000	0.000	-0.000
σ		2.719%	0.099	0.035	1.184%	0.005	0.006	0.000	0.012
%RSD		2.719	0.000	0.000	1.184	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	13:27:18	98.708%	-0.008	-0.030	0.035	0.000	0.000	98.057%	98.184%
2	13:27:27	99.761%	-0.039	-0.030	-0.024	0.000	0.000	99.748%	100.657%
3	13:27:37	101.531%	0.048	0.060	-0.010	0.000	0.000	102.195%	101.159%
x		100.000%	0.000	-0.000	-0.000	0.000	0.000	100.000%	100.000%
σ		1.427%	0.044	0.052	0.031	0.000	0.000	2.080%	1.593%
%RSD		1.427	0.000	0.000	0.000	0.000	0.000	2.080	1.593
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:27:18	-0.003	-0.003	0.006	0.012	-0.001	98.759%		
2	13:27:27	-0.003	0.009	-0.006	-0.009	-0.001	100.516%		
3	13:27:37	0.007	-0.005	-0.000	-0.002	0.002	100.724%		
x		0.000	-0.000	0.000	-0.000	-0.000	100.000%		
σ		0.006	0.007	0.006	0.011	0.002	1.080%		
%RSD		0.000	0.000	0.000	0.000	0.000	1.080		

STD2 1630751 7/20/2015 1:32:55 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	13:32:01	97.802%	193.600	1.142	0.791	0.000	97740.000	98290.000	97330.000
2	13:32:10	95.870%	203.400	0.936	0.923	0.000	101100.000	101000.000	101000.000
3	13:32:19	97.493%	203.000	0.594	1.073	0.000	101200.000	100700.000	101700.000
x		97.055%	200.000	0.891	0.929	0.000	100000.000	100000.000	100000.000
σ		1.038%	5.517	0.277	0.141	0.000	1960.000	1484.000	2339.000
%RSD		1.069	2.758	31.070	15.200	0.000	1.960	1.484	2.339

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:01	969.200	5.830	0.000	98430.000	98080.000	98120.000	102.887%	0.429
2	13:32:10	1012.000	3.774	0.000	100200.000	99900.000	100400.000	101.645%	0.308
3	13:32:19	1018.000	5.407	0.000	101300.000	102000.000	101500.000	101.755%	0.275
x		1000.000	5.004	0.000	100000.000	100000.000	100000.000	102.096%	0.337
σ		26.830	1.086	0.000	1465.000	1971.000	1707.000	0.688%	0.081
%RSD		2.683	21.700	0.000	1.465	1.971	1.707	0.673	24.060

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:01	192.400	196.400	998.100	50210.000	50810.000	202.700	200.200	198.800
2	13:32:10	199.100	197.600	970.300	49180.000	49440.000	198.300	203.000	204.100
3	13:32:19	208.400	206.000	1032.000	50610.000	49750.000	199.000	196.800	197.100
x		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		8.047	5.227	30.690	737.100	714.900	2.366	3.134	3.623
%RSD		4.024	2.614	3.069	1.474	1.430	1.183	1.567	1.812

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:01	200.000	199.400	200.600	201.100	199.500	197.500	0.000	202.600
2	13:32:10	202.800	205.400	203.600	200.400	203.300	200.500	0.000	198.700
3	13:32:19	197.200	195.200	195.800	198.500	197.200	202.000	0.000	198.700
x		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		2.788	5.162	3.955	1.352	3.076	2.277	0.000	2.231
%RSD		1.394	2.581	1.977	0.676	1.538	1.138	0.000	1.116

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:01	98.984%	-0.033	0.036	95.391%	202.800	202.200	203.900	203.800
2	13:32:10	103.227%	0.132	0.041	95.477%	198.500	199.900	197.300	198.700
3	13:32:19	107.337%	0.029	-0.034	97.102%	198.700	197.900	198.800	197.400
x		103.182%	0.043	0.014	95.990%	200.000	200.000	200.000	200.000
σ		4.177%	0.083	0.042	0.964%	2.430	2.164	3.489	3.391
%RSD		4.048	195.000	299.800	1.004	1.215	1.082	1.745	1.696

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:01	96.214%	0.087	0.258	0.140	200.600	197.800	100.620%	101.423%
2	13:32:10	101.002%	0.122	0.083	0.274	199.600	200.600	102.399%	103.655%
3	13:32:19	102.925%	-0.027	0.169	0.392	199.800	201.600	105.159%	106.376%
x		100.047%	0.061	0.170	0.269	200.000	200.000	102.726%	103.818%
σ		3.456%	0.078	0.087	0.126	0.510	1.943	2.287%	2.481%
%RSD		3.454	128.800	51.380	47.040	0.255	0.972	2.226	2.389

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:01	198.300	198.600	197.800	197.400	197.500	104.649%
2	13:32:10	203.000	201.900	202.000	202.300	202.000	104.024%
3	13:32:19	198.700	199.500	200.200	200.300	200.500	106.569%
x		200.000	200.000	200.000	200.000	200.000	105.081%
σ		2.617	1.718	2.076	2.478	2.278	1.326%
%RSD		1.308	0.859	1.038	1.239	1.139	1.262

STD3 1630752 7/20/2015 1:38:01 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	13:37:04	106.826%	0.313	196.000	198.800	0.000	123.500	103.100	97.270
2	13:37:13	105.220%	0.340	202.300	201.800	0.000	122.100	96.770	99.690
3	13:37:23	104.490%	0.202	201.700	199.400	0.000	124.500	102.400	100.300
x		105.512%	0.285	200.000	200.000	0.000	123.400	100.800	99.080
σ		1.195%	0.073	3.506	1.588	0.000	1.210	3.483	1.603
%RSD		1.132	25.560	1.753	0.794	0.000	0.981	3.456	1.617
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:04	12.320	9887.000	0.000	106.900	101.700	162.600	102.457%	194.700
2	13:37:13	12.200	9992.000	0.000	112.600	102.400	162.300	101.861%	201.000
3	13:37:23	12.120	10120.000	0.000	108.500	104.100	167.900	100.495%	204.300
x		12.210	10000.000	0.000	109.300	102.700	164.300	101.604%	200.000
σ		0.100	117.600	0.000	2.911	1.221	3.180	1.006%	4.916
%RSD		0.822	1.176	0.000	2.662	1.189	1.936	0.990	2.458
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:04	0.218	0.260	1.096	98.160	88.650	0.112	0.343	0.353
2	13:37:13	0.228	0.218	1.072	83.290	88.920	0.168	0.500	0.424
3	13:37:23	0.312	0.226	1.137	75.490	95.050	0.178	0.317	0.475
x		0.253	0.235	1.102	85.640	90.870	0.153	0.387	0.418
σ		0.051	0.022	0.033	11.520	3.620	0.035	0.099	0.062
%RSD		20.320	9.541	2.969	13.450	3.984	23.150	25.660	14.740
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:04	0.370	3.297	2.212	0.531	0.354	2.217	0.000	0.209
2	13:37:13	0.697	3.333	1.865	0.420	0.457	0.366	0.000	0.189
3	13:37:23	0.509	2.764	2.511	0.543	0.230	0.577	0.000	0.178
x		0.525	3.131	2.196	0.498	0.347	1.054	0.000	0.192
σ		0.164	0.319	0.323	0.068	0.114	1.014	0.000	0.015
%RSD		31.280	10.180	14.710	13.650	32.760	96.200	0.000	8.040
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:04	101.147%	198.600	197.000	100.783%	0.223	0.197	0.173	3.358
2	13:37:13	104.956%	196.900	200.700	101.606%	0.185	0.162	0.144	3.774
3	13:37:23	103.861%	204.500	202.300	102.207%	0.267	0.189	0.143	3.381
x		103.321%	200.000	200.000	101.532%	0.225	0.183	0.154	3.504
σ		1.961%	3.976	2.717	0.715%	0.041	0.018	0.017	0.234
%RSD		1.898	1.988	1.358	0.704	18.410	9.869	11.190	6.671
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:04	102.466%	200.100	195.800	198.800	0.000	0.226	103.427%	102.264%
2	13:37:13	102.046%	198.800	203.100	198.700	0.309	0.414	104.202%	103.444%
3	13:37:23	103.501%	201.100	201.100	202.500	0.154	0.188	102.560%	103.739%
x		102.671%	200.000	200.000	200.000	0.154	0.276	103.396%	103.149%
σ		0.748%	1.137	3.789	2.177	0.154	0.121	0.822%	0.780%
%RSD		0.729	0.568	1.895	1.089	100.000	43.760	0.795	0.757
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:37:04	0.289	0.284	0.290	0.272	0.241	103.131%		
2	13:37:13	0.358	0.253	0.255	0.195	0.257	102.322%		
3	13:37:23	0.259	0.231	0.325	0.213	0.267	103.378%		
x		0.302	0.256	0.290	0.227	0.255	102.944%		
σ		0.051	0.027	0.035	0.040	0.013	0.552%		
%RSD		16.770	10.400	12.020	17.830	5.236	0.537		

ICV 1613162 7/20/2015 1:43:04 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	13:42:08	98.977%	76.460	87.900	81.020	0.000	39250.000	38960.000	38870.000
2	13:42:17	100.802%	78.340	81.940	84.020	0.000	39960.000	40020.000	39610.000
3	13:42:27	95.376%	80.990	87.690	87.850	0.000	40030.000	40380.000	40170.000
x		98.385%	98.245%	107.304%	105.370%	0.000	99.371%	99.470%	98.874%
σ		2.761%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.806	2.892	3.939	4.061	0.000	1.082	1.860	1.648
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:08	387.000	4269.000	0.000	39060.000	38570.000	38350.000	100.802%	77.600
2	13:42:17	391.200	4352.000	0.000	39850.000	38870.000	39220.000	100.381%	78.510
3	13:42:27	400.500	4472.000	0.000	39980.000	40020.000	39880.000	100.288%	81.120
x		98.224%	109.107%	0.000	99.075%	97.888%	97.873%	100.490%	98.847%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.274%	n/a
%RSD		1.770	2.346	0.000	1.265	1.960	1.956	0.272	2.308
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:08	79.830	78.300	382.200	19590.000	19510.000	82.490	81.010	78.340
2	13:42:17	78.690	78.660	391.200	19650.000	20040.000	81.980	79.830	82.150
3	13:42:27	81.830	80.940	396.900	19450.000	19160.000	79.410	76.630	77.820
x		100.149%	99.125%	97.520%	97.808%	97.858%	101.617%	98.944%	99.295%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.988	1.805	1.902	0.523	2.256	2.034	2.866	2.976
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:08	79.540	81.270	81.220	79.550	76.390	87.680	0.000	78.560
2	13:42:17	79.300	80.800	83.430	80.780	87.850	84.970	0.000	79.260
3	13:42:27	78.550	80.870	81.940	77.980	83.250	80.790	0.000	78.500
x		98.914%	101.229%	102.744%	99.295%	103.120%	105.598%	0.000	98.468%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.658	0.311	1.374	1.770	6.995	4.106	0.000	0.534
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:08	100.120%	87.130	87.450	98.381%	78.040	79.590	78.340	77.950
2	13:42:17	102.157%	85.480	88.560	98.959%	77.000	77.190	76.240	79.480
3	13:42:27	106.894%	87.640	87.330	99.896%	76.890	77.740	77.930	78.280
x		103.057%	108.439%	109.722%	99.079%	96.637%	97.719%	96.879%	98.209%
σ		3.476%	n/a	n/a	0.765%	n/a	n/a	n/a	n/a
%RSD		3.372	1.307	0.773	0.772	0.816	1.612	1.434	1.025
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:08	99.060%	78.760	80.750	79.580	74.180	75.560	103.005%	101.432%
2	13:42:17	100.476%	79.640	82.360	77.530	78.750	79.030	103.294%	105.280%
3	13:42:27	103.083%	78.110	80.080	75.490	77.230	75.790	104.545%	104.575%
x		100.873%	98.546%	101.330%	96.919%	95.901%	95.994%	103.614%	103.762%
σ		2.041%	n/a	n/a	n/a	n/a	n/a	0.818%	2.049%
%RSD		2.023	0.972	1.444	2.639	3.032	2.524	0.790	1.974
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:42:08	77.190	77.630	77.640	75.040	75.810	105.059%		
2	13:42:17	80.340	81.030	79.010	77.250	78.170	103.782%		
3	13:42:27	82.260	80.960	80.730	78.610	79.270	105.670%		
x		99.911%	99.844%	98.908%	96.208%	97.187%	104.837%		
σ		n/a	n/a	n/a	n/a	n/a	0.963%		
%RSD		3.201	2.435	1.954	2.346	2.274	0.919		

ICB 7/20/2015 1:48:09 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	13:47:14	106.969%	0.059	0.273	0.934	0.000	25.500	2.404	2.583
2	13:47:24	103.654%	-0.013	0.449	0.800	0.000	26.570	3.206	2.565
3	13:47:33	106.521%	0.028	0.277	0.638	0.000	25.640	1.714	2.526
x		105.715%	0.024	0.333	0.791	0.000	25.900	2.441	2.558
σ		1.798%	0.036	0.101	0.148	0.000	0.582	0.747	0.029
%RSD		1.701	148.200	30.280	18.760	0.000	2.248	30.590	1.130

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:14	1.251	8.712	0.000	21.920	14.390	26.560	105.254%	0.170
2	13:47:24	1.467	4.832	0.000	20.120	34.390	28.560	104.838%	0.140
3	13:47:33	1.432	2.848	0.000	23.520	44.790	30.820	104.075%	-0.015
x		1.383	5.464	0.000	21.850	31.190	28.640	104.722%	0.098
σ		0.116	2.983	0.000	1.704	15.450	2.129	0.598%	0.099
%RSD		8.380	54.590	0.000	7.796	49.540	7.431	0.571	100.800

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:14	-0.024	0.026	0.047	32.370	47.880	0.005	0.250	0.134
2	13:47:24	0.055	-0.006	0.026	25.980	22.300	0.004	0.324	0.215
3	13:47:33	0.003	0.017	0.094	21.240	27.950	0.011	0.299	0.067
x		0.012	0.013	0.055	26.530	32.710	0.007	0.291	0.139
σ		0.040	0.016	0.035	5.589	13.440	0.004	0.038	0.074
%RSD		344.700	129.500	62.990	21.070	41.080	58.810	13.010	53.420

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:14	0.143	1.745	1.230	0.068	-0.006	0.836	0.000	0.041
2	13:47:24	0.196	2.005	1.548	0.136	-0.120	0.310	0.000	0.003
3	13:47:33	0.159	1.340	1.205	0.058	-0.009	0.564	0.000	0.003
x		0.166	1.696	1.328	0.087	-0.045	0.570	0.000	0.016
σ		0.027	0.335	0.191	0.042	0.065	0.263	0.000	0.022
%RSD		16.410	19.750	14.420	48.680	144.700	46.190	0.000	136.100

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:14	104.897%	1.451	1.378	103.775%	0.004	0.002	0.028	-0.012
2	13:47:24	109.141%	1.267	1.231	104.578%	0.022	0.011	0.027	-0.012
3	13:47:33	109.542%	1.273	0.919	105.857%	-0.010	0.011	0.027	-0.001
x		107.860%	1.330	1.176	104.737%	0.005	0.008	0.028	-0.008
σ		2.574%	0.104	0.234	1.050%	0.016	0.005	0.000	0.006
%RSD		2.386	7.847	19.910	1.003	300.700	61.420	1.378	77.970

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:14	105.471%	0.282	0.043	0.206	0.000	0.000	106.610%	108.235%
2	13:47:24	108.899%	0.256	0.050	0.198	0.000	0.071	108.778%	109.957%
3	13:47:33	107.934%	0.356	0.062	0.107	0.000	0.000	109.028%	110.010%
x		107.435%	0.298	0.051	0.170	0.000	0.024	108.139%	109.401%
σ		1.768%	0.052	0.009	0.055	0.000	0.041	1.330%	1.010%
%RSD		1.646	17.380	18.070	32.380	0.000	173.200	1.230	0.923

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:14	0.122	0.081	0.039	0.045	0.026	110.423%
2	13:47:24	0.054	0.067	0.021	0.026	0.025	112.541%
3	13:47:33	0.105	0.081	0.016	0.014	0.020	114.023%
x		0.094	0.076	0.025	0.028	0.024	112.329%
σ		0.036	0.008	0.012	0.016	0.003	1.809%
%RSD		37.920	10.950	47.830	55.820	14.640	1.611

CRI 1630755 7/20/2015 1:53:15 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	13:52:19	103.593%	0.815	17.200	18.600	0.000	473.800	469.800	483.600
2	13:52:28	103.309%	1.189	18.740	18.230	0.000	480.500	483.100	482.000
3	13:52:38	100.626%	0.931	19.870	19.550	0.000	488.900	496.700	499.400
x		102.509%	97.811%	371.982%	375.857%	0.000	601.330%	483.236%	488.336%
σ		1.637%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.597	19.570	7.206	3.633	0.000	1.578	2.783	1.976
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:19	27.770	470.700	0.000	476.900	437.600	423.800	105.743%	4.477
2	13:52:28	26.930	464.900	0.000	483.200	465.300	437.100	105.413%	5.016
3	13:52:38	27.100	478.100	0.000	485.900	500.000	439.600	104.389%	4.536
x		90.885%	94.252%	0.000	482.001%	467.638%	433.507%	105.182%	93.523%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.706%	n/a
%RSD		1.621	1.409	0.000	0.961	6.691	1.968	0.671	6.322
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:19	1.054	1.987	4.433	42.900	52.510	0.449	0.986	2.306
2	13:52:28	0.925	1.854	4.635	44.530	47.740	0.448	0.958	1.979
3	13:52:38	0.903	1.710	4.542	44.000	56.610	0.463	0.723	1.923
x		96.053%	92.513%	90.730%	87.619%	104.580%	90.635%	88.907%	103.465%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		8.483	7.484	2.225	1.897	8.489	1.834	16.280	9.990
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:19	2.167	3.697	5.086	0.969	3.783	2.949	0.000	4.900
2	13:52:28	2.430	4.869	4.765	0.760	3.643	5.286	0.000	4.829
3	13:52:38	1.830	4.097	3.449	0.859	5.301	5.541	0.000	4.345
x		107.131%	84.421%	88.662%	86.271%	84.844%	91.840%	0.000	93.824%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		14.030	14.120	19.570	12.150	21.680	31.100	0.000	6.444
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:19	104.438%	4.647	4.475	103.447%	0.981	0.936	1.021	1.113
2	13:52:28	105.482%	5.061	4.578	104.679%	1.012	1.054	1.208	1.081
3	13:52:38	107.186%	5.324	4.498	105.036%	1.008	0.967	1.108	1.139
x		105.702%	100.211%	90.333%	104.387%	100.029%	98.584%	111.261%	111.110%
σ		1.387%	n/a	n/a	0.833%	n/a	n/a	n/a	n/a
%RSD		1.313	6.814	1.201	0.798	1.680	6.172	8.431	2.608
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:19	103.998%	4.519	1.652	2.002	9.654	10.220	105.426%	105.020%
2	13:52:28	104.812%	5.026	1.695	1.618	8.087	9.462	105.764%	106.526%
3	13:52:38	106.869%	4.531	1.819	1.918	9.316	8.025	104.705%	104.787%
x		105.226%	93.843%	86.091%	92.296%	90.192%	92.347%	105.298%	105.444%
σ		1.480%	n/a	n/a	n/a	n/a	n/a	0.541%	0.944%
%RSD		1.406	6.160	5.041	10.940	9.142	12.060	0.514	0.895
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:52:19	0.807	0.864	0.868	0.997	0.915	102.416%		
2	13:52:28	0.916	0.949	1.097	0.914	0.978	103.604%		
3	13:52:38	1.078	0.952	0.972	0.980	1.003	104.335%		
x		93.378%	92.164%	97.903%	96.367%	96.524%	103.452%		
σ		n/a	n/a	n/a	n/a	n/a	0.968%		
%RSD		14.580	5.445	11.750	4.552	4.706	0.936		

ICSA 1616919 7/20/2015 1:58:20 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	13:57:25	85.491%	-0.028	1.031	0.956	0.000	94750.000	95620.000	93210.000
2	13:57:35	84.768%	0.012	0.681	0.948	0.000	95970.000	96530.000	96650.000
3	13:57:44	84.803%	0.065	0.863	0.867	0.000	96600.000	98130.000	96410.000
x		85.021%	0.016	0.859	0.924	0.000	95780.000	96760.000	95420.000
σ		0.408%	0.047	0.175	0.049	0.000	942.600	1273.000	1916.000
%RSD		0.479	284.700	20.390	5.290	0.000	0.984	1.316	2.008

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:25	89040.000	21.350	0.000	94060.000	94710.000	95990.000	95.178%	1960.000
2	13:57:35	92510.000	19.820	0.000	96970.000	98950.000	99510.000	92.426%	2002.000
3	13:57:44	92650.000	18.890	0.000	97100.000	99420.000	100500.000	92.736%	2064.000
x		91400.000	20.020	0.000	96040.000	97690.000	98660.000	93.447%	2009.000
σ		2048.000	1.241	0.000	1723.000	2591.000	2367.000	1.508%	51.920
%RSD		2.241	6.199	0.000	1.794	2.652	2.399	1.613	2.585

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:25	0.286	1.448	0.596	92970.000	95400.000	0.075	0.232	0.735
2	13:57:35	0.426	1.501	0.506	96490.000	98890.000	0.084	0.239	0.764
3	13:57:44	0.402	1.359	0.479	98490.000	100600.000	0.130	0.117	0.707
x		0.371	1.436	0.527	95980.000	98300.000	0.096	0.196	0.735
σ		0.075	0.072	0.061	2794.000	2654.000	0.030	0.068	0.029
%RSD		20.290	4.987	11.660	2.911	2.700	30.870	34.800	3.877

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:25	1.006	1.347	1.391	0.145	0.135	2.947	0.000	0.445
2	13:57:35	1.090	1.565	0.736	0.247	0.137	-1.040	0.000	0.708
3	13:57:44	1.509	2.114	1.677	0.234	-0.120	-0.209	0.000	0.761
x		1.202	1.675	1.268	0.209	0.050	0.566	0.000	0.638
σ		0.269	0.395	0.483	0.055	0.148	2.104	0.000	0.170
%RSD		22.410	23.590	38.070	26.500	293.200	371.600	0.000	26.590

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:25	94.082%	2096.000	2145.000	85.264%	0.013	0.012	0.467	0.411
2	13:57:35	93.824%	2138.000	2190.000	85.770%	0.018	0.017	0.425	0.271
3	13:57:44	95.702%	2123.000	2180.000	87.258%	0.039	0.043	0.447	0.364
x		94.536%	2119.000	2172.000	86.097%	0.024	0.024	0.446	0.349
σ		1.018%	20.950	23.520	1.036%	0.014	0.017	0.021	0.071
%RSD		1.077	0.989	1.083	1.204	58.120	70.620	4.743	20.390

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:25	89.800%	0.250	0.001	0.026	0.258	0.084	95.798%	97.858%
2	13:57:35	92.406%	0.401	0.024	0.055	0.419	0.041	97.955%	99.420%
3	13:57:44	94.879%	0.184	-0.015	0.007	0.000	0.121	97.764%	99.302%
x		92.362%	0.278	0.003	0.029	0.226	0.082	97.172%	98.860%
σ		2.539%	0.111	0.020	0.024	0.212	0.040	1.194%	0.870%
%RSD		2.749	39.900	620.600	81.110	93.660	48.990	1.229	0.880

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:25	0.060	0.051	0.171	0.143	0.158	102.303%
2	13:57:35	0.026	0.016	0.191	0.225	0.176	101.068%
3	13:57:44	0.031	0.020	0.196	0.229	0.197	102.004%
x		0.039	0.029	0.186	0.199	0.177	101.792%
σ		0.018	0.019	0.013	0.049	0.020	0.644%
%RSD		47.030	65.650	7.104	24.460	11.190	0.633

ICSAB 1616920 7/20/2015 2:03:28 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	14:02:31	82.569%	19.700	48.710	47.150	0.000	94980.000	95360.000	95320.000
2	14:02:40	80.172%	20.220	45.280	50.800	0.000	97540.000	97880.000	97530.000
3	14:02:50	81.778%	19.040	49.380	47.950	0.000	98810.000	100900.000	99640.000
x		81.506%	98.272%	95.577%	97.264%	0.000	97.112%	98.053%	97.496%
σ		1.222%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.499	3.023	4.599	3.942	0.000	2.009	2.838	2.213
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:31	90190.000	563.500	0.000	95150.000	95600.000	97420.000	90.967%	1975.000
2	14:02:40	93010.000	579.500	0.000	97870.000	99270.000	100400.000	89.372%	2044.000
3	14:02:50	94020.000	576.200	0.000	99460.000	100200.000	102000.000	88.612%	2069.000
x		92.408%	114.616%	0.000	97.494%	98.342%	99.933%	89.650%	101.457%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.202%	n/a
%RSD		2.150	1.468	0.000	2.235	2.461	2.317	1.341	2.395
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:31	19.500	20.420	19.170	95910.000	98280.000	20.150	19.170	20.880
2	14:02:40	18.600	20.160	19.250	100900.000	103100.000	20.970	19.700	19.620
3	14:02:50	20.200	21.050	19.770	101400.000	102700.000	20.990	19.330	20.440
x		97.161%	102.703%	96.979%	99.402%	101.351%	103.519%	96.996%	101.566%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		4.140	2.224	1.696	3.049	2.631	2.321	1.425	3.150
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:31	20.840	20.260	20.200	19.980	51.020	46.640	0.000	20.040
2	14:02:40	19.870	21.050	23.220	20.370	49.220	45.500	0.000	20.860
3	14:02:50	21.090	22.080	20.040	20.770	50.410	48.970	0.000	20.210
x		103.003%	84.511%	84.612%	101.872%	100.435%	94.076%	0.000	101.844%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		3.116	4.328	8.465	1.951	1.824	3.766	0.000	2.126
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:31	92.271%	2120.000	2173.000	84.452%	19.560	19.700	20.000	21.230
2	14:02:40	93.089%	2124.000	2195.000	86.121%	19.370	19.280	19.420	21.370
3	14:02:50	93.991%	2123.000	2198.000	86.598%	19.320	19.920	21.080	21.060
x		93.117%	106.110%	109.438%	85.724%	97.085%	98.165%	100.835%	106.101%
σ		0.860%	n/a	n/a	1.127%	n/a	n/a	n/a	n/a
%RSD		0.924	0.091	0.623	1.314	0.645	1.653	4.163	0.754
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:31	90.399%	95.750	19.330	18.390	22.060	20.150	96.425%	97.990%
2	14:02:40	91.934%	96.290	19.210	18.800	21.750	19.960	96.594%	96.160%
3	14:02:50	92.424%	98.610	19.100	19.600	21.180	21.570	97.488%	98.140%
x		91.586%	96.885%	96.065%	94.649%	108.309%	102.791%	96.836%	97.430%
σ		1.056%	n/a	n/a	n/a	n/a	n/a	0.571%	1.102%
%RSD		1.153	1.568	0.616	3.234	2.064	4.289	0.590	1.132
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:02:31	20.270	20.260	20.180	20.240	20.330	95.468%		
2	14:02:40	19.460	19.940	20.530	20.570	20.540	95.987%		
3	14:02:50	19.840	19.960	20.440	20.840	20.510	95.024%		
x		99.294%	100.263%	101.913%	102.757%	102.290%	95.493%		
σ		n/a	n/a	n/a	n/a	n/a	0.482%		
%RSD		2.053	0.887	0.911	1.480	0.542	0.505		

CCV 1630756 7/20/2015 2:12:19 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	14:11:24	84.563%	99.920	104.600	105.700	0.000	47560.000	47530.000	46750.000
2	14:11:34	87.823%	98.500	101.200	97.570	0.000	48630.000	48350.000	47950.000
3	14:11:43	83.699%	104.400	105.500	104.100	0.000	49460.000	49390.000	49160.000
x		85.362%	100.922%	103.802%	102.467%	0.000	97.104%	96.847%	95.900%
σ		2.175%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.548	3.027	2.174	4.212	0.000	1.959	1.929	2.511

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:24	458.900	5456.000	0.000	48410.000	48130.000	48100.000	97.573%	96.770
2	14:11:34	470.700	5464.000	0.000	49170.000	48790.000	50040.000	95.873%	99.060
3	14:11:43	487.100	5665.000	0.000	49770.000	50170.000	50850.000	95.217%	104.100
x		94.450%	110.563%	0.000	98.234%	98.064%	99.327%	96.221%	99.975%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.216%	n/a
%RSD		2.993	2.143	0.000	1.386	2.125	2.841	1.264	3.747

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:24	98.790	99.940	477.800	24720.000	24900.000	99.650	96.230	98.920
2	14:11:34	100.300	99.230	495.000	25520.000	25370.000	102.500	102.300	103.700
3	14:11:43	103.200	100.900	501.000	25080.000	25130.000	101.800	100.400	98.190
x		100.751%	100.021%	98.249%	100.425%	100.540%	101.320%	99.638%	100.258%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.218	0.830	2.442	1.583	0.926	1.479	3.120	2.967

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:24	101.300	100.200	100.700	97.650	108.800	98.930	0.000	101.300
2	14:11:34	101.800	101.600	103.700	100.300	110.300	105.100	0.000	98.790
3	14:11:43	101.800	102.300	100.300	97.620	105.000	106.300	0.000	97.500
x		101.633%	101.346%	101.568%	98.528%	108.017%	103.431%	0.000	99.185%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.257	1.045	1.860	1.576	2.500	3.812	0.000	1.926

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:24	97.522%	106.300	104.900	93.478%	100.100	101.300	103.100	104.200
2	14:11:34	101.322%	104.300	107.400	95.071%	100.300	99.890	100.600	99.720
3	14:11:43	104.521%	104.800	107.400	95.192%	97.870	98.330	98.430	100.400
x		101.122%	105.148%	106.539%	94.581%	99.440%	99.834%	100.716%	101.425%
σ		3.504%	n/a	n/a	0.957%	n/a	n/a	n/a	n/a
%RSD		3.465	0.995	1.371	1.012	1.373	1.480	2.318	2.388

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:24	94.742%	97.300	99.220	99.550	98.420	97.670	102.951%	102.413%
2	14:11:34	98.333%	99.850	99.140	98.690	102.100	98.360	105.025%	105.451%
3	14:11:43	100.131%	97.950	99.970	97.870	94.400	95.720	104.496%	104.571%
x		97.735%	98.369%	99.443%	98.706%	98.296%	97.249%	104.157%	104.145%
σ		2.743%	n/a	n/a	n/a	n/a	n/a	1.078%	1.563%
%RSD		2.807	1.348	0.464	0.853	3.901	1.410	1.035	1.501

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:24	100.900	100.100	102.200	102.200	102.000	104.114%
2	14:11:34	102.900	102.000	104.000	104.000	103.300	102.770%
3	14:11:43	100.500	101.900	100.800	103.500	102.000	105.443%
x		101.397%	101.305%	102.353%	103.254%	102.452%	104.109%
σ		n/a	n/a	n/a	n/a	n/a	1.337%
%RSD		1.265	1.061	1.584	0.873	0.724	1.284

CCB1 7/20/2015 2:21:13 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	14:20:17	93.831%	0.077	0.558	0.213	0.000	29.000	3.176	3.227
2	14:20:27	94.023%	0.040	0.310	0.536	0.000	29.410	3.304	3.073
3	14:20:36	91.916%	-0.019	0.331	0.523	0.000	31.490	3.620	3.623
x		93.257%	0.033	0.400	0.424	0.000	29.970	3.367	3.308
σ		1.165%	0.048	0.138	0.183	0.000	1.336	0.229	0.284
%RSD		1.249	146.600	34.470	43.130	0.000	4.458	6.787	8.573

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:17	1.275	3.584	0.000	12.400	29.030	26.840	102.156%	0.146
2	14:20:27	1.468	2.256	0.000	14.980	39.620	27.920	101.462%	0.276
3	14:20:36	1.346	0.812	0.000	15.550	31.850	29.390	99.943%	0.250
x		1.363	2.217	0.000	14.310	33.500	28.050	101.187%	0.224
σ		0.098	1.386	0.000	1.680	5.487	1.278	1.132%	0.069
%RSD		7.157	62.530	0.000	11.740	16.380	4.556	1.119	30.660

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:17	0.076	0.032	0.036	11.460	7.778	0.033	0.206	0.086
2	14:20:27	-0.029	0.004	0.074	11.380	9.456	0.019	0.342	0.019
3	14:20:36	0.030	0.009	0.050	10.410	19.420	-0.002	0.153	0.186
x		0.026	0.015	0.053	11.080	12.220	0.017	0.234	0.097
σ		0.053	0.015	0.019	0.585	6.294	0.018	0.098	0.084
%RSD		206.300	97.290	36.280	5.277	51.510	108.100	41.730	86.470

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:17	0.150	1.752	1.680	0.061	-0.120	-0.979	0.000	-0.008
2	14:20:27	0.091	1.274	1.938	0.079	-0.120	-0.706	0.000	0.004
3	14:20:36	0.289	1.841	1.574	0.033	0.227	1.899	0.000	0.016
x		0.176	1.622	1.731	0.057	-0.004	0.071	0.000	0.004
σ		0.102	0.305	0.188	0.023	0.201	1.589	0.000	0.012
%RSD		57.730	18.780	10.830	40.120	4544.000	2223.000	0.000	311.500

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:17	102.700%	1.467	1.004	101.785%	-0.014	0.003	-0.000	0.023
2	14:20:27	103.277%	1.216	1.151	102.986%	0.023	0.017	0.028	-0.012
3	14:20:36	105.114%	1.016	0.765	103.821%	0.018	0.007	0.056	-0.000
x		103.697%	1.233	0.973	102.864%	0.009	0.009	0.028	0.004
σ		1.261%	0.226	0.195	1.023%	0.020	0.007	0.028	0.018
%RSD		1.216	18.350	20.020	0.995	231.900	78.630	100.100	488.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:17	101.159%	0.092	0.129	0.174	0.078	0.000	101.585%	102.625%
2	14:20:27	104.611%	0.257	0.122	0.222	0.076	0.000	104.188%	105.306%
3	14:20:36	104.806%	0.199	0.133	0.263	0.000	0.000	104.180%	104.800%
x		103.525%	0.183	0.128	0.220	0.052	0.000	103.318%	104.244%
σ		2.052%	0.084	0.005	0.044	0.045	0.000	1.500%	1.425%
%RSD		1.982	45.660	4.248	20.180	86.630	0.000	1.452	1.367

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:17	0.039	0.036	-0.000	0.023	0.010	105.770%
2	14:20:27	0.024	0.020	0.028	0.003	0.013	107.645%
3	14:20:36	0.038	0.017	0.023	0.016	0.019	107.301%
x		0.034	0.024	0.017	0.014	0.014	106.906%
σ		0.008	0.010	0.015	0.010	0.005	0.998%
%RSD		24.350	42.280	90.050	72.080	33.550	0.934

MB 180-148003/1-A 7/20/2015 2:26:19 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	14:25:23	97.170%	0.014	-0.116	0.450	0.000	11.000	1.870	1.235
2	14:25:33	95.976%	-0.021	-0.190	0.215	0.000	11.580	1.965	0.693
3	14:25:43	92.240%	0.067	0.495	0.225	0.000	11.640	1.009	0.887
x		95.129%	0.020	0.063	0.297	0.000	11.410	1.615	0.938
σ		2.572%	0.044	0.376	0.133	0.000	0.354	0.527	0.275
%RSD		2.703	221.400	598.100	44.860	0.000	3.106	32.620	29.250

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	0.301	2.378	0.000	3.606	-8.246	-1.893	101.370%	0.212
2	14:25:33	0.161	1.625	0.000	4.423	-6.377	-0.331	100.223%	0.703
3	14:25:43	0.406	2.449	0.000	12.880	0.545	-1.943	100.232%	0.119
x		0.289	2.151	0.000	6.969	-4.693	-1.389	100.608%	0.345
σ		0.123	0.457	0.000	5.133	4.631	0.916	0.660%	0.314
%RSD		42.430	21.230	0.000	73.660	98.690	65.970	0.656	91.060

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	0.009	-0.005	-0.010	5.349	6.207	-0.002	0.017	0.031
2	14:25:33	0.027	-0.000	-0.022	5.173	5.461	-0.002	0.072	0.009
3	14:25:43	0.090	0.014	0.015	4.791	6.962	-0.002	0.015	0.018
x		0.042	0.003	-0.005	5.104	6.210	-0.002	0.035	0.019
σ		0.043	0.010	0.019	0.285	0.751	0.000	0.033	0.011
%RSD		101.800	339.400	357.800	5.587	12.090	0.000	93.310	55.730

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	0.012	-0.165	-0.074	0.015	-0.003	1.118	0.000	0.004
2	14:25:33	-0.008	0.231	-0.125	0.024	-0.003	-0.171	0.000	-0.008
3	14:25:43	0.049	-0.080	0.126	0.015	-0.120	-2.163	0.000	-0.008
x		0.018	-0.005	-0.024	0.018	-0.042	-0.406	0.000	-0.004
σ		0.029	0.208	0.132	0.005	0.068	1.653	0.000	0.007
%RSD		163.700	4539.000	547.500	30.460	161.500	407.700	0.000	171.700

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	102.725%	0.825	0.717	101.274%	-0.000	0.012	-0.000	0.011
2	14:25:33	103.085%	0.599	0.540	101.874%	-0.010	-0.007	-0.000	-0.001
3	14:25:43	108.306%	0.520	0.655	102.808%	0.004	0.002	-0.000	-0.001
x		104.705%	0.648	0.637	101.985%	-0.002	0.003	-0.000	0.003
σ		3.123%	0.158	0.090	0.773%	0.007	0.010	0.000	0.007
%RSD		2.983	24.430	14.120	0.758	348.900	368.000	37.810	204.100

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	104.602%	0.100	0.022	0.140	0.000	0.000	103.801%	104.469%
2	14:25:33	105.451%	0.084	0.086	0.110	0.000	0.000	109.459%	109.081%
3	14:25:43	106.210%	0.195	-0.012	0.231	0.000	0.072	107.905%	109.715%
x		105.421%	0.126	0.032	0.160	0.000	0.024	107.055%	107.755%
σ		0.805%	0.060	0.050	0.063	0.000	0.042	2.923%	2.863%
%RSD		0.763	47.580	154.900	39.350	0.000	173.200	2.731	2.657

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	0.014	0.012	-0.001	0.014	0.000	112.962%
2	14:25:33	0.032	0.001	-0.001	-0.010	0.001	111.668%
3	14:25:43	0.027	0.015	-0.001	0.026	0.008	113.939%
x		0.025	0.009	-0.001	0.010	0.003	112.856%
σ		0.009	0.007	0.000	0.018	0.004	1.139%
%RSD		37.310	77.070	7.304	180.300	143.200	1.010

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:26	94.463%	0.040	0.143	0.119	0.000	9.192	0.768	0.835
2	14:30:36	90.876%	-0.018	0.002	0.236	0.000	10.350	0.356	-0.060
3	14:30:45	91.280%	0.031	-0.001	0.195	0.000	9.506	0.619	0.556
x		92.206%	0.018	0.048	0.183	0.000	9.683	0.581	0.444
σ		1.965%	0.031	0.082	0.060	0.000	0.599	0.209	0.458
%RSD		2.131	176.800	171.000	32.530	0.000	6.188	35.950	103.200

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:26	0.071	4.837	0.000	4.559	22.860	4.114	100.660%	0.021
2	14:30:36	0.083	5.318	0.000	9.765	4.261	1.959	99.192%	-0.010
3	14:30:45	0.003	4.355	0.000	4.011	4.166	6.350	99.580%	0.055
x		0.053	4.837	0.000	6.112	10.430	4.141	99.811%	0.022
σ		0.043	0.481	0.000	3.176	10.770	2.195	0.760%	0.033
%RSD		82.210	9.946	0.000	51.970	103.200	53.020	0.762	149.300

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:26	-0.003	0.005	-0.024	1.670	5.445	0.005	-0.092	-0.046
2	14:30:36	0.061	-0.010	0.032	1.788	5.487	-0.002	0.073	0.009
3	14:30:45	0.138	0.009	-0.030	1.341	0.510	0.005	-0.119	-0.002
x		0.065	0.001	-0.007	1.600	3.814	0.002	-0.046	-0.013
σ		0.070	0.010	0.034	0.232	2.861	0.004	0.104	0.029
%RSD		108.000	678.800	460.700	14.470	75.020	175.600	224.400	226.500

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:26	0.052	0.143	0.135	0.024	-0.002	0.850	0.000	-0.008
2	14:30:36	-0.068	0.010	0.133	0.006	-0.120	0.841	0.000	-0.008
3	14:30:45	-0.028	0.185	0.081	0.069	-0.004	0.310	0.000	0.004
x		-0.015	0.113	0.117	0.033	-0.042	0.667	0.000	-0.004
σ		0.061	0.091	0.031	0.033	0.068	0.309	0.000	0.007
%RSD		420.300	80.800	26.190	98.390	160.000	46.390	0.000	165.500

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:26	102.483%	0.381	0.069	101.729%	0.009	-0.012	-0.000	-0.012
2	14:30:36	105.023%	0.262	0.200	102.673%	-0.000	0.003	-0.000	-0.012
3	14:30:45	104.739%	0.442	0.072	103.137%	-0.010	0.003	-0.000	-0.000
x		104.081%	0.362	0.114	102.513%	-0.000	-0.002	-0.000	-0.008
σ		1.391%	0.092	0.075	0.717%	0.010	0.008	0.000	0.007
%RSD		1.337	25.440	66.050	0.700	2891.000	393.600	53.670	81.760

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:26	101.059%	0.093	0.003	0.103	0.000	0.000	102.355%	103.778%
2	14:30:36	103.087%	0.045	0.024	0.073	0.000	0.000	102.043%	104.073%
3	14:30:45	104.413%	0.043	0.000	0.002	0.076	0.000	105.159%	104.012%
x		102.853%	0.060	0.009	0.059	0.025	0.000	103.186%	103.954%
σ		1.689%	0.028	0.013	0.052	0.044	0.000	1.716%	0.156%
%RSD		1.642	46.330	140.800	87.380	173.200	0.000	1.663	0.150

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:26	-0.003	0.004	0.006	0.017	0.011	103.811%
2	14:30:36	0.006	-0.002	0.023	0.022	0.022	106.125%
3	14:30:45	0.020	0.006	0.017	0.003	0.006	105.193%
x		0.008	0.003	0.015	0.014	0.013	105.043%
σ		0.012	0.004	0.009	0.010	0.008	1.164%
%RSD		154.100	150.800	57.450	68.580	64.430	1.109

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:29	80.505%	44.760	886.700	886.600	0.000	42940.000	43000.000	42880.000
2	14:35:39	81.381%	45.540	884.900	891.700	0.000	45220.000	44690.000	44680.000
3	14:35:48	80.218%	44.610	887.600	899.400	0.000	45200.000	44070.000	44670.000
x		80.701%	44.970	886.400	892.500	0.000	44450.000	43920.000	44080.000
σ		0.605%	0.500	1.391	6.438	0.000	1313.000	858.200	1040.000
%RSD		0.750	1.111	0.157	0.721	0.000	2.953	1.954	2.360
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:29	1717.000	9034.000	0.000	44550.000	44930.000	44910.000	90.093%	886.800
2	14:35:39	1799.000	9170.000	0.000	45910.000	47030.000	46550.000	87.662%	925.500
3	14:35:48	1804.000	9198.000	0.000	45410.000	47420.000	47100.000	87.283%	915.100
x		1773.000	9134.000	0.000	45290.000	46460.000	46190.000	88.346%	909.200
σ		48.650	87.620	0.000	686.000	1341.000	1143.000	1.525%	20.030
%RSD		2.744	0.959	0.000	1.515	2.887	2.474	1.726	2.203
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:29	441.300	176.900	440.800	793.000	977.900	447.800	427.500	220.600
2	14:35:39	456.400	187.300	458.700	851.700	1003.000	467.600	454.700	225.500
3	14:35:48	457.800	188.000	462.700	860.000	1083.000	472.500	453.700	224.900
x		451.800	184.100	454.100	834.900	1021.000	462.600	445.300	223.700
σ		9.162	6.221	11.660	36.500	54.560	13.070	15.390	2.682
%RSD		2.028	3.380	2.567	4.372	5.343	2.826	3.457	1.199
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:29	225.800	461.600	460.600	35.880	12.070	10.040	0.000	903.800
2	14:35:39	228.400	461.300	462.800	36.460	8.719	9.959	0.000	918.500
3	14:35:48	228.900	461.600	474.100	36.370	9.306	8.546	0.000	906.100
x		227.700	461.500	465.800	36.230	10.030	9.515	0.000	909.500
σ		1.654	0.184	7.279	0.312	1.789	0.840	0.000	7.905
%RSD		0.726	0.040	1.563	0.860	17.840	8.826	0.000	0.869
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:29	90.994%	872.700	892.400	86.864%	45.910	46.030	46.810	76.030
2	14:35:39	92.388%	924.200	933.700	87.258%	45.350	45.530	44.180	78.360
3	14:35:48	95.268%	939.500	953.300	88.950%	45.260	45.800	46.420	76.780
x		92.883%	912.200	926.500	87.690%	45.510	45.790	45.800	77.060
σ		2.180%	34.990	31.070	1.108%	0.355	0.251	1.422	1.190
%RSD		2.347	3.836	3.353	1.264	0.779	0.549	3.105	1.544
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:35:29	89.189%	1841.000	462.700	457.800	1764.000	1772.000	94.660%	95.676%
2	14:35:39	89.498%	1877.000	472.100	464.300	1797.000	1807.000	95.905%	96.556%
3	14:35:48	91.067%	1890.000	475.700	472.100	1825.000	1801.000	97.982%	99.865%
x		89.918%	1870.000	470.200	464.700	1795.000	1793.000	96.182%	97.366%
σ		1.007%	25.340	6.737	7.178	30.350	18.630	1.678%	2.209%
%RSD		1.120	1.355	1.433	1.545	1.690	1.039	1.745	2.268
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:35:29	45.360	44.360	18.010	18.220	18.150	102.770%		
2	14:35:39	45.360	44.530	18.090	19.290	18.510	103.611%		
3	14:35:48	43.580	45.030	17.780	18.300	18.180	103.679%		
x		44.770	44.640	17.960	18.610	18.280	103.353%		
σ		1.027	0.350	0.157	0.595	0.203	0.506%		
%RSD		2.294	0.784	0.874	3.199	1.110	0.490		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:32	87.301%	-0.003	8.239	9.098	0.000	50070.000	33.710	33.750
2	14:40:41	82.551%	0.124	9.214	9.342	0.000	51140.000	33.310	34.160
3	14:40:51	86.475%	0.050	9.661	9.366	0.000	51840.000	37.070	34.680
x		85.442%	0.057	9.038	9.269	0.000	51020.000	34.700	34.200
σ		2.538%	0.064	0.727	0.148	0.000	890.600	2.062	0.467
%RSD		2.971	112.100	8.044	1.600	0.000	1.746	5.943	1.365
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:32	3.478	117.200	0.000	121.400	880.300	806.400	90.950%	0.929
2	14:40:41	3.597	120.800	0.000	120.900	887.900	827.400	90.562%	0.862
3	14:40:51	3.756	115.700	0.000	122.000	921.400	827.300	89.924%	1.194
x		3.610	117.900	0.000	121.400	896.500	820.400	90.479%	0.995
σ		0.139	2.642	0.000	0.596	21.880	12.140	0.518%	0.176
%RSD		3.858	2.241	0.000	0.491	2.440	1.479	0.573	17.670
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:32	0.609	0.179	0.185	18.650	27.460	0.157	0.637	0.233
2	14:40:41	1.060	0.356	0.167	16.070	11.880	0.093	0.962	0.266
3	14:40:51	1.036	0.237	0.215	15.170	16.410	0.140	0.660	0.192
x		0.902	0.257	0.189	16.630	18.590	0.130	0.753	0.231
σ		0.254	0.090	0.024	1.809	8.016	0.033	0.181	0.037
%RSD		28.170	35.040	12.760	10.880	43.130	25.710	24.050	16.170
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:32	0.378	2.464	1.669	0.261	21.900	20.380	0.000	3.655
2	14:40:41	0.242	2.287	1.547	0.186	22.040	26.510	0.000	3.651
3	14:40:51	0.153	2.274	2.362	0.233	18.870	24.390	0.000	3.634
x		0.258	2.342	1.859	0.226	20.940	23.760	0.000	3.647
σ		0.114	0.106	0.440	0.038	1.792	3.108	0.000	0.011
%RSD		44.030	4.545	23.640	16.710	8.559	13.080	0.000	0.297
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:32	92.780%	28.310	27.640	92.863%	-0.004	-0.001	0.063	0.138
2	14:40:41	95.769%	20.960	20.690	93.620%	-0.009	-0.016	-0.000	0.075
3	14:40:51	97.698%	16.700	17.540	95.025%	0.006	-0.006	-0.000	0.074
x		95.416%	21.990	21.950	93.836%	-0.003	-0.008	0.021	0.095
σ		2.478%	5.873	5.168	1.097%	0.008	0.008	0.036	0.037
%RSD		2.597	26.700	23.540	1.169	290.900	103.300	173.700	38.760
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:32	94.681%	7.930	0.070	0.083	0.415	0.525	97.435%	98.936%
2	14:40:41	95.956%	7.120	0.104	-0.008	1.158	0.443	96.479%	99.029%
3	14:40:51	96.990%	5.511	0.031	0.124	0.406	0.316	99.401%	99.425%
x		95.876%	6.854	0.068	0.066	0.659	0.428	97.771%	99.130%
σ		1.157%	1.231	0.037	0.068	0.432	0.105	1.490%	0.259%
%RSD		1.207	17.960	54.030	101.900	65.470	24.600	1.524	0.262
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:40:32	0.143	0.110	0.061	0.044	0.061	101.587%		
2	14:40:41	0.099	0.087	0.055	0.057	0.053	101.509%		
3	14:40:51	0.066	0.072	0.106	0.038	0.065	99.976%		
x		0.103	0.090	0.074	0.047	0.060	101.024%		
σ		0.039	0.019	0.028	0.010	0.007	0.909%		
%RSD		37.660	21.370	37.350	21.140	10.890	0.899		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:37	86.141%	-0.015	7.911	8.893	0.000	54490.000	204.400	198.600
2	14:45:46	84.331%	-0.014	7.819	8.672	0.000	54370.000	207.300	211.100
3	14:45:55	81.337%	0.071	8.602	8.822	0.000	54780.000	206.000	212.700
x		83.936%	0.014	8.111	8.796	0.000	54540.000	205.900	207.400
σ		2.427%	0.050	0.428	0.113	0.000	210.800	1.463	7.703
%RSD		2.891	357.700	5.282	1.280	0.000	0.387	0.711	3.713
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:37	5.875	127.200	0.000	163.500	2061.000	2022.000	93.907%	0.307
2	14:45:46	5.986	125.600	0.000	164.200	2262.000	2055.000	93.297%	0.484
3	14:45:55	6.047	124.900	0.000	165.900	2204.000	2107.000	92.828%	0.347
x		5.969	125.900	0.000	164.500	2176.000	2061.000	93.344%	0.380
σ		0.087	1.180	0.000	1.225	103.800	43.020	0.541%	0.093
%RSD		1.462	0.938	0.000	0.744	4.770	2.087	0.580	24.480
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:37	1.300	0.270	15.020	20.900	23.120	0.193	0.295	0.105
2	14:45:46	0.663	0.255	15.060	23.150	36.440	0.216	0.471	0.176
3	14:45:55	0.864	0.251	15.310	22.200	39.980	0.161	0.499	0.187
x		0.943	0.259	15.130	22.080	33.180	0.190	0.422	0.156
σ		0.326	0.010	0.156	1.127	8.892	0.027	0.111	0.045
%RSD		34.530	3.852	1.034	5.105	26.800	14.470	26.300	28.620
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:37	0.325	1.411	2.122	0.267	6.824	10.720	0.000	5.593
2	14:45:46	0.151	1.449	1.901	0.264	7.752	12.890	0.000	5.381
3	14:45:55	0.236	1.348	1.611	0.164	5.791	6.476	0.000	4.944
x		0.237	1.403	1.878	0.231	6.789	10.030	0.000	5.306
σ		0.087	0.051	0.256	0.059	0.981	3.262	0.000	0.331
%RSD		36.780	3.646	13.640	25.390	14.450	32.530	0.000	6.235
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:37	93.390%	2.935	3.236	92.513%	-0.009	0.010	-0.000	0.051
2	14:45:46	95.193%	3.263	3.299	93.700%	-0.004	-0.011	-0.000	0.013
3	14:45:55	96.596%	2.794	2.959	94.030%	0.001	-0.011	-0.000	0.013
x		95.059%	2.997	3.164	93.414%	-0.004	-0.004	-0.000	0.026
σ		1.607%	0.240	0.181	0.798%	0.005	0.012	0.000	0.022
%RSD		1.691	8.018	5.708	0.854	119.400	292.200	19.400	84.520
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:37	94.724%	1.995	-0.003	0.098	0.333	0.162	96.763%	97.559%
2	14:45:46	94.226%	2.018	0.046	0.098	0.495	0.200	99.325%	98.826%
3	14:45:55	95.640%	2.038	0.069	0.097	0.248	0.442	97.346%	100.512%
x		94.863%	2.017	0.037	0.098	0.358	0.268	97.811%	98.966%
σ		0.717%	0.021	0.037	0.001	0.126	0.152	1.343%	1.481%
%RSD		0.756	1.059	98.380	0.786	35.040	56.610	1.373	1.497
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:45:37	0.021	0.024	0.068	0.072	0.061	100.353%		
2	14:45:46	0.016	0.014	0.061	0.090	0.079	101.785%		
3	14:45:55	0.031	0.016	0.080	0.031	0.060	101.480%		
x		0.023	0.018	0.070	0.064	0.066	101.206%		
σ		0.007	0.005	0.009	0.031	0.011	0.754%		
%RSD		32.460	29.820	13.400	47.460	15.880	0.745		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:50:41	87.564%	0.113	12330.000	12640.000	0.000	77720.000	2798.000	2799.000
2	14:50:50	81.719%	0.015	13160.000	13480.000	0.000	78800.000	2849.000	2888.000
3	14:51:00	82.117%	0.083	13080.000	13620.000	0.000	78350.000	2870.000	2895.000
x		83.800%	0.070	12850.000	13250.000	0.000	78290.000	2839.000	2861.000
σ		3.266%	0.050	458.700	529.400	0.000	542.700	36.980	53.890
%RSD		3.897	71.080	3.568	3.996	0.000	0.693	1.302	1.884
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:50:41	312.200	7537.000	0.000	8667.000	19260.000	18780.000	93.120%	13.450
2	14:50:50	298.400	7802.000	0.000	8730.000	19640.000	19290.000	92.251%	13.860
3	14:51:00	325.100	7838.000	0.000	8743.000	20180.000	19440.000	91.913%	12.810
x		311.900	7726.000	0.000	8714.000	19690.000	19170.000	92.428%	13.380
σ		13.350	164.400	0.000	41.010	464.200	345.100	0.623%	0.527
%RSD		4.281	2.127	0.000	0.471	2.357	1.800	0.674	3.942
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:50:41	5.910	2.177	32.950	935.800	1041.000	1.203	29.150	6.044
2	14:50:50	5.025	2.322	33.500	954.200	1073.000	0.991	29.590	6.237
3	14:51:00	5.364	2.243	34.120	975.500	1135.000	1.143	31.740	5.823
x		5.433	2.247	33.530	955.100	1083.000	1.112	30.160	6.035
σ		0.446	0.072	0.584	19.870	47.610	0.110	1.382	0.207
%RSD		8.214	3.217	1.742	2.081	4.396	9.843	4.583	3.436
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:50:41	5.805	76.770	78.770	10.940	0.271	1.209	0.000	47.870
2	14:50:50	5.980	79.280	80.870	11.290	0.395	0.077	0.000	47.570
3	14:51:00	6.710	79.800	87.700	11.600	-0.120	0.674	0.000	49.470
x		6.165	78.620	82.450	11.280	0.182	0.654	0.000	48.310
σ		0.480	1.620	4.666	0.331	0.269	0.566	0.000	1.021
%RSD		7.782	2.060	5.659	2.935	147.900	86.650	0.000	2.113
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:50:41	91.920%	3.587	2.817	89.758%	-0.009	-0.000	0.032	0.040
2	14:50:50	93.707%	3.468	3.502	89.504%	0.007	-0.006	0.096	0.078
3	14:51:00	91.854%	2.853	2.973	90.403%	-0.004	0.011	0.032	0.053
x		92.494%	3.303	3.098	89.889%	-0.002	0.002	0.054	0.057
σ		1.051%	0.394	0.359	0.463%	0.008	0.008	0.037	0.019
%RSD		1.137	11.920	11.600	0.516	393.200	500.400	68.860	33.720
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:50:41	91.638%	1.410	0.249	0.257	12.700	12.300	98.395%	99.262%
2	14:50:50	92.763%	1.487	0.269	0.329	13.510	14.650	100.206%	99.500%
3	14:51:00	91.251%	1.268	0.224	0.257	12.420	13.750	100.887%	101.542%
x		91.884%	1.388	0.248	0.281	12.880	13.560	99.829%	100.101%
σ		0.785%	0.112	0.023	0.042	0.562	1.187	1.288%	1.253%
%RSD		0.855	8.028	9.127	14.890	4.364	8.748	1.290	1.252
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:50:41	0.308	0.228	0.785	0.631	0.621	103.429%		
2	14:50:50	0.250	0.220	0.801	0.630	0.666	103.591%		
3	14:51:00	0.211	0.220	0.786	0.596	0.709	101.357%		
x		0.256	0.223	0.791	0.619	0.666	102.792%		
σ		0.049	0.005	0.009	0.020	0.044	1.245%		
%RSD		19.150	2.068	1.177	3.186	6.611	1.212		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:44	87.214%	0.075	2560.000	2645.000	0.000	15530.000	553.200	566.400
2	14:55:54	89.680%	0.046	2503.000	2508.000	0.000	15340.000	550.600	556.100
3	14:56:03	85.394%	-0.002	2636.000	2633.000	0.000	15900.000	572.500	573.900
x		87.429%	0.040	2566.000	2595.000	0.000	15590.000	558.800	565.500
σ		2.151%	0.039	66.560	75.590	0.000	286.400	11.960	8.978
%RSD		2.460	97.410	2.593	2.913	0.000	1.837	2.141	1.588
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:44	57.200	1544.000	0.000	1741.000	3925.000	3628.000	97.845%	2.718
2	14:55:54	56.170	1503.000	0.000	1748.000	3851.000	3688.000	98.014%	3.012
3	14:56:03	58.810	1576.000	0.000	1770.000	3969.000	3811.000	96.168%	2.971
x		57.390	1541.000	0.000	1753.000	3915.000	3709.000	97.342%	2.900
σ		1.330	36.520	0.000	14.970	59.490	93.490	1.020%	0.159
%RSD		2.317	2.370	0.000	0.854	1.519	2.521	1.048	5.484
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:44	1.089	0.414	6.342	194.500	221.400	0.326	5.885	1.159
2	14:55:54	1.039	0.456	6.822	200.000	219.200	0.242	5.901	1.137
3	14:56:03	1.211	0.443	6.548	198.300	257.400	0.238	5.175	1.104
x		1.113	0.438	6.571	197.600	232.600	0.269	5.654	1.133
σ		0.088	0.022	0.241	2.802	21.450	0.050	0.415	0.028
%RSD		7.945	4.915	3.668	1.418	9.218	18.490	7.335	2.437
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:44	1.115	15.570	14.980	1.918	-0.120	-0.477	0.000	9.072
2	14:55:54	1.063	15.660	15.510	2.292	-0.120	0.588	0.000	9.366
3	14:56:03	1.095	15.070	15.130	1.903	0.123	0.310	0.000	8.944
x		1.091	15.430	15.210	2.038	-0.039	0.140	0.000	9.127
σ		0.026	0.318	0.274	0.220	0.141	0.552	0.000	0.216
%RSD		2.379	2.062	1.804	10.800	358.200	393.800	0.000	2.371
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:44	97.873%	0.861	1.036	95.928%	-0.014	-0.006	-0.000	0.012
2	14:55:54	99.527%	1.096	0.863	96.791%	-0.014	-0.011	-0.000	0.012
3	14:56:03	99.794%	0.823	0.902	97.324%	-0.010	-0.006	-0.000	0.000
x		99.065%	0.927	0.934	96.681%	-0.013	-0.008	-0.000	0.008
σ		1.040%	0.148	0.091	0.705%	0.003	0.003	0.000	0.007
%RSD		1.050	15.930	9.751	0.729	22.220	36.770	110.100	83.650
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:44	98.034%	0.693	-0.017	-0.009	3.074	2.522	98.711%	100.173%
2	14:55:54	98.945%	0.715	-0.006	0.034	2.160	3.079	99.979%	99.931%
3	14:56:03	98.055%	0.647	0.041	0.035	1.856	2.594	99.161%	102.048%
x		98.345%	0.685	0.006	0.020	2.363	2.732	99.284%	100.717%
σ		0.520%	0.035	0.031	0.025	0.634	0.303	0.643%	1.159%
%RSD		0.529	5.105	538.900	125.500	26.810	11.080	0.647	1.151
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:55:44	0.058	0.042	0.155	0.117	0.145	96.564%		
2	14:55:54	0.037	0.059	0.063	0.142	0.092	98.573%		
3	14:56:03	0.057	0.056	0.165	0.143	0.121	97.802%		
x		0.050	0.052	0.128	0.134	0.119	97.646%		
σ		0.012	0.009	0.056	0.015	0.026	1.014%		
%RSD		23.620	17.260	43.940	10.950	22.060	1.038		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:48	82.584%	0.001	13550.000	13860.000	0.000	82750.000	2938.000	2940.000
2	15:00:58	79.096%	0.118	13800.000	14360.000	0.000	80860.000	2930.000	2953.000
3	15:01:07	80.582%	0.100	13740.000	14060.000	0.000	82720.000	3006.000	3036.000
x		80.754%	0.073	13700.000	14090.000	0.000	82110.000	2958.000	2977.000
σ		1.750%	0.063	130.100	251.900	0.000	1080.000	41.770	52.190
%RSD		2.168	86.700	0.950	1.787	0.000	1.315	1.412	1.753
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:48	285.800	8112.000	0.000	9135.000	19800.000	19730.000	91.152%	14.310
2	15:00:58	291.500	8193.000	0.000	9104.000	20460.000	20100.000	91.065%	12.400
3	15:01:07	293.700	8198.000	0.000	9253.000	21090.000	20440.000	89.997%	13.340
x		290.300	8168.000	0.000	9164.000	20450.000	20090.000	90.738%	13.350
σ		4.068	48.570	0.000	78.870	647.500	354.800	0.643%	0.958
%RSD		1.401	0.595	0.000	0.861	3.166	1.766	0.709	7.176
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:48	5.782	2.183	35.030	1014.000	1083.000	1.246	32.480	6.091
2	15:00:58	5.191	2.804	35.130	972.700	1069.000	1.187	30.380	6.239
3	15:01:07	5.659	2.326	36.150	1022.000	1107.000	1.135	32.120	6.022
x		5.544	2.438	35.440	1003.000	1086.000	1.189	31.660	6.117
σ		0.312	0.326	0.618	26.660	19.170	0.055	1.125	0.111
%RSD		5.623	13.350	1.744	2.658	1.765	4.648	3.552	1.817
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:48	6.247	80.570	81.620	11.660	0.013	3.987	0.000	49.730
2	15:00:58	6.207	83.860	86.020	11.740	0.271	2.998	0.000	49.350
3	15:01:07	6.231	82.110	83.160	11.430	0.275	2.120	0.000	50.800
x		6.228	82.180	83.600	11.610	0.186	3.035	0.000	49.960
σ		0.020	1.650	2.233	0.162	0.150	0.934	0.000	0.754
%RSD		0.323	2.007	2.671	1.391	80.580	30.780	0.000	1.509
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:48	89.942%	2.689	1.923	88.348%	0.007	-0.011	0.065	0.040
2	15:00:58	92.730%	1.843	1.850	89.091%	0.007	0.005	0.032	0.228
3	15:01:07	91.862%	2.202	2.398	89.523%	0.007	0.005	0.064	0.078
x		91.511%	2.245	2.057	88.987%	0.007	-0.000	0.054	0.115
σ		1.427%	0.425	0.297	0.595%	0.000	0.009	0.019	0.099
%RSD		1.559	18.930	14.450	0.668	3.087	4659.000	35.390	86.080
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:48	90.637%	0.525	0.278	0.229	12.830	13.670	97.386%	97.740%
2	15:00:58	94.055%	0.614	0.132	0.251	12.870	14.570	98.057%	99.517%
3	15:01:07	92.835%	0.623	0.417	0.437	13.890	14.870	99.218%	98.505%
x		92.509%	0.587	0.276	0.305	13.200	14.370	98.221%	98.587%
σ		1.732%	0.054	0.143	0.114	0.601	0.628	0.927%	0.892%
%RSD		1.872	9.168	51.830	37.420	4.555	4.373	0.944	0.905
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:00:48	0.259	0.233	0.647	0.585	0.586	102.324%		
2	15:00:58	0.234	0.240	0.635	0.520	0.576	102.180%		
3	15:01:07	0.218	0.248	0.792	0.534	0.672	103.309%		
x		0.237	0.240	0.691	0.546	0.611	102.604%		
σ		0.021	0.008	0.087	0.035	0.053	0.614%		
%RSD		8.687	3.146	12.650	6.335	8.674	0.598		

180-45949-F-1-A MS 7/20/2015 3:06:46 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	15:05:51	79.745%	40.760	13970.000	14230.000	0.000	113800.000	41440.000	41170.000
2	15:06:01	77.293%	44.350	14270.000	14790.000	0.000	118200.000	43040.000	43250.000
3	15:06:10	76.454%	44.320	14450.000	14770.000	0.000	117800.000	43530.000	43910.000
x		77.831%	43.150	14230.000	14590.000	0.000	116600.000	42670.000	42780.000
σ		1.710%	2.064	242.400	319.100	0.000	2424.000	1093.000	1428.000
%RSD		2.197	4.783	1.703	2.187	0.000	2.079	2.563	3.339
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:51	2129.000	15890.000	0.000	48630.000	60720.000	60920.000	93.710%	810.800
2	15:06:01	2293.000	16600.000	0.000	50070.000	63460.000	64500.000	90.397%	834.900
3	15:06:10	2293.000	16620.000	0.000	50670.000	64000.000	65960.000	88.890%	857.500
x		2238.000	16370.000	0.000	49790.000	62730.000	63790.000	90.999%	834.400
σ		94.420	414.400	0.000	1048.000	1763.000	2593.000	2.466%	23.360
%RSD		4.218	2.531	0.000	2.105	2.810	4.065	2.709	2.799
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:51	410.500	165.500	462.500	2285.000	2576.000	422.300	438.100	216.600
2	15:06:01	424.900	168.100	482.400	2371.000	2661.000	433.900	448.000	217.500
3	15:06:10	426.200	175.400	495.700	2464.000	2798.000	446.500	463.400	216.600
x		420.600	169.700	480.200	2373.000	2678.000	434.200	449.800	216.900
σ		8.727	5.168	16.710	89.860	112.200	12.130	12.770	0.486
%RSD		2.075	3.046	3.480	3.786	4.189	2.793	2.840	0.224
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:51	219.100	526.400	534.500	46.430	10.900	9.492	0.000	923.300
2	15:06:01	225.900	527.200	534.300	46.620	9.373	12.820	0.000	905.800
3	15:06:10	224.200	535.400	541.200	46.350	8.575	12.470	0.000	896.400
x		223.100	529.700	536.700	46.470	9.614	11.590	0.000	908.500
σ		3.537	4.992	3.921	0.138	1.179	1.829	0.000	13.650
%RSD		1.586	0.942	0.731	0.296	12.260	15.770	0.000	1.502
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:51	89.625%	865.800	878.200	85.113%	43.220	43.430	43.380	70.580
2	15:06:01	93.189%	886.500	908.400	86.434%	43.020	43.810	44.190	72.580
3	15:06:10	93.999%	898.600	923.500	87.080%	43.660	43.620	42.360	74.000
x		92.271%	883.600	903.300	86.209%	43.300	43.620	43.310	72.390
σ		2.327%	16.600	23.050	1.003%	0.327	0.188	0.916	1.719
%RSD		2.522	1.878	2.551	1.163	0.755	0.430	2.115	2.375
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:51	88.343%	1679.000	435.300	437.200	1655.000	1705.000	94.344%	95.210%
2	15:06:01	88.772%	1719.000	440.900	441.600	1721.000	1724.000	94.464%	96.235%
3	15:06:10	88.075%	1730.000	451.800	445.900	1745.000	1739.000	94.011%	96.618%
x		88.397%	1709.000	442.700	441.500	1707.000	1723.000	94.273%	96.021%
σ		0.352%	26.480	8.406	4.328	46.280	17.170	0.235%	0.728%
%RSD		0.398	1.549	1.899	0.980	2.711	0.997	0.249	0.758
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:05:51	44.760	45.020	19.250	19.560	19.200	93.744%		
2	15:06:01	45.030	45.240	19.420	20.070	19.540	92.522%		
3	15:06:10	44.170	45.070	19.310	20.070	19.390	92.441%		
x		44.650	45.110	19.320	19.900	19.380	92.902%		
σ		0.441	0.111	0.086	0.293	0.173	0.730%		
%RSD		0.987	0.246	0.446	1.470	0.893	0.786		

LCS 180-148025/2-A 7/20/2015 3:11:52 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	15:10:57	74.274%	42.010	962.100	983.800	0.000	44120.000	42810.000	43060.000
2	15:11:07	74.794%	42.050	956.800	969.100	0.000	44370.000	44040.000	44210.000
3	15:11:16	70.355%	44.140	987.800	1031.000	0.000	44840.000	44560.000	44570.000
x		73.141%	42.730	968.900	994.600	0.000	44440.000	43800.000	43950.000
σ		2.427%	1.221	16.570	32.240	0.000	364.800	899.900	787.200
%RSD		3.318	2.858	1.710	3.242	0.000	0.821	2.055	1.791
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:57	1741.000	9140.000	0.000	45550.000	47880.000	47110.000	81.556%	936.100
2	15:11:07	1791.000	9127.000	0.000	46900.000	49230.000	49080.000	80.216%	961.300
3	15:11:16	1804.000	9408.000	0.000	46780.000	49380.000	49300.000	80.790%	968.400
x		1778.000	9225.000	0.000	46410.000	48830.000	48500.000	80.854%	955.300
σ		33.370	159.000	0.000	743.600	827.400	1210.000	0.672%	16.970
%RSD		1.877	1.724	0.000	1.602	1.694	2.494	0.832	1.776
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:57	495.400	201.900	462.300	928.800	1106.000	491.900	472.800	233.600
2	15:11:07	503.500	202.500	477.600	911.000	1149.000	492.800	470.100	234.500
3	15:11:16	501.900	202.800	482.500	908.500	1110.000	491.600	472.300	232.300
x		500.300	202.400	474.100	916.100	1122.000	492.100	471.700	233.500
σ		4.281	0.466	10.530	11.080	23.760	0.612	1.429	1.086
%RSD		0.856	0.230	2.222	1.209	2.118	0.124	0.303	0.465
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:57	240.400	482.400	494.600	40.170	9.070	11.020	0.000	982.500
2	15:11:07	236.100	469.500	479.500	38.370	8.619	14.120	0.000	958.000
3	15:11:16	246.900	473.400	504.200	39.500	11.550	12.240	0.000	971.800
x		241.100	475.100	492.700	39.350	9.745	12.460	0.000	970.700
σ		5.471	6.629	12.440	0.910	1.576	1.565	0.000	12.260
%RSD		2.269	1.395	2.525	2.313	16.170	12.560	0.000	1.263
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:57	82.732%	1106.000	1109.000	81.637%	47.540	47.690	49.130	79.340
2	15:11:07	87.163%	1075.000	1095.000	82.157%	48.040	48.520	49.480	82.430
3	15:11:16	87.280%	1079.000	1093.000	82.587%	47.400	47.790	47.670	78.750
x		85.725%	1087.000	1099.000	82.127%	47.660	48.000	48.760	80.170
σ		2.593%	17.070	8.531	0.475%	0.336	0.454	0.963	1.976
%RSD		3.024	1.571	0.776	0.579	0.704	0.946	1.974	2.464
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:10:57	82.636%	1947.000	473.400	463.300	1805.000	1820.000	89.908%	90.649%
2	15:11:07	83.308%	1965.000	474.900	471.500	1835.000	1851.000	91.504%	92.435%
3	15:11:16	85.533%	1928.000	471.200	467.600	1830.000	1849.000	90.855%	92.399%
x		83.826%	1947.000	473.200	467.500	1824.000	1840.000	90.756%	91.828%
σ		1.517%	18.650	1.878	4.119	16.330	17.540	0.802%	1.021%
%RSD		1.809	0.958	0.397	0.881	0.895	0.954	0.884	1.112
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:10:57	50.170	50.330	20.990	21.160	21.310	89.333%		
2	15:11:07	50.480	51.750	20.840	20.250	20.630	90.589%		
3	15:11:16	52.040	51.930	21.670	21.810	21.300	90.670%		
x		50.900	51.340	21.170	21.070	21.080	90.198%		
σ		1.003	0.877	0.446	0.788	0.393	0.749%		
%RSD		1.971	1.709	2.105	3.739	1.863	0.831		

CCV 1630756 7/20/2015 3:16:57 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	15:16:00	89.671%	98.430	142.000	138.100	0.000	45950.000	45680.000	45550.000
2	15:16:10	89.121%	102.100	149.100	136.700	0.000	48390.000	48200.000	47520.000
3	15:16:19	90.196%	99.690	128.000	138.200	0.000	48360.000	48230.000	48690.000
x		89.663%	100.071%	139.680%	137.662%	0.000	95.132%	94.741%	94.503%
σ		0.537%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.599	1.861	7.688	0.628	0.000	2.942	3.090	3.365

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:00	455.800	5391.000	0.000	46400.000	47060.000	47100.000	103.204%	94.990
2	15:16:10	476.000	5530.000	0.000	48710.000	49010.000	49660.000	99.636%	98.360
3	15:16:19	473.900	5192.000	0.000	48700.000	49340.000	49990.000	99.634%	100.600
x		93.713%	107.424%	0.000	95.871%	96.941%	97.834%	100.825%	97.978%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.061%	n/a
%RSD		2.369	3.166	0.000	2.769	2.540	3.239	2.044	2.877

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:00	97.960	98.320	459.600	23730.000	24370.000	96.020	96.130	96.100
2	15:16:10	101.000	102.000	486.200	25210.000	24970.000	101.700	96.640	99.580
3	15:16:19	99.900	99.390	490.500	25310.000	25420.000	103.800	100.800	100.800
x		99.622%	99.913%	95.755%	99.000%	99.679%	100.501%	97.864%	98.838%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.549	1.907	3.504	3.580	2.114	4.000	2.628	2.485

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:00	96.850	99.400	101.300	97.940	96.690	107.700	0.000	99.820
2	15:16:10	99.940	101.800	105.200	99.590	98.380	94.390	0.000	100.800
3	15:16:19	97.620	100.700	102.600	102.200	101.000	103.600	0.000	99.840
x		98.133%	100.629%	103.018%	99.917%	98.689%	101.899%	0.000	100.165%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.639	1.177	1.940	2.153	2.196	6.690	0.000	0.577

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:00	100.278%	103.400	105.500	94.916%	97.830	96.640	98.140	101.500
2	15:16:10	102.742%	107.100	105.800	96.635%	97.830	99.850	93.720	100.700
3	15:16:19	103.043%	106.800	109.200	96.866%	96.840	99.300	99.060	99.460
x		102.021%	105.763%	106.803%	96.139%	97.501%	98.596%	96.972%	100.565%
σ		1.517%	n/a	n/a	1.066%	n/a	n/a	n/a	n/a
%RSD		1.487	1.945	1.919	1.109	0.583	1.739	2.942	1.029

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:00	97.814%	103.700	98.690	97.410	98.840	95.830	103.659%	101.903%
2	15:16:10	98.736%	102.700	100.400	97.870	103.000	97.490	105.479%	105.055%
3	15:16:19	100.829%	102.100	100.600	97.360	100.700	99.920	106.441%	105.029%
x		99.126%	102.839%	99.880%	97.548%	100.851%	97.746%	105.193%	103.996%
σ		1.545%	n/a	n/a	n/a	n/a	n/a	1.413%	1.812%
%RSD		1.559	0.778	1.034	0.286	2.051	2.105	1.343	1.743

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:16:00	105.800	104.400	105.000	108.100	106.400	101.553%
2	15:16:10	105.100	104.400	104.600	107.300	106.200	101.464%
3	15:16:19	106.300	105.800	104.900	107.400	106.200	101.289%
x		105.748%	104.882%	104.820%	107.583%	106.307%	101.435%
σ		n/a	n/a	n/a	n/a	n/a	0.135%
%RSD		0.555	0.722	0.211	0.407	0.114	0.133

CCB2 7/20/2015 3:25:51 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	15:24:55	98.095%	0.024	21.650	18.810	0.000	16.160	3.125	2.905
2	15:25:05	93.034%	0.090	20.370	19.220	0.000	16.640	3.232	4.430
3	15:25:14	96.269%	0.132	21.910	18.840	0.000	18.050	3.731	4.069
x		95.799%	0.082	21.310	18.950	0.000	16.950	3.363	3.801
σ		2.563%	0.054	0.823	0.229	0.000	0.980	0.323	0.797
%RSD		2.675	65.980	3.861	1.210	0.000	5.784	9.612	20.970
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:55	1.520	5.981	0.000	6.415	36.100	25.900	104.726%	0.171
2	15:25:05	1.745	5.647	0.000	12.140	58.520	27.930	103.557%	-0.077
3	15:25:14	1.477	2.586	0.000	11.060	45.260	32.420	103.319%	0.143
x		1.581	4.738	0.000	9.873	46.630	28.750	103.868%	0.079
σ		0.144	1.871	0.000	3.043	11.270	3.336	0.753%	0.136
%RSD		9.103	39.490	0.000	30.820	24.170	11.600	0.725	172.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:55	0.018	0.013	0.055	10.990	17.870	0.019	0.411	0.157
2	15:25:05	-0.038	0.041	0.061	10.730	12.400	-0.002	0.254	0.169
3	15:25:14	0.083	0.036	0.078	9.996	13.290	0.019	0.095	0.160
x		0.021	0.030	0.065	10.570	14.520	0.012	0.253	0.162
σ		0.060	0.015	0.012	0.517	2.938	0.012	0.158	0.006
%RSD		286.900	50.070	19.150	4.885	20.230	104.800	62.370	3.835
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:55	0.086	1.286	1.592	0.042	-0.005	-0.429	0.000	0.004
2	15:25:05	0.301	1.504	1.190	0.086	-0.120	0.573	0.000	0.004
3	15:25:14	0.167	1.344	1.473	0.060	-0.004	0.843	0.000	0.004
x		0.185	1.378	1.418	0.063	-0.043	0.329	0.000	0.004
σ		0.108	0.113	0.207	0.022	0.067	0.670	0.000	0.000
%RSD		58.710	8.185	14.570	35.840	154.700	203.400	0.000	1.942
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:55	104.212%	1.249	1.099	102.326%	0.018	0.017	-0.000	-0.012
2	15:25:05	104.972%	1.021	1.120	103.068%	0.027	0.007	-0.000	-0.001
3	15:25:14	103.653%	1.175	1.030	103.233%	0.018	0.002	-0.000	-0.012
x		104.279%	1.148	1.083	102.876%	0.021	0.009	-0.000	-0.008
σ		0.662%	0.116	0.047	0.483%	0.005	0.007	0.000	0.006
%RSD		0.635	10.130	4.371	0.470	24.660	84.320	36.010	79.450
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:55	104.021%	0.992	0.267	0.224	0.000	0.037	103.503%	104.549%
2	15:25:05	106.683%	0.994	0.260	0.245	0.151	0.000	103.503%	106.922%
3	15:25:14	105.961%	0.787	0.336	0.285	0.000	0.000	107.572%	107.178%
x		105.555%	0.924	0.288	0.251	0.050	0.012	104.859%	106.216%
σ		1.377%	0.119	0.042	0.031	0.087	0.022	2.349%	1.450%
%RSD		1.304	12.870	14.610	12.440	173.200	173.200	2.240	1.365
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:24:55	0.038	0.033	0.040	0.009	0.022	107.987%		
2	15:25:05	0.042	0.042	0.063	0.015	0.031	108.565%		
3	15:25:14	0.033	0.025	0.051	0.028	0.032	108.698%		
x		0.038	0.033	0.051	0.017	0.028	108.417%		
σ		0.005	0.008	0.011	0.009	0.006	0.378%		
%RSD		12.120	24.760	22.120	54.080	20.590	0.349		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:30:01	97.913%	0.013	16.570	17.680	0.000	-1.625	0.360	-0.238
2	15:30:10	96.352%	0.014	17.810	16.960	0.000	-0.753	-0.119	0.264
3	15:30:20	96.905%	0.037	18.660	17.240	0.000	0.097	0.065	0.346
x		97.056%	0.021	17.680	17.290	0.000	-0.760	0.102	0.124
σ		0.791%	0.014	1.050	0.366	0.000	0.861	0.242	0.317
%RSD		0.815	63.280	5.938	2.115	0.000	113.300	237.200	255.300
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:30:01	0.204	5.366	0.000	-7.120	8.159	1.665	103.908%	-0.015
2	15:30:10	0.375	2.831	0.000	-0.325	-1.475	1.919	101.779%	-0.013
3	15:30:20	0.070	4.806	0.000	-0.695	0.268	0.362	101.588%	-0.013
x		0.216	4.334	0.000	-2.713	2.317	1.315	102.425%	-0.013
σ		0.152	1.332	0.000	3.821	5.134	0.835	1.288%	0.001
%RSD		70.410	30.730	0.000	140.800	221.500	63.490	1.257	8.959
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:30:01	0.022	0.013	0.000	2.715	6.886	0.005	-0.119	-0.091
2	15:30:10	0.047	0.023	0.002	2.422	6.184	-0.002	-0.065	-0.002
3	15:30:20	0.149	0.042	0.002	2.256	7.811	0.005	0.071	0.008
x		0.073	0.026	0.001	2.464	6.960	0.002	-0.038	-0.028
σ		0.067	0.014	0.001	0.232	0.816	0.004	0.098	0.055
%RSD		92.170	55.860	85.190	9.421	11.730	178.000	258.100	192.000
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:30:01	0.031	0.184	-0.125	0.006	-0.002	-0.724	0.000	0.004
2	15:30:10	0.012	-0.034	-0.074	0.024	-0.120	0.580	0.000	0.004
3	15:30:20	0.031	-0.034	-0.074	0.006	-0.003	1.115	0.000	-0.008
x		0.025	0.039	-0.091	0.012	-0.042	0.323	0.000	0.000
σ		0.011	0.126	0.030	0.011	0.068	0.946	0.000	0.007
%RSD		45.870	325.200	32.710	87.540	162.700	292.600	0.000	13130.000
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:30:01	100.654%	0.505	0.416	99.975%	-0.000	-0.007	-0.000	-0.012
2	15:30:10	102.441%	0.510	0.176	101.838%	-0.010	-0.002	-0.000	-0.012
3	15:30:20	103.210%	0.670	0.247	102.514%	-0.000	-0.016	-0.000	-0.000
x		102.102%	0.562	0.280	101.443%	-0.003	-0.008	-0.000	-0.008
σ		1.311%	0.094	0.123	1.315%	0.005	0.007	0.000	0.007
%RSD		1.284	16.660	44.090	1.296	158.400	87.560	77.090	81.740
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:30:01	102.215%	0.659	0.104	0.101	0.000	0.038	103.476%	105.473%
2	15:30:10	103.838%	0.820	0.101	0.141	0.000	0.037	104.099%	105.346%
3	15:30:20	104.494%	0.644	-0.033	0.057	0.000	0.037	103.708%	103.149%
x		103.516%	0.708	0.057	0.100	0.000	0.037	103.761%	104.656%
σ		1.173%	0.098	0.078	0.042	0.000	0.000	0.315%	1.307%
%RSD		1.134	13.820	136.100	41.840	0.000	0.670	0.304	1.249
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:30:01	0.015	0.023	0.022	0.009	0.004	109.381%		
2	15:30:10	0.010	0.010	-0.001	-0.010	-0.003	110.429%		
3	15:30:20	0.011	0.017	0.011	0.028	0.008	107.842%		
x		0.012	0.017	0.011	0.009	0.003	109.217%		
σ		0.003	0.006	0.011	0.019	0.006	1.301%		
%RSD		21.820	38.600	104.700	207.600	207.300	1.192		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:06	77.809%	42.740	906.200	905.600	0.000	45180.000	44020.000	44620.000
2	15:35:15	73.122%	44.000	904.500	943.300	0.000	45250.000	44540.000	44850.000
3	15:35:24	71.208%	44.900	952.300	968.400	0.000	45570.000	44840.000	45090.000
x		74.046%	43.880	921.000	939.100	0.000	45330.000	44470.000	44850.000
σ		3.396%	1.085	27.100	31.620	0.000	209.400	414.200	232.200
%RSD		4.586	2.473	2.943	3.367	0.000	0.462	0.931	0.518
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:06	1796.000	9019.000	0.000	46650.000	48180.000	48680.000	80.772%	963.200
2	15:35:15	1821.000	9294.000	0.000	46640.000	48960.000	49220.000	80.906%	962.900
3	15:35:24	1818.000	9406.000	0.000	47550.000	49890.000	49910.000	80.701%	981.000
x		1812.000	9240.000	0.000	46950.000	49010.000	49270.000	80.793%	969.100
σ		13.480	199.400	0.000	523.100	861.000	619.100	0.104%	10.370
%RSD		0.744	2.158	0.000	1.114	1.757	1.256	0.129	1.070
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:06	483.600	200.400	474.000	918.200	1100.000	491.600	481.400	236.200
2	15:35:15	491.900	198.200	482.600	900.700	1071.000	492.100	482.100	238.500
3	15:35:24	494.900	200.900	484.500	932.300	1137.000	511.800	500.300	242.700
x		490.100	199.800	480.400	917.100	1103.000	498.500	487.900	239.100
σ		5.862	1.410	5.578	15.840	33.090	11.510	10.740	3.305
%RSD		1.196	0.706	1.161	1.727	3.000	2.309	2.202	1.382
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:06	239.700	477.200	496.800	39.380	9.253	14.410	0.000	982.800
2	15:35:15	250.700	482.300	503.300	41.210	10.400	14.040	0.000	1002.000
3	15:35:24	252.900	490.600	492.500	41.120	9.923	11.710	0.000	1005.000
x		247.800	483.400	497.500	40.570	9.857	13.390	0.000	996.600
σ		7.102	6.759	5.435	1.029	0.575	1.460	0.000	11.940
%RSD		2.866	1.398	1.092	2.536	5.832	10.910	0.000	1.198
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:06	82.573%	1082.000	1103.000	80.767%	49.110	47.860	49.100	80.190
2	15:35:15	82.815%	1101.000	1104.000	80.992%	48.310	49.610	49.170	81.100
3	15:35:24	83.283%	1094.000	1109.000	82.440%	48.160	48.880	48.710	80.560
x		82.890%	1092.000	1105.000	81.400%	48.530	48.780	48.990	80.620
σ		0.361%	9.304	3.215	0.908%	0.508	0.881	0.247	0.455
%RSD		0.435	0.852	0.291	1.116	1.047	1.806	0.504	0.565
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:06	80.646%	1983.000	484.800	474.300	1836.000	1843.000	87.993%	89.550%
2	15:35:15	82.527%	1964.000	477.500	472.900	1801.000	1843.000	90.481%	91.507%
3	15:35:24	82.588%	1975.000	484.000	482.300	1856.000	1865.000	91.610%	91.573%
x		81.920%	1974.000	482.100	476.500	1831.000	1850.000	90.028%	90.877%
σ		1.104%	9.617	3.991	5.049	28.100	12.990	1.851%	1.149%
%RSD		1.348	0.487	0.828	1.060	1.534	0.702	2.056	1.264
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:35:06	51.010	51.680	21.510	21.320	20.940	85.627%		
2	15:35:15	53.740	52.220	20.630	21.260	21.280	85.571%		
3	15:35:24	52.790	51.600	20.970	21.900	21.380	86.882%		
x		52.510	51.830	21.030	21.490	21.200	86.027%		
σ		1.385	0.336	0.444	0.350	0.233	0.741%		
%RSD		2.638	0.648	2.111	1.626	1.098	0.861		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:10	81.354%	0.043	63220.000	65470.000	0.000	100800.000	62.580	74.760
2	15:40:20	79.311%	0.160	66120.000	67320.000	0.000	103100.000	62.470	75.560
3	15:40:29	76.381%	0.080	67100.000	69670.000	0.000	103700.000	61.290	78.160
x		79.016%	0.094	65480.000	67490.000	0.000	102600.000	62.110	76.160
σ		2.500%	0.060	2014.000	2100.000	0.000	1516.000	0.719	1.781
%RSD		3.163	63.190	3.076	3.112	0.000	1.478	1.157	2.338
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:10	12.520	2373.000	0.000	622900.000	368.600	1048.000	83.898%	268.700
2	15:40:20	12.600	2387.000	0.000	617400.000	431.700	1032.000	83.687%	270.100
3	15:40:29	12.540	2419.000	0.000	624600.000	346.700	1070.000	84.172%	266.400
x		12.550	2393.000	0.000	621600.000	382.300	1050.000	83.919%	268.400
σ		0.045	23.680	0.000	3761.000	44.170	19.380	0.243%	1.868
%RSD		0.358	0.989	0.000	0.605	11.550	1.846	0.290	0.696
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:10	10.390	17.490	3.327	19.270	27.240	0.501	9.781	631.300
2	15:40:20	9.285	17.620	3.427	16.470	27.130	0.559	10.810	636.100
3	15:40:29	9.963	17.130	3.512	15.350	23.020	0.470	9.509	637.200
x		9.881	17.420	3.422	17.030	25.800	0.510	10.030	634.800
σ		0.559	0.253	0.093	2.021	2.407	0.045	0.687	3.142
%RSD		5.656	1.451	2.704	11.870	9.330	8.888	6.849	0.495
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:10	640.800	23.000	24.610	8.551	1.583	4.218	0.000	4.111
2	15:40:20	643.900	24.020	23.330	8.510	1.000	2.232	0.000	4.257
3	15:40:29	637.500	21.680	24.850	7.902	1.270	5.085	0.000	4.154
x		640.700	22.900	24.260	8.321	1.284	3.845	0.000	4.174
σ		3.225	1.173	0.815	0.363	0.292	1.462	0.000	0.075
%RSD		0.503	5.121	3.360	4.365	22.740	38.030	0.000	1.789
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:10	84.993%	919.500	937.900	83.269%	-0.003	0.007	0.318	0.554
2	15:40:20	86.687%	906.200	926.200	83.152%	0.014	0.001	0.459	0.427
3	15:40:29	87.271%	904.900	925.600	84.043%	0.003	0.036	0.349	0.198
x		86.317%	910.200	929.900	83.488%	0.005	0.015	0.375	0.393
σ		1.183%	8.094	6.955	0.484%	0.009	0.019	0.074	0.181
%RSD		1.371	0.889	0.748	0.580	186.900	125.200	19.730	45.950
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:10	83.441%	7.099	2.653	2.819	1.179	0.836	93.366%	92.470%
2	15:40:20	83.564%	6.378	2.444	2.527	0.996	1.184	93.726%	94.361%
3	15:40:29	84.497%	5.935	2.495	2.312	0.892	0.908	95.478%	95.452%
x		83.834%	6.471	2.531	2.553	1.022	0.976	94.190%	94.094%
σ		0.577%	0.588	0.109	0.254	0.146	0.184	1.130%	1.509%
%RSD		0.689	9.080	4.311	9.966	14.230	18.860	1.199	1.603
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:40:10	0.077	0.036	1.148	1.176	1.173	91.613%		
2	15:40:20	0.045	0.035	1.128	1.281	1.181	90.889%		
3	15:40:29	0.023	0.075	1.271	1.317	1.294	91.926%		
x		0.049	0.049	1.182	1.258	1.216	91.476%		
σ		0.027	0.023	0.077	0.073	0.068	0.532%		
%RSD		55.710	46.890	6.523	5.813	5.596	0.582		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:15	81.501%	0.071	12510.000	12860.000	0.000	20140.000	11.760	17.050
2	15:45:24	77.177%	0.064	13130.000	13520.000	0.000	20650.000	13.020	16.010
3	15:45:34	78.394%	0.047	12750.000	13170.000	0.000	20610.000	14.380	15.640
x		79.024%	0.061	12800.000	13180.000	0.000	20470.000	13.060	16.240
σ		2.230%	0.012	313.000	327.500	0.000	280.800	1.311	0.731
%RSD		2.821	19.730	2.446	2.484	0.000	1.372	10.040	4.505

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:15	2.764	451.700	0.000	122400.000	151.400	299.300	87.939%	38.750
2	15:45:24	3.019	468.900	0.000	123700.000	186.700	310.700	86.371%	40.290
3	15:45:34	2.530	469.600	0.000	125300.000	193.200	312.900	86.168%	37.970
x		2.771	463.400	0.000	123800.000	177.100	307.600	86.826%	39.000
σ		0.245	10.110	0.000	1413.000	22.480	7.315	0.969%	1.181
%RSD		8.828	2.182	0.000	1.141	12.690	2.378	1.117	3.029

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:15	2.307	3.588	0.686	2.530	6.953	0.173	2.092	124.300
2	15:45:24	3.030	3.607	0.776	2.387	5.089	0.148	2.093	125.400
3	15:45:34	2.525	3.665	0.725	2.199	1.259	0.164	1.737	124.600
x		2.621	3.620	0.729	2.372	4.434	0.161	1.974	124.800
σ		0.371	0.040	0.045	0.166	2.903	0.013	0.205	0.595
%RSD		14.150	1.103	6.173	7.001	65.470	7.790	10.390	0.477

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:15	129.500	5.290	4.778	1.301	0.292	-2.716	0.000	0.983
2	15:45:24	124.800	5.050	4.671	1.320	0.014	-0.240	0.000	0.764
3	15:45:34	125.800	4.964	4.456	1.430	0.279	1.524	0.000	0.821
x		126.700	5.102	4.635	1.350	0.195	-0.478	0.000	0.856
σ		2.480	0.169	0.164	0.070	0.157	2.130	0.000	0.113
%RSD		1.958	3.315	3.539	5.170	80.340	446.000	0.000	13.240

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:15	87.305%	178.500	177.800	88.012%	0.018	-0.016	0.067	0.042
2	15:45:24	90.393%	177.700	179.200	88.242%	0.013	0.017	0.131	0.027
3	15:45:34	91.987%	177.400	177.400	89.190%	-0.009	-0.005	0.164	0.041
x		89.895%	177.900	178.200	88.481%	0.007	-0.002	0.121	0.037
σ		2.381%	0.564	0.939	0.624%	0.015	0.017	0.049	0.008
%RSD		2.648	0.317	0.527	0.706	198.700	962.400	40.860	22.200

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:15	87.677%	1.191	0.356	0.271	0.264	0.086	93.766%	93.380%
2	15:45:24	90.812%	1.182	0.304	0.702	0.086	0.210	93.860%	94.818%
3	15:45:34	90.080%	0.861	0.409	0.359	0.260	0.042	93.575%	94.115%
x		89.523%	1.078	0.357	0.444	0.204	0.113	93.734%	94.104%
σ		1.640%	0.188	0.052	0.228	0.102	0.087	0.145%	0.719%
%RSD		1.832	17.430	14.720	51.300	49.910	77.340	0.155	0.764

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:15	0.018	0.006	0.238	0.257	0.227	91.555%
2	15:45:24	0.008	0.008	0.321	0.214	0.238	91.001%
3	15:45:34	0.007	0.002	0.310	0.276	0.259	92.318%
x		0.011	0.005	0.290	0.249	0.241	91.625%
σ		0.006	0.003	0.045	0.032	0.016	0.662%
%RSD		56.300	63.540	15.560	12.880	6.641	0.722

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:04	84.526%	-0.001	65.900	57.180	0.000	-5.624	0.252	0.340
2	15:54:14	85.426%	0.078	58.250	57.090	0.000	-4.901	0.619	0.158
3	15:54:23	87.136%	0.062	59.050	55.880	0.000	-5.094	0.452	-0.154
x		85.696%	0.046	61.070	56.720	0.000	-5.207	0.441	0.115
σ		1.326%	0.042	4.207	0.725	0.000	0.374	0.184	0.250
%RSD		1.547	90.040	6.889	1.279	0.000	7.191	41.720	218.100

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:04	0.105	2.754	0.000	5.862	49.500	20.940	94.553%	0.236
2	15:54:14	0.146	-1.747	0.000	4.252	85.390	18.390	93.632%	0.204
3	15:54:23	0.122	-3.425	0.000	12.320	54.590	21.420	92.761%	0.418
x		0.124	-0.806	0.000	7.480	63.160	20.250	93.649%	0.286
σ		0.021	3.195	0.000	4.272	19.420	1.631	0.896%	0.115
%RSD		16.860	396.400	0.000	57.120	30.750	8.055	0.957	40.320

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:04	0.076	0.016	0.048	-1.399	1.735	-0.002	-0.002	-0.017
2	15:54:14	0.158	0.011	0.042	-1.293	-2.688	0.021	0.201	0.077
3	15:54:23	0.104	0.032	0.035	-1.484	-2.673	0.005	0.116	0.055
x		0.112	0.020	0.042	-1.392	-1.209	0.008	0.105	0.038
σ		0.042	0.011	0.006	0.095	2.550	0.012	0.102	0.049
%RSD		37.290	54.490	15.550	6.850	211.000	149.900	97.100	127.200

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:04	-0.043	-0.067	-0.005	0.017	-0.120	1.190	0.000	-0.008
2	15:54:14	-0.044	-0.115	0.046	0.026	-0.120	0.310	0.000	0.005
3	15:54:23	-0.022	-0.209	-0.173	0.007	-0.120	0.310	0.000	-0.008
x		-0.036	-0.130	-0.044	0.016	-0.120	0.603	0.000	-0.004
σ		0.012	0.072	0.115	0.010	0.000	0.508	0.000	0.008
%RSD		33.830	55.400	262.000	58.970	0.000	84.280	0.000	188.100

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:04	94.032%	0.035	-0.128	93.550%	-0.009	-0.001	-0.000	0.001
2	15:54:14	98.307%	-0.090	-0.144	94.161%	-0.009	-0.006	-0.000	0.012
3	15:54:23	97.765%	0.106	0.086	94.515%	0.011	-0.001	-0.000	-0.012
x		96.701%	0.017	-0.062	94.075%	-0.003	-0.003	-0.000	0.001
σ		2.327%	0.099	0.128	0.488%	0.012	0.003	0.000	0.012
%RSD		2.407	574.200	206.600	0.519	435.600	119.500	26.280	2330.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:04	93.188%	0.045	-0.076	-0.007	0.000	0.000	100.215%	101.199%
2	15:54:14	97.942%	0.130	-0.053	-0.024	0.161	0.000	99.548%	100.490%
3	15:54:23	97.524%	0.100	-0.088	-0.009	0.000	0.000	101.972%	102.471%
x		96.218%	0.091	-0.072	-0.013	0.054	0.000	100.578%	101.386%
σ		2.632%	0.043	0.018	0.009	0.093	0.000	1.253%	1.004%
%RSD		2.736	46.660	24.820	67.670	173.200	0.000	1.245	0.990

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:04	0.016	-0.005	-0.000	-0.009	-0.003	102.613%
2	15:54:14	0.001	-0.002	-0.006	-0.003	-0.006	105.748%
3	15:54:23	0.001	-0.002	-0.000	-0.009	-0.003	105.165%
x		0.006	-0.003	-0.002	-0.007	-0.004	104.509%
σ		0.008	0.002	0.003	0.004	0.002	1.667%
%RSD		133.600	69.960	153.200	50.340	45.230	1.595

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:10	68.105%	44.430	1035.000	1034.000	0.000	44210.000	43590.000	43870.000
2	15:59:20	65.367%	47.710	1040.000	1056.000	0.000	44750.000	44440.000	44510.000
3	15:59:29	67.589%	45.820	1028.000	1059.000	0.000	46030.000	46170.000	45860.000
x		67.020%	45.980	1034.000	1050.000	0.000	45000.000	44730.000	44740.000
σ		1.455%	1.646	6.166	13.870	0.000	933.400	1316.000	1017.000
%RSD		2.170	3.580	0.596	1.321	0.000	2.074	2.942	2.272

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:10	1759.000	9290.000	0.000	45990.000	48010.000	47150.000	78.628%	917.700
2	15:59:20	1811.000	9505.000	0.000	46950.000	50190.000	49170.000	76.232%	953.400
3	15:59:29	1859.000	9539.000	0.000	48010.000	51160.000	50480.000	75.767%	975.700
x		1809.000	9445.000	0.000	46990.000	49790.000	48930.000	76.876%	948.900
σ		50.000	134.900	0.000	1009.000	1613.000	1679.000	1.535%	29.280
%RSD		2.763	1.429	0.000	2.148	3.239	3.432	1.997	3.086

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:10	496.600	200.300	469.300	902.400	1113.000	496.600	485.100	247.500
2	15:59:20	514.700	209.800	486.400	929.100	1180.000	512.900	492.100	245.900
3	15:59:29	521.000	209.300	493.700	941.500	1171.000	510.900	497.500	246.500
x		510.800	206.400	483.100	924.300	1155.000	506.800	491.600	246.600
σ		12.680	5.355	12.480	19.990	36.200	8.886	6.214	0.810
%RSD		2.482	2.594	2.583	2.162	3.135	1.753	1.264	0.328

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:10	255.200	511.200	512.000	41.100	11.960	12.070	0.000	1025.000
2	15:59:20	251.300	510.900	506.000	40.730	10.730	12.350	0.000	1008.000
3	15:59:29	255.600	506.300	510.300	40.460	12.630	11.950	0.000	1003.000
x		254.000	509.500	509.400	40.760	11.770	12.120	0.000	1012.000
σ		2.386	2.756	3.083	0.321	0.967	0.208	0.000	11.420
%RSD		0.939	0.541	0.605	0.788	8.217	1.717	0.000	1.129

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:10	77.326%	1086.000	1082.000	77.051%	50.030	50.270	53.230	82.060
2	15:59:20	81.105%	1064.000	1087.000	77.713%	50.730	49.060	50.860	83.480
3	15:59:29	81.722%	1069.000	1082.000	78.875%	49.060	49.210	50.360	81.100
x		80.051%	1073.000	1084.000	77.880%	49.940	49.520	51.490	82.210
σ		2.380%	11.530	2.705	0.924%	0.839	0.661	1.535	1.197
%RSD		2.973	1.075	0.250	1.186	1.679	1.334	2.981	1.456

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:10	77.413%	1951.000	485.100	483.700	1866.000	1902.000	85.612%	86.302%
2	15:59:20	78.930%	1966.000	488.800	481.800	1861.000	1897.000	86.536%	86.750%
3	15:59:29	79.961%	1954.000	484.600	483.800	1891.000	1882.000	85.727%	88.166%
x		78.768%	1957.000	486.100	483.100	1873.000	1894.000	85.958%	87.073%
σ		1.282%	7.863	2.271	1.153	16.390	10.660	0.503%	0.973%
%RSD		1.627	0.402	0.467	0.239	0.875	0.563	0.586	1.117

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:10	53.140	54.070	21.560	22.060	22.000	82.863%
2	15:59:20	53.130	52.960	21.420	21.540	21.830	84.176%
3	15:59:29	51.900	52.170	21.480	21.440	21.590	84.284%
x		52.720	53.070	21.480	21.680	21.810	83.774%
σ		0.710	0.957	0.069	0.331	0.208	0.791%
%RSD		1.346	1.803	0.320	1.527	0.954	0.944

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:15	66.685%	0.135	55.140	56.950	0.000	20810.000	5998.000	6145.000
2	16:04:25	65.061%	0.071	57.470	58.150	0.000	21710.000	6219.000	6372.000
3	16:04:35	64.741%	0.089	55.740	59.230	0.000	21850.000	6315.000	6340.000
x		65.496%	0.099	56.120	58.110	0.000	21450.000	6177.000	6286.000
σ		1.043%	0.033	1.215	1.138	0.000	563.500	162.400	122.900
%RSD		1.592	33.660	2.165	1.959	0.000	2.627	2.629	1.956
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:15	147.900	2170.000	0.000	2708.000	30360.000	29770.000	82.329%	4.318
2	16:04:25	154.200	2273.000	0.000	2810.000	31550.000	30930.000	80.707%	4.407
3	16:04:35	152.100	2241.000	0.000	2850.000	33010.000	31410.000	80.035%	5.055
x		151.400	2228.000	0.000	2789.000	31640.000	30700.000	81.024%	4.593
σ		3.183	52.980	0.000	73.480	1325.000	841.000	1.179%	0.402
%RSD		2.103	2.378	0.000	2.635	4.187	2.739	1.455	8.755
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:15	6.189	1.803	25.180	304.500	429.200	0.392	0.696	3.085
2	16:04:25	6.113	1.654	25.730	302.100	455.200	0.285	0.493	3.385
3	16:04:35	5.386	1.778	26.450	300.100	441.600	0.305	0.394	3.292
x		5.896	1.745	25.790	302.300	442.000	0.327	0.528	3.254
σ		0.443	0.080	0.637	2.207	13.000	0.057	0.154	0.153
%RSD		7.514	4.582	2.472	0.730	2.940	17.330	29.140	4.715
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:15	3.008	14.560	13.870	0.737	0.029	3.741	0.000	98.110
2	16:04:25	3.417	14.920	15.420	0.714	0.318	2.988	0.000	101.000
3	16:04:35	4.059	13.180	14.260	0.591	0.026	1.652	0.000	99.800
x		3.495	14.220	14.520	0.681	0.124	2.794	0.000	99.630
σ		0.530	0.917	0.807	0.079	0.168	1.058	0.000	1.439
%RSD		15.160	6.445	5.556	11.560	134.900	37.870	0.000	1.444
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:15	80.162%	10.430	10.990	79.675%	-0.002	-0.010	0.037	0.062
2	16:04:25	82.849%	7.803	7.373	80.804%	-0.009	0.020	-0.000	0.102
3	16:04:35	82.757%	6.840	7.194	80.253%	-0.003	-0.004	0.071	0.031
x		81.923%	8.359	8.519	80.244%	-0.005	0.002	0.036	0.065
σ		1.525%	1.860	2.141	0.565%	0.003	0.016	0.036	0.035
%RSD		1.862	22.260	25.140	0.703	76.960	964.300	99.400	54.860
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:04:15	80.618%	5.849	0.322	0.350	30.250	33.390	88.846%	87.695%
2	16:04:25	83.556%	4.602	0.227	0.185	31.020	34.700	88.886%	91.221%
3	16:04:35	83.377%	3.592	0.296	0.219	31.540	30.990	90.024%	91.929%
x		82.517%	4.681	0.282	0.252	30.940	33.020	89.252%	90.282%
σ		1.647%	1.131	0.049	0.087	0.649	1.882	0.669%	2.268%
%RSD		1.996	24.150	17.390	34.630	2.097	5.700	0.749	2.512
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:04:15	0.090	0.073	1.533	1.173	1.317	90.380%		
2	16:04:25	0.068	0.048	1.429	1.218	1.282	90.163%		
3	16:04:35	0.045	0.058	1.395	1.195	1.299	92.468%		
x		0.067	0.059	1.452	1.195	1.299	91.003%		
σ		0.023	0.012	0.072	0.023	0.018	1.273%		
%RSD		33.430	20.660	4.963	1.901	1.375	1.399		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	65.452%	-0.033	63.840	58.240	0.000	34510.000	9607.000	9755.000
2	16:09:31	67.407%	0.033	59.340	59.580	0.000	35340.000	10050.000	10020.000
3	16:09:41	66.608%	0.102	57.630	57.250	0.000	35400.000	10130.000	10310.000
x		66.489%	0.034	60.270	58.360	0.000	35080.000	9927.000	10030.000
σ		0.982%	0.067	3.208	1.171	0.000	495.100	280.300	276.600
%RSD		1.478	200.000	5.322	2.007	0.000	1.411	2.823	2.758

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	143.100	2108.000	0.000	4231.000	35350.000	35070.000	81.868%	2.077
2	16:09:31	104.900	2145.000	0.000	4355.000	37040.000	36380.000	79.948%	2.618
3	16:09:41	110.800	2152.000	0.000	4432.000	38280.000	36980.000	78.651%	2.663
x		119.600	2135.000	0.000	4339.000	36890.000	36140.000	80.156%	2.453
σ		20.560	23.830	0.000	101.200	1472.000	981.200	1.619%	0.326
%RSD		17.190	1.116	0.000	2.332	3.990	2.715	2.019	13.290

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	6.593	1.453	53.440	210.700	320.000	0.320	0.627	2.633
2	16:09:31	7.191	1.730	55.270	216.000	363.400	0.406	0.740	3.280
3	16:09:41	7.337	1.508	56.490	214.500	341.900	0.494	0.646	3.757
x		7.041	1.564	55.070	213.700	341.700	0.406	0.671	3.224
σ		0.394	0.147	1.532	2.725	21.690	0.087	0.061	0.565
%RSD		5.597	9.373	2.782	1.275	6.347	21.400	9.027	17.510

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	3.220	5.696	7.194	0.915	0.027	1.400	0.000	118.500
2	16:09:31	2.852	6.412	5.357	0.733	0.027	3.695	0.000	120.800
3	16:09:41	3.542	7.929	6.731	0.948	-0.120	0.795	0.000	123.400
x		3.204	6.679	6.428	0.865	-0.022	1.963	0.000	120.900
σ		0.345	1.140	0.955	0.115	0.085	1.530	0.000	2.444
%RSD		10.770	17.070	14.860	13.330	389.800	77.930	0.000	2.021

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	81.347%	2.442	2.522	78.107%	0.010	-0.016	-0.000	0.047
2	16:09:31	81.914%	2.396	1.863	78.950%	-0.014	-0.010	0.000	0.017
3	16:09:41	81.664%	1.945	2.259	79.801%	0.003	0.002	-0.000	0.089
x		81.642%	2.261	2.214	78.953%	-0.000	-0.008	-0.000	0.051
σ		0.284%	0.275	0.332	0.847%	0.013	0.009	0.000	0.036
%RSD		0.348	12.140	14.980	1.073	3376.000	111.400	208.400	71.010

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	80.760%	1.522	0.152	0.280	37.110	38.730	88.340%	89.876%
2	16:09:31	82.995%	1.068	0.133	0.101	36.360	37.650	88.300%	90.522%
3	16:09:41	82.612%	1.325	0.078	0.222	36.120	34.220	89.135%	91.524%
x		82.123%	1.305	0.121	0.201	36.530	36.870	88.591%	90.641%
σ		1.195%	0.227	0.038	0.091	0.515	2.353	0.471%	0.831%
%RSD		1.455	17.420	31.790	45.350	1.410	6.383	0.532	0.917

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	0.030	0.028	1.417	1.332	1.296	90.120%
2	16:09:31	0.013	0.015	1.367	1.211	1.326	90.188%
3	16:09:41	0.013	0.024	1.294	1.583	1.376	88.905%
x		0.019	0.023	1.359	1.375	1.332	89.738%
σ		0.009	0.007	0.062	0.190	0.040	0.722%
%RSD		50.570	29.980	4.567	13.820	3.032	0.804

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:29	67.656%	0.032	49.210	51.140	0.000	26530.000	6591.000	6736.000
2	16:14:39	63.072%	0.040	52.090	53.980	0.000	27390.000	6878.000	6959.000
3	16:14:48	63.955%	0.126	54.380	53.280	0.000	28170.000	7086.000	7143.000
x		64.894%	0.066	51.890	52.800	0.000	27360.000	6852.000	6946.000
σ		2.432%	0.052	2.592	1.479	0.000	821.100	248.500	203.400
%RSD		3.748	79.100	4.995	2.802	0.000	3.000	3.627	2.929
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:29	176.100	2041.000	0.000	3454.000	29460.000	29010.000	82.487%	2.771
2	16:14:39	184.300	2140.000	0.000	3584.000	30880.000	30100.000	80.305%	3.417
3	16:14:48	186.100	2142.000	0.000	3648.000	31850.000	30690.000	78.894%	3.810
x		182.200	2107.000	0.000	3562.000	30730.000	29930.000	80.562%	3.333
σ		5.361	57.680	0.000	98.640	1198.000	852.500	1.810%	0.524
%RSD		2.943	2.737	0.000	2.769	3.900	2.848	2.247	15.730
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:29	7.638	1.856	57.400	330.300	459.400	0.506	0.896	2.381
2	16:14:39	7.126	2.106	59.910	343.800	422.900	0.431	0.977	2.668
3	16:14:48	8.302	2.104	61.950	354.300	468.900	0.428	0.749	2.874
x		7.689	2.022	59.750	342.800	450.400	0.455	0.874	2.641
σ		0.589	0.144	2.279	11.990	24.300	0.044	0.116	0.248
%RSD		7.664	7.107	3.814	3.497	5.395	9.691	13.230	9.375
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:29	2.698	9.415	8.563	0.573	0.028	1.406	0.000	96.310
2	16:14:39	2.767	9.359	10.680	0.754	0.322	0.044	0.000	96.660
3	16:14:48	2.954	10.810	11.770	0.738	0.177	2.691	0.000	95.070
x		2.806	9.862	10.340	0.688	0.176	1.380	0.000	96.010
σ		0.133	0.823	1.629	0.101	0.147	1.324	0.000	0.835
%RSD		4.724	8.340	15.760	14.610	83.670	95.900	0.000	0.870
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:29	80.663%	1.764	1.370	78.493%	-0.002	0.021	0.037	0.047
2	16:14:39	82.090%	1.547	1.469	79.481%	-0.008	-0.016	0.073	0.047
3	16:14:48	81.631%	1.475	1.338	80.291%	0.003	0.008	-0.000	0.003
x		81.461%	1.595	1.392	79.422%	-0.002	0.004	0.037	0.032
σ		0.728%	0.150	0.068	0.900%	0.006	0.019	0.037	0.025
%RSD		0.894	9.426	4.893	1.134	244.500	462.800	100.000	78.950
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:29	81.260%	0.857	0.180	0.175	32.520	34.430	85.030%	87.142%
2	16:14:39	80.884%	0.621	0.110	0.140	38.030	33.570	87.287%	88.632%
3	16:14:48	80.951%	0.896	0.138	0.158	34.030	33.520	86.687%	87.700%
x		81.032%	0.791	0.143	0.158	34.860	33.840	86.334%	87.824%
σ		0.200%	0.149	0.035	0.018	2.848	0.510	1.169%	0.753%
%RSD		0.247	18.820	24.850	11.180	8.171	1.506	1.354	0.857
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:14:29	0.020	0.007	2.153	1.784	1.936	84.587%		
2	16:14:39	0.014	0.005	2.036	1.826	1.954	87.079%		
3	16:14:48	0.014	0.000	2.012	1.953	1.921	86.273%		
x		0.016	0.004	2.067	1.855	1.937	85.980%		
σ		0.004	0.004	0.076	0.088	0.016	1.271%		
%RSD		22.600	87.990	3.656	4.743	0.850	1.479		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:37	63.241%	0.004	83.160	90.560	0.000	47380.000	10450.000	10510.000
2	16:19:46	62.244%	-0.013	93.180	88.310	0.000	48570.000	10850.000	11060.000
3	16:19:56	60.072%	0.026	91.050	96.690	0.000	49590.000	11020.000	11140.000
x		61.853%	0.006	89.130	91.850	0.000	48510.000	10780.000	10900.000
σ		1.620%	0.020	5.275	4.336	0.000	1110.000	291.900	344.800
%RSD		2.620	359.400	5.918	4.720	0.000	2.288	2.709	3.163

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:37	91.560	2595.000	0.000	7790.000	49060.000	48310.000	82.585%	1.940
2	16:19:46	98.500	2652.000	0.000	8011.000	50590.000	50380.000	80.045%	2.371
3	16:19:56	99.250	2813.000	0.000	8239.000	52240.000	51610.000	78.792%	2.452
x		96.440	2687.000	0.000	8013.000	50630.000	50100.000	80.474%	2.254
σ		4.243	113.400	0.000	224.900	1593.000	1666.000	1.933%	0.275
%RSD		4.399	4.219	0.000	2.806	3.147	3.325	2.402	12.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:37	6.855	1.670	37.520	177.000	340.300	0.294	1.211	3.047
2	16:19:46	8.219	1.735	38.970	188.000	316.800	0.382	1.649	2.721
3	16:19:56	6.736	1.985	40.150	185.900	364.000	0.520	1.477	3.040
x		7.270	1.797	38.880	183.600	340.400	0.398	1.446	2.936
σ		0.824	0.166	1.315	5.845	23.640	0.114	0.221	0.186
%RSD		11.330	9.246	3.383	3.183	6.947	28.540	15.270	6.331

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:37	3.103	16.100	20.500	0.980	0.332	1.080	0.000	142.400
2	16:19:46	3.622	15.260	14.970	0.946	0.030	1.769	0.000	144.000
3	16:19:56	3.152	17.240	16.340	0.990	0.176	2.415	0.000	137.500
x		3.293	16.200	17.270	0.972	0.180	1.755	0.000	141.300
σ		0.287	0.991	2.882	0.023	0.151	0.668	0.000	3.366
%RSD		8.710	6.118	16.690	2.370	84.100	38.060	0.000	2.382

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:37	78.778%	7.153	8.295	78.034%	0.016	-0.004	0.075	0.108
2	16:19:46	79.704%	7.355	7.839	78.881%	0.004	0.008	0.073	0.060
3	16:19:56	82.031%	8.449	7.680	78.375%	-0.014	-0.004	0.073	0.076
x		80.171%	7.653	7.938	78.430%	0.002	0.000	0.074	0.081
σ		1.676%	0.697	0.319	0.426%	0.015	0.007	0.001	0.024
%RSD		2.091	9.110	4.024	0.543	864.100	15020.000	1.290	29.450

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:37	79.347%	0.615	0.271	0.303	30.640	32.660	87.447%	89.779%
2	16:19:46	82.012%	0.917	0.301	0.275	36.780	33.980	89.917%	91.063%
3	16:19:56	80.968%	0.618	0.263	0.243	32.670	35.590	91.553%	92.804%
x		80.776%	0.717	0.279	0.274	33.360	34.080	89.639%	91.215%
σ		1.343%	0.174	0.020	0.030	3.132	1.468	2.067%	1.518%
%RSD		1.663	24.250	7.293	11.110	9.387	4.307	2.306	1.665

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:37	0.008	0.002	1.354	1.389	1.384	87.773%
2	16:19:46	0.035	0.008	1.451	1.519	1.459	90.521%
3	16:19:56	0.013	0.019	1.288	1.425	1.345	90.271%
x		0.019	0.010	1.364	1.444	1.396	89.522%
σ		0.014	0.009	0.082	0.067	0.058	1.519%
%RSD		76.730	86.160	6.024	4.643	4.164	1.697

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:40	79.977%	102.000	129.400	137.100	0.000	45330.000	44770.000	44610.000
2	16:24:50	81.804%	100.400	132.300	131.100	0.000	47290.000	46940.000	46940.000
3	16:24:59	81.944%	101.700	127.800	132.300	0.000	48100.000	47220.000	47650.000
x		81.242%	101.376%	129.840%	133.491%	0.000	93.817%	92.617%	92.799%
σ		1.097%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.351	0.857	1.747	2.364	0.000	3.036	2.894	3.425

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:40	436.000	5344.000	0.000	45920.000	46640.000	46700.000	96.305%	90.870
2	16:24:50	460.200	5399.000	0.000	47700.000	48280.000	49040.000	93.920%	93.360
3	16:24:59	473.700	5472.000	0.000	48440.000	49200.000	50010.000	93.026%	100.900
x		91.329%	108.104%	0.000	94.708%	96.077%	97.172%	94.417%	95.057%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.695%	n/a
%RSD		4.189	1.188	0.000	2.738	2.702	3.502	1.795	5.520

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:40	96.900	95.600	459.600	24170.000	24250.000	97.900	91.710	99.490
2	16:24:50	102.100	102.700	481.400	25280.000	25270.000	101.200	101.200	97.800
3	16:24:59	101.900	99.830	490.600	25400.000	25970.000	103.700	100.200	101.100
x		100.284%	99.374%	95.441%	99.803%	100.659%	100.913%	97.720%	99.476%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.928	3.586	3.338	2.722	3.437	2.872	5.352	1.672

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:40	99.080	100.100	101.000	99.730	100.800	89.570	0.000	98.330
2	16:24:50	97.930	99.150	101.400	99.000	104.400	93.870	0.000	98.390
3	16:24:59	102.300	99.900	103.900	101.500	110.600	109.200	0.000	101.900
x		99.773%	99.704%	102.107%	100.065%	105.251%	97.558%	0.000	99.540%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.278	0.484	1.532	1.269	4.726	10.600	0.000	2.056

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:40	92.371%	96.910	96.570	88.718%	97.760	100.000	101.000	101.400
2	16:24:50	95.009%	98.590	99.750	90.601%	99.180	97.680	98.080	101.200
3	16:24:59	95.869%	99.700	100.100	91.335%	98.670	99.260	96.080	96.720
x		94.416%	98.398%	98.802%	90.218%	98.537%	98.984%	98.397%	99.775%
σ		1.823%	n/a	n/a	1.350%	n/a	n/a	n/a	n/a
%RSD		1.931	1.425	1.967	1.496	0.727	1.198	2.531	2.650

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:40	89.945%	99.660	95.980	96.580	97.630	96.970	94.611%	95.025%
2	16:24:50	91.784%	98.550	98.930	100.500	101.400	97.510	94.389%	95.751%
3	16:24:59	94.621%	98.170	98.110	98.230	97.580	95.220	95.251%	98.923%
x		92.116%	98.793%	97.674%	98.419%	98.855%	96.566%	94.750%	96.566%
σ		2.356%	n/a	n/a	n/a	n/a	n/a	0.448%	2.073%
%RSD		2.557	0.783	1.557	1.978	2.186	1.239	0.473	2.147

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:40	105.900	105.700	106.400	107.800	107.400	89.749%
2	16:24:50	104.400	104.000	105.200	107.900	106.400	91.323%
3	16:24:59	105.700	104.200	105.600	107.000	106.600	90.889%
x		105.354%	104.641%	105.761%	107.588%	106.781%	90.654%
σ		n/a	n/a	n/a	n/a	n/a	0.813%
%RSD		0.764	0.925	0.566	0.487	0.502	0.897

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:39	92.689%	0.066	20.620	21.320	0.000	12.920	4.908	3.863
2	16:33:49	92.442%	0.054	20.760	22.240	0.000	12.130	4.342	4.265
3	16:33:58	90.641%	0.057	21.010	23.010	0.000	12.040	4.382	3.575
x		91.924%	0.059	20.800	22.190	0.000	12.370	4.544	3.901
σ		1.118%	0.006	0.200	0.846	0.000	0.485	0.316	0.347
%RSD		1.216	10.590	0.961	3.812	0.000	3.924	6.946	8.881
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:39	1.722	2.801	0.000	3.601	68.340	30.710	97.950%	0.190
2	16:33:49	1.895	1.202	0.000	6.508	56.920	34.850	96.705%	0.060
3	16:33:58	1.696	-0.033	0.000	7.872	53.770	31.050	96.137%	0.061
x		1.771	1.324	0.000	5.994	59.670	32.200	96.931%	0.104
σ		0.108	1.421	0.000	2.182	7.667	2.297	0.927%	0.075
%RSD		6.095	107.400	0.000	36.400	12.850	7.134	0.956	72.620
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:39	0.098	0.068	0.053	10.400	10.050	0.013	0.420	0.142
2	16:33:49	0.056	0.055	0.085	10.650	20.490	0.013	0.081	0.190
3	16:33:58	0.077	0.025	0.066	9.843	10.090	0.020	0.447	0.164
x		0.077	0.049	0.068	10.300	13.540	0.015	0.316	0.165
σ		0.021	0.022	0.016	0.413	6.014	0.004	0.204	0.024
%RSD		27.460	44.820	23.940	4.007	44.410	28.480	64.640	14.590
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:39	0.121	1.620	1.613	0.054	0.127	0.594	0.000	0.058
2	16:33:49	0.310	1.537	1.456	0.112	0.003	0.593	0.000	-0.008
3	16:33:58	0.243	1.376	1.269	0.063	0.120	0.093	0.000	0.030
x		0.224	1.511	1.446	0.076	0.083	0.427	0.000	0.026
σ		0.096	0.124	0.172	0.031	0.070	0.289	0.000	0.033
%RSD		42.690	8.208	11.900	40.910	83.420	67.660	0.000	125.900
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:39	97.222%	0.518	0.658	95.022%	0.006	-0.001	0.030	0.000
2	16:33:49	97.656%	0.453	0.284	96.469%	0.005	-0.006	-0.000	0.024
3	16:33:58	101.339%	0.584	0.435	97.987%	0.015	-0.001	-0.000	0.024
x		98.739%	0.518	0.459	96.493%	0.009	-0.003	0.010	0.016
σ		2.262%	0.066	0.188	1.482%	0.005	0.003	0.018	0.014
%RSD		2.291	12.720	41.000	1.536	63.430	98.600	174.600	85.010
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:33:39	98.167%	0.372	0.299	0.297	0.000	0.039	101.145%	103.629%
2	16:33:49	99.529%	0.185	0.131	0.262	0.078	0.191	103.864%	104.108%
3	16:33:58	99.575%	0.409	0.143	0.320	0.000	0.077	103.103%	103.325%
x		99.090%	0.322	0.191	0.293	0.026	0.102	102.704%	103.687%
σ		0.800%	0.120	0.093	0.029	0.045	0.079	1.403%	0.395%
%RSD		0.808	37.310	48.990	9.897	173.200	77.460	1.366	0.381
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:33:39	0.062	0.040	0.029	-0.003	0.012	105.784%		
2	16:33:49	0.052	0.050	0.005	0.016	0.025	106.434%		
3	16:33:58	0.011	0.037	0.058	0.047	0.039	106.714%		
x		0.042	0.042	0.031	0.020	0.025	106.311%		
σ		0.027	0.007	0.026	0.026	0.013	0.477%		
%RSD		65.530	16.600	85.350	126.900	51.740	0.449		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:49	65.871%	0.035	64.600	63.140	0.000	34170.000	11720.000	11780.000
2	16:38:59	63.213%	0.075	62.470	67.370	0.000	34370.000	11920.000	12160.000
3	16:39:08	61.362%	0.024	67.380	67.820	0.000	35050.000	12230.000	12260.000
x		63.482%	0.045	64.820	66.110	0.000	34530.000	11960.000	12070.000
σ		2.267%	0.027	2.466	2.581	0.000	461.600	260.900	257.400
%RSD		3.571	59.790	3.805	3.904	0.000	1.337	2.182	2.133
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:49	222.000	4544.000	0.000	6928.000	84360.000	87320.000	78.815%	6.126
2	16:38:59	240.900	4794.000	0.000	7038.000	87060.000	89670.000	77.549%	7.319
3	16:39:08	247.700	4947.000	0.000	7217.000	90290.000	91870.000	76.048%	6.524
x		236.900	4762.000	0.000	7061.000	87240.000	89620.000	77.471%	6.656
σ		13.300	203.400	0.000	145.900	2966.000	2276.000	1.385%	0.607
%RSD		5.617	4.272	0.000	2.066	3.400	2.539	1.788	9.124
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:49	6.008	8.599	22.290	229.600	520.400	0.445	1.613	0.844
2	16:38:59	6.430	8.743	23.320	226.700	430.100	0.457	1.444	0.962
3	16:39:08	6.956	9.545	23.740	231.200	453.500	0.452	1.459	0.956
x		6.465	8.963	23.120	229.200	468.000	0.451	1.505	0.920
σ		0.475	0.510	0.744	2.263	46.900	0.006	0.094	0.067
%RSD		7.344	5.689	3.218	0.988	10.020	1.335	6.212	7.247
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:49	1.136	5.952	5.310	1.268	0.189	3.151	0.000	207.500
2	16:38:59	1.111	5.955	5.306	1.189	0.492	1.363	0.000	206.900
3	16:39:08	0.806	6.276	6.501	0.974	0.185	1.357	0.000	206.100
x		1.018	6.061	5.706	1.144	0.289	1.957	0.000	206.900
σ		0.184	0.186	0.689	0.153	0.176	1.034	0.000	0.701
%RSD		18.070	3.068	12.080	13.330	61.110	52.830	0.000	0.339
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:49	77.593%	1.842	1.739	75.641%	-0.008	0.009	0.341	0.409
2	16:38:59	78.886%	1.397	1.692	76.821%	0.010	0.015	0.261	0.388
3	16:39:08	79.729%	1.747	1.753	76.903%	0.010	0.021	0.821	0.403
x		78.736%	1.662	1.728	76.455%	0.004	0.015	0.474	0.400
σ		1.076%	0.234	0.032	0.706%	0.011	0.006	0.303	0.011
%RSD		1.366	14.080	1.862	0.923	259.000	40.190	63.800	2.698
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:49	78.786%	0.906	0.494	0.507	48.760	49.460	83.276%	84.817%
2	16:38:59	79.967%	1.001	0.255	0.444	44.640	46.000	85.763%	85.850%
3	16:39:08	79.990%	0.518	0.242	0.392	46.980	46.010	84.444%	86.614%
x		79.581%	0.808	0.330	0.448	46.790	47.160	84.494%	85.760%
σ		0.689%	0.256	0.142	0.058	2.062	1.996	1.244%	0.902%
%RSD		0.865	31.630	42.960	12.870	4.407	4.233	1.473	1.052
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:38:49	0.085	0.060	0.409	0.370	0.451	83.958%		
2	16:38:59	0.056	0.046	0.509	0.446	0.476	83.161%		
3	16:39:08	0.043	0.038	0.388	0.301	0.448	85.139%		
x		0.061	0.048	0.435	0.372	0.458	84.086%		
σ		0.021	0.011	0.065	0.073	0.016	0.995%		
%RSD		34.970	23.260	14.880	19.490	3.416	1.184		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:57	63.847%	0.021	33.100	32.580	0.000	27590.000	15600.000	15730.000
2	16:44:06	62.417%	0.005	32.760	33.610	0.000	28530.000	16330.000	16410.000
3	16:44:16	62.666%	-0.050	31.030	32.070	0.000	28760.000	16470.000	16710.000
x		62.977%	-0.008	32.290	32.760	0.000	28290.000	16130.000	16280.000
σ		0.764%	0.037	1.111	0.785	0.000	622.600	465.400	501.900
%RSD		1.213	452.700	3.440	2.397	0.000	2.201	2.885	3.083

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:57	33.040	3319.000	0.000	2078.000	67530.000	68420.000	81.494%	1.049
2	16:44:06	33.120	3455.000	0.000	2145.000	70630.000	71720.000	79.276%	1.000
3	16:44:16	33.110	3420.000	0.000	2183.000	72470.000	73170.000	78.260%	1.014
x		33.090	3398.000	0.000	2135.000	70210.000	71100.000	79.676%	1.021
σ		0.038	70.670	0.000	53.010	2495.000	2437.000	1.654%	0.026
%RSD		0.116	2.080	0.000	2.483	3.554	3.428	2.076	2.504

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:57	6.065	2.447	5.288	33.160	245.500	0.125	0.365	0.953
2	16:44:06	6.075	2.898	5.645	32.590	230.400	0.117	0.264	1.665
3	16:44:16	5.958	2.798	5.428	36.460	238.000	0.137	0.338	1.322
x		6.033	2.714	5.454	34.070	238.000	0.126	0.322	1.313
σ		0.065	0.237	0.180	2.092	7.588	0.010	0.052	0.356
%RSD		1.070	8.729	3.298	6.142	3.188	7.839	16.280	27.120

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:57	1.216	6.073	6.893	0.733	0.033	0.739	0.000	115.400
2	16:44:06	1.037	4.716	5.156	0.605	0.030	-0.652	0.000	114.000
3	16:44:16	1.508	5.658	7.111	1.009	0.182	2.734	0.000	112.600
x		1.253	5.482	6.387	0.783	0.082	0.940	0.000	114.000
σ		0.238	0.695	1.071	0.206	0.087	1.702	0.000	1.416
%RSD		18.970	12.680	16.770	26.370	106.400	181.000	0.000	1.242

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:57	77.543%	0.411	0.433	77.333%	0.010	0.002	-0.000	0.003
2	16:44:06	80.237%	0.135	0.349	77.967%	-0.008	0.002	0.109	0.031
3	16:44:16	80.037%	0.516	0.349	78.024%	-0.002	0.002	-0.000	0.017
x		79.273%	0.354	0.377	77.775%	-0.000	0.002	0.036	0.017
σ		1.501%	0.197	0.048	0.383%	0.009	0.000	0.063	0.014
%RSD		1.894	55.670	12.750	0.493	4543.000	9.894	173.500	83.140

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:57	80.131%	0.571	0.240	0.141	30.140	31.620	87.686%	88.038%
2	16:44:06	82.307%	0.445	0.065	0.343	31.390	29.180	88.811%	91.929%
3	16:44:16	82.914%	0.495	0.243	0.255	31.530	30.040	89.508%	89.898%
x		81.784%	0.504	0.182	0.247	31.020	30.280	88.668%	89.955%
σ		1.463%	0.063	0.102	0.101	0.764	1.239	0.919%	1.946%
%RSD		1.789	12.580	55.870	41.090	2.464	4.093	1.037	2.163

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:57	0.046	0.006	0.351	0.267	0.250	90.883%
2	16:44:06	0.024	0.020	0.237	0.353	0.269	89.430%
3	16:44:16	0.029	0.006	0.271	0.219	0.250	92.097%
x		0.033	0.011	0.286	0.280	0.257	90.803%
σ		0.011	0.008	0.058	0.068	0.011	1.336%
%RSD		34.370	73.360	20.380	24.380	4.250	1.471

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:03	55.989%	0.053	173.900	174.700	0.000	72840.000	10340.000	10710.000
2	16:49:12	58.035%	-0.029	163.000	172.200	0.000	75040.000	10850.000	11040.000
3	16:49:22	54.290%	0.036	174.500	186.500	0.000	75300.000	10950.000	11230.000
x		56.105%	0.020	170.500	177.800	0.000	74390.000	10720.000	10990.000
σ		1.875%	0.043	6.502	7.597	0.000	1352.000	325.900	262.700
%RSD		3.342	214.300	3.815	4.272	0.000	1.818	3.041	2.389
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:03	8.300	2867.000	0.000	15100.000	63080.000	63820.000	80.882%	1.259
2	16:49:12	8.722	2901.000	0.000	15630.000	67220.000	67140.000	78.644%	1.133
3	16:49:22	8.867	2977.000	0.000	15860.000	68210.000	68540.000	77.686%	1.525
x		8.630	2915.000	0.000	15530.000	66170.000	66500.000	79.071%	1.306
σ		0.295	56.390	0.000	392.000	2720.000	2426.000	1.640%	0.200
%RSD		3.416	1.934	0.000	2.524	4.110	3.648	2.074	15.330
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:03	5.654	1.428	14.770	44.510	233.400	0.317	2.960	2.663
2	16:49:12	6.481	1.548	15.650	44.040	232.000	0.481	2.666	2.423
3	16:49:22	7.172	1.602	15.840	46.470	196.900	0.504	2.585	3.433
x		6.435	1.526	15.420	45.010	220.800	0.434	2.737	2.839
σ		0.760	0.089	0.573	1.289	20.700	0.102	0.197	0.528
%RSD		11.810	5.816	3.716	2.864	9.373	23.570	7.200	18.580
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:03	3.065	34.740	36.010	0.704	0.487	5.554	0.000	186.100
2	16:49:12	2.961	33.570	33.570	0.663	0.645	5.232	0.000	186.000
3	16:49:22	2.987	29.610	34.560	1.075	0.649	4.196	0.000	190.200
x		3.005	32.640	34.710	0.814	0.594	4.994	0.000	187.400
σ		0.054	2.687	1.230	0.227	0.093	0.709	0.000	2.415
%RSD		1.802	8.231	3.544	27.860	15.580	14.200	0.000	1.289
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:03	78.669%	21.190	21.290	77.143%	0.047	-0.010	-0.000	0.077
2	16:49:12	78.552%	22.030	21.090	78.096%	-0.002	-0.016	-0.000	0.150
3	16:49:22	78.269%	20.900	21.840	78.453%	-0.014	-0.004	-0.000	0.033
x		78.497%	21.370	21.410	77.897%	0.010	-0.010	-0.000	0.087
σ		0.206%	0.587	0.388	0.677%	0.033	0.006	0.000	0.060
%RSD		0.262	2.746	1.813	0.869	321.700	61.080	72.210	68.740
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:03	80.294%	0.516	0.611	0.726	22.350	24.720	85.461%	87.005%
2	16:49:12	80.241%	0.534	0.640	0.549	23.900	23.880	85.474%	86.087%
3	16:49:22	79.943%	0.462	0.612	0.478	28.040	26.570	87.264%	87.476%
x		80.159%	0.504	0.621	0.585	24.770	25.060	86.066%	86.856%
σ		0.189%	0.038	0.016	0.128	2.942	1.376	1.037%	0.706%
%RSD		0.236	7.506	2.654	21.830	11.880	5.492	1.205	0.813
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:49:03	0.014	0.017	1.031	0.926	0.885	85.111%		
2	16:49:12	0.020	0.012	0.893	0.943	0.837	84.310%		
3	16:49:22	-0.003	-0.002	0.813	0.825	0.845	84.086%		
x		0.010	0.009	0.913	0.898	0.856	84.502%		
σ		0.012	0.010	0.110	0.064	0.026	0.539%		
%RSD		117.700	106.900	12.060	7.124	2.990	0.638		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:07	58.314%	0.048	35.370	37.900	0.000	26730.000	6464.000	6572.000
2	16:54:17	60.417%	-0.068	32.460	38.700	0.000	27270.000	6715.000	6859.000
3	16:54:26	60.095%	0.045	37.510	37.100	0.000	27510.000	6791.000	6973.000
x		59.608%	0.009	35.110	37.900	0.000	27170.000	6657.000	6802.000
σ		1.133%	0.066	2.536	0.798	0.000	396.900	171.200	206.400
%RSD		1.900	772.800	7.222	2.104	0.000	1.461	2.572	3.035

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:07	158.700	2183.000	0.000	3615.000	30460.000	29960.000	81.394%	3.370
2	16:54:17	159.800	2174.000	0.000	3697.000	31760.000	31040.000	80.395%	2.765
3	16:54:26	167.300	2168.000	0.000	3748.000	32220.000	31670.000	78.615%	2.499
x		161.900	2175.000	0.000	3686.000	31480.000	30890.000	80.134%	2.878
σ		4.715	7.675	0.000	67.200	914.900	865.500	1.408%	0.446
%RSD		2.911	0.353	0.000	1.823	2.906	2.802	1.757	15.500

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:07	5.842	1.710	52.180	290.500	397.900	0.422	0.839	2.128
2	16:54:17	6.317	1.714	54.370	312.700	451.900	0.400	0.852	2.695
3	16:54:26	7.329	1.706	54.320	312.300	419.700	0.423	0.651	2.703
x		6.496	1.710	53.620	305.200	423.200	0.415	0.781	2.509
σ		0.760	0.004	1.252	12.680	27.200	0.013	0.112	0.330
%RSD		11.690	0.207	2.335	4.154	6.428	3.130	14.380	13.140

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:07	2.326	9.348	8.760	0.775	0.478	0.727	0.000	98.100
2	16:54:17	2.281	9.024	10.530	0.668	0.334	1.704	0.000	102.300
3	16:54:26	2.679	7.722	10.110	0.889	-0.120	2.038	0.000	102.100
x		2.429	8.698	9.800	0.777	0.231	1.490	0.000	100.900
σ		0.218	0.861	0.926	0.111	0.312	0.681	0.000	2.389
%RSD		8.973	9.896	9.450	14.260	135.400	45.740	0.000	2.369

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:07	80.104%	1.059	0.845	78.633%	0.022	-0.004	0.073	0.003
2	16:54:17	79.053%	1.253	1.383	79.477%	-0.008	-0.004	0.145	0.031
3	16:54:26	80.137%	1.026	1.245	79.861%	-0.009	-0.004	0.036	0.046
x		79.765%	1.112	1.158	79.324%	0.002	-0.004	0.085	0.027
σ		0.617%	0.123	0.279	0.629%	0.018	0.000	0.055	0.022
%RSD		0.773	11.020	24.120	0.792	1075.000	2.130	65.200	82.090

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:07	81.314%	0.251	0.179	0.069	32.790	33.260	87.926%	88.865%
2	16:54:17	82.318%	0.463	0.189	0.153	34.070	32.750	90.153%	90.623%
3	16:54:26	82.261%	0.355	0.217	0.188	33.990	34.170	89.566%	90.570%
x		81.964%	0.356	0.195	0.137	33.610	33.400	89.215%	90.019%
σ		0.564%	0.106	0.020	0.061	0.717	0.722	1.154%	1.000%
%RSD		0.688	29.690	10.180	44.690	2.133	2.161	1.293	1.111

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:54:07	0.013	0.002	1.594	1.612	1.541	89.122%
2	16:54:17	0.002	-0.000	1.780	1.467	1.636	91.022%
3	16:54:26	0.029	0.020	1.755	1.572	1.586	90.463%
x		0.015	0.007	1.710	1.550	1.588	90.202%
σ		0.014	0.011	0.101	0.075	0.048	0.976%
%RSD		91.540	152.100	5.908	4.839	3.018	1.082

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:12	61.356%	0.079	71.030	66.800	0.000	56120.000	17010.000	17350.000
2	16:59:21	58.985%	0.047	61.890	68.760	0.000	56980.000	17460.000	17880.000
3	16:59:31	57.837%	-0.029	65.660	70.930	0.000	58800.000	18120.000	18460.000
x		59.393%	0.033	66.190	68.830	0.000	57300.000	17530.000	17890.000
σ		1.795%	0.056	4.596	2.063	0.000	1368.000	559.500	555.500
%RSD		3.022	170.200	6.944	2.997	0.000	2.387	3.192	3.104

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:12	101.400	4293.000	0.000	5256.000	84260.000	86330.000	80.794%	2.026
2	16:59:21	105.100	4489.000	0.000	5445.000	87380.000	89670.000	78.710%	2.537
3	16:59:31	139.800	4587.000	0.000	5540.000	90770.000	91230.000	77.167%	1.958
x		115.400	4456.000	0.000	5414.000	87470.000	89080.000	78.890%	2.174
σ		21.200	149.300	0.000	144.800	3255.000	2504.000	1.820%	0.317
%RSD		18.370	3.351	0.000	2.675	3.721	2.811	2.307	14.570

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:12	6.545	5.481	127.900	268.100	420.500	0.436	1.407	1.593
2	16:59:21	8.111	6.303	130.800	272.200	536.200	0.422	1.315	1.630
3	16:59:31	6.277	5.825	135.400	283.300	562.000	0.635	1.407	1.611
x		6.978	5.870	131.400	274.500	506.200	0.498	1.377	1.611
σ		0.991	0.413	3.797	7.860	75.360	0.119	0.053	0.018
%RSD		14.200	7.031	2.890	2.863	14.890	23.880	3.876	1.133

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:12	1.930	7.423	5.647	0.980	0.948	4.177	0.000	200.000
2	16:59:21	1.322	6.139	5.019	0.994	0.181	3.146	0.000	203.100
3	16:59:31	1.238	6.733	6.809	0.921	0.184	3.093	0.000	203.300
x		1.497	6.765	5.825	0.965	0.438	3.472	0.000	202.100
σ		0.378	0.643	0.908	0.039	0.442	0.611	0.000	1.873
%RSD		25.250	9.498	15.590	4.021	101.100	17.610	0.000	0.927

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:12	78.160%	9.469	10.270	75.562%	-0.014	-0.004	-0.000	0.033
2	16:59:21	80.237%	9.418	9.598	76.948%	-0.008	0.009	0.150	0.033
3	16:59:31	79.837%	10.300	10.040	77.051%	0.010	-0.010	0.037	0.047
x		79.412%	9.730	9.971	76.520%	-0.004	-0.002	0.062	0.038
σ		1.102%	0.497	0.342	0.832%	0.013	0.010	0.078	0.008
%RSD		1.388	5.106	3.425	1.087	305.500	572.400	125.300	21.320

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:12	78.615%	0.470	0.071	0.073	45.020	45.150	87.766%	89.673%
2	16:59:21	79.625%	0.407	0.055	0.089	46.250	46.720	89.784%	90.878%
3	16:59:31	80.540%	0.402	0.025	0.053	41.080	43.710	87.740%	89.344%
x		79.593%	0.426	0.050	0.071	44.110	45.200	88.430%	89.965%
σ		0.963%	0.038	0.023	0.018	2.701	1.501	1.172%	0.808%
%RSD		1.209	8.953	46.050	25.290	6.122	3.322	1.326	0.898

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:12	0.002	-0.002	1.284	1.244	1.297	87.173%
2	16:59:21	0.024	-0.000	1.364	1.020	1.159	88.468%
3	16:59:31	0.013	-0.005	1.280	1.226	1.194	88.538%
x		0.013	-0.002	1.309	1.163	1.216	88.060%
σ		0.011	0.002	0.047	0.124	0.072	0.769%
%RSD		82.370	100.100	3.606	10.690	5.880	0.873

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:17	57.792%	0.108	32.630	39.300	0.000	28520.000	6870.000	7036.000
2	17:04:26	59.665%	-0.011	38.430	35.530	0.000	29350.000	7190.000	7359.000
3	17:04:35	55.491%	-0.027	37.480	40.800	0.000	30630.000	7454.000	7560.000
x		57.649%	0.023	36.180	38.540	0.000	29500.000	7171.000	7318.000
σ		2.090%	0.074	3.113	2.718	0.000	1066.000	292.500	264.000
%RSD		3.626	316.100	8.605	7.052	0.000	3.614	4.078	3.607
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:17	122.600	2199.000	0.000	3846.000	30910.000	30450.000	82.122%	2.546
2	17:04:26	128.100	2188.000	0.000	4014.000	32950.000	32030.000	79.626%	2.057
3	17:04:35	131.100	2327.000	0.000	4099.000	33810.000	32710.000	78.189%	2.763
x		127.300	2238.000	0.000	3986.000	32560.000	31730.000	79.979%	2.455
σ		4.295	77.300	0.000	128.400	1490.000	1159.000	1.990%	0.362
%RSD		3.375	3.453	0.000	3.222	4.577	3.651	2.488	14.720
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:17	5.730	1.433	55.500	275.500	392.000	0.440	0.668	2.665
2	17:04:26	6.647	1.467	58.050	282.900	398.000	0.446	0.957	2.780
3	17:04:35	7.526	1.631	59.270	281.300	398.100	0.422	0.824	2.647
x		6.634	1.510	57.600	279.900	396.000	0.436	0.816	2.697
σ		0.898	0.106	1.923	3.902	3.491	0.013	0.145	0.072
%RSD		13.540	6.992	3.338	1.394	0.882	2.929	17.720	2.680
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:17	2.358	9.936	11.780	1.040	0.484	2.052	0.000	104.200
2	17:04:26	2.684	10.740	8.762	0.886	0.331	1.689	0.000	104.200
3	17:04:35	2.434	9.908	9.720	0.868	-0.120	2.693	0.000	104.500
x		2.492	10.190	10.090	0.931	0.231	2.145	0.000	104.300
σ		0.171	0.472	1.545	0.095	0.314	0.508	0.000	0.208
%RSD		6.847	4.633	15.310	10.170	135.700	23.690	0.000	0.200
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:17	78.778%	0.686	0.862	79.055%	-0.002	-0.004	0.037	0.003
2	17:04:26	80.162%	0.816	0.739	79.556%	-0.002	0.002	-0.000	0.061
3	17:04:35	81.714%	1.012	0.893	79.903%	-0.002	0.008	-0.000	0.061
x		80.218%	0.838	0.831	79.505%	-0.002	0.002	0.012	0.042
σ		1.469%	0.164	0.081	0.427%	0.000	0.006	0.021	0.033
%RSD		1.831	19.590	9.752	0.536	4.186	302.300	174.000	80.120
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:17	79.405%	0.466	0.157	0.144	28.050	37.530	84.573%	85.705%
2	17:04:26	81.602%	0.250	0.151	0.191	34.280	36.740	86.522%	87.607%
3	17:04:35	81.450%	0.215	0.109	0.244	34.780	34.740	86.087%	87.282%
x		80.819%	0.310	0.139	0.193	32.370	36.340	85.727%	86.865%
σ		1.227%	0.136	0.026	0.050	3.748	1.442	1.024%	1.018%
%RSD		1.518	43.870	18.810	25.950	11.580	3.969	1.194	1.172
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:04:17	0.003	-0.002	1.848	2.027	1.850	83.793%		
2	17:04:26	0.002	-0.002	1.829	1.879	1.907	85.358%		
3	17:04:35	0.008	-0.002	1.833	1.715	1.724	87.704%		
x		0.004	-0.002	1.837	1.874	1.827	85.618%		
σ		0.003	0.000	0.010	0.156	0.094	1.968%		
%RSD		72.000	10.170	0.568	8.324	5.124	2.299		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:09:21	59.653%	-0.030	61.060	65.480	0.000	55470.000	17690.000	18090.000
2	17:09:31	57.286%	-0.009	61.590	69.280	0.000	58470.000	18550.000	19150.000
3	17:09:40	57.178%	-0.009	63.590	67.780	0.000	59350.000	19160.000	19360.000
x		58.039%	-0.016	62.080	67.510	0.000	57760.000	18470.000	18870.000
σ		1.399%	0.012	1.337	1.910	0.000	2034.000	739.100	681.900
%RSD		2.410	78.570	2.153	2.829	0.000	3.522	4.002	3.614

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:09:21	9.062	4442.000	0.000	5241.000	89720.000	91440.000	81.460%	0.211
2	17:09:31	9.037	4669.000	0.000	5497.000	95040.000	95790.000	78.062%	0.558
3	17:09:40	10.280	4739.000	0.000	5608.000	96140.000	98340.000	76.815%	0.823
x		9.459	4616.000	0.000	5449.000	93630.000	95190.000	78.779%	0.531
σ		0.709	155.400	0.000	188.300	3435.000	3486.000	2.404%	0.307
%RSD		7.493	3.367	0.000	3.456	3.668	3.663	3.052	57.850

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:09:21	5.920	4.675	27.290	17.470	270.300	0.162	0.471	0.474
2	17:09:31	6.548	4.971	29.110	18.570	245.900	0.166	0.806	0.660
3	17:09:40	7.044	5.116	29.690	18.050	266.400	0.197	0.313	0.903
x		6.504	4.921	28.690	18.030	260.800	0.175	0.530	0.679
σ		0.564	0.225	1.255	0.546	13.110	0.019	0.252	0.216
%RSD		8.665	4.563	4.374	3.030	5.027	10.810	47.510	31.750

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:09:21	0.660	4.415	5.102	0.870	0.652	3.519	0.000	222.000
2	17:09:31	0.621	4.893	4.657	1.007	0.963	3.865	0.000	221.500
3	17:09:40	1.023	4.249	3.948	0.857	0.814	2.530	0.000	223.800
x		0.768	4.519	4.569	0.912	0.810	3.305	0.000	222.400
σ		0.222	0.334	0.582	0.083	0.156	0.693	0.000	1.207
%RSD		28.880	7.398	12.740	9.127	19.210	20.960	0.000	0.542

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:09:21	76.751%	8.170	8.607	75.878%	-0.008	-0.016	0.038	0.034
2	17:09:31	77.618%	9.233	9.049	76.550%	-0.008	0.003	0.037	-0.012
3	17:09:40	77.376%	8.958	8.342	76.983%	-0.002	-0.010	0.037	0.017
x		77.248%	8.787	8.666	76.470%	-0.006	-0.008	0.037	0.013
σ		0.448%	0.552	0.358	0.557%	0.003	0.010	0.001	0.023
%RSD		0.579	6.279	4.125	0.728	56.190	120.100	1.443	175.600

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:09:21	78.135%	0.227	0.014	0.055	45.890	44.500	87.593%	88.495%
2	17:09:31	79.693%	0.277	-0.017	0.053	42.870	42.250	88.117%	89.656%
3	17:09:40	81.283%	0.287	0.024	0.103	43.920	45.330	90.250%	91.960%
x		79.704%	0.264	0.007	0.071	44.230	44.020	88.654%	90.037%
σ		1.574%	0.032	0.021	0.028	1.532	1.595	1.407%	1.763%
%RSD		1.975	12.140	296.100	40.040	3.465	3.622	1.588	1.958

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:09:21	0.013	-0.002	0.232	0.235	0.218	88.839%
2	17:09:31	0.008	-0.007	0.159	0.230	0.229	90.434%
3	17:09:40	0.019	0.004	0.196	0.135	0.181	89.205%
x		0.013	-0.002	0.196	0.200	0.209	89.493%
σ		0.006	0.006	0.037	0.056	0.025	0.836%
%RSD		41.840	347.800	18.660	28.120	12.100	0.934

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:26	69.061%	-0.051	19.950	24.390	0.000	11870.000	3644.000	3633.000
2	17:14:35	69.185%	0.014	21.700	22.880	0.000	11860.000	3665.000	3771.000
3	17:14:45	72.128%	0.011	21.000	21.710	0.000	11910.000	3789.000	3828.000
x		70.125%	-0.009	20.880	22.990	0.000	11880.000	3699.000	3744.000
σ		1.736%	0.037	0.879	1.344	0.000	25.040	78.330	100.500
%RSD		2.476	407.900	4.210	5.843	0.000	0.211	2.118	2.684

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:26	1.942	867.200	0.000	1109.000	17760.000	17390.000	89.520%	0.073
2	17:14:35	2.235	855.500	0.000	1113.000	18790.000	17960.000	87.717%	0.188
3	17:14:45	1.992	851.400	0.000	1133.000	18720.000	18170.000	87.279%	0.003
x		2.056	858.000	0.000	1119.000	18420.000	17840.000	88.172%	0.088
σ		0.157	8.191	0.000	12.640	575.600	405.300	1.188%	0.093
%RSD		7.626	0.955	0.000	1.130	3.124	2.272	1.347	105.900

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:26	0.964	0.995	5.761	2.827	53.750	0.022	-0.119	0.259
2	17:14:35	1.517	0.971	5.658	3.224	54.830	0.048	-0.024	0.123
3	17:14:45	1.113	0.924	5.748	3.617	55.700	0.073	0.103	0.109
x		1.198	0.963	5.722	3.223	54.760	0.048	-0.013	0.164
σ		0.286	0.037	0.056	0.395	0.975	0.025	0.111	0.083
%RSD		23.860	3.790	0.981	12.260	1.781	53.060	827.400	50.820

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:26	0.282	1.055	1.030	0.125	-0.120	1.890	0.000	42.700
2	17:14:35	0.452	0.717	0.745	0.192	0.019	0.378	0.000	43.650
3	17:14:45	0.124	1.068	1.242	0.061	0.430	-0.255	0.000	42.770
x		0.286	0.947	1.006	0.126	0.110	0.671	0.000	43.040
σ		0.164	0.199	0.249	0.065	0.286	1.102	0.000	0.529
%RSD		57.280	21.060	24.780	51.910	261.100	164.200	0.000	1.229

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:26	87.004%	1.037	1.618	86.287%	0.019	-0.016	-0.000	-0.012
2	17:14:35	85.869%	1.395	1.624	86.498%	-0.014	0.000	-0.000	0.002
3	17:14:45	87.472%	1.432	1.342	87.793%	-0.004	-0.016	-0.000	-0.012
x		86.782%	1.288	1.528	86.859%	0.000	-0.011	-0.000	-0.007
σ		0.824%	0.218	0.161	0.815%	0.017	0.010	0.000	0.008
%RSD		0.949	16.960	10.560	0.939	6454.000	90.090	20.970	104.800

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:26	87.587%	0.090	-0.075	0.029	9.648	9.039	90.864%	92.149%
2	17:14:35	88.912%	0.020	-0.075	-0.053	8.838	8.947	91.339%	91.670%
3	17:14:45	89.964%	0.002	-0.050	0.011	10.370	9.413	91.228%	94.299%
x		88.821%	0.037	-0.067	-0.004	9.618	9.133	91.144%	92.706%
σ		1.191%	0.046	0.015	0.043	0.765	0.247	0.249%	1.401%
%RSD		1.341	124.800	22.040	956.100	7.955	2.702	0.273	1.511

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:14:26	0.002	-0.003	0.027	0.064	0.041	93.095%
2	17:14:35	0.002	-0.007	0.047	0.079	0.055	93.037%
3	17:14:45	0.002	0.002	0.047	0.006	0.031	93.130%
x		0.002	-0.003	0.041	0.049	0.043	93.087%
σ		0.000	0.004	0.012	0.038	0.012	0.047%
%RSD		0.636	157.100	28.540	77.670	28.200	0.050

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:34	55.514%	45.690	1064.000	1091.000	0.000	94520.000	56440.000	57160.000
2	17:19:43	53.820%	48.640	1088.000	1125.000	0.000	98810.000	58480.000	60250.000
3	17:19:53	54.295%	46.820	1071.000	1121.000	0.000	99410.000	59740.000	60890.000
x		54.543%	47.050	1074.000	1112.000	0.000	97580.000	58220.000	59430.000
σ		0.874%	1.489	12.720	18.380	0.000	2667.000	1664.000	1993.000
%RSD		1.603	3.165	1.185	1.653	0.000	2.733	2.859	3.353

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:34	1641.000	13600.000	0.000	48920.000	134600.000	134500.000	76.124%	901.600
2	17:19:43	1738.000	14230.000	0.000	51130.000	142000.000	140600.000	73.991%	920.500
3	17:19:53	1746.000	14030.000	0.000	51270.000	142400.000	141700.000	73.409%	939.400
x		1708.000	13950.000	0.000	50440.000	139700.000	139000.000	74.508%	920.500
σ		58.260	320.000	0.000	1318.000	4405.000	3904.000	1.429%	18.910
%RSD		3.410	2.293	0.000	2.613	3.154	2.810	1.918	2.054

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:34	479.900	189.500	477.800	868.200	1243.000	472.900	462.000	234.900
2	17:19:43	484.400	199.300	495.100	904.200	1355.000	498.200	468.700	237.300
3	17:19:53	506.000	203.000	505.600	895.000	1272.000	475.700	454.400	229.000
x		490.100	197.300	492.800	889.100	1290.000	482.200	461.700	233.700
σ		13.960	6.976	14.080	18.700	58.160	13.850	7.151	4.274
%RSD		2.850	3.536	2.856	2.103	4.507	2.872	1.549	1.829

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:34	240.200	485.800	490.300	41.000	11.500	8.483	0.000	1205.000
2	17:19:43	240.500	484.800	508.500	41.330	9.170	12.370	0.000	1226.000
3	17:19:53	235.200	466.900	486.000	40.120	8.004	12.080	0.000	1165.000
x		238.600	479.200	494.900	40.820	9.557	10.980	0.000	1199.000
σ		2.952	10.620	11.920	0.626	1.778	2.167	0.000	30.750
%RSD		1.237	2.216	2.409	1.533	18.610	19.730	0.000	2.566

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:34	74.024%	1042.000	1044.000	72.991%	47.010	46.600	47.060	77.230
2	17:19:43	73.715%	1051.000	1069.000	73.292%	46.790	48.450	46.890	77.890
3	17:19:53	78.244%	1042.000	1059.000	73.073%	47.180	47.080	47.370	79.140
x		75.328%	1045.000	1058.000	73.119%	46.990	47.380	47.110	78.090
σ		2.530%	5.244	12.590	0.156%	0.193	0.957	0.244	0.967
%RSD		3.359	0.502	1.190	0.213	0.410	2.021	0.519	1.239

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:34	75.236%	1886.000	460.200	462.700	1828.000	1837.000	84.861%	87.027%
2	17:19:43	75.109%	1916.000	474.800	473.400	1847.000	1867.000	85.616%	87.528%
3	17:19:53	75.970%	1898.000	464.100	463.800	1840.000	1864.000	85.177%	85.933%
x		75.438%	1900.000	466.400	466.600	1838.000	1856.000	85.218%	86.830%
σ		0.465%	14.870	7.538	5.906	9.317	16.600	0.379%	0.816%
%RSD		0.616	0.783	1.616	1.266	0.507	0.895	0.445	0.940

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:34	53.600	51.550	21.140	21.740	21.340	81.722%
2	17:19:43	51.310	50.290	20.320	21.050	20.690	83.603%
3	17:19:53	51.080	51.310	20.520	21.160	20.660	84.824%
x		52.000	51.050	20.660	21.320	20.900	83.383%
σ		1.395	0.671	0.426	0.367	0.385	1.563%
%RSD		2.683	1.314	2.062	1.722	1.840	1.874

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:40	53.545%	48.050	1097.000	1143.000	0.000	98150.000	58890.000	60350.000
2	17:24:49	55.476%	47.510	1059.000	1096.000	0.000	102200.000	60920.000	61830.000
3	17:24:59	52.408%	51.100	1122.000	1159.000	0.000	103000.000	63170.000	63660.000
x		53.810%	48.890	1093.000	1133.000	0.000	101100.000	60990.000	61950.000
σ		1.551%	1.932	31.500	32.780	0.000	2574.000	2141.000	1659.000
%RSD		2.882	3.953	2.883	2.893	0.000	2.546	3.511	2.678
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:40	1708.000	14250.000	0.000	50910.000	138600.000	140100.000	73.157%	928.900
2	17:24:49	1754.000	14250.000	0.000	52010.000	145100.000	145100.000	72.132%	951.100
3	17:24:59	1810.000	14700.000	0.000	52940.000	147700.000	148400.000	70.573%	969.500
x		1757.000	14400.000	0.000	51960.000	143800.000	144500.000	71.954%	949.800
σ		51.190	263.200	0.000	1016.000	4675.000	4141.000	1.301%	20.340
%RSD		2.913	1.828	0.000	1.955	3.251	2.865	1.808	2.142
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:40	502.900	203.700	495.300	920.800	1286.000	484.300	460.300	226.200
2	17:24:49	505.300	206.700	511.400	943.000	1262.000	511.500	495.500	239.200
3	17:24:59	508.800	211.000	522.800	984.200	1439.000	512.900	491.800	238.100
x		505.700	207.100	509.800	949.400	1329.000	502.900	482.500	234.500
σ		2.928	3.636	13.790	32.190	96.140	16.090	19.380	7.174
%RSD		0.579	1.756	2.705	3.391	7.233	3.200	4.016	3.059
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:40	236.600	478.600	484.300	40.370	11.990	17.710	0.000	1200.000
2	17:24:49	251.300	490.700	526.200	41.680	9.791	11.760	0.000	1254.000
3	17:24:59	246.100	493.700	511.500	43.290	13.510	11.580	0.000	1212.000
x		244.700	487.700	507.300	41.780	11.770	13.680	0.000	1222.000
σ		7.469	8.022	21.230	1.465	1.870	3.486	0.000	28.330
%RSD		3.052	1.645	4.186	3.506	15.900	25.480	0.000	2.318
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:40	74.908%	1089.000	1112.000	71.024%	47.420	48.360	50.820	83.350
2	17:24:49	73.023%	1115.000	1131.000	71.336%	48.960	49.140	49.570	82.820
3	17:24:59	75.366%	1092.000	1115.000	72.165%	47.430	49.190	43.290	82.200
x		74.432%	1099.000	1119.000	71.508%	47.940	48.900	47.900	82.790
σ		1.242%	14.160	10.260	0.590%	0.888	0.465	4.036	0.576
%RSD		1.668	1.288	0.917	0.825	1.852	0.950	8.426	0.696
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:40	72.190%	2014.000	492.000	492.000	1853.000	1903.000	84.159%	85.063%
2	17:24:49	73.068%	2006.000	493.000	492.400	1913.000	1942.000	85.248%	87.889%
3	17:24:59	73.724%	2000.000	495.800	494.000	1912.000	1896.000	84.435%	84.408%
x		72.994%	2007.000	493.600	492.800	1893.000	1914.000	84.614%	85.787%
σ		0.769%	7.043	1.994	1.087	34.300	25.010	0.566%	1.850%
%RSD		1.054	0.351	0.404	0.221	1.812	1.307	0.669	2.156
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:24:40	52.500	51.560	21.500	22.160	21.740	84.259%		
2	17:24:49	52.100	52.780	21.940	22.400	21.870	83.732%		
3	17:24:59	51.750	51.700	20.460	21.720	21.110	84.009%		
x		52.120	52.010	21.300	22.100	21.580	84.000%		
σ		0.376	0.669	0.759	0.346	0.407	0.263%		
%RSD		0.722	1.286	3.564	1.565	1.886	0.314		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:46	77.087%	96.480	112.900	118.800	0.000	45790.000	44420.000	44790.000
2	17:29:55	72.032%	104.900	125.200	127.800	0.000	46780.000	46090.000	46790.000
3	17:30:05	75.609%	98.580	114.300	120.900	0.000	46980.000	46440.000	47410.000
x		74.910%	99.975%	117.482%	122.524%	0.000	93.035%	91.299%	92.660%
σ		2.599%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.470	4.368	5.706	3.850	0.000	1.378	2.368	2.950
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:46	441.700	5269.000	0.000	46510.000	48360.000	48200.000	92.874%	92.760
2	17:29:55	453.500	5517.000	0.000	47560.000	48960.000	49560.000	90.834%	96.930
3	17:30:05	470.100	5464.000	0.000	48310.000	50130.000	50610.000	89.760%	100.400
x		91.020%	108.333%	0.000	94.927%	98.304%	98.915%	91.156%	96.698%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.582%	n/a
%RSD		3.131	2.407	0.000	1.902	1.837	2.452	1.735	3.961
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:46	100.600	99.910	474.000	24620.000	24600.000	97.820	93.780	94.780
2	17:29:55	105.400	104.100	486.800	24990.000	24870.000	100.800	99.550	97.160
3	17:30:05	105.000	105.400	500.100	25920.000	25900.000	104.200	96.460	99.650
x		103.642%	103.134%	97.394%	100.702%	100.507%	100.953%	96.599%	97.195%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.577	2.780	2.675	2.654	2.735	3.156	2.989	2.506
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:46	93.870	99.230	99.820	98.140	108.900	102.500	0.000	99.710
2	17:29:55	99.490	103.900	101.700	100.200	100.300	102.500	0.000	98.700
3	17:30:05	102.900	106.400	104.800	102.600	104.700	111.000	0.000	104.600
x		98.770%	103.183%	102.109%	100.315%	104.633%	105.314%	0.000	101.006%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		4.639	3.523	2.466	2.235	4.126	4.645	0.000	3.124
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:46	92.146%	107.000	109.600	87.794%	97.870	98.780	98.550	101.200
2	17:29:55	95.811%	106.100	108.000	88.344%	99.080	99.130	96.730	101.400
3	17:30:05	93.239%	110.500	109.900	89.281%	97.900	97.710	102.900	100.800
x		93.732%	107.875%	109.186%	88.473%	98.282%	98.540%	99.388%	101.172%
σ		1.882%	n/a	n/a	0.752%	n/a	n/a	n/a	n/a
%RSD		2.007	2.170	0.968	0.850	0.703	0.751	3.180	0.297
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:46	87.863%	106.600	97.290	98.990	93.310	95.600	92.610%	94.106%
2	17:29:55	90.717%	102.900	98.850	96.290	98.850	94.470	94.327%	96.472%
3	17:30:05	90.684%	103.400	100.500	98.730	98.380	96.020	94.447%	96.169%
x		89.755%	104.289%	98.877%	98.007%	96.847%	95.364%	93.795%	95.582%
σ		1.638%	n/a	n/a	n/a	n/a	n/a	1.027%	1.288%
%RSD		1.825	1.934	1.615	1.519	3.174	0.842	1.095	1.347
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:29:46	104.400	103.600	104.700	110.400	107.500	90.023%		
2	17:29:55	105.700	104.200	105.900	108.800	107.200	90.838%		
3	17:30:05	103.400	104.500	107.100	106.600	106.700	92.108%		
x		104.514%	104.089%	105.898%	108.599%	107.114%	90.990%		
σ		n/a	n/a	n/a	n/a	n/a	1.051%		
%RSD		1.105	0.403	1.122	1.739	0.378	1.155		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:39	88.005%	0.086	11.760	11.060	0.000	12.710	5.160	5.651
2	17:38:48	87.839%	-0.003	12.570	11.280	0.000	13.770	5.871	5.374
3	17:38:58	83.198%	0.095	12.290	12.570	0.000	13.910	5.267	4.659
x		86.347%	0.059	12.210	11.640	0.000	13.460	5.433	5.228
σ		2.729%	0.055	0.413	0.813	0.000	0.658	0.383	0.512
%RSD		3.160	91.990	3.381	6.986	0.000	4.886	7.052	9.790
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:39	1.583	2.365	0.000	-1.101	49.890	32.130	96.496%	0.127
2	17:38:48	1.805	-2.235	0.000	0.934	19.560	30.310	95.928%	0.332
3	17:38:58	1.844	-3.400	0.000	3.314	54.530	31.530	95.155%	0.131
x		1.744	-1.090	0.000	1.049	41.330	31.320	95.860%	0.197
σ		0.141	3.048	0.000	2.210	18.990	0.929	0.673%	0.117
%RSD		8.066	279.600	0.000	210.600	45.950	2.965	0.702	59.620
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:39	0.228	0.055	0.089	9.623	9.472	0.013	0.373	0.207
2	17:38:48	-0.024	0.021	0.078	9.062	20.750	0.005	0.487	0.265
3	17:38:58	0.012	0.031	0.085	8.293	9.383	0.013	0.425	0.109
x		0.072	0.035	0.084	8.993	13.200	0.010	0.428	0.194
σ		0.137	0.018	0.006	0.668	6.539	0.004	0.057	0.079
%RSD		189.400	50.220	6.900	7.423	49.530	42.770	13.350	40.820
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:39	0.190	1.804	1.768	0.066	-0.120	-0.797	0.000	0.060
2	17:38:48	0.209	1.140	1.533	-0.003	-0.120	1.173	0.000	0.032
3	17:38:58	0.246	1.531	1.448	0.063	0.001	1.144	0.000	0.095
x		0.215	1.492	1.583	0.042	-0.080	0.507	0.000	0.062
σ		0.029	0.334	0.166	0.039	0.070	1.129	0.000	0.032
%RSD		13.350	22.360	10.480	93.230	88.100	222.900	0.000	50.590
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:39	94.141%	0.987	1.013	95.594%	0.006	-0.011	0.031	0.025
2	17:38:48	95.978%	1.278	0.944	97.187%	0.010	-0.011	-0.000	0.025
3	17:38:58	100.120%	1.202	0.922	97.425%	-0.010	-0.006	0.030	0.012
x		96.746%	1.156	0.959	96.736%	0.002	-0.010	0.020	0.021
σ		3.062%	0.151	0.047	0.995%	0.010	0.003	0.018	0.007
%RSD		3.165	13.030	4.946	1.029	487.000	29.810	86.830	34.880
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:39	96.379%	0.691	0.247	0.245	0.082	0.000	97.297%	98.941%
2	17:38:48	97.227%	0.760	0.149	0.242	0.081	0.119	99.036%	98.853%
3	17:38:58	97.965%	0.922	0.183	0.284	0.162	0.000	98.782%	99.869%
x		97.190%	0.791	0.193	0.257	0.108	0.040	98.372%	99.221%
σ		0.794%	0.118	0.050	0.024	0.046	0.068	0.939%	0.563%
%RSD		0.816	14.970	25.830	9.173	42.690	173.200	0.955	0.568
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:38:39	0.060	0.036	0.025	-0.002	0.013	101.365%		
2	17:38:48	0.051	0.050	0.006	0.031	0.024	100.982%		
3	17:38:58	0.026	0.045	0.012	0.011	0.024	101.794%		
x		0.046	0.044	0.014	0.013	0.020	101.380%		
σ		0.018	0.007	0.009	0.017	0.006	0.406%		
%RSD		38.860	16.320	65.970	129.000	29.050	0.401		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:48	54.963%	51.530	1173.000	1186.000	0.000	104400.000	64190.000	64920.000
2	17:43:58	56.027%	50.670	1127.000	1174.000	0.000	104600.000	64840.000	65750.000
3	17:44:07	53.694%	52.900	1172.000	1207.000	0.000	104900.000	64730.000	66950.000
x		54.895%	51.700	1157.000	1189.000	0.000	104600.000	64590.000	65870.000
σ		1.168%	1.122	26.500	17.040	0.000	270.200	349.200	1020.000
%RSD		2.128	2.171	2.290	1.433	0.000	0.258	0.541	1.548

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:48	1897.000	15380.000	0.000	56730.000	145100.000	145800.000	71.492%	1071.000
2	17:43:58	1925.000	15140.000	0.000	57010.000	147400.000	147000.000	71.561%	1106.000
3	17:44:07	1962.000	15530.000	0.000	57280.000	150400.000	150100.000	70.721%	1097.000
x		1928.000	15350.000	0.000	57010.000	147600.000	147600.000	71.258%	1091.000
σ		32.750	199.100	0.000	274.900	2681.000	2218.000	0.467%	18.300
%RSD		1.699	1.297	0.000	0.482	1.816	1.502	0.655	1.677

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:48	547.500	218.900	550.500	1023.000	1545.000	561.400	538.900	266.500
2	17:43:58	565.500	225.300	563.500	1021.000	1423.000	542.500	528.600	260.600
3	17:44:07	561.600	230.700	568.100	1058.000	1526.000	558.300	535.000	264.200
x		558.200	225.000	560.700	1034.000	1498.000	554.100	534.200	263.700
σ		9.450	5.926	9.152	20.740	65.800	10.110	5.184	2.970
%RSD		1.693	2.634	1.632	2.006	4.393	1.824	0.971	1.126

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:48	281.700	543.800	571.400	45.630	12.690	18.130	0.000	1355.000
2	17:43:58	274.400	556.000	579.200	44.010	9.680	12.060	0.000	1315.000
3	17:44:07	259.100	547.200	559.100	45.790	10.550	12.320	0.000	1329.000
x		271.700	549.000	569.900	45.140	10.970	14.170	0.000	1333.000
σ		11.570	6.304	10.120	0.982	1.551	3.431	0.000	20.240
%RSD		4.258	1.148	1.776	2.175	14.130	24.220	0.000	1.518

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:48	71.280%	1203.000	1206.000	70.939%	40.640	41.690	57.490	92.070
2	17:43:58	74.341%	1187.000	1210.000	71.592%	41.150	42.120	52.440	89.870
3	17:44:07	74.174%	1205.000	1219.000	71.809%	39.940	39.800	52.180	90.250
x		73.265%	1198.000	1212.000	71.446%	40.580	41.200	54.040	90.730
σ		1.721%	9.847	6.664	0.453%	0.606	1.233	2.991	1.174
%RSD		2.349	0.822	0.550	0.634	1.494	2.993	5.536	1.294

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:48	72.987%	2182.000	540.900	538.400	2024.000	2066.000	81.650%	83.574%
2	17:43:58	74.343%	2210.000	544.000	539.400	2038.000	2069.000	83.609%	84.641%
3	17:44:07	74.796%	2227.000	549.200	545.300	2077.000	2073.000	82.663%	85.511%
x		74.042%	2207.000	544.700	541.000	2047.000	2069.000	82.641%	84.575%
σ		0.941%	22.490	4.184	3.721	27.570	3.557	0.979%	0.971%
%RSD		1.272	1.019	0.768	0.688	1.347	0.172	1.185	1.148

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:43:48	57.660	58.060	23.750	24.320	24.070	80.333%
2	17:43:58	59.540	58.290	23.530	24.300	23.720	83.109%
3	17:44:07	57.030	57.360	23.680	23.350	23.560	83.693%
x		58.070	57.900	23.650	23.990	23.780	82.379%
σ		1.307	0.484	0.114	0.552	0.259	1.795%
%RSD		2.250	0.836	0.482	2.303	1.087	2.179

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:54	60.162%	0.101	25.940	28.750	0.000	19220.000	5503.000	5578.000
2	17:49:04	56.997%	0.150	25.380	29.960	0.000	20000.000	5721.000	5837.000
3	17:49:13	54.731%	-0.006	30.540	29.170	0.000	19970.000	5764.000	5814.000
x		57.297%	0.082	27.280	29.290	0.000	19730.000	5663.000	5743.000
σ		2.728%	0.080	2.833	0.613	0.000	443.000	140.100	143.600
%RSD		4.761	97.510	10.380	2.091	0.000	2.245	2.474	2.500

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:54	140.600	2127.000	0.000	2504.000	28420.000	27760.000	75.522%	3.855
2	17:49:04	148.400	2174.000	0.000	2606.000	29850.000	29140.000	73.152%	4.873
3	17:49:13	144.000	2184.000	0.000	2615.000	30530.000	29540.000	73.347%	4.860
x		144.300	2162.000	0.000	2575.000	29600.000	28810.000	74.007%	4.530
σ		3.877	30.390	0.000	61.360	1075.000	935.900	1.315%	0.584
%RSD		2.686	1.406	0.000	2.383	3.632	3.249	1.777	12.890

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:54	5.860	1.447	19.840	275.700	369.700	0.309	1.322	3.214
2	17:49:04	5.344	1.678	20.850	278.600	380.200	0.184	0.700	2.771
3	17:49:13	6.563	1.607	21.430	287.400	415.100	0.154	0.584	2.917
x		5.922	1.577	20.710	280.600	388.300	0.216	0.869	2.967
σ		0.612	0.118	0.801	6.120	23.780	0.082	0.397	0.226
%RSD		10.330	7.496	3.867	2.181	6.123	38.100	45.640	7.614

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:54	3.279	8.920	9.930	0.700	0.365	3.286	0.000	95.630
2	17:49:04	2.494	10.100	9.906	0.714	-0.120	2.482	0.000	95.020
3	17:49:13	3.014	9.138	10.200	0.585	0.193	3.176	0.000	95.140
x		2.929	9.385	10.010	0.666	0.146	2.981	0.000	95.260
σ		0.400	0.627	0.165	0.071	0.246	0.436	0.000	0.324
%RSD		13.640	6.682	1.644	10.640	168.600	14.610	0.000	0.340

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:54	73.999%	10.270	9.538	74.893%	0.005	-0.010	-0.000	0.202
2	17:49:04	76.901%	7.074	7.904	75.331%	-0.008	0.003	-0.000	0.124
3	17:49:13	77.860%	6.257	5.952	76.114%	-0.008	-0.010	0.153	0.065
x		76.253%	7.867	7.798	75.446%	-0.004	-0.006	0.051	0.130
σ		2.011%	2.121	1.796	0.619%	0.007	0.007	0.088	0.069
%RSD		2.637	26.970	23.020	0.820	188.500	129.200	173.400	52.870

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:54	77.511%	4.867	1.282	1.884	26.180	29.160	84.435%	86.329%
2	17:49:04	78.432%	4.666	1.521	1.330	28.880	29.630	88.300%	88.196%
3	17:49:13	77.302%	3.453	1.340	1.297	26.080	28.900	86.296%	86.970%
x		77.748%	4.329	1.381	1.504	27.050	29.230	86.343%	87.165%
σ		0.601%	0.765	0.125	0.330	1.590	0.370	1.933%	0.949%
%RSD		0.773	17.670	9.035	21.920	5.878	1.267	2.239	1.089

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:54	0.098	0.075	1.161	1.149	1.117	88.108%
2	17:49:04	0.064	0.058	1.225	1.143	1.113	88.500%
3	17:49:13	0.052	0.058	0.994	1.044	1.093	89.199%
x		0.071	0.064	1.127	1.112	1.107	88.602%
σ		0.024	0.009	0.120	0.059	0.013	0.553%
%RSD		33.280	14.910	10.610	5.293	1.145	0.624

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:02	54.942%	-0.027	30.980	32.670	0.000	35310.000	10710.000	10910.000
2	17:54:12	53.720%	0.037	34.000	31.500	0.000	36040.000	11110.000	11410.000
3	17:54:21	52.475%	0.083	35.110	33.940	0.000	37200.000	11450.000	11750.000
x		53.712%	0.031	33.360	32.700	0.000	36180.000	11090.000	11350.000
σ		1.234%	0.055	2.136	1.220	0.000	952.900	374.000	424.500
%RSD		2.297	176.400	6.403	3.730	0.000	2.634	3.372	3.738

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:02	171.900	2293.000	0.000	4094.000	38670.000	38570.000	76.780%	4.341
2	17:54:12	179.800	2377.000	0.000	4225.000	41070.000	40090.000	75.340%	2.872
3	17:54:21	181.000	2416.000	0.000	4306.000	41610.000	41410.000	74.053%	4.110
x		177.600	2362.000	0.000	4208.000	40450.000	40020.000	75.391%	3.774
σ		4.940	62.760	0.000	107.400	1566.000	1424.000	1.364%	0.790
%RSD		2.782	2.657	0.000	2.553	3.872	3.559	1.810	20.940

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:02	4.962	1.361	60.740	319.200	471.200	0.453	1.248	3.356
2	17:54:12	6.867	1.401	64.120	327.600	487.800	0.376	1.204	3.086
3	17:54:21	6.479	1.598	66.040	334.900	465.400	0.349	1.398	3.131
x		6.103	1.453	63.640	327.300	474.800	0.393	1.283	3.191
σ		1.006	0.127	2.688	7.855	11.620	0.054	0.102	0.144
%RSD		16.490	8.725	4.224	2.400	2.447	13.780	7.921	4.523

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:02	2.417	6.159	7.603	0.881	-0.120	0.386	0.000	139.100
2	17:54:12	3.253	6.536	8.340	0.827	-0.120	2.584	0.000	141.600
3	17:54:21	2.832	6.554	6.711	0.800	0.038	2.486	0.000	144.100
x		2.834	6.416	7.551	0.836	-0.068	1.819	0.000	141.600
σ		0.418	0.223	0.816	0.041	0.091	1.242	0.000	2.514
%RSD		14.730	3.479	10.800	4.955	135.500	68.280	0.000	1.776

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:02	77.426%	2.159	2.336	74.212%	-0.008	0.003	0.000	0.051
2	17:54:12	75.500%	2.132	2.194	75.038%	0.017	0.003	-0.000	0.034
3	17:54:21	76.551%	2.627	1.824	75.502%	0.004	0.009	-0.000	0.063
x		76.492%	2.306	2.118	74.917%	0.005	0.005	-0.000	0.049
σ		0.965%	0.278	0.264	0.654%	0.013	0.003	0.000	0.015
%RSD		1.261	12.070	12.470	0.873	280.200	67.760	182.400	29.760

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:02	75.814%	1.687	0.424	0.507	38.300	39.180	83.031%	84.962%
2	17:54:12	78.172%	1.502	0.527	0.492	37.920	41.350	83.627%	85.792%
3	17:54:21	79.581%	0.951	0.272	0.376	37.930	37.380	85.110%	87.739%
x		77.856%	1.380	0.407	0.458	38.050	39.300	83.923%	86.165%
σ		1.903%	0.383	0.129	0.072	0.215	1.993	1.070%	1.426%
%RSD		2.445	27.770	31.540	15.720	0.566	5.070	1.275	1.655

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:02	0.014	0.005	1.005	0.946	0.918	85.588%
2	17:54:12	0.031	-0.002	1.067	1.022	1.065	85.830%
3	17:54:21	0.008	0.002	0.992	0.989	0.955	87.988%
x		0.018	0.002	1.021	0.985	0.979	86.468%
σ		0.012	0.004	0.040	0.038	0.076	1.321%
%RSD		68.020	198.300	3.948	3.845	7.804	1.528

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:09	56.073%	-0.027	41.210	44.700	0.000	32590.000	10020.000	10150.000
2	17:59:18	57.687%	-0.009	44.980	43.750	0.000	33310.000	10380.000	10630.000
3	17:59:27	54.868%	0.076	41.420	45.440	0.000	33310.000	10490.000	10830.000
x		56.210%	0.013	42.540	44.630	0.000	33070.000	10300.000	10540.000
σ		1.415%	0.055	2.120	0.845	0.000	414.100	249.000	347.900
%RSD		2.517	417.400	4.985	1.894	0.000	1.252	2.419	3.301
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:09	99.060	4019.000	0.000	4075.000	49030.000	49040.000	76.796%	2.434
2	17:59:18	108.500	4011.000	0.000	4216.000	51800.000	51150.000	74.613%	2.377
3	17:59:27	107.200	4174.000	0.000	4300.000	52960.000	52400.000	73.936%	2.576
x		104.900	4068.000	0.000	4197.000	51260.000	50860.000	75.115%	2.462
σ		5.128	91.650	0.000	114.100	2022.000	1699.000	1.495%	0.103
%RSD		4.887	2.253	0.000	2.719	3.944	3.341	1.990	4.161
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:09	6.187	1.366	485.200	3299.000	3686.000	0.693	0.760	4.271
2	17:59:18	7.429	1.622	509.500	3303.000	3777.000	0.724	0.439	3.374
3	17:59:27	7.567	1.595	522.900	3331.000	3743.000	0.590	0.555	3.742
x		7.061	1.528	505.800	3311.000	3735.000	0.669	0.585	3.796
σ		0.760	0.141	19.120	17.420	46.140	0.070	0.162	0.451
%RSD		10.770	9.203	3.780	0.526	1.235	10.480	27.790	11.880
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:09	4.525	8.812	7.843	1.767	0.203	1.882	0.000	136.900
2	17:59:18	3.600	7.174	8.132	1.496	0.204	0.762	0.000	139.500
3	17:59:27	4.437	8.529	8.378	1.991	0.204	2.545	0.000	138.400
x		4.188	8.172	8.118	1.751	0.204	1.730	0.000	138.300
σ		0.511	0.876	0.268	0.248	0.000	0.902	0.000	1.303
%RSD		12.190	10.710	3.298	14.150	0.209	52.120	0.000	0.943
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:09	73.507%	1.345	1.718	73.361%	-0.014	0.010	-0.000	0.096
2	17:59:18	74.049%	1.846	1.573	73.638%	-0.008	0.016	0.039	0.095
3	17:59:27	74.165%	1.742	1.140	73.692%	-0.008	-0.010	-0.000	0.064
x		73.907%	1.644	1.477	73.564%	-0.010	0.005	0.013	0.085
σ		0.352%	0.264	0.301	0.178%	0.004	0.014	0.022	0.018
%RSD		0.476	16.080	20.360	0.241	36.320	254.800	173.800	21.580
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:09	77.044%	1.156	0.237	0.240	63.030	60.960	85.448%	87.656%
2	17:59:18	77.637%	0.707	0.205	0.419	62.630	61.380	87.433%	87.559%
3	17:59:27	78.546%	0.886	0.260	0.091	63.400	60.730	87.971%	88.258%
x		77.742%	0.916	0.234	0.250	63.020	61.020	86.951%	87.824%
σ		0.756%	0.227	0.028	0.164	0.385	0.328	1.329%	0.379%
%RSD		0.973	24.710	11.770	65.730	0.611	0.537	1.529	0.431
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:59:09	0.008	0.016	2.591	2.256	2.444	86.963%		
2	17:59:18	0.008	0.000	2.692	2.556	2.514	88.435%		
3	17:59:27	0.030	-0.000	2.478	2.690	2.541	89.550%		
x		0.015	0.005	2.587	2.501	2.500	88.316%		
σ		0.013	0.009	0.107	0.222	0.050	1.297%		
%RSD		82.630	175.400	4.132	8.888	2.002	1.469		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:16	56.650%	0.012	69.630	71.080	0.000	46500.000	10070.000	10130.000
2	18:04:26	51.274%	0.020	74.890	79.240	0.000	47490.000	10340.000	10520.000
3	18:04:35	51.487%	-0.024	71.590	74.760	0.000	48450.000	10610.000	10920.000
x		53.137%	0.003	72.040	75.030	0.000	47480.000	10340.000	10530.000
σ		3.044%	0.023	2.658	4.089	0.000	975.900	272.900	396.600
%RSD		5.729	836.900	3.690	5.450	0.000	2.055	2.640	3.767
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:16	89.900	2555.000	0.000	7749.000	48210.000	47950.000	76.765%	2.265
2	18:04:26	62.290	2750.000	0.000	8019.000	51430.000	50360.000	74.997%	1.714
3	18:04:35	64.510	2769.000	0.000	8218.000	52260.000	52000.000	74.031%	0.858
x		72.240	2691.000	0.000	7995.000	50630.000	50100.000	75.264%	1.612
σ		15.340	118.100	0.000	235.000	2142.000	2033.000	1.386%	0.709
%RSD		21.240	4.389	0.000	2.939	4.230	4.058	1.842	43.960
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:16	5.342	1.500	34.590	138.100	295.400	0.420	1.193	3.692
2	18:04:26	5.497	1.715	36.390	141.600	303.600	0.344	1.230	3.574
3	18:04:35	5.864	1.519	36.900	136.700	244.800	0.367	1.319	4.094
x		5.567	1.578	35.960	138.800	281.300	0.377	1.247	3.787
σ		0.268	0.119	1.214	2.510	31.840	0.039	0.065	0.273
%RSD		4.819	7.544	3.374	1.808	11.320	10.330	5.197	7.197
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:16	4.065	17.580	18.000	0.730	0.040	2.888	0.000	141.000
2	18:04:26	3.824	16.910	16.970	0.604	0.191	4.589	0.000	138.300
3	18:04:35	3.597	16.200	17.840	0.892	0.037	2.107	0.000	139.800
x		3.829	16.900	17.600	0.742	0.089	3.195	0.000	139.700
σ		0.234	0.691	0.555	0.144	0.088	1.269	0.000	1.369
%RSD		6.113	4.088	3.153	19.430	98.990	39.720	0.000	0.980
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:16	74.657%	8.125	7.986	75.413%	0.005	-0.010	-0.000	0.035
2	18:04:26	77.935%	7.886	7.784	75.677%	0.011	-0.016	-0.000	0.034
3	18:04:35	77.385%	7.322	8.023	75.838%	-0.002	-0.004	0.076	0.003
x		76.659%	7.778	7.931	75.643%	0.004	-0.010	0.025	0.024
σ		1.755%	0.413	0.129	0.215%	0.006	0.006	0.044	0.018
%RSD		2.290	5.306	1.624	0.284	140.700	63.820	173.600	74.910
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:04:16	75.268%	0.753	0.397	0.323	29.480	33.770	82.809%	83.253%
2	18:04:26	78.139%	0.457	0.323	0.385	31.510	31.120	82.410%	85.274%
3	18:04:35	78.772%	0.433	0.421	0.128	30.440	33.210	83.871%	85.678%
x		77.393%	0.548	0.380	0.278	30.480	32.700	83.030%	84.735%
σ		1.867%	0.178	0.051	0.134	1.015	1.397	0.755%	1.299%
%RSD		2.413	32.540	13.430	48.190	3.332	4.271	0.909	1.533
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:04:16	0.015	0.008	1.113	1.009	1.150	82.887%		
2	18:04:26	0.003	0.001	1.115	1.168	1.122	83.708%		
3	18:04:35	0.003	0.005	1.270	1.175	1.222	83.759%		
x		0.007	0.005	1.166	1.117	1.164	83.451%		
σ		0.007	0.004	0.090	0.094	0.051	0.489%		
%RSD		104.700	80.350	7.739	8.374	4.417	0.586		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:09:21	57.699%	0.011	29.210	28.210	0.000	28000.000	7145.000	7397.000
2	18:09:30	52.305%	0.083	29.630	30.840	0.000	29160.000	7441.000	7573.000
3	18:09:40	54.173%	0.078	29.440	29.850	0.000	28960.000	7624.000	7774.000
x		54.726%	0.057	29.420	29.630	0.000	28710.000	7403.000	7581.000
σ		2.739%	0.041	0.210	1.332	0.000	619.400	241.700	188.900
%RSD		5.006	70.850	0.715	4.493	0.000	2.158	3.265	2.491
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:09:21	561.000	2655.000	0.000	3740.000	31230.000	30900.000	77.318%	9.740
2	18:09:30	584.900	2831.000	0.000	3842.000	33390.000	32380.000	74.495%	11.600
3	18:09:40	588.800	2790.000	0.000	3882.000	33800.000	32680.000	74.049%	12.110
x		578.200	2759.000	0.000	3821.000	32810.000	31990.000	75.287%	11.150
σ		15.040	91.940	0.000	73.360	1379.000	954.000	1.772%	1.247
%RSD		2.601	3.333	0.000	1.920	4.204	2.983	2.354	11.180
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:09:21	7.866	2.463	59.680	930.200	1171.000	0.635	1.469	2.916
2	18:09:30	8.093	2.158	62.060	969.100	1127.000	0.686	1.386	3.508
3	18:09:40	7.262	2.297	64.380	977.100	1179.000	0.650	1.171	3.103
x		7.741	2.306	62.040	958.800	1159.000	0.657	1.342	3.176
σ		0.430	0.153	2.349	25.070	28.000	0.026	0.154	0.303
%RSD		5.549	6.616	3.786	2.615	2.416	3.956	11.450	9.536
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:09:21	3.334	16.230	18.890	1.089	0.196	2.128	0.000	103.600
2	18:09:30	4.438	17.550	16.870	1.085	0.037	3.181	0.000	105.700
3	18:09:40	3.650	17.560	18.180	1.051	0.194	1.824	0.000	106.100
x		3.807	17.110	17.980	1.075	0.142	2.378	0.000	105.100
σ		0.569	0.764	1.024	0.021	0.091	0.712	0.000	1.361
%RSD		14.940	4.464	5.695	1.935	64.360	29.940	0.000	1.295
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:09:21	75.708%	1.964	1.740	74.186%	0.005	0.016	-0.000	0.019
2	18:09:30	77.451%	1.970	2.309	75.343%	0.023	0.009	0.076	0.063
3	18:09:40	77.376%	2.181	1.792	74.465%	-0.002	0.016	0.114	0.063
x		76.845%	2.039	1.947	74.665%	0.009	0.014	0.063	0.049
σ		0.985%	0.124	0.315	0.604%	0.013	0.004	0.058	0.026
%RSD		1.282	6.060	16.160	0.809	148.900	28.460	91.750	53.030
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:09:21	77.542%	0.727	0.308	0.183	36.520	39.100	86.754%	86.812%
2	18:09:30	78.797%	0.734	0.231	0.360	36.300	37.080	86.105%	88.755%
3	18:09:40	79.090%	0.749	0.273	0.412	34.570	36.460	86.696%	88.869%
x		78.477%	0.737	0.271	0.319	35.800	37.550	86.518%	88.145%
σ		0.822%	0.011	0.039	0.120	1.066	1.383	0.359%	1.156%
%RSD		1.048	1.541	14.360	37.630	2.977	3.682	0.415	1.312
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:09:21	0.025	0.019	2.374	2.104	2.275	86.546%		
2	18:09:30	0.013	0.004	2.452	2.283	2.319	88.915%		
3	18:09:40	0.013	0.011	2.348	2.657	2.424	88.851%		
x		0.017	0.011	2.392	2.348	2.340	88.104%		
σ		0.007	0.007	0.054	0.282	0.076	1.350%		
%RSD		39.420	62.440	2.254	12.010	3.261	1.532		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:14:24	53.584%	0.122	59.410	57.960	0.000	55190.000	16500.000	17000.000
2	18:14:33	53.077%	0.017	55.910	61.200	0.000	55450.000	17290.000	17630.000
3	18:14:42	52.053%	0.041	54.950	62.510	0.000	57640.000	17520.000	17860.000
x		52.904%	0.060	56.760	60.560	0.000	56100.000	17100.000	17500.000
σ		0.780%	0.055	2.345	2.343	0.000	1344.000	534.800	444.000
%RSD		1.474	91.490	4.131	3.870	0.000	2.396	3.127	2.538
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:14:24	162.300	4418.000	0.000	5283.000	82750.000	85620.000	76.293%	3.048
2	18:14:33	165.100	4593.000	0.000	5476.000	87850.000	89650.000	74.363%	3.130
3	18:14:42	205.100	4595.000	0.000	5545.000	90100.000	90950.000	73.664%	3.337
x		177.500	4535.000	0.000	5434.000	86900.000	88740.000	74.773%	3.171
σ		23.980	101.300	0.000	135.800	3765.000	2779.000	1.362%	0.149
%RSD		13.510	2.233	0.000	2.499	4.333	3.132	1.821	4.703
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:14:24	5.864	6.064	135.400	393.800	706.300	0.647	2.087	1.591
2	18:14:33	6.330	5.975	141.300	405.000	676.000	0.645	1.331	1.559
3	18:14:42	5.668	5.578	144.000	404.400	641.600	0.584	1.350	1.476
x		5.954	5.872	140.300	401.100	674.600	0.625	1.589	1.542
σ		0.340	0.259	4.389	6.309	32.350	0.036	0.431	0.059
%RSD		5.709	4.405	3.129	1.573	4.795	5.717	27.120	3.845
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:14:24	1.539	4.906	5.976	0.976	0.689	0.016	0.000	201.900
2	18:14:33	1.550	6.010	6.989	0.848	0.523	3.632	0.000	203.000
3	18:14:42	2.264	6.773	7.725	1.054	0.863	-1.036	0.000	209.000
x		1.784	5.896	6.897	0.959	0.692	0.871	0.000	204.600
σ		0.416	0.938	0.878	0.104	0.170	2.448	0.000	3.835
%RSD		23.280	15.920	12.730	10.860	24.560	281.100	0.000	1.874
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:14:24	73.682%	9.765	9.895	73.527%	-0.001	-0.003	0.119	0.194
2	18:14:33	74.916%	9.728	9.775	73.862%	-0.002	0.010	0.196	0.160
3	18:14:42	73.323%	10.570	9.900	73.842%	0.005	-0.003	0.194	0.142
x		73.974%	10.020	9.857	73.744%	0.001	0.001	0.170	0.166
σ		0.836%	0.476	0.071	0.188%	0.004	0.008	0.044	0.027
%RSD		1.130	4.746	0.716	0.255	589.200	656.500	25.860	16.120
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:14:24	74.533%	0.443	0.126	0.099	45.380	47.020	83.067%	83.718%
2	18:14:33	75.589%	0.318	0.078	0.115	45.280	45.640	83.666%	84.619%
3	18:14:42	77.183%	0.405	0.045	0.149	46.830	46.630	83.706%	84.892%
x		75.768%	0.389	0.083	0.121	45.830	46.430	83.480%	84.410%
σ		1.334%	0.064	0.041	0.026	0.865	0.714	0.358%	0.614%
%RSD		1.761	16.550	48.920	21.300	1.887	1.537	0.429	0.727
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:14:24	0.027	0.020	1.411	1.087	1.226	82.495%		
2	18:14:33	0.015	-0.004	1.248	1.099	1.177	82.793%		
3	18:14:42	0.015	0.003	1.249	1.321	1.173	82.155%		
x		0.019	0.006	1.303	1.169	1.192	82.481%		
σ		0.007	0.012	0.094	0.131	0.030	0.319%		
%RSD		37.120	193.100	7.218	11.240	2.475	0.387		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:27	55.024%	0.322	7.675	9.549	0.000	1618.000	769.500	803.700
2	18:19:36	54.596%	0.056	10.850	9.224	0.000	1664.000	800.800	834.500
3	18:19:46	51.668%	0.063	9.107	9.873	0.000	1710.000	823.300	839.500
x		53.763%	0.147	9.209	9.549	0.000	1664.000	797.900	825.900
σ		1.827%	0.151	1.588	0.325	0.000	46.120	27.020	19.350
%RSD		3.398	102.800	17.250	3.399	0.000	2.772	3.386	2.343
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:27	155.300	7343.000	0.000	5656.000	1002.000	1015.000	77.216%	4.021
2	18:19:36	168.200	7230.000	0.000	5892.000	1154.000	1079.000	75.098%	4.138
3	18:19:46	168.600	7838.000	0.000	6003.000	1124.000	1103.000	73.826%	3.418
x		164.000	7470.000	0.000	5851.000	1093.000	1066.000	75.380%	3.859
σ		7.582	323.400	0.000	177.100	80.280	45.390	1.713%	0.387
%RSD		4.622	4.329	0.000	3.027	7.343	4.260	2.272	10.020
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:27	5.092	2.671	6.808	227.300	242.300	0.494	1.943	1.888
2	18:19:36	4.577	3.046	7.377	237.100	248.900	0.557	2.438	2.093
3	18:19:46	5.769	2.744	7.295	241.400	279.900	0.782	2.035	2.023
x		5.146	2.820	7.160	235.300	257.000	0.611	2.139	2.002
σ		0.598	0.198	0.308	7.213	20.110	0.151	0.264	0.105
%RSD		11.620	7.032	4.294	3.066	7.825	24.790	12.320	5.224
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:27	1.671	65.150	64.930	0.194	-0.120	1.770	0.000	28.580
2	18:19:36	2.077	61.380	66.390	0.143	-0.120	0.386	0.000	27.250
3	18:19:46	2.409	64.570	65.680	0.096	-0.120	-1.069	0.000	28.640
x		2.052	63.700	65.670	0.144	-0.120	0.362	0.000	28.160
σ		0.370	2.030	0.728	0.049	0.000	1.420	0.000	0.782
%RSD		18.030	3.186	1.109	33.890	0.000	392.100	0.000	2.776
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:27	75.400%	0.149	0.009	77.712%	0.023	0.015	-0.000	0.003
2	18:19:36	77.351%	0.141	0.143	78.835%	0.022	0.027	-0.000	0.078
3	18:19:46	76.242%	0.169	0.160	78.634%	0.016	0.070	-0.000	0.018
x		76.331%	0.153	0.104	78.394%	0.020	0.038	-0.000	0.033
σ		0.979%	0.014	0.083	0.599%	0.004	0.029	0.000	0.040
%RSD		1.282	9.446	79.310	0.764	18.310	77.260	29.230	119.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:27	78.270%	0.398	-0.044	0.074	232.200	231.300	85.692%	85.498%
2	18:19:36	78.678%	0.396	-0.030	0.001	241.100	237.200	84.439%	86.619%
3	18:19:46	79.859%	0.760	0.012	0.036	226.300	242.000	85.883%	87.089%
x		78.936%	0.518	-0.021	0.037	233.200	236.800	85.338%	86.402%
σ		0.825%	0.210	0.029	0.036	7.446	5.327	0.784%	0.817%
%RSD		1.045	40.520	142.100	98.050	3.193	2.249	0.919	0.946
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:19:27	0.080	0.072	0.604	0.653	0.566	88.983%		
2	18:19:36	0.083	0.067	0.497	0.411	0.503	91.940%		
3	18:19:46	0.084	0.056	0.602	0.472	0.602	91.385%		
x		0.082	0.065	0.568	0.512	0.557	90.769%		
σ		0.002	0.008	0.061	0.126	0.050	1.572%		
%RSD		2.211	11.980	10.800	24.530	8.952	1.732		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:34	53.662%	46.700	987.400	1024.000	0.000	41560.000	42400.000	41910.000
2	18:24:44	50.042%	47.810	1058.000	1091.000	0.000	42820.000	43300.000	43830.000
3	18:24:54	51.516%	48.230	990.300	1053.000	0.000	42470.000	43280.000	43970.000
x		51.740%	47.580	1012.000	1056.000	0.000	42280.000	42990.000	43240.000
σ		1.820%	0.790	39.990	33.300	0.000	649.500	510.800	1149.000
%RSD		3.518	1.661	3.952	3.154	0.000	1.536	1.188	2.657
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:34	1649.000	7871.000	0.000	45020.000	48330.000	47460.000	71.918%	926.200
2	18:24:44	1707.000	8254.000	0.000	46230.000	49330.000	48870.000	69.901%	942.800
3	18:24:54	1706.000	8048.000	0.000	46160.000	50100.000	49140.000	69.293%	957.600
x		1687.000	8058.000	0.000	45810.000	49250.000	48490.000	70.371%	942.200
σ		32.770	191.400	0.000	678.400	886.700	905.200	1.374%	15.680
%RSD		1.942	2.376	0.000	1.481	1.800	1.867	1.952	1.664
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:34	479.200	191.400	458.800	864.800	1071.000	478.600	470.700	231.300
2	18:24:44	498.400	201.800	478.100	922.900	1125.000	489.600	481.800	223.400
3	18:24:54	502.600	199.300	481.400	898.600	1103.000	499.600	484.400	237.500
x		493.400	197.500	472.800	895.400	1100.000	489.200	479.000	230.700
σ		12.470	5.423	12.230	29.150	27.250	10.490	7.281	7.071
%RSD		2.528	2.746	2.587	3.255	2.479	2.145	1.520	3.065
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:34	239.000	469.800	482.600	38.930	11.320	12.860	0.000	977.100
2	18:24:44	233.800	463.400	482.600	38.620	10.430	13.870	0.000	966.300
3	18:24:54	252.300	471.900	501.300	40.070	12.410	13.680	0.000	997.000
x		241.700	468.400	488.800	39.210	11.390	13.470	0.000	980.100
σ		9.581	4.437	10.790	0.763	0.991	0.535	0.000	15.540
%RSD		3.964	0.947	2.207	1.946	8.700	3.975	0.000	1.586
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:34	72.764%	1040.000	1061.000	69.875%	47.070	47.670	44.230	77.790
2	18:24:44	74.024%	1036.000	1066.000	71.256%	46.250	46.640	45.070	77.290
3	18:24:54	72.940%	1058.000	1066.000	71.911%	45.680	47.630	48.680	77.370
x		73.243%	1045.000	1064.000	71.014%	46.330	47.320	45.990	77.480
σ		0.682%	11.420	3.051	1.040%	0.701	0.582	2.363	0.268
%RSD		0.931	1.093	0.287	1.464	1.513	1.230	5.139	0.346
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:34	73.501%	1909.000	450.400	452.700	1693.000	1729.000	85.074%	85.037%
2	18:24:44	74.288%	1910.000	453.900	460.300	1759.000	1777.000	83.120%	84.566%
3	18:24:54	74.807%	1912.000	458.500	462.100	1731.000	1774.000	83.285%	85.678%
x		74.199%	1910.000	454.200	458.400	1728.000	1760.000	83.826%	85.094%
σ		0.658%	1.435	4.077	4.999	32.960	27.200	1.084%	0.558%
%RSD		0.886	0.075	0.898	1.091	1.908	1.545	1.293	0.656
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:24:34	52.360	51.540	20.930	22.290	21.200	82.906%		
2	18:24:44	50.010	50.040	21.250	21.880	21.600	83.951%		
3	18:24:54	52.290	51.530	21.200	21.810	21.500	81.916%		
x		51.550	51.040	21.130	21.990	21.430	82.924%		
σ		1.335	0.862	0.173	0.261	0.209	1.018%		
%RSD		2.589	1.690	0.818	1.185	0.973	1.227		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:40	48.621%	3.925	71.560	70.170	0.000	1111.000	39210.000	39570.000
2	18:29:50	48.517%	3.632	67.100	71.400	0.000	1114.000	39690.000	39880.000
3	18:29:59	46.517%	3.378	64.880	73.840	0.000	1109.000	39610.000	40270.000
x		47.885%	3.645	67.850	71.800	0.000	1111.000	39500.000	39900.000
σ		1.186%	0.274	3.402	1.867	0.000	2.390	259.800	350.800
%RSD		2.476	7.516	5.014	2.600	0.000	0.215	0.658	0.879

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:40	63390.000	5995.000	0.000	8066.000	79990.000	80690.000	71.984%	952.700
2	18:29:50	64630.000	6257.000	0.000	8204.000	81190.000	81940.000	72.508%	957.900
3	18:29:59	64500.000	6352.000	0.000	8194.000	81220.000	82790.000	72.841%	951.100
x		64170.000	6202.000	0.000	8155.000	80800.000	81810.000	72.444%	953.900
σ		682.300	184.700	0.000	77.010	704.800	1059.000	0.432%	3.546
%RSD		1.063	2.979	0.000	0.944	0.872	1.294	0.597	0.372

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:40	206.900	911.100	1089.000	133100.000	140700.000	61.040	237.400	3254.000
2	18:29:50	202.400	911.200	1101.000	137600.000	145500.000	63.260	235.300	3319.000
3	18:29:59	212.400	931.500	1114.000	135000.000	143700.000	61.840	232.600	3312.000
x		207.200	917.900	1101.000	135200.000	143300.000	62.050	235.100	3295.000
σ		5.029	11.720	12.590	2273.000	2415.000	1.122	2.426	35.640
%RSD		2.427	1.277	1.143	1.681	1.686	1.809	1.032	1.082

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:40	3421.000	8766.000	9102.000	58.560	7.913	10.020	0.000	289.600
2	18:29:50	3458.000	8877.000	9214.000	61.710	6.831	16.670	0.000	292.300
3	18:29:59	3431.000	8886.000	9248.000	60.960	9.812	11.330	0.000	297.300
x		3437.000	8843.000	9188.000	60.410	8.185	12.680	0.000	293.100
σ		18.890	66.770	76.300	1.646	1.509	3.524	0.000	3.886
%RSD		0.550	0.755	0.830	2.724	18.440	27.800	0.000	1.326

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:40	0.000	22.990	23.910	74.429%	17.970	17.820	23.600	37.740
2	18:29:50	0.000	22.080	22.490	75.892%	17.420	18.190	22.500	38.020
3	18:29:59	0.000	22.000	21.400	76.848%	17.290	17.510	24.000	39.610
x		0.000	22.350	22.600	75.723%	17.560	17.840	23.370	38.460
σ		0.000	0.549	1.255	1.219%	0.363	0.344	0.774	1.007
%RSD		0.000	2.455	5.555	1.609	2.067	1.926	3.314	2.620

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:40	75.276%	983.300	12.910	12.170	1449.000	1467.000	87.935%	90.931%
2	18:29:50	78.079%	959.200	12.110	11.860	1443.000	1464.000	90.748%	92.896%
3	18:29:59	78.649%	966.700	12.270	12.150	1435.000	1467.000	92.370%	93.604%
x		77.335%	969.700	12.430	12.060	1442.000	1466.000	90.351%	92.477%
σ		1.805%	12.360	0.420	0.170	7.215	1.954	2.244%	1.385%
%RSD		2.335	1.275	3.379	1.411	0.500	0.133	2.484	1.498

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:40	3.555	3.300	5086.000	4805.000	4608.000	87.369%
2	18:29:50	3.385	3.249	5062.000	4763.000	4567.000	88.962%
3	18:29:59	3.127	3.421	5077.000	4800.000	4573.000	91.541%
x		3.355	3.324	5075.000	4789.000	4583.000	89.291%
σ		0.216	0.088	12.310	23.060	21.860	2.105%
%RSD		6.423	2.657	0.243	0.482	0.477	2.358

CCV 1630756 7/20/2015 6:35:41 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	18:34:44	74.788%	93.460	108.700	105.200	0.000	44610.000	44340.000	44900.000
2	18:34:53	73.222%	100.400	110.800	110.500	0.000	45660.000	45880.000	46010.000
3	18:35:03	74.951%	97.510	105.500	107.600	0.000	46970.000	46630.000	46760.000
x		74.320%	97.137%	108.324%	107.778%	0.000	91.493%	91.237%	91.786%
σ		0.955%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.285	3.603	2.486	2.471	0.000	2.583	2.554	2.041
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:44	440.900	5422.000	0.000	46820.000	48340.000	48520.000	92.703%	97.820
2	18:34:53	458.700	5552.000	0.000	48430.000	49990.000	50410.000	91.158%	100.600
3	18:35:03	463.100	5513.000	0.000	49090.000	51040.000	51330.000	90.118%	101.400
x		90.848%	109.910%	0.000	96.224%	99.582%	100.171%	91.327%	99.952%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.301%	n/a
%RSD		2.584	1.217	0.000	2.419	2.729	2.857	1.424	1.894
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:44	101.800	100.400	472.300	25350.000	25210.000	101.500	98.500	97.640
2	18:34:53	101.900	102.400	491.500	26430.000	26650.000	106.300	102.700	101.900
3	18:35:03	109.200	105.900	502.500	25760.000	25900.000	102.500	99.510	95.670
x		104.271%	102.878%	97.756%	103.386%	103.685%	103.396%	100.250%	98.396%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		4.076	2.719	3.121	2.111	2.764	2.459	2.205	3.226
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:44	99.630	100.600	97.720	102.800	109.500	94.770	0.000	98.620
2	18:34:53	99.510	103.900	104.600	103.200	103.100	103.000	0.000	102.900
3	18:35:03	100.100	102.500	103.700	100.400	97.880	107.400	0.000	98.910
x		99.731%	102.301%	101.988%	102.094%	103.485%	101.752%	0.000	100.141%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.284	1.616	3.650	1.481	5.631	6.318	0.000	2.385
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:44	91.528%	98.550	99.550	87.629%	98.290	99.350	98.610	98.160
2	18:34:53	91.603%	101.100	100.200	88.718%	96.670	99.680	94.640	98.460
3	18:35:03	97.239%	100.800	101.900	89.307%	98.540	98.940	98.730	98.530
x		93.457%	100.159%	100.564%	88.551%	97.833%	99.326%	97.327%	98.382%
σ		3.276%	n/a	n/a	0.851%	n/a	n/a	n/a	n/a
%RSD		3.505	1.397	1.231	0.961	1.036	0.373	2.393	0.201
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:34:44	89.854%	99.910	96.690	99.000	100.100	93.580	96.714%	97.929%
2	18:34:53	91.563%	98.760	97.590	96.240	95.880	98.770	98.324%	99.319%
3	18:35:03	91.851%	103.200	96.550	97.890	101.400	102.000	97.550%	99.592%
x		91.089%	100.637%	96.945%	97.710%	99.138%	98.111%	97.530%	98.947%
σ		1.079%	n/a	n/a	n/a	n/a	n/a	0.805%	0.892%
%RSD		1.185	2.315	0.585	1.420	2.926	4.321	0.826	0.902
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:34:44	105.300	104.600	106.700	107.900	108.000	94.879%		
2	18:34:53	104.700	104.000	106.700	108.000	107.800	96.029%		
3	18:35:03	105.200	105.000	107.400	108.900	108.000	97.078%		
x		105.067%	104.545%	106.947%	108.279%	107.901%	95.995%		
σ		n/a	n/a	n/a	n/a	n/a	1.100%		
%RSD		0.324	0.447	0.390	0.512	0.114	1.146		

CCB5 7/20/2015 6:44:40 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	18:43:45	86.888%	0.049	5.087	5.633	0.000	6.985	6.371	6.217
2	18:43:54	85.535%	0.025	6.258	5.215	0.000	7.204	7.168	6.386
3	18:44:04	84.898%	0.092	6.401	5.577	0.000	8.054	7.054	5.455
x		85.774%	0.055	5.915	5.475	0.000	7.414	6.864	6.019
σ		1.017%	0.034	0.721	0.227	0.000	0.565	0.431	0.496
%RSD		1.185	61.550	12.190	4.147	0.000	7.621	6.279	8.234

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:43:45	1.824	2.911	0.000	-4.547	28.960	32.990	98.762%	0.221
2	18:43:54	1.832	1.186	0.000	-5.379	44.850	32.940	98.639%	-0.010
3	18:44:04	2.018	0.508	0.000	-1.212	56.350	33.130	97.424%	0.159
x		1.891	1.535	0.000	-3.712	43.390	33.020	98.275%	0.123
σ		0.110	1.239	0.000	2.205	13.750	0.098	0.740%	0.119
%RSD		5.819	80.700	0.000	59.400	31.700	0.296	0.752	96.730

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:43:45	0.040	0.043	0.115	14.630	12.400	0.005	0.049	0.115
2	18:43:54	0.092	0.039	0.114	13.140	15.820	0.020	0.386	0.219
3	18:44:04	0.179	0.035	0.065	13.390	15.160	0.020	0.305	0.211
x		0.104	0.039	0.098	13.720	14.460	0.015	0.247	0.182
σ		0.070	0.004	0.029	0.797	1.818	0.009	0.176	0.058
%RSD		67.840	11.480	29.430	5.811	12.570	57.880	71.450	31.740

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:43:45	0.240	1.681	2.275	0.063	0.001	0.587	0.000	0.056
2	18:43:54	0.303	1.553	1.483	0.054	0.123	-1.806	0.000	0.057
3	18:44:04	0.161	1.612	1.710	0.082	-0.120	-0.752	0.000	0.122
x		0.235	1.615	1.823	0.066	0.001	-0.657	0.000	0.079
σ		0.071	0.064	0.408	0.015	0.122	1.200	0.000	0.038
%RSD		30.250	3.962	22.370	22.230	10720.000	182.600	0.000	48.320

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:43:45	99.618%	0.656	0.415	96.348%	0.000	-0.006	0.030	0.013
2	18:43:54	98.909%	0.620	0.382	96.581%	0.020	0.004	0.030	0.000
3	18:44:04	98.767%	0.426	0.334	97.278%	0.025	0.004	-0.000	-0.012
x		99.098%	0.568	0.377	96.736%	0.015	0.000	0.020	0.000
σ		0.456%	0.124	0.041	0.484%	0.013	0.006	0.017	0.012
%RSD		0.461	21.790	10.810	0.501	85.390	1379.000	86.900	3777.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:43:45	97.312%	0.499	0.303	0.242	0.081	0.040	98.720%	99.900%
2	18:43:54	98.768%	0.521	0.286	0.194	0.000	0.117	99.539%	100.868%
3	18:44:04	98.219%	0.295	0.275	0.325	0.000	0.233	101.461%	103.056%
x		98.100%	0.438	0.288	0.254	0.027	0.130	99.906%	101.275%
σ		0.735%	0.124	0.014	0.066	0.047	0.097	1.407%	1.617%
%RSD		0.750	28.340	4.898	26.180	173.200	74.920	1.408	1.596

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:43:45	0.030	0.020	0.042	0.057	0.036	102.614%
2	18:43:54	0.078	0.037	0.036	0.037	0.020	103.138%
3	18:44:04	0.040	0.033	0.048	0.017	0.043	103.451%
x		0.049	0.030	0.042	0.037	0.033	103.068%
σ		0.025	0.009	0.006	0.020	0.012	0.423%
%RSD		51.240	30.040	14.090	54.280	35.270	0.410

MB 180-147825/1-A 7/20/2015 6:49:48 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	18:48:51	90.926%	-0.018	5.852	5.510	0.000	-14.470	-0.754	-0.538
2	18:49:00	86.895%	0.049	7.305	5.944	0.000	-14.880	-0.564	-0.609
3	18:49:10	87.896%	0.035	4.495	5.524	0.000	-13.980	-0.308	-0.469
x		88.572%	0.022	5.884	5.659	0.000	-14.440	-0.542	-0.539
σ		2.099%	0.035	1.405	0.247	0.000	0.451	0.224	0.070
%RSD		2.370	160.900	23.870	4.362	0.000	3.125	41.380	13.040
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:51	0.027	0.435	0.000	-14.360	-8.028	-0.942	99.565%	-0.043
2	18:49:00	-0.021	0.970	0.000	-16.290	-4.479	-2.613	99.162%	0.088
3	18:49:10	-0.052	-0.695	0.000	-15.980	1.027	-1.326	97.959%	0.024
x		-0.015	0.236	0.000	-15.550	-3.827	-1.627	98.895%	0.023
σ		0.040	0.850	0.000	1.039	4.563	0.875	0.836%	0.066
%RSD		261.300	359.700	0.000	6.683	119.200	53.800	0.845	284.700
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:51	0.038	0.000	0.024	3.685	6.486	0.005	-0.035	0.013
2	18:49:00	0.076	0.043	-0.000	2.910	9.826	-0.002	0.020	0.058
3	18:49:10	-0.001	-0.005	0.005	3.398	1.474	0.005	0.077	-0.033
x		0.038	0.013	0.010	3.331	5.929	0.002	0.021	0.013
σ		0.039	0.026	0.013	0.392	4.204	0.004	0.056	0.045
%RSD		101.900	203.700	131.800	11.760	70.900	171.600	272.500	361.300
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:51	0.097	-0.118	0.039	0.035	0.124	0.088	0.000	0.018
2	18:49:00	-0.006	-0.164	-0.016	0.006	0.001	1.142	0.000	-0.008
3	18:49:10	0.056	-0.073	0.144	0.044	0.000	0.586	0.000	0.004
x		0.049	-0.118	0.056	0.028	0.042	0.606	0.000	0.005
σ		0.052	0.045	0.082	0.020	0.071	0.527	0.000	0.013
%RSD		105.200	38.110	146.800	69.430	171.400	87.020	0.000	282.900
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:51	98.023%	0.161	-0.068	96.419%	-0.005	-0.011	-0.000	0.000
2	18:49:00	99.677%	-0.017	0.018	97.243%	-0.005	-0.011	-0.000	-0.012
3	18:49:10	100.253%	0.001	-0.028	97.831%	0.005	-0.007	-0.000	0.023
x		99.318%	0.048	-0.026	97.165%	-0.001	-0.010	-0.000	0.004
σ		1.157%	0.098	0.043	0.709%	0.005	0.003	0.000	0.018
%RSD		1.165	201.900	167.000	0.730	393.500	28.370	19.990	455.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:51	97.350%	0.330	0.184	0.065	0.081	0.000	100.326%	101.942%
2	18:49:00	98.413%	0.386	0.087	0.195	0.000	0.000	100.486%	101.581%
3	18:49:10	102.196%	0.266	0.059	0.088	0.000	0.038	99.552%	102.814%
x		99.319%	0.327	0.110	0.116	0.027	0.013	100.121%	102.113%
σ		2.547%	0.060	0.065	0.069	0.047	0.022	0.500%	0.634%
%RSD		2.564	18.250	59.170	59.690	173.200	173.200	0.499	0.621
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:48:51	-0.003	0.021	0.005	0.003	0.005	106.175%		
2	18:49:00	0.034	0.002	0.006	0.036	0.015	105.124%		
3	18:49:10	0.030	0.012	0.024	-0.003	0.018	104.579%		
x		0.020	0.011	0.012	0.012	0.013	105.293%		
σ		0.021	0.009	0.010	0.021	0.007	0.811%		
%RSD		101.100	81.600	89.920	172.400	52.060	0.770		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:57	56.909%	4.475	75.550	78.350	0.000	1237.000	50690.000	51390.000
2	18:54:07	56.055%	4.624	72.720	77.160	0.000	1275.000	51450.000	52630.000
3	18:54:16	57.866%	5.141	77.490	75.520	0.000	1270.000	51960.000	53450.000
x		56.943%	4.747	75.250	77.010	0.000	1261.000	51370.000	52490.000
σ		0.906%	0.350	2.398	1.420	0.000	20.700	635.100	1037.000
%RSD		1.590	7.364	3.187	1.843	0.000	1.642	1.236	1.977
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:57	80950.000	3418.000	0.000	9407.000	85430.000	86690.000	82.158%	913.100
2	18:54:07	82200.000	3477.000	0.000	9691.000	88320.000	88960.000	81.682%	932.200
3	18:54:16	83550.000	3454.000	0.000	9759.000	87900.000	90080.000	81.929%	944.700
x		82230.000	3450.000	0.000	9619.000	87220.000	88570.000	81.923%	930.000
σ		1302.000	29.770	0.000	186.800	1559.000	1726.000	0.238%	15.900
%RSD		1.584	0.863	0.000	1.942	1.787	1.948	0.291	1.710
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:57	209.000	722.300	1296.000	163700.000	172700.000	71.640	255.000	2869.000
2	18:54:07	203.300	721.300	1325.000	164700.000	174000.000	72.900	282.700	3027.000
3	18:54:16	208.000	723.900	1349.000	164700.000	174000.000	71.520	267.300	2997.000
x		206.800	722.500	1323.000	164300.000	173600.000	72.020	268.300	2964.000
σ		3.029	1.313	26.290	563.100	726.700	0.767	13.860	83.600
%RSD		1.465	0.182	1.987	0.343	0.419	1.064	5.164	2.820
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:57	2940.000	9440.000	9810.000	71.740	10.360	22.580	0.000	335.200
2	18:54:07	3113.000	9675.000	9867.000	75.130	13.360	11.380	0.000	328.100
3	18:54:16	3098.000	9630.000	9984.000	71.460	11.810	13.550	0.000	334.600
x		3050.000	9582.000	9887.000	72.770	11.840	15.840	0.000	332.600
σ		95.960	124.500	88.640	2.041	1.504	5.937	0.000	3.944
%RSD		3.146	1.299	0.897	2.805	12.700	37.490	0.000	1.186
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:57	0.000	15.780	15.240	81.017%	23.890	25.030	23.860	30.080
2	18:54:07	0.000	16.160	15.620	82.343%	25.200	25.920	20.660	30.950
3	18:54:16	0.000	15.450	15.460	83.164%	24.700	25.110	21.780	30.410
x		0.000	15.800	15.440	82.175%	24.600	25.350	22.100	30.480
σ		0.000	0.358	0.190	1.083%	0.661	0.491	1.626	0.439
%RSD		0.000	2.263	1.232	1.318	2.689	1.937	7.359	1.440
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:57	83.153%	521.700	17.110	17.850	2239.000	2294.000	97.097%	97.352%
2	18:54:07	83.483%	526.200	16.990	17.120	2362.000	2343.000	100.188%	102.123%
3	18:54:16	85.387%	529.700	16.500	17.350	2301.000	2337.000	101.955%	101.383%
x		84.008%	525.900	16.870	17.440	2300.000	2325.000	99.746%	100.286%
σ		1.206%	3.987	0.324	0.374	61.510	26.380	2.459%	2.568%
%RSD		1.436	0.758	1.923	2.145	2.674	1.135	2.465	2.560
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:53:57	3.289	3.209	4816.000	4514.000	4355.000	96.110%		
2	18:54:07	3.468	3.351	4884.000	4548.000	4381.000	97.032%		
3	18:54:16	3.512	3.429	4887.000	4537.000	4359.000	99.115%		
x		3.423	3.330	4862.000	4533.000	4365.000	97.419%		
σ		0.118	0.112	40.470	17.210	13.710	1.539%		
%RSD		3.455	3.350	0.832	0.380	0.314	1.580		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:05	62.285%	3.593	65.260	73.880	0.000	1119.000	44580.000	45260.000
2	18:59:14	61.702%	4.030	68.880	72.910	0.000	1148.000	45660.000	46580.000
3	18:59:23	63.375%	3.744	74.840	72.820	0.000	1143.000	45700.000	46870.000
x		62.454%	3.789	69.660	73.200	0.000	1137.000	45310.000	46240.000
σ		0.849%	0.222	4.834	0.590	0.000	15.350	634.300	857.200
%RSD		1.360	5.859	6.939	0.806	0.000	1.350	1.400	1.854

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:05	66980.000	3775.000	0.000	8442.000	66590.000	67600.000	87.549%	844.900
2	18:59:14	68080.000	3874.000	0.000	8536.000	68030.000	68940.000	87.233%	859.500
3	18:59:23	69230.000	3878.000	0.000	8677.000	69000.000	70100.000	87.313%	875.900
x		68100.000	3842.000	0.000	8551.000	67870.000	68880.000	87.365%	860.100
σ		1125.000	58.090	0.000	118.000	1212.000	1256.000	0.164%	15.510
%RSD		1.651	1.512	0.000	1.380	1.786	1.823	0.188	1.803

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:05	185.800	892.600	1058.000	138200.000	144100.000	63.760	241.800	3335.000
2	18:59:14	200.200	905.700	1088.000	134400.000	142000.000	62.440	235.100	3284.000
3	18:59:23	188.600	883.700	1064.000	135500.000	143100.000	65.230	239.800	3463.000
x		191.500	894.000	1070.000	136000.000	143100.000	63.810	238.900	3361.000
σ		7.649	11.100	15.870	1958.000	1072.000	1.397	3.454	92.570
%RSD		3.994	1.242	1.483	1.439	0.749	2.190	1.446	2.754

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:05	3397.000	10030.000	10480.000	63.190	12.020	18.020	0.000	251.100
2	18:59:14	3407.000	10160.000	10540.000	63.200	13.210	9.303	0.000	251.200
3	18:59:23	3521.000	10190.000	10470.000	61.870	10.930	20.670	0.000	256.700
x		3442.000	10130.000	10500.000	62.750	12.060	16.000	0.000	253.000
σ		68.710	86.100	39.360	0.766	1.136	5.946	0.000	3.211
%RSD		1.997	0.850	0.375	1.221	9.426	37.170	0.000	1.269

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:05	0.000	18.990	19.820	83.437%	20.920	20.540	26.580	38.240
2	18:59:14	0.000	19.570	19.700	84.615%	21.500	21.130	27.950	38.090
3	18:59:23	0.000	18.680	19.740	84.924%	20.850	20.400	30.000	36.430
x		0.000	19.080	19.750	84.325%	21.090	20.690	28.180	37.590
σ		0.000	0.448	0.063	0.785%	0.357	0.385	1.720	1.007
%RSD		0.000	2.349	0.319	0.931	1.695	1.862	6.104	2.679

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:05	85.762%	633.700	15.050	15.500	1554.000	1594.000	101.154%	102.290%
2	18:59:14	85.545%	636.200	15.740	15.390	1587.000	1613.000	103.779%	102.105%
3	18:59:23	86.839%	638.800	15.470	14.890	1619.000	1622.000	104.380%	104.170%
x		86.049%	636.300	15.420	15.260	1587.000	1610.000	103.104%	102.855%
σ		0.693%	2.567	0.346	0.324	32.630	13.960	1.716%	1.142%
%RSD		0.806	0.403	2.245	2.122	2.056	0.867	1.664	1.111

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:05	3.786	3.484	5446.000	5130.000	4905.000	104.803%
2	18:59:14	3.580	3.626	5577.000	5218.000	4962.000	106.545%
3	18:59:23	3.539	3.713	5549.000	5180.000	4934.000	105.357%
x		3.635	3.608	5524.000	5176.000	4934.000	105.568%
σ		0.132	0.116	69.130	44.280	28.310	0.890%
%RSD		3.641	3.200	1.251	0.856	0.574	0.843

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:08	62.461%	3.601	80.880	87.060	0.000	1211.000	63480.000	64000.000
2	19:04:18	57.794%	4.053	93.060	93.190	0.000	1218.000	65220.000	65750.000
3	19:04:27	58.327%	3.880	87.050	90.350	0.000	1216.000	65100.000	66320.000
x		59.527%	3.845	86.990	90.200	0.000	1215.000	64600.000	65350.000
σ		2.555%	0.228	6.092	3.069	0.000	3.751	970.800	1207.000
%RSD		4.292	5.939	7.002	3.402	0.000	0.309	1.503	1.846
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:08	55760.000	3292.000	0.000	7304.000	209700.000	210100.000	87.594%	873.700
2	19:04:18	56970.000	3420.000	0.000	7489.000	217300.000	218400.000	86.316%	894.700
3	19:04:27	57070.000	3399.000	0.000	7631.000	221100.000	221300.000	86.297%	911.900
x		56600.000	3370.000	0.000	7475.000	216100.000	216600.000	86.736%	893.400
σ		729.200	68.450	0.000	164.000	5817.000	5836.000	0.743%	19.140
%RSD		1.288	2.031	0.000	2.194	2.692	2.694	0.857	2.143
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:08	160.600	368.200	1732.000	168300.000	176500.000	58.800	300.400	2166.000
2	19:04:18	159.300	371.700	1781.000	166500.000	175200.000	57.010	298.900	2179.000
3	19:04:27	161.400	372.000	1801.000	168800.000	177400.000	60.110	301.300	2220.000
x		160.400	370.600	1771.000	167900.000	176300.000	58.640	300.200	2188.000
σ		1.017	2.096	35.310	1232.000	1124.000	1.556	1.201	27.870
%RSD		0.634	0.566	1.994	0.734	0.637	2.653	0.400	1.274
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:08	2234.000	7849.000	8181.000	106.700	9.208	7.775	0.000	430.800
2	19:04:18	2244.000	7991.000	8206.000	107.800	11.170	16.110	0.000	441.700
3	19:04:27	2269.000	7934.000	8217.000	109.400	11.280	14.430	0.000	440.300
x		2249.000	7925.000	8202.000	108.000	10.550	12.770	0.000	437.600
σ		18.370	71.390	18.460	1.344	1.167	4.407	0.000	5.905
%RSD		0.817	0.901	0.225	1.245	11.050	34.510	0.000	1.349
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:08	0.000	10.270	11.280	83.283%	13.250	12.800	12.070	21.810
2	19:04:18	0.000	10.310	12.040	84.354%	12.910	12.410	11.550	22.390
3	19:04:27	0.000	11.460	11.030	84.816%	12.600	12.450	13.700	22.480
x		0.000	10.680	11.450	84.151%	12.920	12.560	12.440	22.220
σ		0.000	0.674	0.525	0.786%	0.326	0.215	1.121	0.366
%RSD		0.000	6.311	4.585	0.934	2.520	1.715	9.015	1.645
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:04:08	84.635%	585.700	42.700	42.170	985.400	975.800	97.395%	99.517%
2	19:04:18	85.539%	585.600	41.700	39.980	950.500	964.900	99.797%	101.018%
3	19:04:27	85.913%	586.100	41.630	40.930	966.000	974.400	100.731%	101.014%
x		85.362%	585.800	42.010	41.020	967.300	971.700	99.307%	100.516%
σ		0.657%	0.244	0.599	1.100	17.520	5.902	1.721%	0.865%
%RSD		0.770	0.042	1.427	2.681	1.811	0.607	1.733	0.861
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:04:08	2.482	2.470	7174.000	6849.000	7056.000	93.417%		
2	19:04:18	2.653	2.670	7377.000	7006.000	7172.000	93.087%		
3	19:04:27	2.358	2.675	7289.000	6901.000	7110.000	93.387%		
x		2.497	2.605	7280.000	6919.000	7113.000	93.297%		
σ		0.148	0.117	101.800	79.870	58.130	0.182%		
%RSD		5.925	4.485	1.399	1.154	0.817	0.195		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:14	55.674%	3.075	167.000	168.200	0.000	2714.000	78780.000	80030.000
2	19:09:24	55.828%	3.228	166.400	168.700	0.000	2711.000	80810.000	81360.000
3	19:09:33	53.354%	3.487	181.800	183.700	0.000	2769.000	80940.000	81650.000
x		54.952%	3.263	171.700	173.500	0.000	2732.000	80180.000	81010.000
σ		1.386%	0.208	8.724	8.807	0.000	32.400	1214.000	861.800
%RSD		2.522	6.377	5.080	5.076	0.000	1.186	1.515	1.064
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:14	54020.000	8340.000	0.000	5437.000	847300.000	830800.000	77.966%	1405.000
2	19:09:24	55380.000	8230.000	0.000	5478.000	868800.000	851800.000	77.522%	1432.000
3	19:09:33	55660.000	8426.000	0.000	5563.000	879200.000	859000.000	77.383%	1457.000
x		55020.000	8332.000	0.000	5493.000	865100.000	847200.000	77.624%	1431.000
σ		876.000	98.500	0.000	64.330	16240.000	14630.000	0.304%	26.160
%RSD		1.592	1.182	0.000	1.171	1.878	1.727	0.392	1.828
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:14	267.600	2248.000	10620.000	1713000.000	1761000.000	169.100	2769.000	69960.000
2	19:09:24	266.400	2236.000	10920.000	1750000.000	1800000.000	171.900	2869.000	72680.000
3	19:09:33	250.200	2247.000	10970.000	1763000.000	1811000.000	174.800	2889.000	73550.000
x		261.400	2244.000	10830.000	1742000.000	1791000.000	171.900	2843.000	72060.000
σ		9.710	6.450	188.700	25920.000	26470.000	2.852	64.340	1875.000
%RSD		3.714	0.288	1.742	1.488	1.478	1.659	2.264	2.602
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:14	71330.000	66240.000	64880.000	390.100	18.480	18.360	0.000	1765.000
2	19:09:24	72860.000	66870.000	65070.000	401.900	20.640	24.440	0.000	1765.000
3	19:09:33	72890.000	66840.000	65440.000	398.700	18.500	14.880	0.000	1785.000
x		72360.000	66650.000	65130.000	396.900	19.210	19.230	0.000	1771.000
σ		895.200	352.700	288.400	6.080	1.238	4.837	0.000	11.500
%RSD		1.237	0.529	0.443	1.532	6.447	25.160	0.000	0.649
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:14	0.000	114.300	112.900	72.877%	44.010	44.860	101.300	615.600
2	19:09:24	0.000	114.900	112.500	74.716%	44.410	44.360	98.460	611.600
3	19:09:33	0.000	111.500	113.400	75.352%	43.570	46.680	107.200	639.400
x		0.000	113.600	112.900	74.315%	44.000	45.300	102.300	622.200
σ		0.000	1.821	0.428	1.285%	0.416	1.219	4.446	15.070
%RSD		0.000	1.603	0.379	1.730	0.946	2.692	4.345	2.421
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:14	73.217%	28680.000	2163.000	2120.000	19360.000	19810.000	87.931%	87.366%
2	19:09:24	74.758%	28760.000	2192.000	2163.000	19740.000	20220.000	90.695%	92.492%
3	19:09:33	72.452%	29980.000	2287.000	2275.000	20350.000	20850.000	91.148%	91.969%
x		73.476%	29140.000	2214.000	2186.000	19810.000	20290.000	89.925%	90.609%
σ		1.175%	729.900	64.850	79.920	498.800	521.600	1.741%	2.821%
%RSD		1.599	2.505	2.929	3.656	2.517	2.571	1.937	3.113
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:09:14	1.419	1.328	122100.000	115300.000	119000.000	86.898%		
2	19:09:24	1.422	1.451	121200.000	114100.000	118500.000	86.775%		
3	19:09:33	1.384	1.556	122300.000	114800.000	119200.000	87.501%		
x		1.408	1.445	121900.000	114700.000	118900.000	87.058%		
σ		0.021	0.114	557.300	560.300	347.900	0.389%		
%RSD		1.481	7.881	0.457	0.488	0.293	0.446		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:20	83.967%	0.685	40.180	36.910	0.000	563.300	18090.000	18010.000
2	19:14:30	85.326%	0.713	37.630	35.560	0.000	578.600	18740.000	19000.000
3	19:14:39	85.276%	0.502	35.390	37.330	0.000	579.000	18860.000	19020.000
x		84.856%	0.633	37.730	36.600	0.000	573.600	18560.000	18680.000
σ		0.771%	0.115	2.394	0.925	0.000	8.981	410.900	577.800
%RSD		0.908	18.140	6.345	2.527	0.000	1.566	2.213	3.094

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:20	11670.000	1641.000	0.000	1149.000	163700.000	166000.000	96.939%	280.500
2	19:14:30	12330.000	1743.000	0.000	1209.000	171100.000	172800.000	94.830%	298.000
3	19:14:39	12560.000	1699.000	0.000	1194.000	174200.000	175000.000	95.120%	300.200
x		12190.000	1695.000	0.000	1184.000	169700.000	171300.000	95.629%	292.900
σ		464.800	51.220	0.000	31.060	5378.000	4742.000	1.143%	10.780
%RSD		3.815	3.022	0.000	2.623	3.170	2.768	1.195	3.682

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:20	42.880	404.200	2138.000	311100.000	334000.000	32.530	534.500	13910.000
2	19:14:30	44.190	416.300	2220.000	333300.000	341100.000	33.760	559.500	14360.000
3	19:14:39	47.240	418.700	2245.000	322300.000	346500.000	33.360	557.200	14300.000
x		44.770	413.100	2201.000	322200.000	340500.000	33.220	550.400	14190.000
σ		2.233	7.775	55.930	11110.000	6279.000	0.626	13.810	246.300
%RSD		4.987	1.882	2.541	3.449	1.844	1.884	2.509	1.735

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:20	14050.000	13070.000	13210.000	68.640	2.092	2.306	0.000	315.800
2	19:14:30	14390.000	13500.000	13490.000	73.200	3.007	3.076	0.000	315.700
3	19:14:39	14580.000	13530.000	13560.000	70.230	2.992	4.258	0.000	316.900
x		14340.000	13370.000	13420.000	70.690	2.697	3.213	0.000	316.200
σ		267.800	253.800	187.400	2.315	0.524	0.983	0.000	0.680
%RSD		1.868	1.899	1.396	3.275	19.420	30.600	0.000	0.215

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:20	0.000	21.530	20.460	89.219%	8.765	8.351	21.000	123.100
2	19:14:30	0.000	20.710	21.000	90.478%	8.594	9.305	22.210	118.500
3	19:14:39	0.000	21.520	22.320	90.983%	8.973	8.703	22.150	121.300
x		0.000	21.250	21.260	90.227%	8.777	8.787	21.780	121.000
σ		0.000	0.474	0.958	0.908%	0.190	0.483	0.683	2.319
%RSD		0.000	2.229	4.507	1.007	2.163	5.494	3.136	1.917

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:20	86.899%	6348.000	439.400	431.500	3943.000	3960.000	94.051%	94.950%
2	19:14:30	90.803%	6217.000	437.800	430.000	3931.000	3919.000	95.638%	96.002%
3	19:14:39	91.537%	6210.000	435.200	419.900	3918.000	3928.000	97.688%	98.021%
x		89.746%	6258.000	437.400	427.100	3931.000	3936.000	95.792%	96.324%
σ		2.493%	77.700	2.118	6.353	12.280	21.600	1.824%	1.561%
%RSD		2.777	1.241	0.484	1.487	0.313	0.549	1.904	1.620

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:20	0.261	0.292	25540.000	24230.000	25100.000	92.863%
2	19:14:30	0.237	0.314	25150.000	23830.000	24800.000	93.905%
3	19:14:39	0.286	0.277	25560.000	24090.000	25040.000	93.264%
x		0.261	0.294	25410.000	24050.000	24980.000	93.344%
σ		0.024	0.018	231.700	201.500	160.500	0.526%
%RSD		9.184	6.280	0.912	0.838	0.643	0.563

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:26	75.247%	45.610	1034.000	1051.000	0.000	44650.000	98780.000	98350.000
2	19:19:36	72.496%	45.600	1047.000	1054.000	0.000	44010.000	98410.000	98580.000
3	19:19:45	68.986%	47.100	1113.000	1109.000	0.000	44490.000	98890.000	98750.000
x		72.243%	46.100	1065.000	1072.000	0.000	44390.000	98700.000	98560.000
σ		3.138%	0.865	42.360	32.760	0.000	331.800	249.700	200.100
%RSD		4.344	1.877	3.979	3.057	0.000	0.748	0.253	0.203
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:26	53140.000	13640.000	0.000	49990.000	513100.000	512700.000	87.009%	1830.000
2	19:19:36	54010.000	13690.000	0.000	50220.000	523900.000	523000.000	86.146%	1844.000
3	19:19:45	54060.000	14190.000	0.000	50830.000	530000.000	528200.000	85.959%	1875.000
x		53740.000	13840.000	0.000	50350.000	522300.000	521300.000	86.371%	1850.000
σ		515.500	303.200	0.000	430.600	8572.000	7892.000	0.560%	22.780
%RSD		0.959	2.191	0.000	0.855	1.641	1.514	0.649	1.232
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:26	682.400	1537.000	11530.000	1711000.000	1708000.000	647.300	2378.000	23660.000
2	19:19:36	689.100	1525.000	11720.000	1696000.000	1720000.000	655.800	2429.000	24280.000
3	19:19:45	703.500	1575.000	11840.000	1722000.000	1727000.000	665.800	2426.000	24160.000
x		691.600	1546.000	11700.000	1710000.000	1719000.000	656.300	2411.000	24030.000
σ		10.770	25.950	154.600	12930.000	9644.000	9.212	28.680	330.600
%RSD		1.558	1.679	1.322	0.757	0.561	1.404	1.190	1.376
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:26	23780.000	34220.000	33960.000	411.100	19.640	26.790	0.000	2222.000
2	19:19:36	24410.000	34480.000	33970.000	418.500	20.060	29.330	0.000	2238.000
3	19:19:45	24080.000	34890.000	34380.000	416.200	23.100	37.450	0.000	2240.000
x		24090.000	34530.000	34100.000	415.300	20.930	31.190	0.000	2233.000
σ		314.600	340.800	238.800	3.777	1.888	5.571	0.000	10.120
%RSD		1.306	0.987	0.700	0.909	9.020	17.860	0.000	0.453
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:26	0.000	1199.000	1190.000	75.904%	98.010	98.020	528.500	673.300
2	19:19:36	0.000	1193.000	1189.000	77.589%	97.490	99.940	538.100	681.500
3	19:19:45	0.000	1197.000	1194.000	77.273%	97.870	98.680	534.300	667.800
x		0.000	1196.000	1191.000	76.922%	97.790	98.880	533.700	674.200
σ		0.000	3.143	2.454	0.896%	0.271	0.977	4.850	6.861
%RSD		0.000	0.263	0.206	1.164	0.277	0.988	0.909	1.018
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:26	75.655%	8582.000	2682.000	2612.000	13830.000	13890.000	87.318%	86.856%
2	19:19:36	75.937%	8642.000	2694.000	2656.000	14090.000	14210.000	88.868%	90.553%
3	19:19:45	77.963%	8493.000	2646.000	2617.000	13860.000	13980.000	88.939%	88.785%
x		76.518%	8572.000	2674.000	2629.000	13930.000	14030.000	88.375%	88.731%
σ		1.259%	75.080	25.150	24.220	144.000	166.100	0.916%	1.849%
%RSD		1.645	0.876	0.941	0.922	1.034	1.184	1.037	2.084
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:19:26	44.640	44.690	100300.000	95590.000	99390.000	81.975%		
2	19:19:36	46.270	46.170	102500.000	97470.000	100600.000	82.270%		
3	19:19:45	45.570	46.080	101500.000	96520.000	100000.000	83.984%		
x		45.490	45.650	101400.000	96530.000	100000.000	82.743%		
σ		0.818	0.829	1087.000	940.800	616.200	1.085%		
%RSD		1.799	1.816	1.072	0.975	0.616	1.311		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:24:32	72.982%	51.820	1173.000	1176.000	0.000	46290.000	144300.000	144200.000
2	19:24:42	73.136%	52.640	1179.000	1193.000	0.000	46460.000	141000.000	142200.000
3	19:24:52	73.683%	50.610	1164.000	1177.000	0.000	46460.000	142800.000	143200.000
x		73.267%	51.690	1172.000	1182.000	0.000	46400.000	142700.000	143200.000
σ		0.368%	1.022	7.755	9.483	0.000	101.500	1643.000	1012.000
%RSD		0.503	1.977	0.662	0.802	0.000	0.219	1.152	0.707

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:24:32	78930.000	12700.000	0.000	57050.000	673100.000	665800.000	86.518%	2456.000
2	19:24:42	78660.000	12520.000	0.000	56680.000	674900.000	668500.000	87.420%	2444.000
3	19:24:52	78900.000	12320.000	0.000	56750.000	680800.000	674100.000	86.668%	2477.000
x		78830.000	12510.000	0.000	56830.000	676300.000	669500.000	86.868%	2459.000
σ		147.900	192.800	0.000	194.400	4030.000	4240.000	0.484%	16.760
%RSD		0.188	1.541	0.000	0.342	0.596	0.633	0.557	0.681

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:24:32	697.600	2096.000	9889.000	891500.000	906100.000	635.300	1990.000	24180.000
2	19:24:42	723.400	2157.000	9928.000	884500.000	888800.000	619.400	1967.000	23740.000
3	19:24:52	730.200	2141.000	10030.000	891100.000	907100.000	636.700	2036.000	24810.000
x		717.100	2131.000	9948.000	889000.000	900700.000	630.500	1998.000	24240.000
σ		17.170	31.620	71.590	3893.000	10320.000	9.641	35.380	534.800
%RSD		2.395	1.484	0.720	0.438	1.146	1.529	1.771	2.206

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:24:32	24290.000	31790.000	31690.000	275.000	43.540	40.700	0.000	2162.000
2	19:24:42	24010.000	32040.000	31990.000	272.000	46.970	32.630	0.000	2196.000
3	19:24:52	24800.000	32490.000	32120.000	278.300	48.980	30.600	0.000	2181.000
x		24370.000	32110.000	31930.000	275.100	46.500	34.640	0.000	2180.000
σ		399.700	357.200	218.600	3.114	2.747	5.342	0.000	17.240
%RSD		1.640	1.113	0.685	1.132	5.908	15.420	0.000	0.791

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:24:32	0.000	1157.000	1155.000	73.338%	87.230	90.050	267.900	357.400
2	19:24:42	0.000	1160.000	1170.000	73.103%	87.290	89.850	257.500	359.400
3	19:24:52	0.000	1157.000	1173.000	73.836%	88.520	89.900	268.000	352.800
x		0.000	1158.000	1166.000	73.425%	87.680	89.930	264.500	356.500
σ		0.000	2.066	9.542	0.374%	0.728	0.107	6.011	3.417
%RSD		0.000	0.178	0.818	0.510	0.830	0.119	2.273	0.958

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:24:32	73.140%	5776.000	2080.000	2048.000	14690.000	14910.000	90.166%	90.170%
2	19:24:42	75.001%	5790.000	2064.000	2026.000	14750.000	14780.000	89.499%	90.241%
3	19:24:52	75.444%	5755.000	2059.000	2040.000	14860.000	14990.000	91.521%	93.521%
x		74.528%	5774.000	2067.000	2038.000	14760.000	14890.000	90.396%	91.311%
σ		1.223%	17.450	11.280	11.330	86.800	106.900	1.030%	1.915%
%RSD		1.641	0.302	0.546	0.556	0.588	0.718	1.140	2.097

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:24:32	48.750	48.050	51530.000	48170.000	50420.000	77.475%
2	19:24:42	48.230	48.980	51320.000	48200.000	50260.000	79.948%
3	19:24:52	49.930	48.990	52200.000	48660.000	50530.000	79.216%
x		48.970	48.670	51680.000	48340.000	50410.000	78.880%
σ		0.874	0.537	461.000	273.700	134.600	1.270%
%RSD		1.785	1.104	0.892	0.566	0.267	1.611

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:29:37	65.055%	56.840	1363.000	1337.000	0.000	51260.000	136200.000	136200.000
2	19:29:46	65.759%	57.140	1283.000	1296.000	0.000	51930.000	136500.000	136300.000
3	19:29:56	64.174%	60.650	1323.000	1329.000	0.000	52050.000	137200.000	138000.000
x		64.996%	58.210	1323.000	1321.000	0.000	51750.000	136600.000	136800.000
σ		0.794%	2.117	40.240	21.520	0.000	421.600	510.300	1031.000
%RSD		1.222	3.637	3.042	1.629	0.000	0.815	0.374	0.753
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:29:37	61380.000	20430.000	0.000	55990.000	861100.000	850700.000	81.915%	2393.000
2	19:29:46	61920.000	20120.000	0.000	56390.000	879500.000	866300.000	80.582%	2474.000
3	19:29:56	61670.000	20340.000	0.000	56370.000	878400.000	863200.000	81.031%	2476.000
x		61660.000	20300.000	0.000	56250.000	873000.000	860000.000	81.176%	2448.000
σ		273.100	161.600	0.000	223.600	10310.000	8228.000	0.678%	47.560
%RSD		0.443	0.796	0.000	0.398	1.181	0.957	0.835	1.943
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:29:37	752.300	2201.000	10800.000	1556000.000	1561000.000	685.300	3094.000	67270.000
2	19:29:46	762.100	2204.000	11010.000	1593000.000	1606000.000	709.300	3183.000	69630.000
3	19:29:56	753.300	2214.000	11000.000	1578000.000	1584000.000	704.300	3137.000	68660.000
x		755.900	2206.000	10940.000	1576000.000	1584000.000	699.600	3138.000	68520.000
σ		5.403	6.568	119.200	18390.000	22410.000	12.660	44.860	1181.000
%RSD		0.715	0.298	1.089	1.167	1.415	1.809	1.429	1.724
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:29:37	66830.000	61100.000	59030.000	397.900	29.890	31.930	0.000	2733.000
2	19:29:46	68290.000	62000.000	68090.000	408.800	30.540	23.610	0.000	2749.000
3	19:29:56	67810.000	61700.000	59550.000	402.100	23.780	10.820	0.000	2776.000
x		67640.000	61600.000	62220.000	402.900	28.070	22.120	0.000	2752.000
σ		747.800	461.200	5090.000	5.487	3.728	10.640	0.000	21.820
%RSD		1.105	0.749	8.180	1.362	13.280	48.090	0.000	0.793
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:29:37	0.000	1336.000	1359.000	69.168%	85.220	87.380	150.700	709.500
2	19:29:46	0.000	1340.000	1339.000	69.880%	84.390	85.100	153.500	697.200
3	19:29:56	0.000	1344.000	1355.000	69.368%	85.220	87.460	154.600	708.900
x		0.000	1340.000	1351.000	69.472%	84.940	86.650	152.900	705.200
σ		0.000	4.029	10.520	0.367%	0.479	1.339	2.032	6.925
%RSD		0.000	0.301	0.779	0.528	0.564	1.545	1.329	0.982
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:29:37	66.603%	30410.000	2721.000	2657.000	21190.000	21460.000	80.176%	80.446%
2	19:29:46	67.607%	30070.000	2747.000	2674.000	21430.000	21660.000	81.020%	81.794%
3	19:29:56	67.270%	30310.000	2712.000	2671.000	21380.000	21590.000	81.402%	80.894%
x		67.160%	30270.000	2727.000	2667.000	21330.000	21570.000	80.866%	81.045%
σ		0.511%	172.900	18.440	8.989	129.000	102.400	0.627%	0.687%
%RSD		0.761	0.571	0.676	0.337	0.605	0.475	0.775	0.847
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:29:37	54.460	52.780	119700.000	112100.000	116500.000	72.128%		
2	19:29:46	53.670	52.720	120100.000	112300.000	116400.000	72.072%		
3	19:29:56	52.040	53.130	119900.000	112300.000	116500.000	72.999%		
x		53.390	52.880	119900.000	112200.000	116500.000	72.400%		
σ		1.230	0.223	228.500	90.850	91.020	0.520%		
%RSD		2.304	0.421	0.191	0.081	0.078	0.718		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:42	79.305%	4.516	81.950	77.400	0.000	1324.000	42460.000	42010.000
2	19:34:51	77.632%	4.425	82.240	80.020	0.000	1338.000	42530.000	42720.000
3	19:35:00	77.731%	4.391	77.570	78.540	0.000	1334.000	42260.000	42240.000
x		78.223%	4.444	80.590	78.650	0.000	1332.000	42420.000	42320.000
σ		0.939%	0.065	2.616	1.312	0.000	7.330	136.300	362.800
%RSD		1.200	1.452	3.246	1.669	0.000	0.550	0.322	0.857

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:42	90140.000	7633.000	0.000	10850.000	57420.000	58340.000	90.187%	1035.000
2	19:34:51	90780.000	7643.000	0.000	10940.000	59200.000	59690.000	90.164%	1068.000
3	19:35:00	91060.000	7649.000	0.000	10870.000	59510.000	59870.000	90.290%	1065.000
x		90660.000	7642.000	0.000	10880.000	58710.000	59300.000	90.214%	1056.000
σ		469.700	8.511	0.000	48.150	1129.000	834.300	0.067%	17.990
%RSD		0.518	0.111	0.000	0.442	1.923	1.407	0.075	1.704

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:42	205.300	929.200	1088.000	151800.000	151800.000	68.940	250.300	3863.000
2	19:34:51	203.800	949.100	1098.000	154700.000	154500.000	70.870	260.900	3919.000
3	19:35:00	200.800	925.800	1096.000	154000.000	154800.000	69.850	260.500	3961.000
x		203.300	934.700	1094.000	153500.000	153700.000	69.890	257.200	3914.000
σ		2.271	12.590	5.204	1523.000	1631.000	0.965	6.010	49.090
%RSD		1.117	1.347	0.476	0.992	1.061	1.381	2.336	1.254

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:42	3758.000	9625.000	9649.000	64.750	12.610	15.830	0.000	287.700
2	19:34:51	3851.000	9754.000	9822.000	66.870	10.720	4.243	0.000	290.400
3	19:35:00	3872.000	9847.000	9840.000	65.960	10.080	19.720	0.000	290.400
x		3827.000	9742.000	9770.000	65.860	11.140	13.270	0.000	289.500
σ		60.430	111.800	105.200	1.066	1.316	8.052	0.000	1.578
%RSD		1.579	1.148	1.077	1.619	11.820	60.700	0.000	0.545

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:42	0.000	28.980	28.850	79.952%	19.340	18.760	34.170	49.190
2	19:34:51	0.000	29.620	28.660	80.402%	18.710	19.010	33.330	49.010
3	19:35:00	0.000	28.010	26.840	81.174%	18.790	18.470	33.680	47.050
x		0.000	28.870	28.120	80.509%	18.950	18.750	33.720	48.420
σ		0.000	0.808	1.107	0.618%	0.344	0.268	0.422	1.190
%RSD		0.000	2.798	3.938	0.767	1.817	1.429	1.250	2.457

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:42	79.746%	899.700	14.470	14.370	1250.000	1226.000	92.299%	91.054%
2	19:34:51	81.213%	895.500	14.700	13.980	1264.000	1238.000	92.859%	91.955%
3	19:35:00	83.388%	877.400	13.690	13.440	1237.000	1223.000	95.407%	93.776%
x		81.449%	890.800	14.290	13.930	1250.000	1229.000	93.522%	92.262%
σ		1.833%	11.840	0.531	0.464	13.850	7.753	1.656%	1.387%
%RSD		2.250	1.329	3.714	3.332	1.108	0.631	1.771	1.503

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:42	4.188	3.920	5189.000	4905.000	4747.000	85.090%
2	19:34:51	4.141	3.989	5174.000	4874.000	4718.000	86.741%
3	19:35:00	4.013	4.017	5157.000	4848.000	4698.000	87.861%
x		4.114	3.975	5173.000	4875.000	4721.000	86.564%
σ		0.091	0.050	16.010	28.360	24.740	1.394%
%RSD		2.208	1.262	0.309	0.582	0.524	1.610

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:39:44	88.288%	103.900	111.000	115.400	0.000	48420.000	49320.000	49460.000
2	19:39:54	87.175%	108.600	120.200	113.500	0.000	49250.000	50780.000	50910.000
3	19:40:03	85.898%	108.300	116.000	113.400	0.000	49900.000	51250.000	51390.000
x		87.120%	106.960%	115.752%	114.083%	0.000	98.385%	100.898%	101.176%
σ		1.196%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.372	2.458	3.982	1.031	0.000	1.508	2.000	1.983
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:39:44	491.600	5548.000	0.000	49620.000	47840.000	47580.000	101.358%	99.610
2	19:39:54	507.700	5763.000	0.000	51590.000	49370.000	49470.000	98.659%	100.500
3	19:40:03	511.700	5720.000	0.000	51710.000	50050.000	50340.000	98.530%	100.800
x		100.737%	113.546%	0.000	101.944%	98.177%	98.259%	99.516%	100.287%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.596%	n/a
%RSD		2.109	2.005	0.000	2.308	2.300	2.869	1.604	0.604
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:39:44	98.710	99.490	468.700	24960.000	24040.000	98.710	96.630	102.700
2	19:39:54	101.300	101.700	486.800	25340.000	24700.000	99.410	101.200	108.200
3	19:40:03	98.700	100.100	494.100	26330.000	25750.000	104.600	105.900	107.900
x		99.573%	100.437%	96.638%	102.171%	99.318%	100.925%	101.239%	106.245%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.508	1.142	2.703	2.763	3.464	3.214	4.589	2.934
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:39:44	101.600	103.900	109.100	97.870	95.880	107.000	0.000	99.520
2	19:39:54	108.600	106.000	106.900	97.130	95.670	98.750	0.000	97.450
3	19:40:03	106.100	108.700	102.000	98.900	94.190	89.120	0.000	95.910
x		105.448%	106.217%	105.982%	97.967%	95.247%	98.300%	0.000	97.628%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		3.362	2.292	3.455	0.905	0.964	9.120	0.000	1.856
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:39:44	97.873%	97.110	100.100	92.617%	98.210	100.000	98.440	101.200
2	19:39:54	101.214%	101.400	102.800	92.738%	99.280	98.860	95.690	97.330
3	19:40:03	100.120%	100.500	103.200	93.191%	100.400	99.060	99.980	98.470
x		99.735%	99.672%	102.042%	92.849%	99.295%	99.321%	98.036%	98.984%
σ		1.703%	n/a	n/a	0.302%	n/a	n/a	n/a	n/a
%RSD		1.708	2.281	1.688	0.326	1.098	0.636	2.219	1.981
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:39:44	93.826%	102.100	100.800	96.590	107.600	101.200	94.789%	93.965%
2	19:39:54	96.494%	101.100	97.290	96.380	102.900	105.700	95.411%	94.321%
3	19:40:03	95.859%	99.750	99.900	98.310	105.100	103.700	95.674%	97.071%
x		95.393%	100.995%	99.334%	97.093%	105.190%	103.511%	95.291%	95.119%
σ		1.394%	n/a	n/a	n/a	n/a	n/a	0.454%	1.700%
%RSD		1.461	1.183	1.837	1.093	2.268	2.194	0.477	1.787
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:39:44	96.320	95.770	102.300	103.700	102.200	97.606%		
2	19:39:54	96.560	96.330	104.900	105.300	104.500	96.975%		
3	19:40:03	96.870	95.580	104.700	106.600	104.300	96.870%		
x		96.582%	95.896%	103.983%	105.203%	103.699%	97.150%		
σ		n/a	n/a	n/a	n/a	n/a	0.398%		
%RSD		0.287	0.407	1.376	1.364	1.225	0.410		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	96.454%	0.038	4.124	4.428	0.000	4.405	9.190	8.439
2	19:48:50	95.517%	0.062	4.009	4.530	0.000	5.204	9.670	9.081
3	19:49:00	95.934%	0.062	4.310	4.031	0.000	6.223	11.000	10.840
x		95.968%	0.054	4.148	4.329	0.000	5.277	9.952	9.453
σ		0.469%	0.014	0.152	0.264	0.000	0.911	0.935	1.243
%RSD		0.489	26.150	3.667	6.089	0.000	17.270	9.395	13.150
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	2.634	6.904	0.000	0.502	53.000	40.720	101.881%	0.019
2	19:48:50	2.737	5.464	0.000	-2.384	42.950	37.990	101.610%	0.084
3	19:49:00	2.877	4.425	0.000	2.630	33.150	40.040	100.755%	0.150
x		2.750	5.598	0.000	0.249	43.030	39.580	101.415%	0.084
σ		0.122	1.245	0.000	2.516	9.923	1.422	0.588%	0.065
%RSD		4.433	22.240	0.000	1010.000	23.060	3.592	0.580	77.610
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	0.242	0.075	0.089	23.930	17.750	0.012	0.482	0.244
2	19:48:50	0.001	0.046	0.100	20.650	15.940	0.076	0.395	0.251
3	19:49:00	0.227	0.089	0.129	20.360	16.100	0.034	0.317	0.265
x		0.157	0.070	0.106	21.650	16.600	0.041	0.398	0.253
σ		0.136	0.022	0.021	1.984	0.999	0.033	0.083	0.010
%RSD		86.430	31.150	19.460	9.164	6.019	80.490	20.770	4.083
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	0.213	2.175	1.916	0.062	-0.001	0.859	0.000	0.082
2	19:48:50	0.307	2.398	2.290	0.097	-0.120	-0.167	0.000	0.016
3	19:49:00	0.211	1.630	1.739	0.097	-0.120	0.310	0.000	0.079
x		0.244	2.067	1.981	0.085	-0.080	0.334	0.000	0.059
σ		0.055	0.395	0.281	0.020	0.069	0.514	0.000	0.037
%RSD		22.560	19.120	14.190	23.780	85.710	153.700	0.000	62.550
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	100.253%	0.551	0.360	98.102%	0.010	0.014	-0.000	0.049
2	19:48:50	103.945%	0.460	0.569	98.321%	0.020	0.013	0.030	0.012
3	19:49:00	103.285%	0.309	0.452	100.114%	0.024	0.013	-0.000	0.035
x		102.494%	0.440	0.460	98.846%	0.018	0.013	0.010	0.032
σ		1.969%	0.122	0.105	1.104%	0.007	0.000	0.017	0.019
%RSD		1.921	27.800	22.770	1.117	39.280	3.606	174.600	58.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	97.836%	0.587	0.488	0.430	0.080	0.117	100.428%	99.324%
2	19:48:50	100.067%	0.527	0.304	0.306	0.158	0.193	101.074%	102.273%
3	19:49:00	102.231%	0.601	0.442	0.368	0.078	0.113	103.058%	102.713%
x		100.044%	0.572	0.411	0.368	0.105	0.141	101.520%	101.436%
σ		2.198%	0.039	0.096	0.062	0.046	0.045	1.371%	1.843%
%RSD		2.197	6.871	23.340	16.870	43.480	31.700	1.350	1.817
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:48:41	0.076	0.061	0.491	0.564	0.541	98.861%		
2	19:48:50	0.056	0.046	0.675	0.528	0.572	100.351%		
3	19:49:00	0.021	0.048	0.591	0.512	0.525	100.954%		
x		0.051	0.052	0.586	0.535	0.546	100.055%		
σ		0.028	0.008	0.092	0.027	0.024	1.077%		
%RSD		54.790	15.940	15.740	5.010	4.406	1.077		

CRI 1630755 7/20/2015 7:54:42 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	19:53:45	103.112%	0.961	21.840	23.420	0.000	456.200	499.900	485.400
2	19:53:55	101.972%	1.139	23.450	24.570	0.000	465.800	507.500	499.400
3	19:54:04	103.751%	0.868	23.410	22.440	0.000	469.200	503.200	505.500
x		102.945%	98.937%	458.007%	469.600%	0.000	579.646%	503.522%	496.756%
σ		0.901%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.876	13.910	4.013	4.538	0.000	1.442	0.762	2.079
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:45	28.410	497.100	0.000	467.000	425.500	438.000	103.932%	4.932
2	19:53:55	29.000	510.300	0.000	477.300	407.100	456.200	103.128%	4.656
3	19:54:04	29.680	500.800	0.000	482.500	469.000	461.400	102.854%	4.574
x		96.756%	100.549%	0.000	475.574%	433.866%	451.853%	103.304%	94.414%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.560%	n/a
%RSD		2.191	1.356	0.000	1.656	7.323	2.711	0.542	3.978
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:45	0.817	1.805	4.453	45.740	60.080	0.604	1.070	2.008
2	19:53:55	0.872	1.766	4.565	49.610	55.880	0.526	0.949	2.249
3	19:54:04	1.058	1.896	4.592	47.610	55.350	0.506	1.016	2.332
x		91.555%	91.099%	90.737%	95.311%	114.204%	109.117%	101.155%	109.830%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		13.810	3.670	1.619	4.062	4.537	9.510	6.008	7.659
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:45	2.225	5.432	5.974	0.793	4.987	4.471	0.000	4.657
2	19:53:55	2.329	5.410	4.744	0.982	4.940	5.847	0.000	4.469
3	19:54:04	2.212	5.269	5.725	1.061	5.238	4.698	0.000	4.294
x		112.764%	107.404%	109.623%	94.514%	101.101%	100.109%	0.000	89.463%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.842	1.645	11.870	14.570	3.175	14.740	0.000	4.065
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:45	106.652%	4.823	4.581	100.920%	1.032	0.900	0.876	0.973
2	19:53:55	105.064%	4.934	4.611	101.137%	0.940	0.843	0.924	0.957
3	19:54:04	109.451%	4.142	4.694	101.953%	0.916	0.939	0.856	1.344
x		107.055%	92.655%	92.571%	101.337%	96.263%	89.430%	88.522%	109.135%
σ		2.221%	n/a	n/a	0.544%	n/a	n/a	n/a	n/a
%RSD		2.074	9.258	1.265	0.537	6.379	5.407	3.911	20.060
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:45	100.753%	4.941	2.495	2.422	8.703	8.184	96.363%	96.358%
2	19:53:55	102.470%	5.163	2.112	2.126	9.431	9.559	97.955%	97.902%
3	19:54:04	103.810%	4.301	2.117	2.028	7.904	10.850	99.161%	97.018%
x		102.344%	96.034%	112.072%	109.588%	86.794%	95.319%	97.826%	97.093%
σ		1.532%	n/a	n/a	n/a	n/a	n/a	1.403%	0.775%
%RSD		1.497	9.315	9.804	9.349	8.801	14.000	1.434	0.798
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:53:45	0.931	0.900	1.395	1.123	1.216	104.610%		
2	19:53:55	0.847	0.877	1.374	1.477	1.361	104.699%		
3	19:54:04	0.924	0.802	1.420	1.205	1.307	105.368%		
x		90.087%	85.965%	139.621%	126.866%	129.444%	104.892%		
σ		n/a	n/a	n/a	n/a	n/a	0.414%		
%RSD		5.159	5.943	1.661	14.590	5.673	0.395		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	97.689%	0.002	4.143	3.672	0.000	-21.040	-0.957	-0.875
2	20:04:09	97.382%	-0.010	3.921	3.581	0.000	-20.840	-1.071	-0.440
3	20:04:18	95.730%	-0.021	3.354	4.023	0.000	-20.740	-1.286	-0.886
x		96.934%	-0.010	3.806	3.758	0.000	-20.870	-1.105	-0.734
σ		1.054%	0.011	0.407	0.233	0.000	0.150	0.167	0.255
%RSD		1.087	115.700	10.690	6.209	0.000	0.721	15.150	34.700

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	-0.041	4.979	0.000	-18.990	23.190	3.513	103.888%	-0.015
2	20:04:09	0.114	1.539	0.000	-17.740	6.826	0.009	102.616%	-0.045
3	20:04:18	0.029	0.594	0.000	-15.670	1.892	0.897	101.973%	0.019
x		0.034	2.371	0.000	-17.470	10.640	1.473	102.826%	-0.014
σ		0.078	2.308	0.000	1.676	11.150	1.821	0.975%	0.032
%RSD		227.200	97.350	0.000	9.597	104.800	123.600	0.948	236.300

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	0.100	0.027	-0.039	3.729	0.360	-0.002	0.040	0.028
2	20:04:09	0.050	0.032	-0.018	3.891	5.175	0.005	0.199	-0.006
3	20:04:18	0.087	0.004	-0.002	3.900	6.833	0.012	0.041	0.049
x		0.079	0.021	-0.020	3.840	4.123	0.005	0.094	0.024
σ		0.026	0.015	0.019	0.096	3.362	0.007	0.092	0.028
%RSD		32.430	70.600	94.470	2.503	81.550	153.400	98.080	116.100

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	-0.030	0.220	0.126	0.042	-0.120	1.103	0.000	0.029
2	20:04:09	0.047	0.046	-0.028	0.041	-0.120	1.084	0.000	-0.008
3	20:04:18	0.086	0.175	0.376	-0.003	0.106	-0.411	0.000	0.016
x		0.034	0.147	0.158	0.026	-0.045	0.592	0.000	0.012
σ		0.059	0.090	0.204	0.026	0.131	0.869	0.000	0.019
%RSD		171.300	61.200	129.000	97.050	291.400	146.800	0.000	157.500

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	104.588%	0.065	-0.158	101.078%	-0.010	-0.016	0.029	-0.000
2	20:04:09	107.821%	0.041	-0.108	101.626%	-0.014	0.003	-0.000	0.057
3	20:04:18	107.754%	-0.032	-0.205	103.457%	-0.005	-0.007	-0.000	-0.000
x		106.721%	0.025	-0.157	102.054%	-0.010	-0.007	0.010	0.019
σ		1.848%	0.051	0.049	1.245%	0.005	0.010	0.017	0.033
%RSD		1.731	206.300	30.890	1.220	47.300	140.100	174.500	176.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	102.137%	0.487	0.037	0.089	0.000	0.039	98.867%	99.082%
2	20:04:09	103.499%	0.537	0.013	0.115	0.078	0.038	99.107%	100.556%
3	20:04:18	104.820%	0.400	0.100	0.044	0.000	0.038	100.669%	99.495%
x		103.485%	0.475	0.050	0.083	0.026	0.038	99.548%	99.711%
σ		1.342%	0.069	0.045	0.036	0.045	0.000	0.978%	0.760%
%RSD		1.297	14.590	90.160	43.670	173.200	1.110	0.983	0.763

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	0.031	0.016	0.365	0.300	0.271	100.595%
2	20:04:09	0.041	0.020	0.315	0.299	0.292	100.672%
3	20:04:18	0.022	0.033	0.251	0.276	0.299	99.403%
x		0.031	0.023	0.310	0.292	0.287	100.223%
σ		0.010	0.009	0.058	0.014	0.015	0.712%
%RSD		30.950	36.690	18.560	4.629	5.184	0.710

LCS 180-147544/2-A 7/20/2015 8:09:58 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	20:09:02	84.931%	47.860	978.000	981.300	0.000	46480.000	46340.000	46240.000
2	20:09:12	85.926%	47.070	990.400	999.300	0.000	48050.000	48020.000	47960.000
3	20:09:21	86.534%	49.190	1002.000	1006.000	0.000	48800.000	49210.000	49420.000
x		85.797%	48.040	990.000	995.400	0.000	47780.000	47860.000	47880.000
σ		0.809%	1.073	11.910	12.640	0.000	1183.000	1439.000	1589.000
%RSD		0.943	2.233	1.203	1.270	0.000	2.476	3.006	3.318
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	1858.000	9911.000	0.000	47890.000	46090.000	46440.000	92.557%	943.700
2	20:09:12	1917.000	10100.000	0.000	48920.000	48060.000	48110.000	91.621%	969.600
3	20:09:21	1959.000	10280.000	0.000	50260.000	48930.000	49090.000	90.419%	997.600
x		1911.000	10090.000	0.000	49020.000	47690.000	47880.000	91.532%	970.300
σ		50.770	182.300	0.000	1193.000	1453.000	1341.000	1.072%	26.940
%RSD		2.656	1.807	0.000	2.433	3.046	2.800	1.171	2.777
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	473.200	192.700	455.300	917.500	1096.000	499.300	493.100	257.700
2	20:09:12	481.800	194.900	472.000	948.700	1105.000	517.200	506.700	261.100
3	20:09:21	489.200	201.600	484.800	961.800	1151.000	515.000	490.200	252.700
x		481.400	196.400	470.700	942.700	1118.000	510.500	496.700	257.200
σ		8.014	4.627	14.780	22.740	29.600	9.770	8.816	4.258
%RSD		1.665	2.356	3.140	2.412	2.649	1.914	1.775	1.656
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	253.600	477.200	494.100	39.230	9.808	11.950	0.000	944.200
2	20:09:12	258.900	496.200	503.100	40.120	9.343	15.650	0.000	966.500
3	20:09:21	251.000	501.800	494.700	39.620	8.964	14.640	0.000	938.000
x		254.500	491.700	497.300	39.660	9.372	14.080	0.000	949.600
σ		4.038	12.890	5.037	0.448	0.423	1.908	0.000	14.970
%RSD		1.587	2.621	1.013	1.130	4.508	13.550	0.000	1.576
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	90.293%	1059.000	1069.000	84.691%	49.650	49.870	48.150	81.020
2	20:09:12	89.767%	1085.000	1104.000	84.887%	49.780	49.610	49.520	82.880
3	20:09:21	93.440%	1074.000	1100.000	85.660%	48.440	49.280	47.960	79.600
x		91.166%	1072.000	1091.000	85.079%	49.290	49.590	48.550	81.170
σ		1.986%	12.930	19.270	0.512%	0.738	0.293	0.848	1.643
%RSD		2.179	1.206	1.767	0.602	1.496	0.591	1.747	2.024
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	85.273%	1948.000	494.100	491.900	1940.000	1916.000	89.668%	88.812%
2	20:09:12	84.779%	1978.000	511.500	513.800	1968.000	1936.000	90.357%	89.748%
3	20:09:21	87.235%	1955.000	493.900	497.500	1935.000	1961.000	89.255%	91.107%
x		85.762%	1961.000	499.800	501.100	1948.000	1938.000	89.760%	89.889%
σ		1.299%	15.910	10.120	11.360	17.440	22.890	0.557%	1.154%
%RSD		1.515	0.811	2.025	2.268	0.895	1.181	0.620	1.284
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:09:02	52.370	52.350	22.540	22.350	22.170	82.711%		
2	20:09:12	51.440	51.310	21.750	22.780	22.090	84.659%		
3	20:09:21	51.550	51.420	22.260	22.590	22.130	85.570%		
x		51.780	51.690	22.180	22.570	22.130	84.313%		
σ		0.509	0.573	0.399	0.219	0.039	1.461%		
%RSD		0.982	1.109	1.799	0.969	0.174	1.732		

LCSD 180-147544/3-A 7/20/2015 8:15:04 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	20:14:07	82.501%	48.150	1026.000	1017.000	0.000	46780.000	46620.000	46710.000
2	20:14:16	83.148%	48.380	1020.000	1014.000	0.000	47990.000	47830.000	47830.000
3	20:14:26	84.214%	47.900	982.500	1008.000	0.000	48820.000	49280.000	49150.000
x		83.287%	48.150	1009.000	1013.000	0.000	47860.000	47910.000	47900.000
σ		0.865%	0.240	23.320	4.474	0.000	1028.000	1332.000	1222.000
%RSD		1.038	0.498	2.311	0.442	0.000	2.148	2.781	2.551
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:14:07	1857.000	9971.000	0.000	47420.000	46180.000	45980.000	92.065%	927.300
2	20:14:16	1899.000	10090.000	0.000	48760.000	47870.000	47540.000	90.383%	950.200
3	20:14:26	1952.000	10290.000	0.000	49200.000	49010.000	48740.000	89.882%	982.100
x		1903.000	10120.000	0.000	48460.000	47690.000	47420.000	90.777%	953.200
σ		47.880	161.700	0.000	928.500	1421.000	1381.000	1.143%	27.530
%RSD		2.516	1.598	0.000	1.916	2.980	2.913	1.259	2.888
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:14:07	470.800	197.500	449.800	932.700	1081.000	510.000	485.100	246.500
2	20:14:16	487.400	201.000	468.700	937.300	1111.000	496.200	487.600	246.100
3	20:14:26	493.200	197.500	478.800	908.100	1044.000	498.800	481.000	249.400
x		483.800	198.700	465.800	926.000	1078.000	501.600	484.600	247.300
σ		11.590	2.033	14.690	15.700	33.370	7.305	3.330	1.810
%RSD		2.396	1.023	3.154	1.695	3.094	1.456	0.687	0.732
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:14:07	245.800	495.300	503.500	40.180	10.440	12.810	0.000	951.000
2	20:14:16	247.900	499.800	492.400	37.870	8.960	9.064	0.000	935.000
3	20:14:26	245.500	511.000	503.800	37.800	8.190	6.316	0.000	927.000
x		246.400	502.100	499.900	38.620	9.198	9.396	0.000	937.700
σ		1.352	8.087	6.451	1.354	1.146	3.259	0.000	12.250
%RSD		0.549	1.611	1.291	3.506	12.460	34.680	0.000	1.306
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:14:07	87.747%	1071.000	1094.000	83.373%	47.770	49.020	49.830	80.870
2	20:14:16	91.720%	1067.000	1084.000	84.811%	47.740	47.660	47.820	83.120
3	20:14:26	93.565%	1049.000	1081.000	84.824%	47.470	47.780	46.810	82.680
x		91.011%	1062.000	1086.000	84.336%	47.660	48.150	48.150	82.220
σ		2.973%	11.870	6.549	0.834%	0.166	0.755	1.541	1.193
%RSD		3.267	1.118	0.603	0.989	0.347	1.568	3.199	1.451
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:14:07	84.559%	1929.000	490.800	487.800	1919.000	1892.000	91.117%	89.203%
2	20:14:16	83.797%	1985.000	498.300	501.500	1959.000	1930.000	90.664%	90.592%
3	20:14:26	86.334%	1936.000	492.500	488.300	1920.000	1896.000	92.446%	92.026%
x		84.896%	1950.000	493.900	492.500	1932.000	1906.000	91.409%	90.607%
σ		1.302%	30.580	3.927	7.737	23.040	21.220	0.926%	1.411%
%RSD		1.533	1.568	0.795	1.571	1.192	1.113	1.013	1.558
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:14:07	50.960	51.380	20.720	21.880	21.460	85.371%		
2	20:14:16	50.850	50.740	20.420	21.790	21.570	85.733%		
3	20:14:26	51.060	51.610	21.530	21.870	21.250	86.249%		
x		50.960	51.240	20.890	21.850	21.430	85.784%		
σ		0.106	0.451	0.578	0.048	0.165	0.441%		
%RSD		0.209	0.881	2.764	0.221	0.771	0.514		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:13	82.851%	0.096	18.390	18.310	0.000	25470.000	12750.000	12740.000
2	20:19:22	80.629%	0.086	17.000	17.960	0.000	26250.000	13400.000	13550.000
3	20:19:32	83.573%	-0.000	20.720	17.700	0.000	26670.000	13570.000	13730.000
x		82.351%	0.061	18.700	17.990	0.000	26130.000	13240.000	13340.000
σ		1.534%	0.053	1.878	0.305	0.000	607.100	433.400	528.400
%RSD		1.863	87.240	10.040	1.696	0.000	2.323	3.274	3.962
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:13	11.310	5856.000	0.000	3749.000	24460.000	24040.000	92.752%	1.610
2	20:19:22	12.060	6303.000	0.000	3898.000	25940.000	25310.000	89.641%	1.815
3	20:19:32	12.190	6332.000	0.000	3965.000	26320.000	26010.000	89.856%	2.064
x		11.860	6164.000	0.000	3871.000	25570.000	25120.000	90.750%	1.830
σ		0.473	266.400	0.000	110.400	979.400	997.900	1.738%	0.227
%RSD		3.991	4.322	0.000	2.852	3.830	3.973	1.915	12.420
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:13	3.904	1.111	65.410	40.570	105.400	0.293	2.149	0.915
2	20:19:22	4.162	0.971	68.800	41.670	107.700	0.366	1.560	0.740
3	20:19:32	3.655	0.992	69.750	39.660	133.800	0.258	1.917	0.808
x		3.907	1.025	67.980	40.630	115.600	0.306	1.875	0.821
σ		0.254	0.075	2.280	1.009	15.800	0.055	0.297	0.089
%RSD		6.487	7.353	3.354	2.482	13.670	18.150	15.830	10.780
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:13	1.136	8.356	7.228	0.348	0.279	-0.239	0.000	193.300
2	20:19:22	1.055	8.373	8.578	0.419	0.287	-0.182	0.000	198.000
3	20:19:32	0.818	9.082	9.661	0.257	-0.120	-1.340	0.000	193.100
x		1.003	8.604	8.489	0.342	0.149	-0.587	0.000	194.800
σ		0.166	0.414	1.219	0.081	0.233	0.653	0.000	2.779
%RSD		16.510	4.812	14.360	23.760	156.700	111.200	0.000	1.426
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:13	89.508%	8.712	10.210	83.658%	0.009	-0.011	0.210	0.353
2	20:19:22	88.123%	8.783	7.647	84.256%	-0.014	-0.011	0.241	0.290
3	20:19:32	89.775%	6.824	6.431	83.371%	-0.009	0.013	0.070	0.211
x		89.135%	8.106	8.095	83.762%	-0.005	-0.003	0.174	0.285
σ		0.887%	1.111	1.927	0.452%	0.012	0.014	0.091	0.071
%RSD		0.995	13.710	23.810	0.539	244.000	485.800	52.590	25.040
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:13	84.216%	5.676	-0.006	0.049	165.300	159.500	85.918%	88.012%
2	20:19:22	86.286%	4.593	0.046	0.164	162.300	163.900	86.358%	87.651%
3	20:19:32	85.039%	3.915	0.047	0.098	162.100	166.300	88.171%	88.517%
x		85.181%	4.728	0.029	0.104	163.200	163.200	86.816%	88.060%
σ		1.042%	0.889	0.030	0.057	1.758	3.425	1.194%	0.435%
%RSD		1.224	18.790	104.600	55.410	1.077	2.099	1.375	0.494
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:19:13	0.126	0.108	0.592	0.779	0.632	82.987%		
2	20:19:22	0.120	0.098	0.783	0.582	0.703	83.341%		
3	20:19:32	0.096	0.114	0.735	0.555	0.594	83.732%		
x		0.114	0.107	0.703	0.638	0.643	83.353%		
σ		0.016	0.008	0.100	0.122	0.055	0.373%		
%RSD		14.010	7.566	14.150	19.150	8.618	0.447		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:19	81.278%	0.002	29.480	28.260	0.000	29790.000	10240.000	10210.000
2	20:24:28	80.397%	-0.026	28.750	29.320	0.000	30840.000	10650.000	10680.000
3	20:24:38	81.100%	-0.012	28.210	26.470	0.000	31270.000	10990.000	10960.000
x		80.925%	-0.012	28.810	28.020	0.000	30630.000	10630.000	10620.000
σ		0.466%	0.014	0.635	1.441	0.000	756.300	376.200	374.300
%RSD		0.576	114.000	2.203	5.144	0.000	2.469	3.539	3.526
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:19	6.614	8305.000	0.000	1078.000	9062.000	8878.000	92.614%	1.227
2	20:24:28	7.371	8546.000	0.000	1132.000	9629.000	9336.000	90.405%	1.079
3	20:24:38	6.759	8678.000	0.000	1154.000	9805.000	9512.000	88.729%	0.918
x		6.915	8510.000	0.000	1121.000	9499.000	9242.000	90.583%	1.075
σ		0.402	189.300	0.000	39.260	388.000	327.200	1.949%	0.154
%RSD		5.813	2.224	0.000	3.501	4.085	3.541	2.151	14.350
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:19	3.226	2.329	13.580	4.698	42.730	0.037	1.210	1.668
2	20:24:28	3.527	2.232	14.340	3.988	27.800	0.078	1.075	1.525
3	20:24:38	4.452	2.298	14.730	4.697	48.720	0.087	1.304	1.490
x		3.735	2.286	14.220	4.461	39.750	0.068	1.197	1.561
σ		0.639	0.049	0.586	0.409	10.770	0.027	0.115	0.094
%RSD		17.110	2.163	4.124	9.178	27.100	39.360	9.632	6.040
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:19	1.600	4.921	4.537	0.388	0.410	1.837	0.000	87.540
2	20:24:28	1.863	5.509	5.877	0.410	0.278	3.358	0.000	87.620
3	20:24:38	1.495	5.054	5.327	0.452	0.278	0.679	0.000	87.890
x		1.653	5.161	5.247	0.417	0.322	1.958	0.000	87.680
σ		0.190	0.309	0.673	0.033	0.076	1.343	0.000	0.184
%RSD		11.480	5.977	12.830	7.804	23.740	68.620	0.000	0.210
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:19	89.992%	2.060	1.962	82.550%	0.009	-0.005	0.140	0.113
2	20:24:28	90.668%	1.703	1.728	84.640%	-0.003	-0.005	0.206	0.070
3	20:24:38	91.177%	1.335	1.296	84.547%	-0.003	-0.011	0.068	0.083
x		90.613%	1.699	1.662	83.913%	0.001	-0.007	0.138	0.089
σ		0.595%	0.362	0.338	1.181%	0.007	0.003	0.069	0.022
%RSD		0.656	21.320	20.350	1.407	904.900	50.500	49.890	24.860
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:19	85.111%	1.775	0.087	0.098	40.290	43.730	89.082%	89.401%
2	20:24:28	86.466%	1.729	0.125	0.112	41.140	39.320	89.873%	89.691%
3	20:24:38	87.236%	1.473	0.096	0.062	37.800	39.770	91.264%	91.639%
x		86.271%	1.659	0.103	0.091	39.740	40.940	90.073%	90.244%
σ		1.076%	0.163	0.019	0.026	1.736	2.429	1.105%	1.217%
%RSD		1.247	9.807	18.960	28.860	4.369	5.932	1.226	1.349
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:24:19	0.048	0.030	0.586	0.472	0.521	87.040%		
2	20:24:28	0.019	0.025	0.419	0.452	0.439	87.796%		
3	20:24:38	0.030	0.038	0.579	0.468	0.511	89.167%		
x		0.032	0.031	0.528	0.464	0.490	88.001%		
σ		0.014	0.006	0.095	0.010	0.045	1.078%		
%RSD		44.620	20.940	17.960	2.208	9.129	1.225		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:29:25	78.448%	0.004	16.410	18.970	0.000	-13.340	0.470	-0.049
2	20:29:35	80.524%	0.016	17.120	17.420	0.000	-13.680	0.351	0.515
3	20:29:44	80.099%	0.116	16.640	18.210	0.000	-13.120	0.789	0.258
x		79.690%	0.045	16.720	18.200	0.000	-13.380	0.537	0.241
σ		1.097%	0.061	0.363	0.777	0.000	0.281	0.227	0.283
%RSD		1.377	134.600	2.170	4.270	0.000	2.099	42.220	117.100
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:29:25	3.008	16.240	0.000	-25.720	14.360	20.550	95.305%	0.301
2	20:29:35	2.791	10.020	0.000	-20.310	11.550	21.390	92.830%	-0.003
3	20:29:44	2.686	10.620	0.000	-16.800	30.950	20.040	91.534%	0.247
x		2.828	12.290	0.000	-20.940	18.950	20.660	93.223%	0.182
σ		0.165	3.431	0.000	4.495	10.480	0.685	1.916%	0.163
%RSD		5.815	27.910	0.000	21.460	55.320	3.314	2.055	89.500
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:29:25	3.041	0.816	0.238	4.585	7.073	0.029	0.265	0.263
2	20:29:35	2.892	0.685	0.163	4.579	8.191	0.045	0.512	0.183
3	20:29:44	3.131	0.784	0.173	5.653	7.452	0.038	0.033	0.311
x		3.021	0.762	0.191	4.939	7.572	0.037	0.270	0.252
σ		0.121	0.068	0.041	0.619	0.569	0.008	0.239	0.065
%RSD		4.003	8.940	21.210	12.520	7.513	22.080	88.720	25.770
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:29:25	0.414	3.765	2.612	0.118	0.010	3.022	0.000	0.034
2	20:29:35	0.421	3.283	3.450	0.068	-0.120	-0.835	0.000	0.091
3	20:29:44	0.384	3.380	3.500	0.069	-0.120	1.228	0.000	0.063
x		0.406	3.476	3.187	0.085	-0.077	1.139	0.000	0.063
σ		0.020	0.255	0.499	0.029	0.075	1.930	0.000	0.028
%RSD		4.894	7.336	15.650	33.630	98.290	169.500	0.000	45.140
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:29:25	90.994%	0.510	0.291	88.172%	-0.004	0.017	-0.000	0.002
2	20:29:35	91.127%	0.381	0.359	89.144%	-0.014	0.011	-0.000	0.001
3	20:29:44	89.942%	0.216	0.361	89.451%	-0.004	-0.011	-0.000	0.028
x		90.688%	0.369	0.337	88.922%	-0.007	0.006	-0.000	0.010
σ		0.649%	0.147	0.040	0.667%	0.006	0.015	0.000	0.015
%RSD		0.716	39.920	11.870	0.751	86.120	256.400	66.650	147.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:29:25	88.480%	0.713	0.055	0.093	0.179	0.087	88.935%	89.528%
2	20:29:35	89.526%	0.871	0.041	0.044	0.089	0.131	88.557%	90.425%
3	20:29:44	90.269%	0.796	0.040	0.059	0.177	0.172	89.766%	90.627%
x		89.425%	0.793	0.046	0.065	0.149	0.130	89.086%	90.194%
σ		0.899%	0.079	0.009	0.025	0.051	0.042	0.618%	0.585%
%RSD		1.005	9.977	18.900	38.990	34.520	32.620	0.694	0.649
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:29:25	0.014	0.014	0.453	0.389	0.454	86.510%		
2	20:29:35	0.002	0.007	0.480	0.419	0.457	86.816%		
3	20:29:44	0.025	0.014	0.470	0.331	0.396	87.343%		
x		0.014	0.012	0.468	0.380	0.436	86.890%		
σ		0.011	0.004	0.014	0.044	0.035	0.421%		
%RSD		82.150	34.120	2.896	11.710	7.985	0.485		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:33	85.278%	0.051	6.369	5.868	0.000	-20.660	-0.541	-0.747
2	20:34:42	85.189%	-0.028	5.110	5.735	0.000	-20.700	-0.097	-0.490
3	20:34:52	86.482%	-0.002	5.381	5.446	0.000	-20.600	-0.777	0.519
x		85.650%	0.007	5.620	5.683	0.000	-20.650	-0.472	-0.239
σ		0.722%	0.041	0.663	0.216	0.000	0.052	0.345	0.669
%RSD		0.843	580.300	11.800	3.794	0.000	0.254	73.140	279.500
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:33	0.430	9.706	0.000	-29.660	8.105	4.848	97.983%	0.057
2	20:34:42	0.733	7.008	0.000	-28.600	10.190	5.164	96.958%	0.093
3	20:34:52	0.672	4.353	0.000	-25.480	16.130	7.814	95.443%	0.164
x		0.612	7.023	0.000	-27.910	11.480	5.942	96.795%	0.105
σ		0.160	2.677	0.000	2.171	4.164	1.628	1.278%	0.054
%RSD		26.210	38.110	0.000	7.778	36.280	27.410	1.320	51.880
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:33	0.399	0.152	0.054	1.557	5.038	0.028	-0.062	0.158
2	20:34:42	0.812	0.172	0.013	1.929	3.265	0.020	0.051	0.108
3	20:34:52	-0.008	0.175	0.034	2.136	-0.091	0.013	-0.033	0.182
x		0.401	0.166	0.034	1.874	2.737	0.020	-0.014	0.149
σ		0.410	0.012	0.021	0.294	2.605	0.008	0.059	0.038
%RSD		102.300	7.434	61.380	15.660	95.170	37.130	410.500	25.510
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:33	0.062	0.584	1.228	0.056	-0.120	0.603	0.000	-0.008
2	20:34:42	0.079	1.072	0.475	0.026	-0.120	-0.757	0.000	-0.008
3	20:34:52	0.146	0.815	0.652	0.016	-0.120	-0.776	0.000	-0.008
x		0.096	0.823	0.785	0.033	-0.120	-0.310	0.000	-0.008
σ		0.044	0.244	0.394	0.021	0.000	0.791	0.000	0.000
%RSD		46.510	29.660	50.140	63.810	0.000	255.100	0.000	0.000
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:33	93.406%	0.099	-0.090	92.327%	-0.009	-0.006	0.031	0.013
2	20:34:42	98.249%	0.285	-0.026	92.977%	-0.014	-0.011	0.031	0.001
3	20:34:52	96.487%	0.030	0.053	94.437%	-0.014	-0.001	-0.000	-0.012
x		96.047%	0.138	-0.021	93.247%	-0.013	-0.006	0.021	0.001
σ		2.451%	0.132	0.072	1.080%	0.003	0.005	0.018	0.013
%RSD		2.552	95.540	343.800	1.159	23.500	87.230	86.840	1547.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:33	93.872%	0.363	0.023	-0.022	0.169	0.000	94.269%	93.899%
2	20:34:42	94.176%	0.425	-0.051	0.023	0.000	0.000	94.940%	95.835%
3	20:34:52	94.893%	0.374	0.009	0.023	0.084	0.041	94.482%	95.298%
x		94.314%	0.387	-0.006	0.008	0.084	0.014	94.564%	95.010%
σ		0.524%	0.033	0.039	0.026	0.085	0.024	0.343%	0.999%
%RSD		0.556	8.511	611.100	329.200	100.200	173.200	0.363	1.052
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:34:33	0.007	-0.001	0.300	0.222	0.245	93.426%		
2	20:34:42	0.012	-0.005	0.256	0.276	0.247	94.828%		
3	20:34:52	0.007	0.003	0.352	0.266	0.276	95.699%		
x		0.009	-0.001	0.303	0.255	0.256	94.651%		
σ		0.003	0.004	0.048	0.028	0.017	1.147%		
%RSD		33.480	542.600	15.790	11.160	6.742	1.212		

CCV 1630756 7/20/2015 8:40:33 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	20:39:38	88.008%	106.800	108.000	112.900	0.000	47720.000	48730.000	48540.000
2	20:39:47	89.839%	105.700	108.300	115.800	0.000	49670.000	50640.000	49910.000
3	20:39:56	89.930%	106.900	114.200	113.400	0.000	50560.000	51840.000	51240.000
x		89.259%	106.477%	110.163%	114.019%	0.000	98.630%	100.810%	99.796%
σ		1.085%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.215	0.640	3.187	1.347	0.000	2.945	3.110	2.703

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:38	475.800	5510.000	0.000	48310.000	45850.000	45950.000	102.905%	94.160
2	20:39:47	492.900	5581.000	0.000	49870.000	47700.000	47960.000	101.246%	97.630
3	20:39:56	508.500	5551.000	0.000	50780.000	49370.000	49420.000	99.009%	100.400
x		98.480%	110.947%	0.000	99.306%	95.276%	95.555%	101.054%	97.406%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.955%	n/a
%RSD		3.325	0.648	0.000	2.517	3.692	3.646	1.935	3.228

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:38	97.400	100.300	455.900	26060.000	25240.000	102.200	101.400	98.830
2	20:39:47	99.340	100.900	476.100	26400.000	25780.000	105.400	104.500	104.500
3	20:39:56	105.100	104.200	486.300	26360.000	25560.000	103.100	102.500	101.300
x		100.604%	101.796%	94.562%	105.103%	102.113%	103.559%	102.812%	101.562%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.970	2.073	3.272	0.703	1.073	1.590	1.488	2.801

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:38	101.900	102.500	98.420	96.930	94.010	93.450	0.000	99.710
2	20:39:47	101.300	105.100	104.100	99.760	97.270	100.100	0.000	99.550
3	20:39:56	103.900	104.100	102.500	98.350	103.200	86.530	0.000	94.850
x		102.400%	103.931%	101.700%	98.348%	98.161%	93.374%	0.000	98.035%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.323	1.254	2.902	1.435	4.755	7.292	0.000	2.814

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:38	100.804%	101.400	98.720	93.734%	98.870	99.810	97.330	96.590
2	20:39:47	102.258%	98.640	101.400	95.019%	98.420	98.140	97.030	98.130
3	20:39:56	106.652%	100.500	100.300	95.245%	98.520	98.920	95.670	99.050
x		103.238%	100.180%	100.170%	94.666%	98.604%	98.960%	96.679%	97.921%
σ		3.044%	n/a	n/a	0.815%	n/a	n/a	n/a	n/a
%RSD		2.949	1.397	1.362	0.861	0.238	0.843	0.913	1.268

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:38	95.920%	97.980	99.750	99.190	107.200	102.100	96.274%	96.182%
2	20:39:47	99.172%	98.320	98.350	97.190	95.670	102.800	96.741%	98.254%
3	20:39:56	99.862%	101.000	101.200	99.520	97.880	99.310	98.000%	98.734%
x		98.318%	99.090%	99.757%	98.632%	100.265%	101.402%	97.005%	97.723%
σ		2.106%	n/a	n/a	n/a	n/a	n/a	0.893%	1.356%
%RSD		2.142	1.648	1.415	1.273	6.127	1.816	0.920	1.388

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:38	103.000	104.300	106.400	108.800	107.700	91.073%
2	20:39:47	104.800	103.700	107.500	107.100	107.000	91.145%
3	20:39:56	104.800	105.300	108.400	110.100	108.400	90.484%
x		104.207%	104.427%	107.416%	108.658%	107.701%	90.901%
σ		n/a	n/a	n/a	n/a	n/a	0.363%
%RSD		1.006	0.763	0.923	1.410	0.645	0.399

CCB7 7/20/2015 8:49:30 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

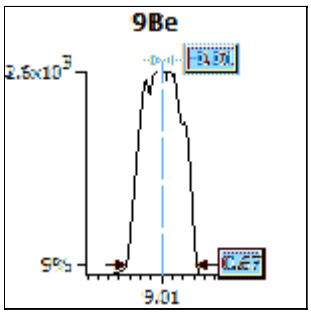
Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:34	95.529%	0.062	2.636	3.731	0.000	8.075	13.410	13.080
2	20:48:43	91.495%	0.043	4.127	4.009	0.000	8.796	12.930	11.060
3	20:48:53	98.673%	0.070	2.924	3.218	0.000	9.702	13.030	12.370
x		95.232%	0.058	3.229	3.653	0.000	8.858	13.120	12.170
σ		3.598%	0.014	0.791	0.401	0.000	0.815	0.249	1.021
%RSD		3.778	23.210	24.490	10.990	0.000	9.205	1.894	8.393
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:34	4.184	7.823	0.000	-3.046	55.160	52.280	103.563%	0.080
2	20:48:43	4.332	4.295	0.000	-0.473	39.490	43.700	101.692%	0.339
3	20:48:53	4.295	1.322	0.000	0.750	80.190	50.690	101.938%	-0.013
x		4.270	4.480	0.000	-0.923	58.280	48.890	102.398%	0.136
σ		0.077	3.254	0.000	1.937	20.530	4.564	1.017%	0.183
%RSD		1.801	72.650	0.000	209.900	35.230	9.335	0.993	134.700
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:34	0.045	0.109	0.213	28.820	39.610	0.089	0.546	0.526
2	20:48:43	0.048	0.051	0.255	28.890	21.640	0.033	0.178	0.482
3	20:48:53	0.030	0.111	0.207	26.990	22.390	0.055	0.340	0.745
x		0.041	0.090	0.225	28.230	27.880	0.059	0.355	0.585
σ		0.010	0.034	0.026	1.077	10.170	0.028	0.184	0.141
%RSD		23.760	37.890	11.630	3.814	36.470	47.590	51.930	24.090
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:34	0.494	2.696	3.057	0.095	0.223	0.310	0.000	0.053
2	20:48:43	0.386	2.919	2.461	0.060	-0.004	-0.434	0.000	0.054
3	20:48:53	0.602	2.566	2.643	0.078	0.112	0.310	0.000	0.054
x		0.494	2.727	2.720	0.078	0.111	0.062	0.000	0.053
σ		0.108	0.179	0.305	0.017	0.114	0.429	0.000	0.001
%RSD		21.830	6.550	11.230	22.280	102.900	694.500	0.000	0.954
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:34	105.449%	0.708	0.525	99.410%	0.014	0.013	-0.000	0.012
2	20:48:43	103.878%	0.581	0.650	101.001%	-0.000	0.008	0.029	0.023
3	20:48:53	104.054%	0.597	0.572	101.410%	0.037	0.022	-0.000	0.034
x		104.460%	0.628	0.582	100.607%	0.017	0.014	0.010	0.023
σ		0.861%	0.069	0.063	1.057%	0.019	0.007	0.017	0.011
%RSD		0.824	11.020	10.820	1.050	110.200	50.050	175.200	48.940
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:34	101.434%	0.652	0.289	0.303	0.475	0.309	99.450%	99.596%
2	20:48:43	101.664%	0.738	0.378	0.386	0.235	0.268	101.042%	100.631%
3	20:48:53	103.546%	0.492	0.437	0.365	0.464	0.189	101.959%	101.621%
x		102.215%	0.628	0.368	0.351	0.391	0.255	100.817%	100.616%
σ		1.159%	0.125	0.075	0.043	0.135	0.061	1.270%	1.012%
%RSD		1.134	19.890	20.320	12.320	34.550	23.940	1.259	1.006
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:48:34	0.082	0.058	0.978	0.907	0.951	110.903%		
2	20:48:43	0.055	0.053	1.188	0.978	1.015	111.857%		
3	20:48:53	0.050	0.056	1.015	1.064	0.998	113.048%		
x		0.062	0.056	1.060	0.983	0.988	111.936%		
σ		0.018	0.002	0.112	0.078	0.033	1.074%		
%RSD		28.140	3.845	10.590	7.965	3.379	0.960		

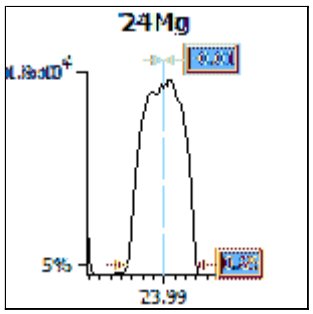
Performance Report

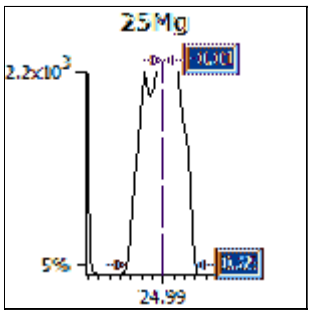
Sample details
Sample name : ITUNE
Acquired at : 7/20/2015 7:03:12 AM
Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

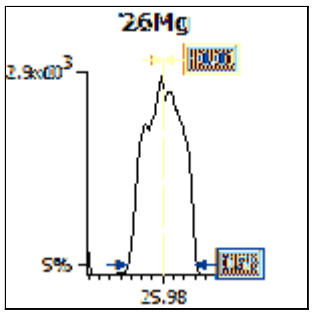
Mass Calibration verification

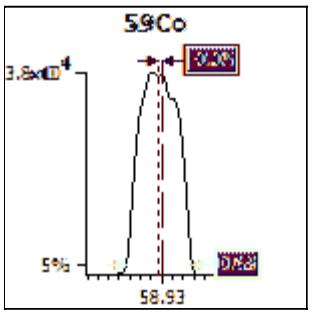
Acquisition parameters
Sweeps : 50
Dwell : 1.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 5% of the peak maximum

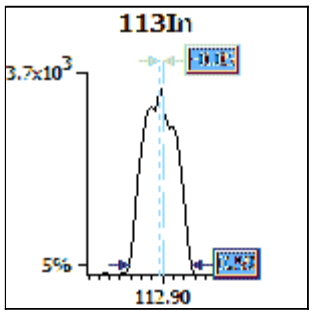


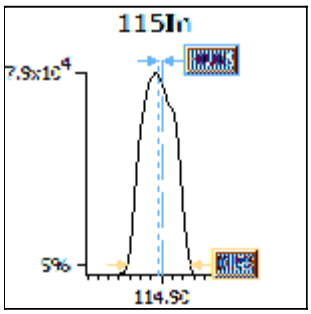


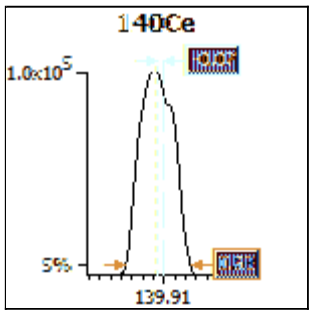


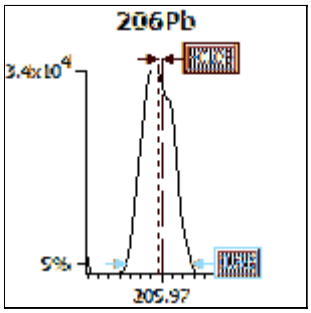


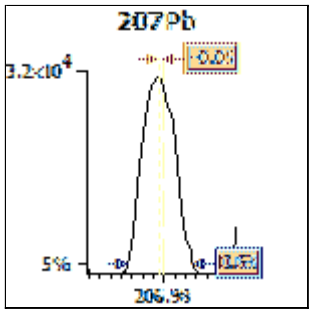


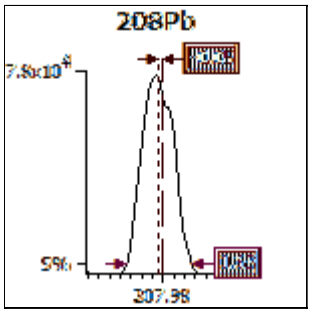












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.90	0.40	0.10	0.67	-0.01
24Mg	0.90	0.40	0.10	0.65	-0.01
25Mg	0.90	0.40	0.10	0.65	-0.01
26Mg	0.90	0.40	0.10	0.65	-0.01
59Co	0.90	0.40	0.10	0.63	-0.05
113In	0.90	0.40	0.10	0.59	-0.05
115In	0.90	0.40	0.10	0.59	-0.05
140Ce	0.90	0.40	0.10	0.63	-0.07
206Pb	0.90	0.40	0.10	0.63	-0.05
207Pb	0.90	0.40	0.10	0.63	-0.05
208Pb	0.90	0.40	0.10	0.63	-0.05

Sample details
Sample name : ITUNE
Acquired at : 7/20/2015 7:03:12 AM
Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

Tune conditions

Major	
Extraction	-173
Lens 1	2.0
Focus	24.7
D1	-28.2
Pole Bias	-0.0
Hexapole Bias	-3.4
Nebuliser	0.82
Sampling Depth	200

Minor	
Lens 2	-36.9
Lens 3	-184.3
Forward power	1404
Horizontal	13
Vertical	386
D2	-121
DA	-80.0
Cool	14.0
Auxiliary	0.80

Global	
Standard resolution	n/a
High resolution	n/a
Analogue Detector	n/a
PC Detector	n/a

Add. Gases	
CCT1	0.00
CCT2	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 180

Run	Time	5Bkg	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	7:03:59 AM	0	2447	16926	2156	2625	37201	3320	74267
2	7:05:12 AM	0	2350	16966	2216	2610	37426	3283	74616
3	7:06:24 AM	0	2263	17240	2253	2567	37278	3325	74142
4	7:07:36 AM	0	2238	16780	2261	2529	37201	3414	74533
5	7:08:48 AM	0	2175	17027	2209	2597	37174	3324	74869
x		0	2295	16988	2219	2586	37256	3333	74485
σ		0.11	105.67	167.80	41.79	38.40	102.61	48.22	288.04
%RSD		66.667	4.605	0.988	1.883	1.485	0.275	1.447	0.387

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	7:03:59 AM	89031	1138	31172	27986	68689	0
2	7:05:12 AM	90140	1179	31234	28352	68689	0
3	7:06:24 AM	89319	1157	31117	28092	67930	0
4	7:07:36 AM	90236	1186	32099	28516	69160	0
5	7:08:48 AM	90557	1177	32270	29048	69782	0
x		89857	1168	31578	28399	68850	0
σ		648.91	19.59	558.15	418.70	682.28	0.05
%RSD		0.722	1.678	1.768	1.474	0.991	149.071

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0600
1	7:03:59 AM	0
2	7:05:12 AM	0
3	7:06:24 AM	0
4	7:07:36 AM	0
5	7:08:48 AM	0
x		0.0130
σ		0.00
%RSD		1.0547

Result : The performance report passed.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Batch Number: 148049 Batch Start Date: 07/17/15 10:45 Batch Analyst: Hartsock, Bobbi M

Batch Method: 3005A Batch End Date: 07/17/15 14:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAPITTICPMS 00022	MTAPITTMSA 00024	MTAPITTMSC 00030	
MB 180-148049/1		3005A, 6020A		50 mL	50 mL				
LCS 180-148049/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-45946-B-1	HD-COD-SW-6-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-2	HD-COD-SW-7-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-3	HD-COD-SW-8-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-4	HD-COD-SW-9-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-5	HD-COD-SW-10-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-6	HD-COD-SW-11-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-7	HD-COD-SW-12-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-8	HD-COD-SW-13-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-9	HD-COD-SW-15-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-11	HD-COD-SW-16-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-12	HD-COD-SW-17-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-12 MS	HD-COD-SW-17-0/1-0	3005A, 6020A	T	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-45946-B-12 MSD	HD-COD-SW-17-0/1-0	3005A, 6020A	T	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-45946-B-13	HD-COD-SW-20-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-14	HD-COD-SW-26-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-15	HD-COD-SW-27-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-16	HD-COD-SW-28-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-17	HD-COD-SW-29-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-45946-B-18	HD-QC1-0/1-1	3005A, 6020A	T	50 mL	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.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Batch Number: 148049 Batch Start Date: 07/17/15 10:45 Batch Analyst: Hartsock, Bobbi M

Batch Method: 3005A Batch End Date: 07/17/15 14:45

Batch Notes	
Batch Comment	Metals B5
First End time	14:45
Lot # of hydrochloric acid	2.5 ml 1634921
Lot # of Nitric Acid	1.0 ml 1634846
Hot Block ID number	#1
Oven, Bath or Block Temperature 1	95
Pipette ID	L1201611U
Person who witnessed spiking	AB
First Start time	10:45
ID number of the thermometer	IP1-14 CF=0.0 H3
Digestion Tube/Cup Lot #	1501179
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.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-45946-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-COD-SW-6-0/1-0	180-45946-1
HD-COD-SW-7-0/1-0	180-45946-2
HD-COD-SW-8-0/1-0	180-45946-3
HD-COD-SW-9-0/1-0	180-45946-4
HD-COD-SW-10-0/1-0	180-45946-5
HD-COD-SW-11-0/1-0	180-45946-6
HD-COD-SW-12-0/1-0	180-45946-7
HD-COD-SW-13-0/1-0	180-45946-8
HD-COD-SW-15-0/1-0	180-45946-9
HD-COD-SW-16-0/1-0	180-45946-11
HD-COD-SW-17-0/1-0	180-45946-12
HD-COD-SW-20-0/1-0	180-45946-13
HD-COD-SW-26-0/1-0	180-45946-14
HD-COD-SW-27-0/1-0	180-45946-15
HD-COD-SW-28-0/1-0	180-45946-16
HD-COD-SW-29-0/1-0	180-45946-17
HD-QC1-0/1-1	180-45946-18

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-45946-1

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 10:55

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	76	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	76	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-45946-2

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 11:35

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	110	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	110	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-45946-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 08:55

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	86	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	86	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-45946-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 12:20

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	140	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	140	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-10-0/1-0 Lab Sample ID: 180-45946-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 09:35

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	230	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	230	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-11-0/1-0 Lab Sample ID: 180-45946-6

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 12:45

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	220	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	220	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-12-0/1-0 Lab Sample ID: 180-45946-7

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 13:00

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	190	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	190	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-45946-8

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 09:20

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	110	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	110	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-45946-9

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 13:20

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	220	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	220	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-45946-11

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 10:25

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	88	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	88	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 180-45946-12

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 10:00

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	250	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	250	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-20-0/1-0 Lab Sample ID: 180-45946-13

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 10:55

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	80	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	80	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-45946-14

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 11:15

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	130	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	130	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-45946-15

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 13:30

Reporting Basis: WET Date Received: 07/16/2015 09:30

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	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-45946-16

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 12:35

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	150	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	150	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-45946-17

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 08:40

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	84	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	84	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-45946-18

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG ID.:

Matrix: Water Date Sampled: 07/15/2015 08:00

Reporting Basis: WET Date Received: 07/16/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	220	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	220	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	ND	5.0	0.41	mg/L			1	SM 2320B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Analyst: CLL Batch Start Date: 07/20/2015

Reporting Units: mg/L Analytical Batch No.: 148162

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	06:02	Total Alkalinity as CaCO3 to pH 4.5	133	125	106	80-120		WALK125PPMCCV_00088
14	CCB	06:02	Total Alkalinity as CaCO3 to pH 4.5	4.02				J	
			Bicarbonate Alkalinity as CaCO3	4.02				J	
			Carbonate Alkalinity as CaCO3	ND					
25	CCV	06:22	Total Alkalinity as CaCO3 to pH 4.5	135	125	108	80-120		WALK125PPMCCV_00088
26	CCB	06:22	Total Alkalinity as CaCO3 to pH 4.5	4.02				J	
			Bicarbonate Alkalinity as CaCO3	4.02				J	
			Carbonate Alkalinity as CaCO3	ND					

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

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 148162 Date: 07/20/2015 06:02							
SM 2320B	MB 180-148162/2	Total Alkalinity as CaCO3 to pH 4.5	4.02	J	mg/L	5.0	1
SM 2320B	MB 180-148162/2	Bicarbonate Alkalinity as CaCO3	4.02	J	mg/L	5.0	1
SM 2320B	MB 180-148162/2	Carbonate Alkalinity as CaCO3	ND		mg/L	5.0	1

FORM III-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 148162 Date: 07/20/2015 06:02								
SM 2320B	HD-COD-SW-17-0/1-0	180-45946-12	Total Alkalinity as CaCO3 to pH 4.5	250	mg/L			
SM 2320B	HD-COD-SW-17-0/1-0	180-45946-12 DU	Total Alkalinity as CaCO3 to pH 4.5	245	mg/L	2	20	
SM 2320B	HD-COD-SW-17-0/1-0	180-45946-12	Bicarbonate Alkalinity as CaCO3	250	mg/L			
SM 2320B	HD-COD-SW-17-0/1-0	180-45946-12 DU	Bicarbonate Alkalinity as CaCO3	245	mg/L	2	20	
SM 2320B	HD-COD-SW-17-0/1-0	180-45946-12	Carbonate Alkalinity as CaCO3	ND	mg/L			
SM 2320B	HD-COD-SW-17-0/1-0	180-45946-12 DU	Carbonate Alkalinity as CaCO3	ND	mg/L	NC	20	

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

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 148162	Date: 07/20/2015 06:02										
						LCS Source: WALK250PPMPi_00096					
SM 2320B	LCS 180-148162/1	Total Alkalinity as CaCO3 to pH 4.5	241		mg/L	250	96	80-120			

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

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-45946-1

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 CaCO3		5	0.4111
Carbonate Alkalinity as CaCO3		5	0.4111
Total Alkalinity as CaCO3 to pH 4.5		5	0.4111

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-45946-1

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 CaCO3		5	0.4111
Carbonate Alkalinity as CaCO3		5	0.4111
Total Alkalinity as CaCO3 to pH 4.5		5	0.4111

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2320B

Start Date: 07/20/2015 06:02 End Date: 07/20/2015 06:22

Lab Sample Id	D/F	Type	Time	Analytes																										
				Alk	BALKCC	CarAlk																								
LCS 180-148162/1	1	T	06:02	X																										
MB 180-148162/2	1	T	06:02	X	X	X																								
ZZZZZZ			06:02																											
ZZZZZZ			06:02																											
180-45946-1	1	T	06:02	X	X	X																								
180-45946-2	1	T	06:02	X	X	X																								
180-45946-3	1	T	06:02	X	X	X																								
180-45946-4	1	T	06:02	X	X	X																								
180-45946-5	1	T	06:02	X	X	X																								
180-45946-6	1	T	06:02	X	X	X																								
180-45946-7	1	T	06:02	X	X	X																								
180-45946-8	1	T	06:02	X	X	X																								
CCV 180-148162/13	1		06:02	X																										
CCB 180-148162/14	1		06:02	X	X	X																								
180-45946-9	1	T	06:02	X	X	X																								
180-45946-11	1	T	06:02	X	X	X																								
180-45946-12	1	T	06:02	X	X	X																								
180-45946-12 DU	1	T	06:02	X	X	X																								
180-45946-13	1	T	06:02	X	X	X																								
180-45946-14	1	T	06:02	X	X	X																								
180-45946-15	1	T	06:02	X	X	X																								
180-45946-16	1	T	06:02	X	X	X																								
180-45946-17	1	T	06:22	X	X	X																								
180-45946-18	1	T	06:22	X	X	X																								
CCV 180-148162/25	1		06:22	X																										
CCB 180-148162/26	1		06:22	X	X	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

07 2015 ALK
Alk #148162 ow 7-20-15

PITTSBURGH
ALKALINITY LOGSHEET
Method 2320B
NB-2015-024

Analyst: CLahuda **Date:** 7-20-15
Reviewed By: SelDLC **Date:** ———
pH Meter ID Accumet XLSP#94102132 **AD Batch:** 148162
pH 4 Start: 3.99 **pH 4 End:** 4.02

Job Number(s): 45941 - 45946

Calculations:

$$\text{Alkalinity as } CaCO_3 \text{ mg/L} = \frac{(\text{mL of } H_2SO_4)\ (N)(50{,}000)}{\text{mL of Sample}}$$

Alkalinity Relationships:

P = Phenolphthalein Alkalinity (pH 8.3)

T = Total Alkalinity

OH^- = Hydroxide Alkalinity as $CaCO_3$

$CO_3^{\ 2}$ = Carbonate Alkalinity as $CaCO_3$

HCO_3 = Bicarbonate Concentration as $CaCO_3$

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Pittsburgh
ALKALINITY LOGSHEET
Method 2320B
NB-2015-024

Sample ID	pH	Sample Volume	mL to pH 8.3	Ttl mL pH 4.5	N	T	P	OH^-	CO_3^{2}	HCO_3
LCS	10.51	50	3.5	12.0	.0201	241.2				
MB	5.61	|	0	0.2	|	4.02				
180-45941-1	9.19	|	0.8	7.1	|	142.71				
↓ -1X	9.16	|	0.8	~~7.0~~ 6.9	|	138.69				
180-45946-1	7.63	|	0	3.8	|	76.38				
2	7.23	|	0	5.6	|	112.56				
3	7.46	|	0	4.3	|	86.43				
4	7.85	|	0	7.0	|	140.7				
5	8.22	|	0	11.4	|	229.14				
6	8.02	|	0	10.9	|	219.09				
7	7.84	|	0	9.6	|	192.96				
↓ 8	7.86	|	0	5.3	|	106.53				
CCV	10.47	|	2.6	6.6	|	132.66				
CCB	5.59	|	0	0.2	|	4.02				
180-45946-9	7.42	|	0	10.9	|	219.09				
10	7.75	|	0	4.4	|	88.44				
12	7.49	|	0	12.4	|	249.24				
12X	7.47	|	0	12.2	|	245.22				
13	7.76	|	0	4.0	|	80.4				
14	7.84	|	0	6.5	|	130.65				
15	7.29	|	0	7.9	|	158.79				
16	8.00	|	0	7.3	|	146.73				
17	7.72	|	0	4.2	|	84.42				
↓ 18	7.51	|	0	11.0	|	221.1				
CCV	10.53	|	2.6	6.7	|	134.67				
CCB	5.67	↓	0	0.2	↓	4.02				

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Batch Number: 148162 Batch Start Date: 07/20/15 06:02 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	Initial pH	BuretStart1	BuretStop1	TitrantVolume1	BuretStart2
LCS 180-148162/1		SM 2320B		50 mL	10.51 SU	0 mL	3.5 mL	3.5 mL	0 mL
MB 180-148162/2		SM 2320B		50 mL	5.61 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-1	HD-COD-SW-6-0/1-0	SM 2320B	T	50 mL	7.63 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-2	HD-COD-SW-7-0/1-0	SM 2320B	T	50 mL	7.73 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-3	HD-COD-SW-8-0/1-0	SM 2320B	T	50 mL	7.46 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-4	HD-COD-SW-9-0/1-0	SM 2320B	T	50 mL	7.85 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-5	HD-COD-SW-10-0/1-0	SM 2320B	T	50 mL	8.22 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-6	HD-COD-SW-11-0/1-0	SM 2320B	T	50 mL	8.02 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-7	HD-COD-SW-12-0/1-0	SM 2320B	T	50 mL	7.84 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-8	HD-COD-SW-13-0/1-0	SM 2320B	T	50 mL	7.86 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-148162/13		SM 2320B		50 mL	10.47 SU	0 mL	2.6 mL	2.6 mL	0 mL
CCB 180-148162/14		SM 2320B		50 mL	5.59 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-9	HD-COD-SW-15-0/1-0	SM 2320B	T	50 mL	7.42 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-11	HD-COD-SW-16-0/1-0	SM 2320B	T	50 mL	7.75 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-12	HD-COD-SW-17-0/1-0	SM 2320B	T	50 mL	7.49 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-12 DU	HD-COD-SW-17-0/1-0	SM 2320B	T	50 mL	7.47 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-13	HD-COD-SW-20-0/1-0	SM 2320B	T	50 mL	7.76 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-14	HD-COD-SW-26-0/1-0	SM 2320B	T	50 mL	7.84 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-15	HD-COD-SW-27-0/1-0	SM 2320B	T	50 mL	7.29 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-16	HD-COD-SW-28-0/1-0	SM 2320B	T	50 mL	8.00 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-17	HD-COD-SW-29-0/1-0	SM 2320B	T	50 mL	7.72 SU	0 mL	0 mL	0 mL	0 mL
180-45946-A-18	HD-QC1-0/1-1	SM 2320B	T	50 mL	7.51 SU	0 mL	0 mL	0 mL	0 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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Batch Number: 148162 Batch Start Date: 07/20/15 06:02 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	Initial pH	BuretStart1	BuretStop1	TitrantVolume1	BuretStart2
CCV 180-148162/25		SM 2320B		50 mL	10.53 SU	0 mL	2.6 mL	2.6 mL	0 mL
CCB 180-148162/26		SM 2320B		50 mL	5.67 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 180-148162/1		SM 2320B		8.5 mL	8.5 mL	Case 2	140.7 mg/L	0 mg/L	100.5 mg/L
MB 180-148162/2		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	4.02 mg/L
180-45946-A-1	HD-COD-SW-6-0/1-0	SM 2320B	T	3.8 mL	3.8 mL	Case 1	0 mg/L	0 mg/L	76.38 mg/L
180-45946-A-2	HD-COD-SW-7-0/1-0	SM 2320B	T	5.6 mL	5.6 mL	Case 1	0 mg/L	0 mg/L	112.56 mg/L
180-45946-A-3	HD-COD-SW-8-0/1-0	SM 2320B	T	4.3 mL	4.3 mL	Case 1	0 mg/L	0 mg/L	86.43 mg/L
180-45946-A-4	HD-COD-SW-9-0/1-0	SM 2320B	T	7.0 mL	7 mL	Case 1	0 mg/L	0 mg/L	140.7 mg/L
180-45946-A-5	HD-COD-SW-10-0/1-0	SM 2320B	T	11.4 mL	11.4 mL	Case 1	0 mg/L	0 mg/L	229.14 mg/L
180-45946-A-6	HD-COD-SW-11-0/1-0	SM 2320B	T	10.9 mL	10.9 mL	Case 1	0 mg/L	0 mg/L	219.09 mg/L
180-45946-A-7	HD-COD-SW-12-0/1-0	SM 2320B	T	9.6 mL	9.6 mL	Case 1	0 mg/L	0 mg/L	192.96 mg/L
180-45946-A-8	HD-COD-SW-13-0/1-0	SM 2320B	T	5.3 mL	5.3 mL	Case 1	0 mg/L	0 mg/L	106.53 mg/L
CCV 180-148162/13		SM 2320B		4.0 mL	4 mL	Case 2	104.52 mg/L	0 mg/L	28.14 mg/L
CCB 180-148162/14		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	4.02 mg/L
180-45946-A-9	HD-COD-SW-15-0/1-0	SM 2320B	T	10.9 mL	10.9 mL	Case 1	0 mg/L	0 mg/L	219.09 mg/L
180-45946-A-11	HD-COD-SW-16-0/1-0	SM 2320B	T	4.4 mL	4.4 mL	Case 1	0 mg/L	0 mg/L	88.44 mg/L
180-45946-A-12	HD-COD-SW-17-0/1-0	SM 2320B	T	12.4 mL	12.4 mL	Case 1	0 mg/L	0 mg/L	249.24 mg/L
180-45946-A-12 DU	HD-COD-SW-17-0/1-0	SM 2320B	T	12.2 mL	12.2 mL	Case 1	0 mg/L	0 mg/L	245.22 mg/L
180-45946-A-13	HD-COD-SW-20-0/1-0	SM 2320B	T	4.0 mL	4 mL	Case 1	0 mg/L	0 mg/L	80.4 mg/L
180-45946-A-14	HD-COD-SW-26-0/1-0	SM 2320B	T	6.5 mL	6.5 mL	Case 1	0 mg/L	0 mg/L	130.65 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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Batch Number: 148162 Batch Start Date: 07/20/15 06:02 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStop2	TitrantVolume2	CalcMsg	carb	hydr	bCarb
180-45946-A-15	HD-COD-SW-27-0/1-0	SM 2320B	T	7.9 mL	7.9 mL	Case 1	0 mg/L	0 mg/L	158.79 mg/L
180-45946-A-16	HD-COD-SW-28-0/1-0	SM 2320B	T	7.3 mL	7.3 mL	Case 1	0 mg/L	0 mg/L	146.73 mg/L
180-45946-A-17	HD-COD-SW-29-0/1-0	SM 2320B	T	4.2 mL	4.2 mL	Case 1	0 mg/L	0 mg/L	84.42 mg/L
180-45946-A-18	HD-QC1-0/1-1	SM 2320B	T	11.0 mL	11 mL	Case 1	0 mg/L	0 mg/L	221.1 mg/L
CCV 180-148162/25		SM 2320B		4.1 mL	4.1 mL	Case 2	104.52 mg/L	0 mg/L	30.15 mg/L
CCB 180-148162/26		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	4.02 mg/L

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00088	WALK250PPMPi 00096	
LCS 180-148162/1		SM 2320B		70.35 mg/L	241.2 mg/L	50 mL		50 mL	
MB 180-148162/2		SM 2320B		0 mg/L	4.02 mg/L	50 mL			
180-45946-A-1	HD-COD-SW-6-0/1-0	SM 2320B	T	0 mg/L	76.38 mg/L	50 mL			
180-45946-A-2	HD-COD-SW-7-0/1-0	SM 2320B	T	0 mg/L	112.56 mg/L	50 mL			
180-45946-A-3	HD-COD-SW-8-0/1-0	SM 2320B	T	0 mg/L	86.43 mg/L	50 mL			
180-45946-A-4	HD-COD-SW-9-0/1-0	SM 2320B	T	0 mg/L	140.7 mg/L	50 mL			
180-45946-A-5	HD-COD-SW-10-0/1-0	SM 2320B	T	0 mg/L	229.14 mg/L	50 mL			
180-45946-A-6	HD-COD-SW-11-0/1-0	SM 2320B	T	0 mg/L	219.09 mg/L	50 mL			
180-45946-A-7	HD-COD-SW-12-0/1-0	SM 2320B	T	0 mg/L	192.96 mg/L	50 mL			
180-45946-A-8	HD-COD-SW-13-0/1-0	SM 2320B	T	0 mg/L	106.53 mg/L	50 mL			
CCV 180-148162/13		SM 2320B		52.26 mg/L	132.66 mg/L	50 mL	50 mL		
CCB 180-148162/14		SM 2320B		0 mg/L	4.02 mg/L	50 mL			
180-45946-A-9	HD-COD-SW-15-0/1-0	SM 2320B	T	0 mg/L	219.09 mg/L	50 mL			
180-45946-A-11	HD-COD-SW-16-0/1-0	SM 2320B	T	0 mg/L	88.44 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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-45946-1

SDG No.:

Batch Number: 148162 Batch Start Date: 07/20/15 06:02 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00088	WALK250PPMPi 00096	
180-45946-A-12	HD-COD-SW-17-0/1-0	SM 2320B	T	0 mg/L	249.24 mg/L	50 mL			
180-45946-A-12 DU	HD-COD-SW-17-0/1-0	SM 2320B	T	0 mg/L	245.22 mg/L	50 mL			
180-45946-A-13	HD-COD-SW-20-0/1-0	SM 2320B	T	0 mg/L	80.4 mg/L	50 mL			
180-45946-A-14	HD-COD-SW-26-0/1-0	SM 2320B	T	0 mg/L	130.65 mg/L	50 mL			
180-45946-A-15	HD-COD-SW-27-0/1-0	SM 2320B	T	0 mg/L	158.79 mg/L	50 mL			
180-45946-A-16	HD-COD-SW-28-0/1-0	SM 2320B	T	0 mg/L	146.73 mg/L	50 mL			
180-45946-A-17	HD-COD-SW-29-0/1-0	SM 2320B	T	0 mg/L	84.42 mg/L	50 mL			
180-45946-A-18	HD-QC1-0/1-1	SM 2320B	T	0 mg/L	221.1 mg/L	50 mL			
CCV 180-148162/25		SM 2320B		52.26 mg/L	134.67 mg/L	50 mL	50 mL		
CCB 180-148162/26		SM 2320B		0 mg/L	4.02 mg/L	50 mL			

Batch Notes	
Batch Comment	PH 4 START: 3.99 PH 4 END: 4.02
pH Buffer 1 ID	1179927
pH Buffer 2 ID	1568035
pH Buffer 3 ID	1525375
pH Buffer 4 ID	1538765
pH Buffer 5 ID	1535729
Sulfuric Acid Lot Number	1627652
Sulfuric Acid Vendor	RICCA
Nominal Amount Used	50 mL
Normality of first Titrant	.0201 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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jennifer S. Reese	Site Contact: Jennifer S. Reese	DateSubmitted: 7/15/2015	COC No: TAP2015071501
Groundwater Sciences Corporation	Tel/Fax: 717-901-8181 / (717) 657-1611	Lab Contact: Carrie Gamber	Carrier: FEDEX	1 of 1 COCs
2601 Market Place St. Suite 310	Analysis Turnaround Time			Job No. 10012.16.0005
Harrisburg, PA 17110	Calendar (C) or Work Days (W)			
(717) 901-8180 Phone	TAT if different from Below: Standard			Container No. 1
(717) 657-1611 FAX	■ 2 weeks			SDG No.
Project Name: FYNOP	☐ 1 week			
Site: Harley-Davidson, York PA	☐ 5 days			
Quote # 18000557	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs (8260C)	Alkalinity (Carb/Bicarb), SO4, Cl, NO3 2320B/300.0	Total Na, Ca, K, and Mg (SW846 6020A)	Notes:
HD-COD-SW-6-0/1-0	7/15/15	1055	Surface Water	Water	5	X	X	X	
HD-COD-SW-7-0/1-0	7/15/15	1135	Surface Water	Water	5	X	X	X	
HD-COD-SW-8-0/1-0	7/15/15	0855	Surface Water	Water	5	X	X	X	
HD-COD-SW-9-0/1-0	7/15/15	1220	Surface Water	Water	5	X	X	X	
HD-COD-SW-10-0/1-0	7/15/15	0935	Surface Water	Water	5	X	X	X	
HD-COD-SW-11-0/1-0	7/15/15	1245	Surface Water	Water	5	X	X	X	
HD-COD-SW-12-0/1-0	7/15/15	1300	Surface Water	Water	5	X	X	X	
HD-COD-SW-13-0/1-0	7/15/15	0920	Surface Water	Water	5	X	X	X	
HD-COD-SW-15-0/1-0	7/15/15	1320	Surface Water	Water	5	X	X	X	
HD-QC1-0/1-2	7/15/15	12:00	Trip Blank	Water	2	X			
					Number of Containers	3	1	1	
					Preservation Used: 1=Ice, 2=HCL, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Unpreserved 7=Zinc Acetate & NaOH	2	1	4	
					Field Filter	N	N	N	

180-45946 Chain of Custody

Possible Hazard Identification
■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: CLP Like Deliverables

Relinquished by (Print and Sign):	Company: GSC	Date/Time: 7/15/15 1400	Received by:	Company: TJ	Date/Time: 7/15/15 1400
Relinquished by:	Company: TA	Date/Time: 7/15/15 1555	Received by: Delilah Watson	Company: TAP	Date/Time: 7-16-15 9:30
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2470

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jennifer S. Reese	Site Contact: Jennifer S. Reese	DateSubmitted: 7/15/2015	COC No: TAP2015071502
Groundwater Sciences Corporation	Tel/Fax: 717-901-8181 / (717) 657-1611	Lab Contact: Carrie Gamber	Carrier: FEDEX	1 of 1 COCs
2601 Market Place St. Suite 310	Analysis Turnaround Time			Job No. 10012.16.0005
Harrisburg, PA 17110	Calendar (C) or Work Days (W)			
(717) 901-8180 Phone	TAT if different from Below: Standard			
(717) 657-1611 FAX	■ 2 weeks			Container No. 2
Project Name: FVNOP	☐ 1 week			SDG No.
Site: Harley-Davidson, York PA	☐ 5 days			
Quote # 18000557	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs (8260C)	Alkalinity (Carb/Bicarb), SO4, Cl, NO3 2320B/300.0	Total Na, Ca, K, and Mg (SW846 6020A)	Sample Specific Notes:
HD-COD-SW-16-0/1-0	7/15/15	1025	Surface Water	Water	5	X	X	X	
HD-COD-SW-17-0/1-0	7/15/15	1000	Surface Water	Water	5	X	X	X	
HD-COD-SW-17-0/1-0 MS	7/15/15	1000	Surface Water	Water	5	X	X	X	
HD-COD-SW-17-0/1-0 MSD	7/15/15	1000	Surface Water	Water	5	X	X	X	
HD-COD-SW-20-0/1-0	7/15/15	1055	Surface Water	Water	5	X	X	X	
HD-COD-SW-26-0/1-0	7/15/15	1115	Surface Water	Water	5	X	X	X	
HD-COD-SW-27-0/1-0	7/15/15	1330	Surface Water	Water	5	X	X	X	
HD-COD-SW-28-0/1-0	7/15/15	1235	Surface Water	Water	5	X	X	X	
HD-COD-SW-29-0/1-0	7/15/15	0840	Surface Water	Water	5	X	X	X	
HD-QC1-0/1-1	7/15/15	0800	Surface Water	Water	5	X	X	X	
HD-QC2-0/1-2	7/15/15	12:01	Trip Blank	Water	2	X			
Number of Containers						3	1	1	
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Unpreserved 7=Zinc Acetate & NaOH						2	1	4	
Field Filter						N	N	N	

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Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:


180-45946 Waybill
SHIP DATE: 15JUL15
ACTWGT: 52.00 LB
CAD: 8490299/INET3670
BILL RECIPIENT
PRUSSIA, PA 19406
STATES US
MPLE RECEIPT
EST AMERICA - PITTSBURGH
01 ALPHA DR
PITTSBURGH PA 15238
(412) 963-7058
REF:
DEPT:
FedEx
Express
1 of 2
7740 6106 9532
MASTER
THU - 16 JUL AA
STANDARD OVERNIGHT
15238
PA-US PIT
Uncorrected temp
Thermometer ID
CF
Initials
PT-WI-SR-001 effective 7/26/13
SHIP DATE: 15JUL15
ACTWGT: 56.00 LB
CAD: 8490299/INET3670
BILL RECIPIENT
2 of 2
7740 6106
THU - 16 JUL AA
STANDARD OVERNIGHT
15238
PA-US PIT
Uncorrected temp
Thermometer ID
CF
Initials
PT-WI-SR-001 effective 7/26/13

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-45946-1

Login Number: 45946
List Number: 1
Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	